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JERSEY TTSD

LA COLLETTE ENERGY-FROM-WASTE FACILITY

WORKING PLAN

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1 INTRODUCTION

This Working Plan is a live document which will be finalised prior to the start of commissioning of the plant. This will allow the final document to be based on, and relate to the Operational and Maintenance (O&M) manuals which at that time will be available for the plant.

2 SITE DESCRIPTION

The Energy from Waste (EfW) plant is located La Collette, an area of reclaimed land which lies to the south of the town of St. Helier. The EfW at La Collette is located in the same area as the Jersey Electricity company's power station, the bus depot operated by Connex and fuel storage facilities for Jersey.

The EfW plant consists of two buildings. The main building which houses the majority of the process plant is approximately 80 m long, 36 m wide and up to 32 m high (to roof ridge) or 37 m high (to the top of the roof trusses). The plant footprint is approximately 2,880 m^2.

The Bulky Waste Facility (BWF) and Ash Hall is a smaller building used for the reception, storage and shredding of bulky waste, and storage of bottom ash. The BWF and Ash Hall is approximately 67 m long, 25 m wide and up to 15 m high. Pre sorting of the bulky waste is carried out within the BWF building prior to shredding, principally to separate out recyclable material and to exclude unsuitable material. Skips or other storage containers are provided for the storage of the separated recyclable or unsuitable materials.

The EfW will be operated under a Waste Management License as prescribed by the Waste Management (Jersey) Law 2005. This law was introduced with the aim of protecting Jersey's environment from air, water, and ground pollution caused through operating waste management facilities. The EfW will also be operated in accordance with a Discharge Consent obtained in accordance with the Water Pollution (Jersey) Law 2007, and a Trade Effluent Consent obtained pursuant to the Drainage (Jersey) Law 2005.

This Working Plan follows the UK specifications and guidance previously issued by the UK Environment Agency laid out in:

(1) WPS/V1 Working plan guidance and specifications. Volume 1: Waste Management Licences. Edition 2 issued 3rd August 1999 which replaces Edition 1 (issued 5th June 1998)

(2) WM103 Background Notes – preparing a working plan prepared by the Environment Agency

(3) A Practical Guide to Environmental Risk Assessment for Waste Management Facilities – Environmental Policy – Risk and Forecasting Guidance Note No. 25, Environment Agency, November 2000

3 REQUIREMENTS FOR RISK ASSESSMENT, RISK MANAGEMENT SYSTEMS AND WORKING PLAN

Ref No.	Specification title	Working plan section?	Level of risk assessment?
1.	**Site description and characterisation of risk source**		
1.1	Specified site and waste management operations	Yes (M)	None
1.2	Permitted wastes	Yes (M)	None
1.3	Hours of operation	Yes	None
1.4	Duration of activities – groundwater protection	Yes	Generic
1.5	Staffing and understanding of requirements of licence conditions and Working Plan	Yes	None
1.11	*Not applicable (preparatory works)*	No	NA
1.12	Notification of commencement, cessation and recommencement of waste handling operations	Yes	None
2.	**Site engineering for pollution prevention and control**		
2.[111]	*Not applicable (Engineering surveys*)	No	NA
2.[210]	Engineered site containment and drainage systems	Yes	Generic
2.[320]	*Not applicable (landfill)*	No	NA
2.[330]	*Not applicable(Leachate management systems)*	No	NA
2.[340]	*Not applicable (landfill)*	No	NA
2.[350]	Surface water management systems	Yes	Generic
2.[360]	*Not applicable (landfill)*	No	NA
2.[403]	Removal of residual wastes from site	Yes	Generic
2.[404]	*Not applicable (final landform)*	No	NA
3.	**Site infrastructure**		
3.1	Provision of site identification board	Yes	None
3.2	Site security	Yes (M)	Generic
4.	**Site operations**		
4.[140]	Control of mud and debris	Yes	Generic

Ref No.	Specification title	Working plan section?	Level of risk assessment?
4.[151]	Potentially polluting leaks and spillages	Yes	Generic
4.[153]	Fires on site	Yes	Generic
4.[210]	Waste acceptance and control systems and procedures	Yes (M)	None
4.[220]	Waste sampling and testing	Yes	None
4.[230]	Waste quantity measurement systems	Yes (M)	None
4.[301]	Storage of [specified wastes]	Yes	None
4.[410]	EfW – plant, equipment and procedures	Yes	None
4.[520]	*Not applicable (landfill)*	No	NA
4.[521]	*Not applicable (landfill)*	No	NA
5.	**Pollution control, monitoring & reporting**		
5.[100]	*Not applicable (landfill)*	No	NA
5.[101]	*Not applicable (landfill)*	No	NA
5.[103]	*Not applicable (Emissions, vapours or aerosols)*	No	NA
5.[200]	*Not applicable (Leachate monitoring & reporting)*	No	NA
5.[400]	Groundwater monitoring and reporting systems	Yes	Generic
5.[500]	*Not applicable (Ground water monitoring and reporting system)*	No	NA
5.[600]	*Not applicable (meteorological conditions)*	No	NA
6.	**Amenity management & monitoring**		
6.[010]	Control, monitoring and reporting of dusts, fibres and particulates	Yes	Generic
6.[020]	Control of odours	Yes	Generic
6.[030]	Control and monitoring of noise	Yes	Generic
6.[040]	Control of pests	Yes	Generic
6.[041]	Control of scavenging birds and other scavengers	Yes	Generic
6.[050]	Control of litter	Yes	Generic
7.	**Site records**		
7.1	Security and availability of records	Yes (M)	None

Ref No.	Specification title	Working plan section?	Level of risk assessment?
7.[200]	*Not applicable (landfill)*	No	NA
7.[300]	Records of waste movements	Yes	None
7.[400]	Site diary	Yes	None
7.[500]	Periodic reporting of environmental performance	Yes	None

Notes:

***Yes (M)* =** required in Working Plan Guidance and Specification WPS/V1/ 1999 (Edn 2) – Environment Agency as mandatory items

NA – Not Applicable

The waste management operations to be carried out at this site are in accordance with Table WP/1.1 Waste Management Operations in WPS/V1 Working plan guidance and specifications. Volume 1: Waste Management Licences. Edition 2 issued 3rd August 1999 which replaces Edition 1 (issued 5th June 1998), UK Environment Agency.

In accordance with Table WP/1.1 the waste management operations is waste recovery operations ('R' classifications) as listed in Part IV of Schedule 4 of the Waste Management Licensing Regulations 1994

The following waste management operations are carried out at this site:

Waste management operation	Description
Reception of Incoming waste	Municipal Solid Waste (MSW) registration at incoming weighbridge Domestic and offensive/hygiene clinical waste registration at incoming weighbridge (during restricted hours) Hazardous clinical waste registration at the clinical waste unloading area
Unloading of waste in storage bunker or BWF	Delivery vehicles unloading waste into storage bunker or BWF as directed by site operational staff
Unloading of sludge in storage tank	Delivery vehicle unloading digested sewage sludge into sludge storage tank within the EfW tipping apron
Unloading of clinical waste	Domestic and offensive/hygiene clinical waste unloading into storage bunker as directed by site operational staff Delivery vehicles unloading pre-treatable and hazardous waste at designated the clinical waste unloading area as directed by site operational staff
Movement of clinical waste	The clinical waste delivered to La Collette shall have been segregated at source by the producer and after registration shall be appropriately stored and processed:

Waste management operation	Description
	- domestic and offensive/hygiene waste to be added to storage bunker waste; - hazardous clinical waste which may be pretreated to be forwarded for refrigerated storage in the atrium or immediate processing in the pretreatment stream; and - hazardous clinical waste that cannot be made safe through pretreatment shall be forwarded for refrigerated storage in the atrium or immediate processing in the high temperature disposal stream.
Identification of unsuitable materials	Identification and isolation of unsuitable and/or potentially hazardous materials
Exit of vehicles	Waste vehicles leave EfW plant via the exit weighbridge to weigh empty outgoing vehicles
Recycling of material	Separation of recyclable material from incoming waste
Waste storage	Storage of MSW and shredded waste in the bunker Storage of domestic and offensive/hygiene clinical waste in the bunker Storage of bulky waste in the BWF Storage of sludge in the sludge storage tank Storage of hazardous clinical waste in refrigerated stores located in the tipping hall atrium Storage of recyclable materials Storage of unsuitable or hazardous materials
Waste loading	Use of overhead waste cranes for transfer of stored waste (MSW and domestic and offensive/hygiene clinical waste) to the boiler feed hoppers Hazardous clinical waste loaded into clinical waste processing equipment using located automated bin tippers. The sterilized product of the clinical waste pretreatment stream forwarded to the storage bunker using a conveyor system.
Combustion of Waste	Combustion of waste on the grates with flue gases maintained at a temperature >850^{o}C for a period of at least 2 seconds. Combustion of non-pretreatable hazardous clinical waste in the high temperature disposal stream with flue gases maintained at a temperature >1100^{o}C for a period of at least 2 seconds. The flue gas products shall be forwarded to the EfW flue gas stream for treatment

Waste management operation	Description
Boilers	Conversion of the energy from gases to steam
Steam turbine	Steam driven turbine which converts the energy from steam to electricity
Flue gas treatment	Removal of pollutants from flue gases with the injection of lime and activated carbon and the removal of particulate matter via a fabric (bag) filter.
Storage of Atmospheric Pollution Control (APC) reagents	Storage of urea, lime and activated carbon for the use of flue gas treatment.
Storage and removal of APC Treatment residue	Storage of APC residue from the bag filters in silos and discharge to vehicles for disposal.
Storage and removal of clinical waste ash	Storage of clinical waste ash from the high temperature disposal stream and discharge to vehicles for disposal.
Storage and removal of bottom ash residue from site	Storage of bottom ash in the ash hall from the combustion chambers removed and disposed.
Storage and disposal of process water	Recovery of contaminated process water which is treated via settlement prior to reuse or neutralization for discharge to the local foul sewer.

The location of specified waste management operations within the site are shown on Drawing (Site Layout).

Probable maximum capacities for stages of the waste handling operations are shown in the following tables.

Waste Management Operation	Maximum Capacity of Operation
EfW Design capacity	105,000 t/a
Number of waste streams	2
Throughput	15 t/h
Bunker storage capacity	2,500 t
BWF capacity	400 t
Hazardous Waste Storage	Up to 170 m^3
Recyclables Storage	50 t
Clinical waste processing system capacity	281 t/a
Clinical waste storage	8.5 t
Clinical waste throughput	210 kg/h

(operating up to 5 days a week, 8 hours a day)	

Waste Products and Consumables		
Waste Products and Consumables	**Annual Consumption (105,000 t/a)**	**Transport**
Lime	1,400	Delivered periodically by up to 70 lorries per year
Activated Carbon	80	Delivered periodically by up to 12 lorries per year
Urea	265	Delivered periodically by up to 20 lorries per year
Bottom Ash	26,100	Removed by up to 11 tipper loads per day
Clinical waste ash	30	Removed periodically by up to 10 lorries per year
Clinical Waste (suitability packaged and sealed)	60	Removed periodically up to 2 lorries per week
APC Residue	4,220	Removed by up to 10 tipper loads per week
Ferrous Metal (recycled)	2,100	Removed in skips as they are filled

3.1 WP/1.2: Permitted wastes

The plant will be used to treat Municipal Waste, including household, commercial, trade and charitable waste and any other waste which by its nature is similar to Household Waste and which are combustible in nature (i.e. not "inert" waste). This will include:

- Combustible construction and demolition wastes;
- Sawdust, shavings, cuttings, wood, particle board and veneers;
- Packaging wastes, including paper, cardboard, plastics, wood, composites, textiles;
- Non- hazardous combustible material from end-of-life vehicles and material from Waste Electrical and Electronic Equipment, including end-of-life tyres;
- Bulky wastes (which will be shredded on or off site prior to incineration);
- Sludge, oil or oily water from oil/water separators
- Absorbents, filter materials, wiping cloths, protective clothing;
- Anaerobically treated sewage sludge

Within the Municipal Waste, the plant will receive the following Municipal Wastes which may exhibit hazardous properties. These wastes will be separated, stored and transferred for disposal elsewhere at an appropriate waste disposal facility.

- Electrical and electronic display equipment (on-site storage capacity of up to 75m^3);
- Small electrical and electronic equipment with potentially hazardous properties (on-site storage capacity of up to 5m^3);
- Fluorescent tubes and gas discharge lamps (on-site storage capacity of up to 10m^3);
- Paints, oils, oil filters and other fluids or chemicals with potentially hazardous properties (on-site storage capacity of up to 50 litres);
- Batteries (on-site storage capacity of up to 5m^3);
- Gas cylinders and other pressurised containers (on-site storage capacity of up to 75m^3).

The plant will also incorporate a clinical waste storage and processing facility which will pretreat to a sterilised form (for final disposal with the MSW waste) or incinerate segregated clinical waste as appropriate. The facility shall process the following waste types:

- medical suction canisters, blood contaminated medical equipment (including drip bags, tubes & rigid containers);
- body parts, organs, blood bags and blood preserves;
- needle syringes, scalpels, blades, infusion sets, broken glass, sharp instruments, contaminated sharps, used vials, syringe bottles or tubing; and
- used vials, syringe bottles or tubing, contaminated gloves, tablets, liquid medicines and inhalers.

3.2 WP/1.3: Hours of operation

This site would operate continuously however general opening hours for the reception of waste are as follows:

Day	Opening hours	
	MSW deliveries	Clinical Waste deliveries
Monday to Thursday	07:30 – 16:15	08:00 – 16:00
Friday	07:30 – 15:15	08:00 – 16:00
Saturday	07:30 – 12:00	Closed
Public holidays	Closed	Closed

Out of hours acceptance is required for some vehicles. A schedule of such deliveries required operationally or in an emergency will be maintained and will be available to the Regulator.

Site opening hours are displayed on the display notice board at the entrance to the site

The site would not be open to members of the public for car deliveries. The site is open for deliveries of commercial waste.

3.3 WP/1.4: Duration of activities – groundwater protection

Refer to Generic Risk Assessment – Appendix A; Table 4 Solid wastes which are likely to produce contaminated or polluting runoff.

The EfW plant is designed to minimise any pollution risk to groundwater as a result of waste handling or site management activities. Refer to WP/2. [210]: Engineered site containment and drainage system.

3.4 WP/1.5: Staffing and understanding of requirements of licence conditions & Working Plan

Site operative staff and their roles are given in the table below.

Site operative	Roles and responsibilities
Waste Disposal Facility Manager Operations Manager Maintenance Manager	• Supervision of all site operatives • Registered holder of a copy of the Site Licence and Working Plan • Reporting to the Health and Safety Inspectorate • Reporting to Environmental Protection Department • Scheduling of planned maintenance in accordance with the O&M manuals • Management of unplanned maintenance in accordance with the O&M manuals • Recording of all site maintenance • Maintain site records • Liaison with other departments of States of Jersey • Carrying out and recording of site inspections, sampling, testing, and monitoring
Principal Shift Operator	• Maintain site diary • overhead crane operator • Operation of all process elements of the plant • Recording visitors in and out of the site • Recording or Health & Safety and environmental incidents • Maintain Site Health & Safety and Accident Book • Notifying site visitors of Health & Safety on site • Maintain Site Environmental Protection and Incident Book
Maintenance Technicians	• Carrying out of maintenance of plant in accordance with the O&M manuals

Site operative	Roles and responsibilities
	• Monitoring of condition and performance of plant
Technical Operator	• Carrying out of minor maintenance of plant in accordance with the O&M manuals • Monitoring of condition and performance of plant
Plant Operators BWF Driver	• Waste Inspection • Unloading and sorting of waste • Loading of shredder • Clearing of tipping bays • Loading clinical waste high temperature disposal equipment. • Loading clinical waste pretreatment equipment.

The site is supervised by the Principal Shift Operator who is fully conversant with the requirements of the Working Plan and responsible for maintaining the site diary.

All accidents are reported on the T&TS accident reporting form and sent to the T&TS Health & Safety section which holds the master copies of all accident reports and subsequent investigations. The Health & Safety section will report any accidents which by the very nature or severity require the notification of the Health & Safety Inspectorate.

A site diary is maintained which lists all records of pollution monitoring or incidents. Pollution incidents are reported to the Environmental Protection Department of the States of Jersey.

The Facility Manager is responsible for the training of the site operatives in those elements of the Working Plan, and Site Licence conditions set by the Environmental Protection Department that are relevant to their roles and responsibilities. All site staff are made aware of their responsibilities under health and safety legislation, quality control and pollution control.

A copy of the Site Licence and Working Plan is held in the Facility Manager's office at the plant. Ref WP/7.1: Security and availability of records.

3.5 WP/1.12: Notification of commencement, cessation and recommencement of waste handling operations

No specified waste management operation(s) is to be carried out until at least seven (7) days prior notice in writing has been given to the Environmental Protection Department of the States of Jersey.

In the event that the site ceases receiving wastes for longer than 21 days then T&TS will, within 7 days following the elapse of that time, inform the Environmental Protection Department of the States of Jersey in writing of the date of cessation and of the planned date of recommencement. This shall include details for the storage of waste for the period that waste will not be received at the Plant.

In the event that it is intended that the site shall recommence receiving wastes sooner that the notified date then the Transport and Technical Services Department (the Licence Holder) will give the Environmental Protection Department not less than 7 days prior notice in writing.

3.6 WP/2. [210]: Engineered site containment and drainage system

The elements comprising the primary engineered site containment and drainage system are outlined below.

Site Drainage	Primary Engineered Prevention
Water from delivered / putrescible waste stored within the bunker will be contained by the concrete structure. There is no drainage. Liquid will be absorbed by shredded waste prior to be combusted in the boilers.	No discharge.
Drainage from hardstandings. Drainage from hardstanding areas with the potential for run off to become contamination are drained to the waste water treatment tank. This includes: • The areas underneath the lime, carbon and APC residue silos; • The hardstanding adjacent to the silos where loading and unloading takes place; • The area within, and adjacent to the ash hall where bottom ash is stored and transferred. The waste water system discharges to the local foul sewer.	Discharged to foul sewer
All chemical stores are bunded with a capacity of not less than 110% of the total volume of the stored tanks. This includes: • Boiler water chemicals (oxygen scavenger, corrosion inhibitor and scale inhibitor); • Waste water treatment chemicals (neutralising agent).	Storage areas for site chemicals in lockable impermeable bunds
Waste reception and process areas are drained to waste water tank and either recycled for use in the ash dischargers or discharged to foul sewer.	Discharged to foul sewer
Foul drainage from staff facilities	Discharged to foul sewer
There is no fuel storage on site	No discharge
Recyclable material skips	No discharge
Hazardous waste storage	Positioned within impermeable bund.
Surface water drainage form clinical waste unloading area	Discharged to foul sewer
Drainage from refrigerated clinical waste stores	Discharged to foul sewer
Drainage from tipping hall atrium	Discharged to foul sewer

The drainage system is inspected in accordance with a specified maintenance schedule and recorded in the site diary (see WP/5. [500]: Waste water quality monitoring and reporting).

3.7 WP/2. [350]: Surface water management systems

The elements comprising the primary engineered surface water management systems are outlined below.

Site Drainage	Primary Engineered Prevention
Uncontaminated run off from the EfW roof is collected in the rainwater tank and recycled within the grey water system for flushing of WCs and urinals. Excess rainwater is discharged to the culvert via Class I separator	Discharged to culvert.
Uncontaminated run off from the BWF roof is collected is the general surface water drainage system and is discharged to the culvert via Class I separator	Discharged to culvert.
Drainage from hardstandings uncontaminated runoff from hardstanding areas is collected in the general site drainage system and discharged to culvert via Class I separators.	Discharged to culvert
Drainage from areas of hardstanding where there is a potential for contamination including bottom ash loading area, APC residue loading area, APC reagent loading area and clinical waste unloading area are discharged to foul sewer via the waste water treatment tank	Discharged to foul sewer

Areas of hardstanding on the site are impermeable to prevent uncontrolled percolation of surface water to groundwater.

The surface water management system is inspected in accordance with a specified maintenance schedule and recorded in the site diary (see WP/5. [500]: Surface water quality monitoring and reporting).

3.8 WP/2. [403]: Removal of residual wastes from site

The residual wastes from this waste facility include:

- Bottom ash from the combustion chamber
- Clinical waste ash from high temperature incineration of clinical waste (contains sharps)
- Clinical waste suitably packaged in sealed containers
- Ferrous metal recycled from bottom ash
- Flue Gas Treatment residues (APC residues)
- Wastes generated in offices or staff facilities
- Drums, containers and packaging from consumables

- Recyclable materials separated from bulky waste
- Wastes generated from cleaning of the plant, spills etc

For the purposes of this Working Plan, wastes generated on site are considered as residual wastes.

Hazardous waste received on site will be stored in a bunded area and transported off site using a consignment note system.

Residual wastes and those wastes generated on site would need to be removed from site for disposal elsewhere. These are specified in the table below.

Residual or Site Generated Waste	Temporary Storage and Disposal Route
Bottom ash	Recycled as secondary aggregate where quality standards for leachable compounds are achieved. Alternatively, bottom ash will be disposed of in sealed pits at La Collette
Clinical waste ash	Disposed of at a suitably licensed facility
Clinical waste	Stored in containers within the refrigerated store and transferred off site for disposal at a suitably licensed facility.
APC residue	Classified as a hazardous waste. Disposal in sealed pits at La Collette
Ferrous Metal	Transferred in skips to recycling facility
Office Waste - paper	Stored in bags. Confidential documents shredded. Transferred to recycling facility or disposed of into the EfW process
Recyclable materials separated from bulky waste	Transferred in skips to recycling facility
Used absorbent material from site spills	Provided acceptable under the license, collected in site vacuum system, stored in bags and transferred for disposal within the disposal facility. Otherwise disposed of through hazardous waste management system.
Drums and containers from site chemicals	Re-used via workshop services or BWF processed
Packaging	Disposed of into EfW process
Hazardous Waste	Stored in containers within bund and transferred off site for disposal using a consignment note system.

3.9 WP/3.1: Provision of site identification board

A site notice board is located at the site entrance. This notice board would display the following information.

- Site and facility name and address

- Licence Holder name (States of Jersey Transport and Technical Services Department) and Licence numbers
- Operator name (States of Jersey Transport and Technical Services Department)
- Operating / opening hours
- Contact name and details of States of Jersey Environmental Protection Department who are the regulator
- Statement that this is a site licensed by States of Jersey Environmental Protection Department
- Emergency contact number
- Safety information
- CCTV notice

The site notice board is inspected regularly and its condition recorded in the site diary.

3.10 WP/3.2: Site security

The operational site is secured with security gate and night gates at entrance and exits to the site.

The site entrance is gated to the same height as the security fencing and is lockable. Opening hours are signposted. The responsibility for securing the gate lies with the Principal Shift Operator or nominated representative.

The site security is monitored by EFW shift staff out of normal office hours. Copies of all site keys are held at a defined location.

The site is monitored by CCTV.

Security systems are inspected on a regular basis and inspections recorded in the site diary.

3.11 WP/4. [140]: Control of mud and debris

Refer to Generic Risk Assessment – Section 4; Table 9: Wastes or waste operations which are likely to give rise to mud or debris.

There should be no debris on the road as this issue is controlled by the appropriate legislation as applied by Driver and Vehicle Standards Department of the States of Jersey.

3.12 WP/4. [151]: Potentially polluting leaks and spillages

Refer to Generic Risk Assessment – Section 4; Table 4: Solid wastes which are likely to produce contaminated or polluting run-off.

The engineered drainage system is designed so that spillages are contained within areas which drain to the waste water system and not released to groundwater.

All drums for chemicals for use on site are clearly labelled and stored in a bund to contain any spillages. Refer to WP/2. [350]: Surface water management systems.

Spill absorbent materials are available on site. Spills are cleaned up immediately with sand or the proprietary absorbents. Used absorbent material is collected within the plant's vacuum system and stored separately from the incoming waste and either disposed of within the site if acceptable under the license, or removed from site for disposal at a suitable licensed facility Refer to WP/2. [403]: Removal of residual wastes from site.

Site operatives are trained in dealing with spillages including the health and safety implications. PPE is available for site operatives dealing with spillages.

Hazardous waste and potentially hazardous materials will be stored in containers and within a bunded area.

The light fuel oil (LFO) storage tank shall be double bunded and include leak detection, the associated forwarding pumps will be located within a bunded area.

The clinical waste bin storage and unloading area shall drain to the foul sewer.

Spills and remedial action taken is recorded in the site diary.

3.13 WP/4. [153]: Fires on site

Refer to Generic Risk Assessment – Section 4; Table 6: Combustible wastes (such as wood) which are capable of self-sustained burning in air, once ignited.

This section refers to non controlled fires on site. Controlled combustion is part of the Energy from Waste process.

Fire walls, fire detection and suitable fire fighting equipment are incorporated into the design.

There is no smoking within the licensed facility; notices to inform site visitors and operatives are placed at the EfW reception and around the plant.

Fire fighting equipment is available on site and site operatives are trained in their safe use for small fires. Bunkers are equipped with fire detection equipment and fitted with water cannon to allow fires to be put out in a contained manner In the event of a larger fire, emergency services should be called.

Run off from fire fighting water and wash down is contained within the site by an engineered drainage system. [Refer to WP/2. [210]: Engineered site containment and drainage system.] Drainage from fire fighting wash down water, which may be contaminated, is drained to the waste water tank.

Fires on site are recorded in the site diary and notified to the Environmental Protection Department of the States of Jersey.

Emergency contact numbers are displayed in the EfW control room.

3.14 WP/4. [210]: Waste acceptance and control systems and procedures

Refer to Generic Risk Assessment – Section 4; Table 11: Hazardous Waste

Incoming MSW and non-hazardous clinical waste will be monitored at four stages during the waste reception process:

- At the weighbridge by the control room operators (via CCTV camera) where a proximity card has been provided to a regular customer, or by the EfW operators where a new or occasional customer wishes to deliver waste;
- Within the EfW and BWF tipping aprons as waste is deposited waste will be monitored by the plant operators;
- By the crane operator during mixing and prior to the waste being loaded into the feed hoppers.
- Bulky waste will be monitored by the Bulky Waste operators prior to waste being shredded and transferred by conveyor to the EfW bunker.

Unacceptable waste will be separated from the rest of the wastes and quarantined in the EfW tipping hall or BWF until an alternative appropriate means of disposal is identified.

Incoming hazardous clinical waste shall have been segregated into designated bins and containers (identified by coloured labelling) by the waste producer prior to forwarding for disposal. Operational staff shall use these bin designations to determine the waste category and ensure that it is stored and processed appropriately and the waste will be monitored at two stages during its reception and processing:

- at the clinical waste unloading area by the operators where the deliveries shall be weighed and logged into the clinical waste tracking system;
- during storage when the clinical waste containers and bins are forwarded to or removed from the refrigerated stores.

Unacceptable clinical waste will be separated from the rest of the wastes and quarantined in the refrigerated store until an alternative appropriate means of disposal is identified.

Waste which is considered to be hazardous will be separated into specific storage containers within the hazardous waste storage area. Drainage from these quarantine and hazardous waste storage areas will be to the bunker or waste water tank respectively.

A daily report shall be completed by the EfW and BWF operators detailing any customers and confirming loads which have been quarantined, rejected or directed elsewhere due to the waste having unacceptable waste characteristics.

Wastes which are identified as unsuitable for processing in the EfW plant shall be removed to an appropriate disposal route. Where required, Waste Consignment Notes shall be retained for unsuitable waste transferred from the site for disposal.

Where any customer delivers unacceptable wastes to the plant, a record of these wastes will be entered into the weighbridge system by the operators prior to the vehicle being weighed out at the exit from the site.

3.15 WP/4. [220]: Waste sampling and testing

Refer to WP/1.2: Permitted wastes

Refer to WP/4. [210]: Waste acceptance and control systems and procedures

Waste compliance testing is carried out according to WPS/V1 Working Plan Guidance 1999. The main purpose of the compliance testing is to:

- Identify if incoming waste complies with the licence criteria
- Screen out non compliant waste that may compromise the combustion process or lead to a hazard to site operatives.

Reporting results - Refer to WP/7. [500]: Periodic reporting of environmental performance.

Correct segregation of clinical waste at source by the producer is vital to ensuring that it is processed correctly at La Collette. Due to the hazards associated with handling clinical waste, the contents of the clinical waste bins shall not be sampled following delivery to La Collette to verify producer segregation practices. The producer will instead be required to audit segregation practices at source as part of its waste handling procedure and shall provide evidence of this audit to La Collette.

3.16 WP/4. [230]: Waste quantity measurement systems

Electronic records are kept of the quantity of incoming waste on the weighbridge and clinical waste logging systems. Records are made for rejected wastes. The record of rejected deliveries is kept in the Control Room of the plant so that it can be updated by the plant operators.

3.17 WP/4. [301]: Storage of accepted and rejected wastes

Accepted wastes are stored in the EfW bunker and the BWF.

Accepted hazardous clinical wastes are stored in the refrigerated store and in the tipping hall atrium prior to processing. All hazardous clinical waste delivered to La Collette shall be stored and handled in the bins and containers they have been delivered in and the contents of the bins shall not be handled by the operators.

Rejected wastes which are not detected at the weighbridge are separated from waste and stored in separated quarantine areas on the EfW tipping apron, in skips adjacent to the BWF (as described in drawing 0871-096) or in a quarantined area of the refrigerated store for rejected clinical wastes. The use of a quarantine area stops rejected wastes from being accidentally mixed with accepted wastes. Quarantined waste is removed from the site within 14 days and notified to the Regulator to agree instructions to relocate to an alternative licensed waste facility.

3.18 WP/4. [410]: Energy from waste plant – plant, equipment and procedures

The Working Plan will include an inventory of static and mobile plant and equipment contained on site together with a description of its purpose and specification. This will be generated from the asset register from the Planned and Preventative Maintenance System for the plant.

A suite of Standard Operating Procedures for inspection and monitoring will be completed prior to the commissioning of the plant. These will be based on the O&M manuals for the plant. It is considered that the suite of procedures will include the following:

1. Inspection and acceptance of incoming waste
2. Waste quantity measurement
3. Monitoring of waste
4. Quarantine of rejected waste
5. Storage of hazardous waste
6. Consignment of hazardous waste from the site
7. Control of mud and debris
8. Monitoring and control of odour
9. Monitoring and control of litter
10. Monitoring and control of noise
11. Monitoring and control of pests
12. Monitoring and control of scavengers
13. Monitoring and control of dust
14. Delivery and transfer of lime
15. Delivery and transfer of activated carbon
16. Storage of residual waste
17. Monitoring and analysis of Total Organic Compounds in bottom ash
18. Disposal of bottom ash
19. Transfer and discharge of APC residue
20. Spillage control
21. Inspection and cleaning of waste water tank, drainage and containment
22. Monitoring of effluent quality from waste water tank
23. Inspection and cleaning of interceptors

24. Monitoring of water quality from site drainage
25. Monitoring cooling water quality and temperatures
26. Monitoring and reporting of emissions to atmosphere
27. Maintaining and reporting of Continuous Emissions Monitoring System fault
28. Fire hazard
29. Isolation of drainage in event of external fire
30. Record keeping
31. Reporting
32. Inspection and acceptance of incoming clinical waste
33. Storage and monitoring of clinical waste
34. Disposal of clinical waste ash
35. Clinical waste spillage control
36. Monitoring of pretreatment process
37. Qualification of the pretreatment process

3.19 WP/5.[500]: Surface water monitoring and reporting

Refer to Generic Risk Assessment – Section 4; Table 4: Solid wastes which are likely to produce contaminated or polluting runoff

Refer to WP/2. [210]: Engineered site containment and drainage system

Refer to WP/4. [151]: Potentially polluting leaks and spillages

A site operative will routinely inspect interceptors for the build up of silt and oil and take samples for analysis. Samples will be analysed for TOC to monitor the performance of the interceptor. Records will be maintained at site in accordance with the Standard Operating Procedures.

3.20 WP/6. [010]: Control, monitoring and reporting of dusts, fibres and particulates

Refer to Generic Risk Assessment– Section 4; Table 1: Solid wastes which are likely to give rise to significant amounts of dusts, fibres, powders or particulates.

Dust, fibber and particulate generating activities and the waste management operation procedures are summarised in the table below.

Dust Generating Activity	Designed Control Measures and Procedures
Transport of waste to site	Enclosed dustcarts and commercial vehicles to prevent debris escape during transport
Potentially dusty waste	Control measures are applied to potentially dust waste. A separate risk assessment & method statement applies
Unloading of waste	Unloading enclosed within the EfW building and BWF. Automatic doors will close prior to unloading to prevent odour and dust escape. EfW tipping apron under negative pressure. Air drawn into combustion process.
Release of particulate matter emissions from	Flue stack emissions filtration Release of flue gases to prescribed limits as defined by

combustion of waste	the Waste incineration Directive from the JEC power station chimney adjacent to the Plant.
Release of dust from APC (Air Pollution Control) residues from flue gas treatment plant	Stored in APC residue silo prior to mixing and disposal of site at a licensed disposal facility. APC residues are discharged via humidifying screw to avoid the release of dry dust from lorries.
Dust from shredding of waste	Dust suppression system above shredder bed to restrict release of dust.

All observations on the levels of dust at site and the effectiveness of dust control measures are recorded in the site diary.

Emissions of particulate matter from the combustion process are monitored continuously and reported monthly to the Environment Regulator. Records and copies of reports will be kept on site in the Facility Manager's office.

Reporting of monitoring is in accordance with WP/7. [500]: Periodic reporting of environmental performance.

3.21 WP/6. [020]: Control of odours

Refer to Generic Risk Assessment– Section 4; Table 2: Solid wastes which are likely to give rise to harmful or offensive odours.

Odour generating activities and the waste management operation procedures are summarised in the table below.

Odour Generating Activity	Designed Control Measures and Procedures
Transport of waste to site	the majority of putrescible waste will be received in Parish dust carts which are enclosed. Vehicles carrying other putrescible or odorous material will be sheeted.
Unloading of waste	Unloading enclosed within the EfW building Clinical waste delivered and unloaded in sealed containers Building will operate under slight negative pressure Roof vent remain closed during tipping Forced draught fans located above unloading bays
Processing of waste	EfW waste handling process occurs within enclosed building Clinical waste handling processing occurs within enclosed building Building will operate under slight negative pressure Roof vents remain closed during tipping Forced draught fans located above unloading bays
Odour from storage of waste	Enclosed in EfW building Forced draught fans above waste tipping bays Hazardous clinical waste stored in a store refrigerated

Odour Generating Activity	Designed Control Measures and Procedures
	between 3°C and 5°C to mitigate the generation of odours
Odour from storage of sewage sludge	Enclosed concrete storage tank inside EfW building Air from sludge storage facility directed to forced draught fan intakes above waste tipping bays Air from sludge storage facility directed to carbon filter when boilers are not operating
Odour from handling and storage of ash	Enclosed ash hall and APC residue silo Clinical waste incinerator ash unloading in the enclosed tipping hall atrium

The primary odour control systems within the EfW plant is the forced draught fans located above the tipping apron. These draw air from the waste reception hall into the furnace to feed the combustion process and therefore create a slight negative pressure which prevents odours and dusts from escaping from the building.

Recording of monitoring is agreed with Waste Regulation and kept in the site diary. Reporting of monitoring is in accordance with WP/7. [500]: Periodic reporting of environmental performance.

3.22 WP/6. [030]: Control and monitoring of noise

Refer to Generic Risk Assessment– Appendix A; Table 10: Noise arising from deposit of material or operation of plant.

The site design and layout is designed to minimise noise impact.

Noise Generating Activity	Designed Control Measures and Procedures
Continuous operational noise	In enclosed building with doors closed. Building is designed to meet noise levels prescribed in Planning Conditions. Equipment is designed to meet limits prescribed in the EU Noise at Work Directive 2003/10/EC. Equipment is to be operated and maintained in accordance with the O&M manuals to avoid excessive noise generation.
Transport to and from site	Opening hours of site WP/1.3: Hours of operation

Noise monitoring is carried out by TTS Health & safety section on an annual basis at predetermined locations within the building.

Recording of monitoring is kept by the TTS Health & safety section. Reporting of monitoring is in accordance with WP/7. [500]: Periodic reporting of Environmental performance.

3.23 WP/6. [040]: Control of pests

Refer to Generic Risk Assessment– Appendix A; Table 7: Wastes which are likely to attract pests.

Site operatives monitor the waste handling operations on a regular basis to check for evidence of pests.

A pest standard operating procedure is in place whereby an accredited professional pest controller makes regular visits to site and taking necessary action.

Recording of monitoring is kept in the site diary. Reporting of monitoring is in accordance with WP/7. [500]: Periodic reporting of environmental performance.

3.24 WP/6. [041]: Control of scavenging birds and other scavengers

Refer to Generic Risk Assessment– Appendix A; Table 8: Wastes which are likely to attract scavengers.

Site operatives would monitor the waste handling operations on a regular basis to check for evidence of scavengers.

The primary control system is that the entire waste handling process is enclosed within a building and this would reduce the risk from scavenging birds.

A pest standard operating procedure is in place whereby an accredited professional pest controller makes regular visits to site.

Site operatives are briefed on the Health & Safety Implications of vermin borne diseases such as Weil's disease.

Recording of monitoring is kept in the site diary. Reporting of monitoring is in accordance with WP/7. [500]: Periodic reporting of environmental performance.

3.25 WP/6. [050]: Control of litter

Refer to Generic Risk Assessment– Appendix A; Table 3: Light wastes and other wastes, which are likely to give rise to significant quantities of litter.

The enclosed EfW waste handling process means that the residual risk of litter is low.

The Shift Manager is responsible for organising litter collection by site operatives at the site boundary and nearby vicinity if it is obvious that it is site generated litter.

Collected litter is disposed of into the EfW waste stream.

Litter monitoring is carried out on a regular basis during the site walkover inspection.

Recording of monitoring is kept in the site diary. Reporting of monitoring is in accordance with WP/7. [500]: Periodic reporting of environmental performance.

3.26 WP/7.1: Security and availability of records

A copy of the site's Waste Management Licence and the Working Plan is kept on site at the Facility Manager's office. Records are held in a secure office with the Manager responsible for access to these records.

Duplicate records are held off site at South Hill & La Collette electronically stored backups. Records are kept for a period specified by the Environment Regulator.

All records required are kept under the conditions of the site licence and are available for inspection by an authorised officer of the Environment Regulator.

3.27 WP/7. [300]: Records of waste movements

A record is kept of all waste loads entering the site.

Records of waste movements (WP/7. [300]: Records of waste movements) are retained electronically by the weighbridge and the clinical waste logging systems. Duplicate records are held off site as electronically backups.

A consignment note system shall be used for clinical waste deliveries to La Collette which shall be completed by the waste producer on an annual basis. The clinical waste consignment note shall list the clinical waste types the producers generate for the coming year.

All records required to be kept under the conditions of the Waste Management Licence are available for inspection by an authorised officer of the Environment Regulator.

A consignment notes system will be used for hazardous waste transfers offsite. Copies of consignment notes will be retained at site.

3.28 WP/7. [400]: Site diary

The Principal Shift Operator is responsible for maintaining the site diary. This is held on site in the control room and be completed with 24 hours of the relevant event.

All records required to be kept under the conditions of the site licence are available for inspection by an authorised officer of the Environment Regulator.

This site diary contains a record of events in accordance with the conditions of the Site Licence. The site diary is a record of the following:

Any construction / demolition work on site

Details of maintenance, breakdowns or unusual operations

Details of any exceedances of prescribed emission limits

Details of CEMS failures or other monitoring equipment related to Discharge Consent or Trade Effluent Consent

H&S accidents or incidents

Environmental and/or pollution incidents and remedial actions

Problems with waste received and action taken

Site inspections and remedial actions taken by the operator

Complaints about site operations and actions taken

Timed in and out attendance by technically competent management attendance on site

Dispatch of requested records to the Environment Regulator

Site conditions

Spillages

Severe weather conditions and actions taken.

Process details of clinical waste pretreatment process

3.29 WP/7. [500]: Periodic reporting of environmental performance

Conditions in the site's Waste Management Licence, Discharge Consent and Trade Effluent Consent establish the reporting requirements to the Environment Regulator.

3.30 Inspection Schedule

Inspection of plant and machinery will be inspected in accordance with the O&M manuals and the Planned and Preventative Maintenance System implemented at the plant.

Other inspections at the plant have been set out in the table below:

Frequency	Items Inspected
Daily	• Monitor waste for unacceptable waste types • Inspection of CEMS system • Inspection of boiler gauge glasses • Visual litter inspection at site boundary • Visual dust inspection at site boundary • Access road inspection for debris and mud
Weekly	• Monitor waste handling for pest presence • Monitor waste handling for vermin presence
Monthly	• Inspection of internal and external drainage system and silt traps • Health and safety equipment • Environmental (spillage) control equipment
Bi-Annually	• Independent testing of emissions to atmosphere • Inspection of interceptors • Sampling of interceptor outfall • Sampling and analysis of sea water discharge for hydrocarbons
Annually	• Personal exposure - dust monitoring

4 RISK ASSESSMENT

Table 1: Solid wastes which are likely to give rise to significant amounts of dusts, fibres, powders or particulates		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of airborne dusts, fibres, powders or particulates	Affected by windy conditions. Release to air of: • dusts from waste unloading • emissions from the combustion process	Local residents within 200m radius Staff operating site Local ecosystem habitats
Simple Generic Risk Assessment		
Respiratory risk to local residents of dusty conditions Visual impact of dusty conditions affecting local community Respiratory risk to staff operating site during operations Smothering effect of dust on local plant communities / habitats Risk of explosion should high levels of particulate dust be present		
Primary environmental risk management provision		**Reference section of Working Plan & other docs.**
Design EfW process within an in building system Flue gas particulate filtration Air circulation controls within building Entrance / exit air control system ***Waste acceptance/ Site operation*** Would only accept licensed waste described in WP/1.2. Waste arriving that contains significant levels of soil is refused		WP/2. [210]: Engineered site containment and drainage system WP/6. [010]: Control, monitoring and reporting of dusts, fibres and particulates WP/4. [210]: Waste acceptance and control systems and procedures WP/1.2: Permitted wastes
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems		**Reference section of Working Plan & other docs.**
Checking procedure on daily basis by Principal Shift Operator Provision of PPE for site staff during turning operations		WP/6. [010]: Control, monitoring and reporting of dusts, fibres and particulates Site Health and Safety Plan Site Diary

Table 2 : Wastes which are likely to give rise to harmful or offensive odours		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of odours from delivered waste	Aerial release of odours which may be offensive or harmful beyond the site boundary	Local residents
Simple Generic Risk Assessment		
Odour nuisance risk to local residents and community		
Primary environmental risk management provision	**Reference section of Working Plan & other docs.**	
Design EfW process within a building Air circulation controls within building Entrance / exit air control system Refrigerated hazardous clinical waste stores ***Waste acceptance/ Site operation*** Would only accept waste described in WP/1.2	WP/2. [210]: Engineered site containment and drainage system WP/4. [210]: Waste acceptance and control systems and procedures WP/1.2: Permitted wastes	
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems	**Reference section of Working Plan & other docs.**	
Checking procedure on regular basis by Principal Shift Operator Specified locations for olfactory test	WP/6. [020]: Control of odours Site Health and Safety Plan Site Diary	

Table 3: Light wastes and other wastes, which are likely to give rise to significant quantities of litter		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of wind borne litter	Release of litter via atmosphere beyond the site boundary	Local residents and community Local habitats Agricultural animals
Simple Generic Risk Assessment		
Nuisance to local residents Accident risk of wind borne litter on local road network Ingestion and/ or entanglement of agricultural animals and wildlife		
Primary environmental risk management provision	**Reference section of Working Plan & other docs.**	
Design All EfW processes within an enclosed building system ***Waste acceptance/ Site operation*** Only accept waste described in WP/1.2. Unloading activities in building Rejected wastes in covered skips	WP/2. [210]: Engineered site containment and drainage system WP/4. [210]: Waste acceptance and control systems and procedures WP/1.2: Permitted wastes WP/4. [301: Storage of [specified wastes]	
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems	**Reference section of Working Plan & other docs.**	
Checking procedure on regular basis by Principal Shift Operator Litter control action plan	Site Diary WP/6. [050]: Control of litter	

Table 4: Solid wastes which are likely to produce contaminated or polluting run-off		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of generation of contaminated run-off	Release of contaminated site drainage to the environment	Surface waters - contamination with hardstanding run-off
Simple Generic Risk Assessment		
Site is located adjacent to the RAMSAR site. ***Contaminated surface drainage*** from: Wash down of hardstandings and vehicles Spills such as diesel, ash, APC residues, clinical waste APC reagents, mud and grit Leaks from drums / containers – during filling, emptying and accidental spillages from damages		
Primary environmental risk management provision	**Reference section of Working Plan & other docs.**	
Prevention of pollution by design measures Combination of clean / contaminated water on site Impermeable hardstandings draining to Ash pumping station tank & discharging to sewage treatment works (subject to Trade Effluent Consent) ***Operation*** Effluent is discharge to foul drainage	WP/2. [210]: Engineered site containment and drainage system	
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems	**Reference section of Working Plan & other docs.**	
Visual inspection of engineered drainage – interceptors / manholes Samples to be tested by quality assured laboratory – to be agreed	Site Diary WP/5. [500]: Surface water quality monitoring and reporting WP/7. [500]: Periodic reporting of environmental performance	

Table 5: Solid wastes which are likely to give rise to harmful emissions		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of airborne emissions from the waste handling process	Aerial emissions from combustion process to the environment	Local residents Staff operating site – potential health risk
Simple Generic Risk Assessment		
As the working site boundary lies within 1000 m of a workplace or dwelling this generic risk assessment does not apply. See the Health Impact Assessment See Air Dispersion modelling in Environmental Statement		
Primary environmental risk management provision		**Reference section of Working Plan & other docs.**
Design EfW process within a building Flue stack emissions control systems Air circulation controls within building Entrance / exit air control system ***Waste acceptance/ Site operation*** Only accept waste described in WP/1.2		Health Impact Assessment WP/2. [210]: Engineered site containment and drainage system WP/4. [210]: Waste acceptance and control systems and procedures WP/1.2: Permitted wastes
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems		**Reference section of Working Plan & other docs.**
Checking procedure on regular basis by Principal Shift Operator Provision of PPE for site staff during waste handling operations		Site Health and Safety Plan Site Diary

Table 6: Combustible wastes (such as wood) which are capable of self-sustained burning in air, once ignited		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of deliberate or accidental combustion of wastes (with the exception of the controlled burning of waste in the combustion chamber)	Fire leading to direct damage to infrastructure and polluting releases to the environment	Staff operatives Local residents EfW infrastructure Residential / commercial properties in vicinity Local habitats Coastal waters
Simple Generic Risk Assessment		
Risk of: Deliberately started fires & accidentally started fires from cigarettes Combustion in stored waste Fire from diesel or materials store causing fire in main building		
Primary environmental risk management provision	**Reference section of Working Plan & other docs.**	
Permitted wastes only – hazardous or chemical wastes excluded from site Specified storage precautions for materials Specified handling methods for materials Separation / storage of inflammable chemicals / diesel on site in lockable compounds in separate building On site fire detection and control systems No smoking policy	WP/1.2: Permitted wastes WP/4. [153]: Fires on site WP/2. [350]: Surface water management systems	
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems	**Reference section of Working Plan & other docs.**	
Fire hazard plan with emergency services Fire detection measures Fire fighting equipment held on site Staff training Maintenance and inspection schedule	Site Diary Site Health & Safety Plan WP/4. [153]: Fires on site	

Table 7: Wastes which are likely to attract pests		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of attracting pests (vermin or insects), resulting in infestations of the site	Pest migration from the site to adjacent property via air, land or underground services	Staff operatives Local residents
Simple Generic Risk Assessment		
Risk of insect infestation of waste in loading bays Risk to health and working conditions of site operatives Should there be a pest infestation risk of migration off site causing nuisance to neighbouring properties		
Primary environmental risk management provision	**Reference section of Working Plan & other docs.**	
Energy from waste process within a building Air circulation controls within building Entrance / exit air control system ***Waste acceptance/ Site operation*** Would only accept waste described in WP/1.2	WP/2. [210]: Engineered site containment and drainage system WP/4. [210]: Waste acceptance and control systems and procedures WP/1.2: Permitted wastes WP/4. [301: Storage of [specified wastes]	
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems	**Reference section of Working Plan & other docs.**	
Visual Inspection on a regular basis Pests action plan implemented if detected Approved pesticides applied (type which has minimum risk to staff operatives and environment)	Site Diary WP/6. [040]: Control of pests	

Table 8: Wastes which are likely to attract scavengers		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of attracting scavengers	Deposit of scavenged waste outside the site boundary	Staff operatives Nearby residents Habitats – animals
Simple Generic Risk Assessment		
Potential for attraction of scavengers (primarily rats) and seagulls to transport and unloading of waste Failure of primary controls could lead to scavenging problems		
Primary environmental risk management provision	**Reference section of Working Plan & other docs.**	
EfW process within a building Waste delivery wagons is covered Would only accept waste described in WP/1.2 Throughput of waste maintained and therefore reduce risk of vermin attracted to standing piles of waste	WP/2. [210]: Engineered site containment and drainage system WP/4. [210]: Waste acceptance and control systems and procedures WP/1.2: Permitted wastes WP/3.2: Site security	
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems	**Reference section of Working Plan & other docs.**	
Visual Inspection on a regular basis Annual contract with accredited professional pest controller	Site Diary WP/6. [041]: Control of scavenging birds/vermin and other scavengers	

Table 9: Wastes which are likely to give rise to mud or debris		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of mud and debris being dropped on route to EfW plant Risk of waste material dropped when being transported off site	Vehicles accessing and leaving site	Local residents – visual impact and nuisance of muddy roads Road users – danger of debris causing accidents or vehicle damage
Simple Generic Risk Assessment		
Vehicular access would all be on impermeable hardstanding areas. Mud and debris are more likely to be from: Vehicles delivering waste to the site Loading of bottom ash onto transport vehicles for transport to disposal site Mud and debris on local roads could cause nuisance to local residents and be a danger to road users		
Primary environmental risk management provision	**Reference section of Working Plan & other docs.**	
Site machinery for moving waste to remain on site Bottom ash loading procedure to minimise spills	WP/2. [403]: Removal of residual wastes from site WP/4. [140]: Control of mud and debris WP/2. [210]: Engineered site containment and drainage system	
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems	**Reference section of Working Plan & other docs.**	
Monitoring and inspection procedure on a regular basis Cleaning of local roads with road sweeper on a regular basis	Site Diary WP/4. [140]: Control of mud and debris	

Table 10: Noise arising from deposit of material or operation of plant		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of noise causing harm to human health or detriment to the amenity	Noise transmission beyond the site boundary Noise transmission to site operatives	Local residents Site operatives
Simple Generic Risk Assessment		
Noise generating processes at the EfW include: Vehicles accessing and leaving the site Vehicle reverse warnings at loading / unloading bays Air circulation control fans Generators Likely to be a general background 'hum' outside opening hours		
Primary environmental risk management provision	**Reference section of Working Plan & other docs.**	
EfW process within a building. This should reduce the impact of noise at the site boundary Operating hours Compliance with requirements of Environmental Protection Department and Environmental Health Officer	WP/2. [210]: Engineered site containment and drainage system WP/1.3: Hours of operation	
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems	**Reference section of Working Plan & other docs.**	
Noise monitoring on an annual basis	Site Diary WP/7. [500]: Periodic reporting of environmental performance	

Table 11: Hazardous Waste		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of hazardous waste leaking to site/off site	Release of hazardous wastes due to failure of containment via atmosphere, ground or water.	Local residents and community Local habitats
Simple Generic Risk Assessment		
Risk to health of operators and local residents Risk of damage to local ecology and wildlife		
Primary environmental risk management provision	**Reference section of Working Plan & other docs.**	
Design Inspection to allow separation of material from normal operation Minimal storage on site – wastes routinely removed for disposal. Hazardous waste stored within suitable container within separated bunded area. Hazardous clinical waste shall be stored in sealed containers and bins. The operator is not required to remove the clinical waste from the delivered containers during processing. Hazardous clinical waste to be handled and stored in areas with foul water drainage to manage potential spills. ***Waste acceptance/ Site operation*** Only accept waste described in WP/1.2. Checks of waste received	WP/1.2: Permitted wastes WP/2. [210]: Engineered site containment and drainage system WP/2. [350]: Surface water management systems WP/4. [210]: Waste acceptance and control systems and procedures WP/4. [301: Storage of [specified wastes]	
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems	**Reference section of Working Plan & other docs.**	
Checking procedure on regular basis by Principal Shift Operator	Site Diary	

Table 12: Bottom Ash Handling		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of contaminated water leaching from site	Release of ash water leaving site via ground.	Local ecology
Risk of dust	Release of airborne dust	Operators / local residents
Risk of odours	Release of airborne odours	Operators / local residents
Simple Generic Risk Assessment		
Risk of damage to local ecology and wildlife Risk to health of operators and local residents		
Primary environmental risk management provision	**Reference section of Working Plan & other docs.**	
Design Engineered drainage system in storage and loading areas Enclosed storage area Use of covered skips Humidifying screw discharge ***Site operation*** Operation in accordance with Standard Operating Procedure Wetting of residue during loading to avoid release of dust Sheeting up of lorries	WP/2. [210]: Engineered site containment and drainage system	
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems	**Reference section of Working Plan & other docs.**	
Checking procedure and maintenance of equipment on regular basis by Principal Shift Operator	Site Diary	

Table 13: APC Residue Handling		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of contaminated water leaching from site Risk of odours	Release of APC residue run off leaving site via ground. Release of airborne odours	Local ecology Local Residents
Simple Generic Risk Assessment		
Risk of damage to local ecology and wildlife Risk to health of operators and local residents		
Primary environmental risk management provision	**Reference section of Working Plan & other docs.**	
Design Engineered drainage system in storage and Handling areas Enclosed storage silo. ***Site operation*** Handling (loading) operation in accordance with Standard Operating Procedure	WP/2. [210]: Engineered site containment and drainage system	
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems	**Reference section of Working Plan & other docs.**	
Checking procedure on regular basis by Principal Shift Operator	Site Diary	

Table 14: APC Reagent Handling		
Risk phrases may include one or more of the following:	**Hazardous event & pathway**	**Receptors or 'targets'**
Risk of irritant dust Risk of contaminated run-off	Release of airborne dusts Release of APC reagents entrained in run off leaving site via ground / drainage.	Operators / Local Residents Local ecology
Simple Generic Risk Assessment		
Risk to health of operators and local residents Risk of damage to local ecology and wildlife		
Primary environmental risk management provision	**Reference section of Working Plan & other docs.**	
Design Filters on pneumatic conveying system and silo Engineered drainage system in storage and Handling areas Enclosed storage silo. PPE ***Site operation*** Operation in accordance with Standard Operating Procedure	WP/2. [210]: Engineered site containment and drainage system	
Residual environmental risk management provision to prevent & minimise pollution due to failure of primary systems	**Reference section of Working Plan & other docs.**	
Supervision of supplier personnel during handling (filling) operations Inspection and maintenance of transfer equipment Checking procedure on regular basis by Principal Shift Operator	Site Diary	

5 GLOSSARY

Abbreviation	Full Text
Bottom ash	The incombustible ash residue remaining in the energy recovery plant after the combustibles have been burnt
BS EN ISO 9001:1994	Certification to the internationally recognised quality management system (QMS) standard and verified by external audit
BWF	Bulky Waste Facility
CA	Civic Amenity (household waste recycling centre)
CQAP	Construction Quality Assurance Plan
CCTV	Closed Circuit Television
combustion	Burning or rapid oxidation, accompanied by the release of energy in the form of heat and light
Clinical waste	Waste arisings from healthcare activities, such as: - Domestic and offensive/hygiene waste: waste which may be processed with MSW with out pretreatment; - Hazardous pretreatable clinical waste: waste which following pretreatment may be processed with MSW; and - Hazardous clinical waste: waste which cannot be made safe through pretreatment and must be disposed of though the high temperature disposal stream.
Clinical waste ash	The incombustible ash residue remaining in the high temperature disposal stream after the combustibles has been burnt. This ash may contain sharps and must be disposed of separately from bottom ash.
Clinical waste pretreatment stream	An infectious clinical waste sterilisation process primarily comprising of an autoclave. The sterilised waste product may then be disposed of in the EfW plant.
Commercial waste	Waste from premises used wholly or mainly for the purposes of a trade or business for sport, recreation or entertainment (Section 75(7) of the Environmental Protection Act
design footprint	the actual space on the ground that the scheme occupies
EfW	Energy from Waste
EIA	Environmental Impact Assessment
EWC	The European Waste Catalogue (EWC) classifies waste materials and categorises them according to what they are and how they were produced
Flue gas	The mixture of air and gas resulting from combustion in a burner. It can include nitrogen oxides, carbon oxides, water vapour, sulphur oxides, particles and other chemical pollutants.

Abbreviation	Full Text
	It is subject to extensive treatment prior to venting from the stack.
Ha.	hectare - a unit of measurement of an area of land (10, 000 m2) or 2.471 acres
High temperature disposal stream	An incineration process which disposes of clinical was at high temperature (min. 1,100^{o}C).
Household waste	Waste from domestic premises, caravans, residential homes, educational establishments or premises forming part of a hospital or nursing homes (Section 75 (5) of the Environmental Protection Act 1990). This includes all waste arising within a Waste Collection Authority, collected waste, waste delivered to Civic Amenity sites, and waste brought to recycling centres.
ISO 14001:1996	Certification to ISO 14001 demonstrates that an organisation operates an externally verified Environmental Management System encouraging continual environmental improvement.
particulates	Fine solid particles that remain individually dispersed in gases and stack emissions
PPE	Personal Protective Equipment. Safety devices or safeguards worn by workers to protect against environmental hazards. PPE includes helmets, safety goggles, hearing protectors, face shields, respirators, arm guards, smocks, gloves, and safety boots.
PPG	Pollution Prevention Guidance
sensitive receptor	Generally used in reference to air quality and noise assessments and refers to persons, community or community facility that is significantly effected by the polluting process.
SoJ	States of Jersey
telemetry	An electronic device which transmits specific data (measurements) to a remote site.
UK	United Kingdom
UKAS	The United Kingdom Accreditation Service is the sole national accreditation body recognised by government to assess, against internationally agreed standards, organisations that provide certification, testing, inspection and calibration services.
weighbridge	platform scale flush with a roadway for weighing vehicles at the entrance to a waste facility

5.1 Guidance / Specifications / Codes of Practice / British Standards

WPS/V1 Working plan guidance and specifications. Volume 1: Waste Management Licences. Edition 2 issued 3rd August 1999 which replaces Edition 1 (issued 5th June 1998), Environment Agency

A Practical Guide to Environmental Risk Assessment for Waste Management Facilities – Environmental Policy – Risk and Forecasting Guidance Note No. 25, Environment Agency, November 2000

WM103 Background Notes – preparing a working plan prepared by the Environment Agency

Consolidated European Waste Catalogue (EWC) CONSLEG: 2000DO532 01/01/2002 publ. Office for Official Publications of the European Communities.

HTM 07-01 – Safe Management of Healthcare Waste

RCN Safe Management of Health Care Waste

5.2 Websites

www.gov.je

www.environment-agency.gov.uk

5.3 Appendix A– Key contact addresses

Transport & Technical Services
P.O. Box 412,
States Offices South hill,
St Helier,
JE3 8UY

Telephone:	+44 (0) 1534 445509
Telephone (out of hours)	+44 (0) 1534 725351
Fax:	+44 (0) 1534 445529

E-Mail: tts@gov.je

Web: www.tts@gov.je

5.4 Site location plan

5.5 Site layout – process

5.6 Site layout – engineered containment

5.7 Location of monitoring points

5.8 Location of sensitive receptors

5.9 Objectives