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Trigon Hill Landfill Site

Odour Management Plan

Valencia Waste Management Limited

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Disclaimer: Please note that this report is based on specific information, instructions, and information from our Client and should not be relied upon by third parties.

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1 Introduction

1.1 Report Objectives

This Odour Management Plan (OMP) has been prepared to support a variation application by Valencia Waste Management Limited (the Operator) for the existing Trigon Hill Landfill permit, referenced EPR/BX4054ID to add a new Material Recovery Facility (MRF).

The purpose of this OMP is to identify which aspects of the MRF operations may cause harmful emissions of uncontrolled odour and how these emissions will be minimised.

A copy of this OMP will be included in the Site's Environmental Management System (EMS) held at the Site Office and all members of staff will have access to this document.

This OMP is only applicable to the MRF activities. Trigon Hill Landfill Site is subject to a separate OMP with control measures applicable to on-going waste operations associated with the landfill activities.

Where applicable control measures applicable to the landfill activities are repeated for the MRF activities, e.g. requirements related to acceptance of waste, plant maintenance, community liaison.

1.2 Relevant Sector Guidance

Reference has been made to the following guidance documents:

- H4 Odour Management: How to comply with your environmental permit (Environment Agency, March 2011)¹;
- Environment Agency. Appropriate measures for permitted facilities: non-hazardous and inert waste. 12 July 2021²
- Environment Agency. Odour Management Plan Template, Final V2. 5 May 2021.
- Best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council. 10 August 2018³.

¹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/296737/geho0411btqm-e-e.pdf

² <https://www.gov.uk/guidance/non-hazardous-and-inert-waste-appropriate-measures-for-permitted-facilities>

³ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2018.208.01.0038.01.ENG&toc=OJ%3AL%3A2018%3A208%3ATOC

2 Odour Management Plan

2.1 Maintenance and Review of OMP

The Site Manager is responsible for the OMP and ensuring staff are suitably trained in the content of the OMP. A copy of this OMP will be included in the EMS and all members of staff will have access to this document. The OMP will be reviewed on an annual basis with the scheduled review of the EMS or with every major change to odour risk associated with the MRF (i.e. a change to odour source term, pathways or receptors).

2.2 Site Location and Operations

The proposed MRF will be located approximately 2.2 km to the northwest of Northport and 2.4km northwest of Wareham town centre in Dorset. The approximate centre of the wider site (including the MRF and Trigon Hill landfill site) is at National Grid Reference SY8960089400. The proposed MRF is bounded: to the west by the landfill (adjacent to Cell 2 Phase 3) and quarry extension; to the north by woodland; to the east by a solar farm and woodland; and to the south by the landfill and woodland.

Trigon Hill landfill is located on a former area of opencast ball clay pit with planning consent issued to Viridor Waste Management Limited in May 2005 for restoration by landfilled wastes. The opencast clay pit activity was granted an extension to the west of the landfill site in 2018.

The environmental permit, referenced BX4054ID, was issued on 21st June 2006 to Viridor Waste Management Limited for landfilling at the site. The landfill is comprised of 6 phases and 25 cells and has accepted non-hazardous household, commercial and industrial wastes. The permit has been varied a number of times with the current extant permit issued on 13th March 2023 for a minor technical variation updating the company name, address and financial provision.

The proposed permit variation is to extend the existing boundary to the east to incorporate additional land for the proposed MRF. The proposed MRF will have an annual throughput of up to 250,000 tonnes of predominantly commercial and industrial wastes. The MRF proposes to treat commercial and industrial waste into separate fractions including ferrous and non-ferrous metal, plastic and wood for recovery and residues to produce RDF (Refuse Derived Fuel) and SRF (Solid Recovered Fuel). A portion of recovered material comprising soil and rubble may be utilised in the adjacent landfill for daily cover and construction of in cell tracks in place of end of waste material.

A combination of: shredders; long-part separator (removes long items from the process), magnets (removes ferrous metals), screens, eddy current separator (removes non-ferrous metals) and picking lines (to remove wood and plastics) will typically sort the inputs into the following components (% by weight):

- Hardcore 30% - to be used on the landfill for engineering, daily cover and capping

- Fines 15% - to be landfilled or recovered as an RDF/SRF elsewhere (not produced to a specific standard)
- Wood 10% - to be recycled
- Metals 5% - to be recycled
- Plastics 5% - to be recycled
- Residue 10% - to be landfilled
- Lights 25% - to be landfilled or recovered as RDF or SRF (not produced to a specific standard)

The MRF includes a

- Waste reception bays for the receipt of incoming wastes;
- Processing equipment including a shredders, screens, magnets, waterbath, picking lines, 3-way separator, eddy current separator, optical sorter and various conveyors
- Storage skips / bays for outputs including wood, non-ferrous and ferrous metals, SRF, RDF, fines, plastics, and aggregates.

Vehicle access and egress to the MRF will be via the Bere Road landfill entrance. Vehicles entering via the Bere Road entrance will progress to the existing landfill weighbridge where waste acceptance procedures will be completed. Vehicles will then progress along an internal road which follows a southerly direction along the east of the landfill to the proposed MRF. All vehicles leaving the MRF will progress along the internal road and utilise the wheel wash prior to exit onto Bere Road.

3 Odour Source Term Characterisation

3.1 Odour Sources and Materials

The current and proposed activities associated with the MRF that have the potential to produce odorous emissions are:

- Delivery of waste to MRF and acceptance assessment.
- Unloading of waste within MRF
- Temporary storage of incoming waste awaiting treatment.
- Fugitive emissions release from the agitation of waste in the MRF from handling and the recycling plant
- Storage and transfer of wastes after treatment.
- Removal of contaminated residues from treatment process.

The waste types to be accepted at the MRF are limited to commercial and industrial wastes and are set out in the permit variation application report (K0485-BLP-R-ENV-00001). Putrescible waste will not be suitable for treatment at the MRF and will therefore be excluded. Household waste and similar materials will not normally be accepted at this facility. If they are accepted, with a high proportion of food waste or other putrescible material, they will be identified at the pre-acceptance stage and will be directed to the landfill. EWC 20 03 01 will only be accepted at the MRF if it excludes putrescible material. Only wastes with a low putrescible content, such as construction and demolition wastes and some commercial and industrial wastes, will be directed to the MRF.

The non-hazardous waste accepted at the MRF therefore would contain only limited organic substances and have a low odour generation potential. Historical work undertaken by Sniffer⁴, indicate that commercial and industrial wastes are less odorous than household waste with an estimated odour emission rate of 5 ou_E/m²/s in comparison to the 25 ou_E/m²/s for household waste. All waste storage and treatment will be undertaken within a purpose built steel portal framed enclosed building with internal push walls. The building will measure circa 85m by 39m with an eaves height of approximately 9m and a ridge height of circa 12.5m.

A dust suppression system is to be designed and installed within the building for the collection and containment of fugitive emissions. The system is to be designed and installed by a specialist contractor.

⁴ Sniffer: Odour Monitoring and Control on Landfill Sites, ER31, Final Report, January 2013

The building will have two 8m wide vehicular access fast acting roller shutter doors on the northern and southern aspect with access limited only to allow delivery of waste and the export of waste materials. The fast-acting roller shutter doors will remain shut at all other times.

4 Receptors

4.1 Receptors List

When choosing the receptors, the closest or the most sensitive (if different from the closest) have been considered in each direction from the MRF. The most sensitive receptors are within 500 m radius of the MRF making the assessment conservative for other potential receptors located further away. Receptors are considered sensitive where people have the potential to be adversely affected by the odour emissions. The nearest sensitive receptors to the MRF are identified in drawing referenced Sensitive Receptor Plan. The probability of exposure is determined by the distance of the receptor to the MRF and the likelihood of the hazard reaching the receptor (e.g. frequency of prevailing wind in that direction).

This stage of the assessment assumes that exposure has resulted from an uncontrolled emission i.e. without mitigation.

The distance of these receptors to the MRF boundary, their direction relative to the MRF and the frequency the wind blows in the direction of the receptor are detailed in Table 1 below. The sensitivity to odour of the receptor types are detailed in Table 2.

Table 1. Potential Sensitive Receptors

No	Description of Receptor	Type	Direction	Distance (metres)	Frequency Downwind (%)
1	Landfill site, associated surface water bodies and site roads	Commercial/Industrial/ Surface Water/Road	S to NNW	<10	2.64 to 6.12
2	Local Wildlife Sites (Trigon Heaths, Stokeford Heath, Old Ram Plantation, Budden's Farm, South Heath Binnegar, Bloxworth and Morden Heaths, Hyde House, Wareham Lodge, Worgret Heath)	Protected habitat	SW to NNE	<10	2.64 to 6.26
3	Priority habitat (deciduous woodland)	Protected habitat	E to SSE	50	0 to 8.14
4	Priority habitat (lowland heathland, deciduous woodland and no main habitat), Trigon Hill Plantation and road	Protected habitat, commercial/industrial and road	NW to SE	80	3.35 to 19.27
5	Public right of way (PROW)	Bridleway/Footpath	N to S	95	0 to 19.27
6	Drainage ditches	Surface Water	ENE to SW	98	0 to 19.27
7	Solar power farm	Infrastructure	E to SE	132	3.35 to 8.14
8	Pond at the Covert	Surface Water	NE	217	12.4
9	Little Trigon Hill Plantation, Clean Hallow Plantation & Brick Kiln Plantation	Commercial/Industrial	S to W	248	2.64 to 6.12
10	Properties off Bere Road in Cold Harbour	Residential	ENE to E	480	8.14 to 19.27
11	Protected habitats (Dorset Heaths (SAC), Morden Bog and Hyde Heath (SSSI))	Protected habitat	ESE	999	5.17
12	Protected habitats (Dorset Heathlands (Ramsar) (SPA), Dorset Heaths (SAC), Morden Bog and Hyde Heath (SSSI))	Protected habitat	SW to NE and SSE to SW	1031	0 to 12.4

No	Description of Receptor	Type	Direction	Distance (metres)	Frequency Downwind (%)
13	Protected habitats (Dorset Heathlands (Ramsar) (SPA), Dorset Heaths (Purbeck and Wareham) & Studland Dunes (SAC), Morden Bog and Hyde Heath (SSSI))	Protected habitat	NE to SE	1488	3.35 to 19.27
14	Morden Bog	National Nature Reserve	NE to E	1686	8.14 to 19.27
15	Protected habitats (Dorset Heathlands (Ramsar) (SPA), Dorset Heaths (SAC), Stokeford Heaths (SSSI))	Protected habitat	SW to NW	2000	2.64 to 4.72
16	Protected habitat Poole Harbour (Ramsar) (SPA)	Protected habitat	E to SE	2726	3.35 to 8.14
17	Protected habitat Solent and Dorset Coast (SPA) & Studland to Portland (SAC)	Protected habitat	S to SW	9809	4.33 to 6.12

Table 2. Types of Receptors Sensitive to Odour

Receptor Type	Sensitivity to Odour
Habitat	Low
Watercourse/ body	Low
Residential	High
Highway/ Railway/ Footpaths	Medium
Recreational	High
Industrial	Medium
Commercial	Medium

4.1.1 Residential, Recreational, Industrial and Commercial Premises

The potential emissions from the MRF may have an impact on persons occupying residential, recreational, industrial, or commercial premises. Exposure of emissions to persons at industrial or commercial premises may be lower however as they are more likely to be inside during the working day or they may be transient visitors to the premises.

The MRF is to be located to the west of the active non-hazardous landfill.

The closest residential areas to the MRF are located off Bere Road in Cold Harbour. There are no schools identified within 500m of the proposed activity. For conservatism, this management plan assumes the residences are occupied during the operational hours of the MRF by members of the public most sensitive to emissions. The combination of controls, physical containment (building, fast acting roller shutter doors), distance to the receptors, and the prevailing wind direction will prevent emissions from reaching receptors.

4.1.2 Highways and Public Rights of Way

The transitory nature of highways means receptors using those locations will be exposed to potential emissions from the MRF for shorter (albeit variable) periods of time than residences or businesses. Pedestrians will have longer and more direct exposure to emissions compared to vehicle users.

The proximity of the unnamed roads and footpaths to the MRF means there is a more immediate need for operational effectiveness of site controls.

4.1.3 Off-Site Odour Emissions

Trigon Hill Landfill Site and proposed MRF are located in a primarily rural location with neighbouring quarry excavations, tree plantations, agricultural land, solar farms and residential areas. Neighbouring agricultural land has the potential to generate potential odour.

4.2 Meteorological Conditions

The principle mechanism for the transit of odorous emissions from MRF operations to adjacent sensitive receptors is via ambient air. The distance and direction that these emissions will be carried is determined by the following factors:

- Source
- Related Pathways
- Meteorological Conditions; and
- Topography

4.2.1 Wind Direction

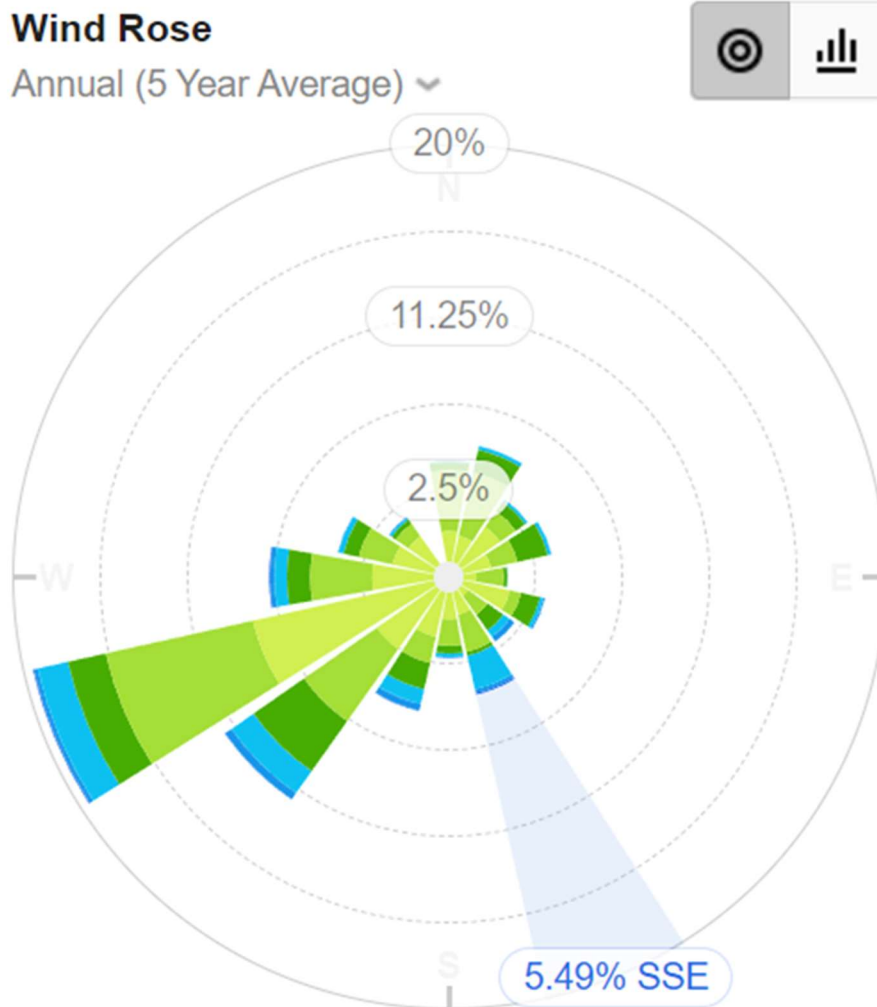
The prevailing wind direction will determine which receptors will be affected and at what frequency.

4.2.2 Wind Velocity

Wind velocity will affect the distance an odour emission will travel. Conversely, increased wind speed could also improve dispersal. Those receptors closest to the MRF are still at the highest risk of a potential negative impact however.

Meteorological data from Hurn weather station⁵ which is located 22.9 km northeast of the MRF is expected to provide representative meteorological data for the area. The windrose reproduced as Figure 1 indicates a wind direction from the prevailing west-southwest.

Figure 1. Wind Rose



4.2.3 Air Temperature

Warm air may carry odours upwards by convection for their dispersal away from the MRF. However, warm weather will encourage the onset of biodegradation of exposed or temporarily stored wastes and therefore increase odour potential. Cold air has less ability for dispersion which can result in localising the potential odours. Temperature inversion in which warm odorous air trapped beneath a layer of cold air under still conditions can also influence potential odour

⁵ <https://wind.willyweather.co.uk/sw/dorset/coldharbour.html>

emissions by effectively trapping odour emissions closer to the ground and inhibiting dispersion but potentially localising the potential odours.

4.2.4 Adverse Weather Conditions

Unusual weather conditions may increase the risk of odour emissions from the MRF. Site staff will be vigilant to unusual trends in the meteorological data or forecasts which may indicate strong winds or extremes of temperature which may cause a potential problem. The types of weather conditions that may impact on odour generation and emissions and appropriate contingency actions are detailed in section 7.5 below

5 Odour Risk Assessment

5.1 Odour Emissions

The risk potential to each receptor from odour generated at the MRF is presented in Table 3 below. This table evaluates the nuisance to sensitive receptors from odour emissions and the control measures to be implemented at the MRF in order to minimise this risk, producing a revised residual risk to receptor.

Table 3. Odour Risk Assessment and Management Plan

Hazard/Pathway	Receptor				Probability of Exposure	Unmitigated Consequence	Initial Risk	Risk Management	Residual Risk
	ID No.	Distance from Site (m)	Direction from Site	Freq. Downwind (%)					
Odour through the Air from: Waste handling, storage and treatment.	1	<10	S to NNW	2.64 to 6.12	High - close proximity to the site, moderately downwind	Medium - staff/users sensitive to odour. Surface water not sensitive.	Medium	<p>Strict waste acceptance procedures are in place to ensure that no non-conforming materials are accepted into the MRF which may contain malodorous waste.</p> <p>All waste treatment and storage undertaken within an enclosed building.</p> <p>Dust suppression system to be installed within the MRF.</p> <p>Fast acting roller shutter doors to remain shut when access is noted required for vehicles.</p> <p>Regular olfactory monitoring will be conducted and will</p>	Low
	2	<10	SW to NNE	2.64 to 6.26	High - close proximity to the site, moderately downwind	Low - not a nuisance to habitats	Medium		
	3	50	E to SSE	0 to 8.14	High - close proximity to the site, moderately downwind	Low - not a nuisance to habitats	Medium		
	4	80	NW to SE	3.35 to 19.27	High - close proximity to the site, frequently downwind	Medium - potential nuisance to staff/users. Not a nuisance to habitats	Medium		
	5	95	N to S	0 to 19.27	High - close proximity to the site, frequently downwind	Medium - odour nuisance to users	Medium		
	6	98	ENE to SW	0 to 19.27	High - close proximity to the site, frequently downwind	Low - not a nuisance to surface water	Medium		
	7	132	E to SE	3.35 to 8.14	High - close proximity to the site, moderately downwind	Low - not a nuisance to receptor	Medium		
	8	217	NE	12.4	High - moderate proximity to the site, frequently downwind	Low - not a nuisance to surface water	Medium		
	9	248	S to W	2.64 to 6.12	Medium - moderate proximity to the site, moderately downwind	Medium - odour nuisance to staff	Medium		

Hazard/Pathway	Receptor				Probability of Exposure	Unmitigated Consequence	Initial Risk	Risk Management	Residual Risk
	ID No.	Distance from Site (m)	Direction from Site	Freq. Downwind (%)					
	10	480	ENE to E	8.14 to 19.27	Medium - distant from the site, frequently downwind	High - odour nuisance to residents	Medium	take account of meteorological conditions. Regular cleaning and clearing of waste storage areas. Any non inert waste will be processed, stored and sent offsite within 72 hours. All bays will be emptied on a regular basis. All controls are detailed in Section 6.	
	11	999	ESE	5.17	Medium - distant from the site, moderately downwind	Low - not a nuisance to habitats	Low		
	12	1031	SW to NE and SSE to SW	0 to 12.4	Medium - distant from the site, frequently downwind	Low - not a nuisance to habitats	Low		
	13	1488	NE to SE	3.35 to 19.27	Medium - distant from the site, frequently downwind	Low - not a nuisance to habitats	Low		
	14	1686	NE to E	8.14 to 19.27	Medium - distant from the site, frequently downwind	Low - not a nuisance to habitats	Low		
	15	2000	SW to NW	2.64 to 4.72	Low - distant from the site, infrequently downwind	Low - not a nuisance to habitats	Low		
	16	2726	E to SE	3.35 to 8.14	Medium - distant from the site, moderately downwind	Low - not a nuisance to habitats	Low		
	17	9809	S to SW	4.33 to 6.12	Medium - distant from the site, moderately downwind	Low - not a nuisance to habitats	Low		

6 Control Measures

The primary control to potential odour is the type of waste to be accepted at the MRF and the fact that all storage and treatment activities are to be undertaken within a purpose built building. Section 6.1 to 6.4 detail the controls to be applied to the MRF to control the potential for odour emissions.

6.1 Waste acceptance and handling

The Best Available Techniques Report (Document referenced: K0485-BLA-R-ENV-00005) and Environmental Management System (EMS) details the waste acceptance procedures for the MRF.

Strict waste acceptance procedures are in place to ensure that no non-conforming materials are accepted which may contain malodorous waste.

6.1.1 Waste Acceptance

Control of incoming wastes will be managed according to the Operator's Waste Acceptance Procedures (WAP) to ensure only low odour generating wastes are accepted (wastes as detailed in section 3.1 above).

All vehicles would arrive sheeted and would only remove their sheets once at the point of material inspection at the weighbridge and at the point of unloading within the MRF.

In the event that any highly odorous waste is identified during the waste acceptance process the Site Manager will be notified and the waste load will be segregated in the quarantine area for a maximum of 24 hours or immediate rejected. The rejection procedure for waste at the MRF is detailed in WAP in the EMS.

6.1.2 Waste handling and storage

Wastes will be transported to the MRF in covered vehicles and transferred on acceptance directly into the building for processing.

- Vehicles will be supervised during unloading to ensure the load does not contain any highly odours waste.
- Waste will be dealt with on a first in first out basis.
- Any non inert waste will be processed and removed within 72 hours to minimise the risks of odour from aging waste.
- Should any stockpile within the MRF generate a strong odour it will be prioritised for removal from the MRF with an aim for it to be moved before the end of the working day.

6.2 MRF Controls

- All MRF activities are to be undertaken within a purpose built enclosed building.
- The building will have two 8m wide vehicular fast acting roller shutter doors on the northern and southern aspect to allow delivery of waste and the export of waste materials only. The vehicular access doors will be closed when not in use.
- Waste will be unloaded inside the MRF.
- A dust suppression system will be in place within the building, the design and installation to be confirmed prior to construction of the building and appropriate liaison with a specialist contractor. The system will be subject to a service contract. Some of the routine maintenance tasks e.g. cleaning of ducts and the system will be carried out in house in accordance with manufacturers training and instructions.
- Good housekeeping practices will be in place to ensure that any loose waste is cleared from the recycling plant and building. This will include daily inspections and clearing as required.
- Jet wash facilities will be available for cleaning waste storage and treatment areas. Cleaning will be undertaken as necessary to prevent the build-up of any waste residues.
- A daily inspection of all recycling plant will be undertaken to ensure the plant is operating as designed. The recycling plant will be subject to a routine maintenance programme.
- The effective operation of opening/closing of doors will be checked on a daily basis.
- The roller shutter doors will have a maintenance contract and emergency call out response for breakdowns and repairs.

All stated previously all waste storage and treatment is to be undertaken within an enclosed building. Access doors are only open to allow delivery of waste and the export of waste materials and will remain shut at all other times.

6.3 Housekeeping Practices

The MRF building will be subject to regular housekeeping and cleaning of waste storage and treatment areas. Cleaning will be undertaken as necessary if identified during daily inspections to prevent the build up of any waste residues. Jet wash facilities will be available if necessary for cleaning of waste storage / treatment areas.

Good housekeeping practices will be in place to ensure that any loose waste is cleared from the recycling plant and building. These will include daily inspections and clearing as required

The floor will be swept regularly throughout the day and at the end of each working day the floors are washed down to minimise fugitive release or vehicles tracking any material outside of the MRF.

6.4 Drainage

The MRF site surface will comprise impermeable steel reinforced concrete hardstanding with sealed drainage. All clean surface water will discharge to the current on-site surface water management system.

All surfaces used to treat or store waste therefore will comprise impermeable hardstanding.

All drainage infrastructures will be inspected, maintained and repaired as necessary. In the highly unlikely event that odour should become an issue as a result of the on-site drainage system, a full review of the infrastructure will be conducted and cleaning and inspection frequencies adjusted accordingly.

7 Odour Monitoring and Reporting

7.1 Overview

Prevention will be viewed as the most effective means of controlling odour before an impact occurs. The Source → Pathway → Receptor model determined above allows for the identification of the critical control points where odour can arise, how it can travel to a receptor and the likely impact.

The performance of the OMP will ultimately be judged by the impact of the MRF on the receptors. Should complaints be received, a procedure will be in place to effectively deal with the issue in a sensitive, efficient and auditable manner.

The controls are detailed in previous sections of this report. The management of those controls will be based on the on-going monitoring regime at the MRF. The monitoring regime can work as an early warning system against potential problems. The monitoring procedure is provided in Section 7.2.

7.2 Odour Monitoring

Daily olfactory monitoring via sniff testing will be carried out at the MRF with reference to the protocol in Appendix 1 of the Environment Agency H4 Odour Management Guidance.

Due to the potential for de-sensitisation to odours, odour monitoring will only be carried out by personnel who do not regularly work within the MRF building. These personnel will be the most suitable to detect any fugitive odour outside the MRF.

The following locations internally and externally will be targeted for odour monitoring by the nominated site personnel:

- Unloading area with MRF (continuous monitoring of vehicles);
- Treatment operations within MRF;
- Waste storage areas within MRF;
- External - Access doors to MRF;
- External – Personnel access doors to MRF;
- Subject to prevailing wind direction (i.e. up and down wind), appropriate areas around the MRF.

The following information will be recorded during each round of monitoring as required by Appendix 1 of the H4 Odour Management Guidance:

- Name and job position of assessor;
- Nature of any problem identified including location / source, date, time, duration, prevailing weather conditions and likely cause;
- The intensity of the odour based on the VDI 3882 Part 1 Odour intensity scale which provides intensity levels 0 to 6.
- On-site activities and operational condition at the time of the monitoring visit (this should include any abnormal events detailed in Section 7.5 below);
- Records of the likely source of any odour even if it is not from the MRF;
- Details on the corrective action taken, realistic timeframes for remedial works and any subsequent changes to monitoring and operational procedures.

The Site Manager will be responsible for ensuring that daily odour monitoring is undertaken at the MRF and external to the building in order to identify any sources of odour and to establish whether any odours are discernible.

Due to the proximity of the landfill odour monitoring procedures presented in this OMP are supplementary to those stipulated in the landfill OMP. Consideration will be given to the wider site, comprising the landfill and proposed MRF, during odour monitoring and the Site Manager will review all reported odour report forms.

The Site Manager will be informed immediately of any findings of odour attributed to the MRF and will authorise remedial measures to be taken.

All odour monitoring will be input into the Odour Report Form provided at Appendix A.

7.3 Complaints Reporting

7.3.1 Complaints Procedure

Any complaints received at the MRF or via the regulatory bodies including the Environment Agency and Local Authority, will be recorded using the Odour Complaint Report Form at Appendix B. This will instigate further olfactory monitoring at the location of the complaint and on site to determine the extent of the odour and whether a mobile mister should be employed. Where possible, as much information and detail about the complaint will be recorded, whether this is from the relevant authority or complaint direct to MRF. This information will assist in the investigation and determining the source of the odour e.g. differentiating between potential on-site and off-site odours.

All complaints and queries will be logged in accordance with the management system as soon as is practicably possible. All complaints logged will be subject to investigation and complainants responded to within 48 hours of receipt, where possible.

In the event that a substantiated odour complaint is received, additional monitoring may be undertaken at the nearest sensitive receptors to determine any off-site odour emissions.

Complaints regarding odour will be investigated in accordance with the protocol, and appropriate records maintained which may include:

- Complaints received including name and contact details of complainant (if known), and complainants description of the odour.
- Nature of problem including date, time, duration, prevailing weather conditions and cause of the problem.
- Onsite activities and operational condition at the time of the complaint.
- Records of the likely source of the odour even if it is clearly not from the MRF or landfilling activities.
- Details on the corrective action taken, and any subsequent changes to monitoring and operational procedures.

Due to the landfill and MRF activities being adjacent to each other odour monitoring procedures presented in this OMP are supplementary to those stipulated in the landfill OMP. Consideration must be given to the wider site, comprising the landfill and proposed MRF, when investigating any complaint. The Site Manager will review all reported odour report forms as part of the investigation process.

The Environment Agency will be informed by the Operator of the complaint and the Operator will confirm to the best of its knowledge the information described above.

The Operator will ensure that the complainant has all the relevant contact details of the MRF (e.g. the Site Manager) and the officer responsible at the Environment Agency. The Operator will be in regular contact with the complainant and the Environment Agency whilst the cause of the odour is being investigated and remediated.

An evaluation of the effectiveness of the techniques used will be carried out on completion of any remedial measures or if the complaints persist. Records of the above will be retained by the Valencia for future reference.

7.3.2 Complaints Investigation

As part of each odour complaint received, these will be objectively assessed against the wider environment to ensure that the source of the emission is traced back to the correct source. As discussed earlier in this OMP, it is essential that the source is correctly identified in order that mitigating measures can be applied effectively and correctly. The complaint will also be assessed against previous records to place the nature of the complaint into context.

7.4 Community Engagement

The MRF will be readily contactable to outside organisations and to members of the public. The Trigon Hill Landfill Site, including the proposed MRF, will have a signage board (placed in a readily visible location) which contains the necessary contact details for Operator and Environment Agency.

Any complaints received directly to the MRF will be notified to the Environment Agency.

7.5 Pro-Active Odour Monitoring

7.6 Abnormal Events and Contingency Procedures

7.6.1 Temperature Inversion

The conditions that can facilitate a temperature inversion (warm odorous air trapped beneath a layer of cold air under still conditions) can be predicted by simple regard to weather forecasts. Waste storage and treatment are to be undertaken within the MRF building. Olfactory monitoring (detailed in Section 7.2 above) will enable the potential for low level odour movement to be identified.

7.6.2 Hot Conditions

The warmer the waste the greater the potential to generate odour therefore an increase in ambient air temperature may result in increased odour from the wastes due to the promotion of the biodegradation process. The waste types to be accepted will not comprise putrescible waste.

7.6.3 Strong Winds

The MRF building and the fast acting roller shutter will provide a physical barrier against strong winds and transmission of odour. Daily visual inspection of the site infrastructure will be undertaken and recorded. Additional inspection for damage resulting from high wind events will also be undertaken and appropriate contingency actions undertaken including removal of waste from MRF until repairs can be undertaken.

7.6.4 Snow/Ice

Severe cold weather may result in disruption to waste deliveries and removal of materials from the MRF. However the corresponding colder temperatures are likely to compensate for the increased storage time and result in waste with similar odour generation potential as would normally be expected. Inability to remove waste from the MRF as a result of severe weather conditions is likely to coincide with the inability to deliver waste to the MRF. As a result the most likely scenario is a short term need to store waste.

7.6.5 Unscheduled Availability

Unscheduled unavailability should only take place due to unscheduled maintenance, emergency situations and for Health and Safety reasons such as a fire. In such cases the site operative will initially inform the Site Manager who will in turn inform the Environment Agency. The Operator will implement measures to store or divert waste as required.

7.7 Records and Reviews

A daily record relating to the management and monitoring of odour will be maintained. It will include the following details:

- The results of inspections and olfactory monitoring carried out by installation personnel;
- Weather conditions including atmospheric pressure, wind speed and wind direction;
- Problems including date, time, duration, prevailing weather conditions and cause of the problem;
- Complaints received including address of complainant; and
- Details of the corrective action taken, and any subsequent changes to operational procedures.

The OMP will be reviewed on an annual basis with the scheduled review of the site management system or with every major increase, or alteration to the odour generated at the MRF (i.e. a change to odour source term, pathways or receptors).

Drawings



- LEGEND
- DO NOT SCALE
 - ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM
 - ANY ANOMALIES ON THIS DRAWING ARE TO BE BROUGHT TO THE ATTENTION OF BYRNE LOOBY LTD

- KEY
- PERMIT BOUNDARY
 - PROPOSED BOUNDARY
 - 2K BUFFER ZONE
 - PROPOSED MRF LOCATION
 - RECEPTOR MARKER

Rev	Date	Description	By	CHK	APP
BYRNE LOOBY WWW.BYRNELOOBY.COM					
IRELAND UK UAE BAHRAIN KSA					
CLIENT Valencia Waste Management Limited					
PROJECT TRIGON					
DRAWING TITLE 2K SENSITIVE RECEPTOR PLAN					
STATUS FINAL					
Date	02.11.23	Scale	1:7500	Drawn	JM
Project No.	K0485	Drw. No.	K0485.1.002	Chk	GH
				App	JB
				Rev	00



LEGEND

1. DO NOT SCALE
2. ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM
3. ANY ANOMALIES ON THIS DRAWING ARE TO BE BROUGHT TO THE ATTENTION OF BYRNE LOOBY LTD

KEY

- PERMIT BOUNDARY
- - - - PROPOSED BOUNDARY
- 10K BUFFER ZONE
- PROPOSED MRF LOCATION
- 4 RECEPTOR MARKER

Rev	Date	Description	By	Chk	App

BYRNE LOOBY
 WWW.BYRNELOOBY.COM
 IRELAND | UK | UAE | BAHRAIN | KSA

CLIENT
 Valencia Waste Management Limited

PROJECT
 TRIGON

DRAWING TITLE
 10K SENSITIVE RECEPTOR PLAN

STATUS
 FINAL

Date: 02.11.23	Scale: 1:35000	Drawn: JM	Chk: GH	App: JB
Project No: K0485	Drwg. No: K0485.1.003	Rev: 00		

Appendix A – Odour Report Form

Odour report form					Date
Time of test					
Location of test e.g. street name etc					
Weather conditions (dry, rain, fog, snow etc):					
Temperature (very warm, warm, mild, cold, or degrees if known)					
Wind strength (none, light, steady, strong, gusting) Use Beaufort scale if known					
Wind direction (e.g. from NE)					
Intensity (see below)					
Duration (of test)					
Constant or intermittent in this period or persistence					
What does it smell like?					
Receptor sensitivity (see below)					
Is the source evident?					
Any other comments or observations					

<p>Intensity</p> <p>0 No odour 1 Very faint odour 2 Faint odour 3 Distinct odour</p>	<p>4 Strong odour 5 Very strong odour 6 Extremely strong odour</p> <p>Ref: German Standard VDI 3882, Part 14</p>	<p>Receptor sensitivity</p> <p>Low (e.g. footpath, road) Medium (e.g. industrial or commercial workplaces) High (e.g. housing, pub/hotel etc)</p>
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Appendix B – Odour Complaint Report Form

Odour Complaint Reporting Form	
Time and date of complaint:	Name and address of complainant:
Telephone number of complainant:	

Date of odour:	
Time of odour:	
Location of odour, if not at above address:	
Weather conditions (i.e., dry, rain, fog, snow):	
Temperature (very warm, warm, mild, cold or degrees if known):	
Wind strength (none, light, steady, strong, gusting):	
Wind direction (eg from NE):	
Complainant's description of odour:	
o What does it smell like?	
o Intensity (see below):	
o Duration (time):	
o Constant or intermittent in this period:	
o Does the complainant have any other comments about the odour?	
Are there any other complaints relating to the installation, or to that location? (either previously or relating to the same exposure):	
Any other relevant information:	
Do you accept that odour likely to be from your activities?	
What was happening on site at the time the odour occurred?	
Operating conditions at time the odour occurred (eg flow rate, pressure at inlet and pressure at outlet):	
Actions taken:	
Form completed by:	Date Signed

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www.byrneology.com
www.ayesa.com/en/

Email: info@byrneology.com