OPERATIONAL SUPPORT

OUTLINE ODOUR MANAGEMENT PLAN

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SITE DETAILS:

Canford EfW CHP Limited

Canford Resource Park,

Arena Way,

Magna Road,

Wimborune,

Poole,

BH21 3BW

Version: Final for Permit Application

Issue date: May 2024

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1. INTRODUCTION

MVV Environment Limited (Applicant), are developing the Canford Energy from Waste Combined Heat and Power (EfW CHP) Facility within the Canford Resource Park, Wimborne, Poole.

The objective of this document is to provide an Outline Odour Management Plan (OMP), detailing the intended provisions to be incorporated into final detailed design and operation of the EfW CHP Facility. The document will be reviewed and finalised following the detailed design stage of the EfW CHP Facility, prior to operation and secured under the Environmental Permit. The Outline OMP is designed to:

- Employ appropriate methods, including monitoring and contingencies, to control and minimise odour pollution;
- Prevent unacceptable odour pollution at all times;
- Reduce the risk of odour releasing incidents or accidents by anticipating them and planning accordingly.

This Outline OMP will form one of a suite of documents managing operational activities at the EfW CHP Facility. It has been drafted in accordance with controls dictated by the company's existing Integrated Management System (IMS), which is certified in accordance with international standards for Environmental, Occupational Health & Safety, Quality and Energy Management.

This document has been drafted with due consideration given to Environment Agency guidance 'H4 Odour Management' and the associated report template supplied by the National Odour Team, to provide a framework for the provision of the Environment Agency's required information.

1.1. Site Description

The EfW CHP Facility will consist of a Schedule 1 installation activity, as defined in the Environmental Permitting Regulations (EPR) and several directly associated activities. These include:

- Single-line waste incineration plant thermally treating non-hazardous residual waste.
- Generation of power with electricity exported to the National Grid and/or private wire customers, with the potential export of heat (in the form of hot water) to nearby consumers.
- Production of incinerator bottom ash (IBA) that will be temporarily stored on-site before being transferred to a suitably licensed waste treatment facility for recycling/disposal.
- Generation of air pollution control residues (APCr) that will be temporarily stored on-site before being transferred to a suitably licensed waste treatment facility for recycling/disposal.

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- Provision for the generation of emergency power using a fuel oil engine in the event of interruption to the off-site electricity supply to the installation and failure of island mode operation.

Table 1.1 lists the Schedule 1 activities, from the EPR, and the Directly Associated Activities (DAA's).

Table 1.1: Scheduled and directly associated activities

Activity Reference	Activity listed in Schedule 1 of the EPR	Description of specified activity	Proposed limits of specified activity
AR1	Section 5.1 Part A(1)(b)	The incineration of non-hazardous waste in a waste incineration plant or waste co-incineration plant with a capacity exceeding 3 tonnes per hour (Line 1).	The incineration of non-hazardous waste including the operation a boiler and auxiliary burner; facilities for the treatment of exhaust gases; on-site facilities for treatment of water; storage and disposal of residues, surface water and waste water; systems for controlling and monitoring incineration operations; and receipt, storage and handling of wastes and raw materials (including fuels).
Directly Associated Activities			
AR3	Electricity generation	The generation of electricity using a steam turbine.	Generation of electricity for use on-site and/or export to the Grid.
AR4	Steam supply	Export of hot water	Provision for hot water to be utilised by other energy users local to the site.
AR5	Emergency combustion plant	Emergency electrical generation in a diesel generator to provide electrical power in the event of an interruption in the off-site electricity supply to the EfW CHP Facility and failure of island mode operation.	From fuel storage to generation of electricity and subsequent use.

The EfW CHP Facility comprises a single-line waste incineration process; waste reception tipping hall, waste reception bunker and waste storage bunker; main thermal treatment process; boiler; turbine hall; on-site facilities for the treatment and/or storage of raw materials; residues; and water; flue gas treatment; chimney; air cooled condenser (ACC); and devices and systems for controlling the operation of the waste incineration plant and recording and monitoring conditions.

The EfW CHP Facility also includes weighbridges; supply systems for water, heating oil and air; emergency fuel oil generator; site fencing and security barriers; external hardstanding areas; transformers, grid connection and switching compound; internal access roads for circulation and parking; drainage systems with oil interceptors and attenuation tanks; offices; workshop; stores and welfare facilities.

As the final detailed design of the EfW CHP Facility has not been completed, the process description and associated parameter values provided in this document are based on an initial specification and will be confirmed during the detailed design process together with the EPC contractor. As such, parameter values quoted in this document should be viewed as indicative/estimated. However, the Environment Agency will be informed of the final detailed design specification prior to commissioning, the Applicant would be willing to accept this requirement as a pre-operational condition of the EP. The EfW CHP Facility will, as a minimum, achieve the minimum performance levels required by the IED and the implementing BAT Conclusions for Waste Incineration.

Whilst centrally located within BCP, the EfW CHP Facility Site is remote from residential and significant public receptors. The EfW CHP Facility Site benefits from mature tree belts on three sides, with the fourth (eastern) side being its boundary with a MBT facility. Immediately to its north-west is White's Pit; originally a sand and gravel quarry. It operated as a landfill site from the 1970s to 2010, being then the main focus of waste disposal in Poole and the surrounding areas. Being capped, the former landfill site forms an artificial hill. A 7MW solar farm and associated hydrogen electrolysis plant was constructed on the landfill site in 2022. The part of the former landfill site closest to the EfW CHP Facility Site is an open air operational inert waste recycling facility, including weighbridges, stockpiles of unprocessed inert waste, a wash plant, stockpiles of recycled aggregates and a concrete batching plant.

To the south and south-west is the open area of Canford Heath, where the land rises to 70m AOD, the highest part of BCP. The EfW CHP Facility Site ground level is currently circa 43m AOD. To the east and south-east, the land undulates, forming wooded areas and fields between the EfW CHP Facility Site and the Bearwood and West Howe residential areas, with the recently completed Canford Paddock residential development +500m distant. To the north-east, beyond the MBT and MRF facilities, which comprise six existing large buildings and open yard areas, is Canford Arena, an open-air events venue which has been used in recent years for car boot sales, concerts, firework displays, and fairs but which has been unused

since before the Covid pandemic. To the north-west of Canford Arena are several sports pitches, then the land drops gently down to the Stour Valley.

Magna Business Park, now partially constructed, occupies land around 500m east of the EfW CHP Facility Site. The Distribution Network Connection (DNC) compound site is at its closest point 10m from the south-west corner of Magna Business Park. Magna Business Park is accessed from Provence Drive, which is also the access from Magna Road to the newly built Canford Paddock housing area. The DNC compound access will also be from Provence Drive, which is an adopted highway.

The EfW CHP Facility would share the existing CRP access via Arena Way to a traffic light-controlled junction on the A341 Magna Road. Magna Road connects via the A349 to the west with the A31 at the Merley Interchange. The A31 is part of the National Roads system operated by National Highways. It forms the strategic highway through BCP and Dorset, linking to the next nearest major urban areas, and motorways, to the west (Dorchester and Weymouth, then Exeter/M5) and east (Southampton/M27 and M3).

The closest Public Rights of Way to the EfW CHP Facility Site is approximately 250m away to its north and east with mature trees, landform, or existing buildings obstructing views towards the EfW CHP Facility Site.

Approximately 100m south of the EfW CHP Facility Site is a small tributary stream, Knighton Stream, which runs in a north-easterly direction for around 1km before it reaches the River Stour.

Adjacent to the south of the EfW CHP Facility Site are a number of ecological designations related to the Canford Heathlands, including the Dorset Heathlands Special Protection Area (SPA), Dorset Heaths Special Area of Conservation (SAC) and Canford Heath Site of Special Scientific Interest (SSSI). In the wider area there are also a number of similar designations, such as part of the Dorset Heathlands Ramsar site 1.6km south-west, the Corfe and Barrow Hills SSSI 2.5km west and the Broadstone Heath Local Nature Reserve (LNR) 1.5km west-south-west.

The wider area is dominated to the north and east by open space and sports pitches, to the west by the adjoining closed landfill site, solar farm and inert waste recycling facility, and to the south primarily by the Canford Heath Nature Reserve. In terms of other large scale industrial and commercial sites, the Nuffield

Industrial Estate is approximately 3km south of the EfW CHP Facility Site and the industrial area at West Howe is 2.1km south-east.

1.2. Maintenance and review of the Outline OMP

MVV manage and operate their facilities with environmental responsibility for individual operations assigned through the site management structure and defined through the Integrated Management System (IMS), which is certified to international standards ISO 9001, ISO 14001, ISO 45001 and ISO 50001. This Outline OMP is one of many operational procedures controlled within the IMS, available electronically on the company cloud storage system to all employees [BAT 01].

The Facility Manager, supported by the Operations/QHSE Manager, is the designated management representative for compliance with the IMS. Responsibilities of staff within the Facility are represented in Table 1.2 below:

Table 1.2 Roles and Responsibilities

Position	Responsibility
Facility Manager	Ensure the safe, compliant and efficient operation of the EfW CHP Facility in accordance with the IMS.
QHSE Manager	Holds responsibility for Quality, Health, Safety and Environmental aspects of the management system for the EfW CHP Facility, ensuring that: • Safe working practices are in place and adhered to. • Required information is submitted to the EA and other regulatory authorities in a timely and accurate manner. • All accidents, incidents, illness, injuries and near misses are recorded on the MVV incident recording software.
Operations Manager	Responsible to the Facility Manager for ensuring the safe, compliant, and efficient operation of the plant, and deputises for the Facility Manager.
Shift Team Leader (STL)	Operates the EfW CHP Facility in a safe, compliant and efficient manner, including: • Monitoring plant performance • Carrying out daily checks, and • Reporting any defects to the Maintenance Manager
Assistant Shift Team Leader (ASTL)	Supports the safe, compliant, and efficient operation of the EfW CHP Facility, under the supervision of the Shift Team Leader.

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Position	Responsibility
Maintenance Manager	Holds site responsibility for the EfW CHP Facility Maintenance processes, including: • Planning and implementation of planned annual maintenance programme • Prioritising and actioning unplanned and ad hoc maintenance, and • Ensuring contractors meet safety, environmental and quality standards
Waste Acceptance Operative	Safe, compliant, and efficient operation of the weighbridge and waste reception tipping hall, including: • Ensuring delivery vehicles are legitimate, registered and authorised • Computerised recording and Duty of Care checks • Daily inspection of the tipping hall and site roads/paths for odour/litter/dust • Maintaining cleanliness of the tipping hall • Litter picking around external site areas, and • Liaison between weighbridge, tipping hall and control room

All staff are appropriately qualified for their role, ensuring that all aspects of the operation are handled in a safe, compliant, and efficient manner.

The Facility Manager is responsible for ensuring that all staff receive instruction and training, both formal and informal, in all relevant aspects of operational procedures and Permit requirements. A hard copy of the Environmental Permit (EP) is kept on site for reference when required by any staff or contractors carrying out work covered by the EP; an electronic version is available in the IMS or to download from MVV's website. All supporting management plans required by the EP are also held in the IMS, including this Outline OMP once finalised.

Training requirements are identified through the use of a Competence and Training Matrix which details type and frequency of training, and personal training needs assessments are completed during the annual performance review appraisal system. Training is either delivered by third party suppliers or internally, whichever is most efficient and effective.

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Odour management is incorporated into general site operational training and covers odour awareness in relation to normal, abnormal and maintenance situations; it also includes management of odour complaints.

This Outline OMP is incorporated within MVV's IMS [BAT 01], internal and external audits are carried out at defined frequencies to ensure continued compliance. The Outline OMP will be reviewed following a change to site operations, incident or following receipt of a justified complaint.

1.3. Relevant sector guidance on which this Outline OMP is based

The following industry reference documents have been considered during the drafting of this OMP:

- Best Available Techniques (BAT) Reference Document for Waste Incineration 2019
- Environment Agency Incineration of waste (EPR5.01): additional guidance 2009
- Environment Agency H4 Odour Management - How to comply with your environment permit 2011
- Environment Agency Develop a management system: environmental permits 2016
- Environment Agency Control and monitor emissions for your environmental permit 2016

The relevant BAT conclusions for consideration are:

BAT 01: In order to improve the overall environmental performance, BAT is to elaborate and implement an environmental management system (EMS) that incorporates all of the following figures:

xxvii an odour management plan where an odour nuisance at sensitive receptors is expected and/or has been substantiated.

BAT 21: In order to prevent or reduce diffuse emissions from the incineration plant, including odour emissions, BAT is to:

- Store solid and bulk pasty wastes that are odorous and/or prone to releasing volatile substances in enclosed buildings under controlled subatmospheric pressure and use the extracted air as combustion air for incineration or send it to another suitable abatement system in the case of a risk of explosion;
- Store liquid wastes in tanks under appropriate controlled pressure and duct the tank vents to the combustion air feed or to another suitable abatement system;
- Control the risk of odour during complete shutdown periods when no incineration capacity is available, e.g. by:
  - Sending the vented or extracted air to an alternative abatement system, e.g. a wet scrubber, a fixed adsorption bed;

- Minimising the amount of waste in storage, e.g. by interrupting, reducing or transferring waste deliveries, as a part of waste stream management;
- Storing waste in properly sealed bales.

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2. RECEPTORS

2.1. Receptor List – Identified sensitive receptors are presented on drawing EP_OMP_001_REV_0, dated September 2023.

Table 2.1. Receptor list

TYPE OF RECEPTOR	ID #	DESCRIPTION	DISTANCE FROM BOUNDARY (M) APPROX	DIRECTION	SENSITIVITY TO ODOUR Low (e.g. footpath/road) Medium (e.g. industrial / commercial workplace) High (e.g. housing / pub / hotel etc.)
HUMANS AND PROPERTY	**SITE**				
	-	Site Workers	On site	-	Medium
	-	Site Visitors	On site	-	Medium
	COMMERCIAL				
	1	Canford Resource Park	1	NE	Medium
	2	Magna Business Park	500	SE	Medium
	3	Canford Business Park	965	NE	Medium
	4	Canford Magna Garden Centre	985	NE	Medium
	5	White's Pit (closed landfill)	100	W	Low
	6	Inert Recycling facility	150	W	Low
	7	Wimborne Wellness Centre	950	NW	High
	RESIDENTIAL				
	1	Group at Provence Drive/Beaumaris Road/Arthur Gardens	600	E	High
	2	Group at Provence Drive/Beaumaris Road	620	NE	High
	3	Group at Provence Drive/Neville Gardens/ Edmund Cresent	680	NE	High

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TYPE OF RECEPTOR	ID #	DESCRIPTION	DISTANCE FROM BOUNDARY (M) APPROX	DIRECTION	SENSITIVITY TO ODOUR Low (e.g. footpath/road) Medium (e.g. industrial / commercial workplace) High (e.g. housing / pub / hotel etc.)
	4	Group at Provence Drive/Bohemia Gardens	780	NE	High
	5	Group at Provence Drive/Isabella Street	850	NE	High
	6	Group at Provence Drive/Beckets Cresent	930	NE	High
	7	Group at Isabella Street	900	NE	High
	8	Group at Bohemia Gardens	840	NE	High
	9	Group at Neville Gardens/Edmund Cresent	710	NE	High
	10	Group at Beaumaris Road/Mortimer Place	670	E	High
	11	Group at Neville Gardens/Edmund Cresent	785	NE	High
	12	Group at Poitiers Drive	840	E	High
	13	Group at Wheelers Lane	780	E	High
	14	Beechleys	660	SE	High
	15	Group at Wheelers Lane/Ross Gardens/Viscount Walk	915	E	High
	16	Group at Viscount Walk	880	SE	High
	17	Group at Viscount Walk	860	SE	High
	18	Group at Viscount Walk/Monks Way	940	SE	High
	19	143 Magna Road	960	NE	High
	20	2 x dwellings off Magna Road	920	NE	High
	21	Moortown Cottage, Magna Road	860	NE	High

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TYPE OF RECEPTOR	ID #	DESCRIPTION	DISTANCE FROM BOUNDARY (M) APPROX	DIRECTION	SENSITIVITY TO ODOUR Low (e.g. footpath/road) Medium (e.g. industrial / commercial workplace) High (e.g. housing / pub / hotel etc.)
	22	Group at Moortown Drive	900	NE	High
	23	Stoats Hill, Magna Road	940	N	High
	24	Brakehill Cottages, Arrowsmith Road	880	N	High
	25	Group south of Arrowsmith Road	520	N	High
	26	Group north of Arrowsmith Road	840	NW	High
	27	Group south of Arrowsmith Road	510	NW	High
	28	Group south of Arrowsmith Road	510	NW	High
	29	Magna Care Centre	940	NW	High
	30	Dwelling north of Arrowsmith Road	960	MW	High
	PUBLIC USE				
	1	Bearwood Primary School	880	E	High
	2	Playing fields	965	SE	High
	Critical Infrastructure				
	1	Solar Farm at White's Pit	300	W	Low
	PUBLIC RIGHTS OF WAY (PROW)				
	-	Bridleway 118 – Arrowsmith Road to Wheeler's Lane	250	NW to SE	Low
	-	Bridleway 125 – Magna Road to Dorset Way	500	N to W	Low
	-	Bridleway 129 – north of Wheelers Lane	720	SE	Low

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TYPE OF RECEPTOR	ID #	DESCRIPTION	DISTANCE FROM BOUNDARY (M) APPROX	DIRECTION	SENSITIVITY TO ODOUR Low (e.g. footpath/road) Medium (e.g. industrial / commercial workplace) High (e.g. housing / pub / hotel etc.)
	-	Bridleway 24 – Wheelers Lane	860	SE	Low
	RECREATIONAL				
	1	The Hamworthy Club	900	NE	Medium
	2	Canford Park Sports Pitches	415	NE	Medium
	3	Heathland Support Area (dog walking area)	545	SE	Medium
	4	Canford Arena	320	NE	Medium
	5	Knighton Heath Golf Club	970	SE	Medium
	AGRICULTURAL				
	1	Paddocks	720	N	Low
	2	Grassland	600	N	Low
	3	Paddocks	740	NE	Low
	4	Grassland	710	E	Low
	5	Grassland	660	SE	Low
	ATMOSPHERE-AQMA				
	-	None	n/a	n/a	n/a
WATER	**SURFACE WATER**				
	-	Knighton Stream	100	SW to E	Low
	-	Drainage ponds, White's Pit	60	NW	Low

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TYPE OF RECEPTOR	ID #	DESCRIPTION	DISTANCE FROM BOUNDARY (M) APPROX	DIRECTION	SENSITIVITY TO ODOUR Low (e.g. footpath/road) Medium (e.g. industrial / commercial workplace) High (e.g. housing / pub / hotel etc.)
	-	Unnamed Drainage Channels (various)	1 to 1000	N,E,S,W	Low
	-	Drinking Water Protected Area (surface water) Lower River Stour	0	N,E,S,W	Low
	GROUNDWATER				
	-	Secondary A Aquifer	0	N,E,S,W	Low
ENVIRONMENTALLY SENSITIVE	**DESIGNATED SITES**				
	1	Dorset Heaths Special Areas of Conservation (SAC)	1	S	Low
	2	Dorset Heathlands Special Protection Area (SPA)	15	S	Low
	3	Canford Heath Site of Special Scientific interest (SSSI)	15	S	Low
	NON DESIGNATED SITES (but of impact to permitting)				
	-	Multiple areas of deciduous woodland	1 to 1000	N,E,S,W	Low
HERITAGE LOATIONS	**LISTED BUILDINGS/STRUCTURES AND PARKS**				
	1	Bow Barrow on Canford Heath – Scheduled Ancient Monument (SAM)	500	S	Low
		Bow Barrow on Canford Heath – SAM	850	SW	Low
		Bow Barrow on Canford Heath – SAM	800	NW	Low
	4	Bowl barrow on Knighton Heath, SAM	980	SE	Low

2.2. Wind rose and source of weather data

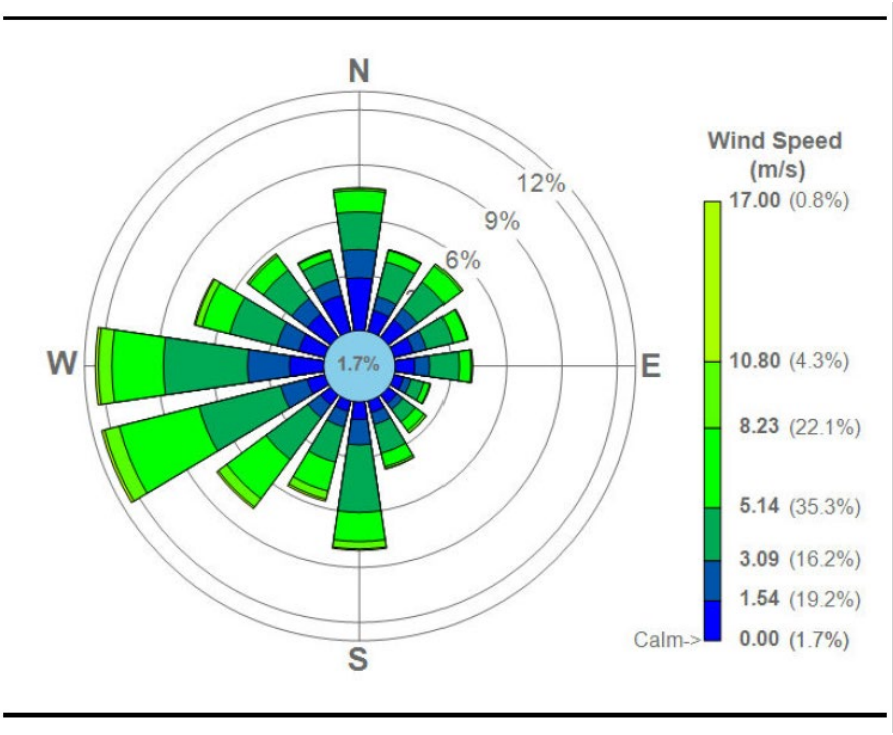

Figure 2.2. - Wind Rose for Bournemouth Airport (2016 to 2020)

3. SOURCES OF ODOUR AND SITE PROCESSES

3.1. Odorous materials entering and leaving site

Deliveries of waste feedstock and consumables, and the removal of residues are undertaken by road in enclosed heavy goods vehicles (HGVs). The majority of HGVs delivering waste to the EfW CHP Facility will comprise walking floor articulated lorries and RCVs. Waste deliveries are made between the hours of 07:00 – 20:00. On an average weekday 74 waste deliveries to the EfW CHP Facility would occur. On a weekend day, waste delivery will be significantly less. RCVs are sealed vehicles by virtue of their construction. Where HGVs are not fully sealed in their construction, they will be fully sheeted. All consumables and residues are also delivered to and removed from site in sealed HGVs.

Delivery drivers are subject to a site induction when visiting the EfW CHP Facility for the first time. During this induction they are encouraged to report any concerns regarding the potentially odorous nature of their load to the weighbridge operator so that an assessment can be made during initial acceptance checks. Whilst the induction process encourages delivery drivers to pro-actively report concerns relating to extremely malodorous waste, or the integrity of the sheeting/enclosed nature of the delivery vehicle, waste

acceptance operatives will have primary responsibility for identifying such issues as part of initial acceptance checks at the weighbridge.

Delivery vehicles will arrive on site and wait in the queuing lane in front of the incoming weighbridge. Where drivers have not completed a site induction they will be directed to the layby at the south-east boundary within the EfW CHP Facility Site and the induction process will be initiated. The queuing area has a capacity of 3 HGVs or 5 RCVs and the out of hours parking area has a capacity of 2 HGVs or 3 RCVs. All vehicles will wait only on the EfW CHP Facility Site and within the out of hours parking area. Vehicles will be called forward to the weighbridge one at a time and weighed in before travelling to the tipping hall entrance. Once inside the tipping hall the vehicle will be directed to one of 5 tipping bays where they will tip before leaving the tipping hall via the exit. The vehicle will continue back to the outgoing weighbridge where it will be weighed out before leaving the EfW CHP Facility Site. Maximum vehicle waiting times are expected to be 30 minutes. Turnaround times for tipping are expected to be 7 minutes on average, for a RCV (up to 15 minutes maximum) and 25 minutes for a HGV. Maximum time on site is expected to be up to 45 minutes for a RCV and up to 55 minutes for a HGV.

Where wastes are identified either at the weighbridge, or in the tipping hall, as not conforming with the waste Duty of Care documentation accompanying the load, or to be in conflict with MVV's waste specification, the load will be rejected and returned to the waste producer.

Where wastes are identified at the weighbridge as extremely malodorous, these will be prioritised for tipping and combustion to minimise the potential for offsite odour. These wastes will not be rejected, as that could increase the potential for offsite odour due to further transportation. However, the waste customer will be informed, and future loads monitored more closely.

If a waste delivery arrives in an unsheeted vehicle, or one where the integrity of the sheeting is not complete, delivery vehicle drivers will be reminded of the site rules by the weighbridge operator and the requirement to sheet their vehicles when entering and exiting the site. Photographic evidence or CCTV still images will be captured, the waste customer will be informed, and future loads monitored more closely. Further failure to sheet vehicles could result in termination of waste contracts.

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3.2. Odorous materials

Table 3.2 Odorous materials

Odorous and potentially odorous material (any solid, liquid or gas)	Odour potential High Risk / Medium Risk / Low Risk	Maximum quantity on site at any given day	Maximum time held on site (hours or days)	Location of odorous materials on site	Additional comments
Municipal waste	High	17,000m^3	c. 2 days (during normal operations)	Waste bunker	Potential for high organic content
C&I waste	Medium			Waste bunker	MVV input specification rigorously applied
Lime	Low	330m^3	Continuous supply	Lime silo	Not classified as inherently odorous, delivered in sealed tankers and discharged directly into the sealed storage silo. Not considered further in this management plan.
Urea	Low	50m^3	Continuous supply	Urea tank	Potential for some odour when in solution. Delivered in sealed tankers and discharged directly into the sealed storage tank. Injected directly into the combustion process. Not considered further in this management plan.

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Activated Carbon	Low	50m^3	Continuous supply	Carbon silo	Not classed as inherently odorous. Not considered further in this management plan.
Incinerator Bottom Ash	Low	1,400m^3	Daily turnover	IBA bunker	Not classed as inherently odorous. Not considered further in this management plan.
APCr	Low	360m^3	Daily turnover	APCr silos	Not classed as inherently odorous. Not considered further in this management plan.

3.3. Overview of odorous processes and emissions

All waste received at the EfW CHP Facility will enter along the site access road and pass over the 'in' weighbridge where the load will be assessed for compliance with Duty of Care requirements, the EP and MVV's waste input specification. All vehicles delivering waste will be sealed or sheeted until entering the waste reception tipping hall.

The waste reception tipping hall is an enclosed building with a single point of access, vehicles will enter the waste reception area via a fast-acting roller shutter door, subject to completion of detailed design.

Waste is discharged from delivery vehicles directly into the waste reception bunker. The waste reception bunker is substantially sealed such that the only air ingress during normal operation is via the tipping hall reception chutes.

During normal operation a negative pressure is maintained within the waste bunker/tipping hall by the primary air fan which draws air through the tipping hall and waste bunker into the combustion chamber where it is used as under fire air in the combustion chamber, thereby destroying any potentially odorous compounds in the combustion process.

Residence time of the waste once delivered is closely managed to minimise the potential for decomposition during storage. Daily 'turning' of the waste bunker is managed by the Operations Team to ensure that the oldest waste is fed into the incineration process first and that aerobic conditions are maintained.

During periods of complete plant shutdown, when no combustion is undertaken, waste residence time increases, and no combustion air is required. During this period the negative pressure through the waste bunker and tipping hall is maintained by operating the shutdown fan; this passes air through a dust and activated carbon filter system to remove odorous compounds, prior to being emitted to atmosphere. Prior to the planned shutdown waste inputs will be reduced to lower the level of waste stored within the bunker to a minimum and waste will continue to be received at a minimal reduced capacity for the duration of the outage.

During periods of complete plant un-planned shutdown, when no combustion is undertaken, waste residence time increases, and no combustion air is required. During this period the negative pressure through the waste bunker and tipping hall is maintained by operating the shutdown fan; this passes air

through a dust and activated carbon filter system to remove odorous compounds, prior to being emitted to atmosphere.

Where the duration of a complete un-planned shutdown is estimated to exceed 2 days, waste inputs will be reduced to limit the level of waste stored within the bunker to a minimum and waste will continue to be received at a minimal reduced capacity for the duration of the outage.

It is not anticipated that waste will be diverted to alternative sites however, contingency plans will be put in place. There are two scenarios in which waste would be diverted; where the main waste bunker is full to capacity, and where both waste cranes are out of operation and the waste reception bunker is full to capacity. Removal of waste from the EfW CHP Facility is not anticipated.

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4. CONTROL MEASURES AND PROCESS MONITORING

Table 4.1 Monitoring procedures for appropriate measures/ BAT

Odorous and potentially odorous process / material	Control measures (Appropriate Measure / BAT)	Monitoring frequency	Monitoring procedure and optimum process parameters	Trigger level	Action taken if outside optimum process parameters
Waste Acceptance (Odour is only expected to be noticeable near vehicles (<1m))	All delivery vehicles are either sealed containers or sheeted. Queuing of vehicles is minimised by the site design and operations are configured to ensure quick turnaround times. This is achieved through the provision of multiple tipping bays which can be used simultaneously. All deliveries are pre-programmed into the weighbridge software followed by efficient traffic management, clear signage, markings and supervision of the tipping process.	Constant – ongoing through shift Continual communication between weighbridge and tipping hall	Turnaround times logged through weighbridge software. Visual inspection of vehicles on entering and leaving the site.	Unsheeted vehicle	Delivery vehicle drivers will be reminded of the site rules and requirement to sheet their vehicles when entering and exiting the site. Photographic evidence or CCTV still images will be captured, the waste customer will be informed and future loads monitored more closely. Further failure to sheet vehicles could result in termination of waste contracts.
Waste Composition	MVV input specification and waste stream management	Daily random and targeted sampling of	All loads visually inspected before, or whilst, depositing their loads. Random or	Non-conforming waste type not in accordance with	The waste customer will be informed of any non-conforming loads received and monitored against contractual

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Odorous and potentially odorous process / material	Control measures (Appropriate Measure / BAT)	Monitoring frequency	Monitoring procedure and optimum process parameters	Trigger level	Action taken if outside optimum process parameters
	[BAT 21]	loads depending on day-to-day operational conditions.	targeted loads will be diverted to the quarantine bay for a more thorough waste inspection utilising the loading shovel to search through the load prior to depositing it in the waste reception bunker.	the permitted EWC codes and MVV input specification	specifications. Should frequent and repeated breaches be detected the contract may be terminated.
Waste Receipt	Waste loads are discharged directly into the waste reception bunker by the delivery vehicle to reduce the handling of the waste.	All loads are supervised by the Waste Acceptance Operatives whilst in the tipping hall.	All loads deposited safely in accordance with tipping hall operational procedures and driver induction training.	Non-complaint tipping hall activities.	The waste customer will be informed of any non-compliant actions taken by delivery drivers and monitored against contractual requirements. Should frequent or repeated breaches be detected the delivery driver may be banned from the site.
Waste Storage	All waste is stored within the waste bunker which is substantially sealed and maintained under negative pressure through the extraction of primary air into the combustion process through the bunker, drawing fresh air in through the tipping hall.	Daily by the Operations Team as they turn the pit and feed the combustion process. Daily site inspections include the	Activities are managed in accordance with the company Bunker Management procedures.	Function of the primary air fan and waste grab cranes.	Should the primary air fan fail the shutdown fan will be activated. Should the waste grab crane fail the secondary crane can be brought into operation to maintain waste turning. Should malodour be identified during site inspection an incident report will be raised, investigation instigated, and corrective actions identified.

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Odorous and potentially odorous process / material	Control measures (Appropriate Measure / BAT)	Monitoring frequency	Monitoring procedure and optimum process parameters	Trigger level	Action taken if outside optimum process parameters
	The waste in the bunker is 'turned' on a daily basis to apply the 'FIFO' principle and maintain aerobic conditions within the waste mass.	identification of any malodour.			
Outage Maintenance	For planned outages, on site waste storage will be minimised through waste stream management. During full shutdown, when no combustion is undertaken, negative pressure is maintained by the operation of the shutdown fan which is equipped with a dust and activated carbon filter system to remove odorous compounds. [BAT 21]	Operation of the shutdown fan and monitoring for potential odorous emissions is undertaken daily during the outage period.	It is the duty of the operational staff to conduct twice daily sniff test assessments on site. An off- site sniff test at identified sensitive receptor locations is carried out daily throughout full shutdown outage periods. All records of odour monitoring are retained.	Function of the shutdown fan and filter system. Identification of malodour during site inspection.	Critical spares for the shutdown fan and filter system held on site to enable prompt maintenance. Should malodour be identified during site inspection an incident report will be raised, investigation instigated, and corrective actions identified.
Ad hoc un-planned maintenance	During full shutdown, when no combustion is undertaken, negative	Operation of the shutdown fan and	Activities are managed in accordance with the	Function of the shutdown fan and filter system.	Critical spares for the shutdown fan and filter system held on site to enable prompt maintenance.

ODOUR MANAGEMENT PLAN

Odorous and potentially odorous process / material	Control measures (Appropriate Measure / BAT)	Monitoring frequency	Monitoring procedure and optimum process parameters	Trigger level	Action taken if outside optimum process parameters
	pressure is maintained by the operation of the shutdown fan which is equipped with a dust and activated carbon filter system to remove odorous compounds. [BAT 21]	monitoring for potential odorous emissions is undertaken daily during the outage period.	company Bunker Management procedures. It is the duty of the operational staff to conduct twice daily sniff test assessments on site. An off site sniff test at identified sensitive receptor locations is carried out daily throughout full shutdown outage periods. All records of odour monitoring are retained	Identification of malodour during site inspection.	Should malodour be identified during site inspection an incident report will be raised, investigation instigated, and corrective actions identified.

5. ODOUR REPORTING

5.1. Complaints reporting

All complaints will be received and managed in accordance with the IMS procedure BS.CL.01 Management of Communications and Complaints and recorded on the Incident Management Recording Software through which an investigation will be instigated, and any corrective actions allocated to responsible persons.

The investigation will aim to answer the following questions:

- Is the process under control?
- Have odour containment measures failed?
- Have treatment measures failed?
- Have dispersion methods failed?
- If the odour is associated with hazards, is there any possibility of health risk to the local community?

Where a complaint is substantiated the Environment Agency will be notified without delay.

The purpose of the IMS procedure is to ensure that any complaint is investigated promptly, and that appropriate remedial action is taken. Communication will be maintained with the complainant, and other interested parties, regarding the actions taken and records of this compiled.

5.2. Community engagement

The EfW CHP Facility will engage with a community liaison committee on matters regarding operational control. In advance of any planned outage the community liaison committee will be informed of the planned dates for the outage, as this is the time when the risk of odour is highest from the EfW CHP Facility.

5.3. Pro-active odour monitoring

It is the duty of the site Operations team to conduct a twice daily set of environmental site rounds and record the findings on the daily operational logbook software. Any site odour which is detected through a sniff test during the site rounds is recorded and investigated by the duty site staff. Their investigation will ensure that all applicable odour control measures are implemented and operating correctly.

Following investigation, should the site odour controls be found to not be operating correctly the duty site staff will implement corrective action, and where this is not possible inform the site management team

immediately in accordance with the IMS procedure OS.HSE.06.01 Reporting of Operational Incidents and Accidents.

5.4. Reactive odour monitoring

Following the receipt of an odour report from a sensitive receptor the duty Shift Team Leader will ensure that an on-site sniff test is carried out and recorded in the operational logbook software. An investigation of all odour control measures will be undertaken to ensure they are operating correctly. Any remedial action will be taken where necessary.

6. ABNORMAL EVENTS

Table 6.1 Abnormal events

Abnormal event	Recovery steps
Fire	The site will activate actions in accordance with the site Fire Prevention Plan (*A Fire Prevention Plan is a further requirement under the Environmental Permitting requirements)*.
[Flood] [1]	The site will activate actions in accordance with the site Flood Emergency Management Plan. Should the site be surrounded by flood water no deliveries of new waste will be able to access the site. Waste already on site will continue to be combusted for a short period to reduce the volume in storage. Suppression systems and filters within the waste bunker will continue to operate. Critical spares are held on site should breakdown occur during the flood event.
Staffing	MVV operate multiple sites across the UK and Germany. Should a specific site suffer staffing issues, personnel from other MVV sites can be called upon to assist with operations. MVV also employ several 3rd party contractors who can assist if necessary. Several of the operational processes are automated and require limited human interaction and can be monitored remotely.
Equipment breakdown	A high level of equipment redundancy is included in the design of the facility such that abnormal events due to equipment breakdowns are not anticipated. Where redundancy is not provided, critical spares will be held onsite, and equipment will be repaired and returned to service as soon as possible.

7. REVISION HISTORY

[1] A requirement or not for a Flood Emergency Management Plan to accompany the Environmental Permit application is to be confirmed.

ODOUR MANAGEMENT PLAN

Revision Date	Issue	Approved by:	Signature	Summary of changes	Affected pages
04.09.2023	D1	~	~	First draft for internal review	All
31.05.2024	D2	JW		Final for permit application	-