



# **FUGITIVE EMISSIONS RISK ASSESSMENT & MANAGEMENT PLAN**

**CARDIFF WASTE MANAGEMENT RESOURCE CENTRE  
WATERSIDE BUSINESS PARK  
LAMBY WAY  
RUMNEY  
CARDIFF  
CF3 2EQ**

**Document Reference: BF5023/06/FRA (Rev 1)  
November 2020**



**Project Quality Assurance  
Information Sheet**

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CARDIFF WASTE MANAGEMENT RESOURCE CENTRE, WATERSIDE BUSINESS PARK,  
LAMBY WAY, RUMNEY, CARDIFF, CF3 2EQ**

**Report Status** : FINAL

**Report Reference** : BF5023/06/FRA (Rev 1)

**Report Date** : November 2020

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Revision	Date	Amendment Details	Author	Reviewer
1	November 2020	Revisions to Document Narrative in Response to Information Request by NRW	MK & RC	DT

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## 1.0 INTRODUCTION

### 1.1 Scope and Background

- 1.1.1 A risk assessment has been undertaken to determine if the fugitive emissions anticipated from the operational activities may have an effect on any sensitive receptors located close to the proposed Cardiff Waste Management Resource Centre.
- 1.1.2 Risks have been considered during the operational phases of both the proposed Hazardous Waste Transfer Station Installation Activity and Non-Hazardous Waste Transfer Station Operation.
- 1.1.3 **Table 1** includes a list of the receptors that have been identified through a desktop assessment of the locality.

**Table 1: Identified potential receptors within 1000m of the facility**

ID	Receptor Name	Receptor Type	Approximate distance from the operational area	Direction from the facility
1	Commercial/industrial Properties	Commercial and Industrial	Adjacent up to 1000m	All Directions
2	Great Western Railway Mainline	Railway Line	Adjacent	N
3	Cardiff HWRC	Commercial and Industrial	220m	S
4	Residential Areas of Rumney	Residential	50m	N
5	Residential Areas of Pengam	Residential	800m	W
6	Parc Tredelerch	Recreational	40m	W
7	Rumney Hill Gardens	Recreational	890m	NW
8	Allotments	Recreational	520m	NE
9	Rhymney River SINC	Surface Water	570m	W, SW
10	Rhosog Fach Reen	Surface Water	235m	S, SE
11	Gwent Levels SSSI	Designated Habitat (Biological)	460m	E
12	Severn Estuary SSSI, Ramsar, SAC & SPA	Designated Habitat (Biological)	980m	S, SE
13	Lamby Way SINC	Designated Habitat (Biological)	110m	S
14	Lamby North SINC	Designated Habitat (Biological)	650m	WSW
15	Rhymney Grassland East SINC	Designated Habitat (Biological)	520m	WNW
16	Lamby Salt Marsh SINC	Designated Habitat (Biological)	960m	S

ID	Receptor Name	Receptor Type	Approximate distance from the operational area	Direction from the facility
17	Rumney Primary School	School	490m	NW
18	Greenway Primary School	School	820m	N
19	Brightside Manor Care Home	Care Home	920m	NW
20	Rumney Primary Care Centre	Medical	500m	N
21	Surface Water Courses	Surface Water	500m – 1000m	ENE/SE
22	Public Roads	Highway	Adjacent up to 1000m	All Directions
23	Buttercups Day Nursery	Preschool	110m	S/SE

1.1.4 The assessment of risks from the facility arising from fugitive emissions have been considered with reference to the following guidance documents:

- H1 Environmental Risk Assessment Part 1: Simple assessment of environmental risk for accidents, odour, noise and fugitive emissions.

## 1.2 Site Setting

1.2.1 The facility is located c. 3.7km northeast of Cardiff city centre, to the south of Rumney in the County of Cardiff as illustrated on **Drawing Reference Number BF5023/09/01**. The site is approximately centred at National Grid Reference: ST 22019 78619. The area surrounding the proposed site has a long and established agricultural, residential and transport infrastructure history with the first residential developments commencing between 1919-1920 and the mainline railway present since 1881.

1.2.2 The site is accessed via an existing tarmacked road that junctions with Lamby Way located to the south of the site. Lamby Way is ultimately accessed from the A4232 which connects the site to the M4.

1.2.3 Currently, the site largely comprises of undeveloped open areas containing vegetated sections. The land surrounding the site mainly consists of an industrial estate and the Network Rail operated mainline railway between Cardiff and London Paddington to the north. Parc Tredelerch Lake, the Rhymney River are located to the east of the proposed site and the Rhosog Fach Reen is located to the south. In addition to this, residential areas of Rhymney are situated to the north. Relevant receptors are included in **Table 1** above and visually depicted in **Drawing Reference Number BF5023/09/05**.

1.2.4 The nearest residential receptors to the site are located c. 50m north of the site and extend northwards from the mainline railway.

1.2.5 The site is secured by security fencing, CCTV and lockable security gates which are kept secure outside of operational hours.

- 1.2.6 The site is located within 1km of four Sites of Scientific Interest (SSSIs); Gwent Levels (Biological Designation), Rumney Quarry (Geological Designation), Rumney River Section (Geological Designation) and the Severn Estuary (Biological Designation). with the Severn Estuary.
- 1.2.7 In addition to its designation as a SSSI, the Severn Estuary is also designated as a Ramsar Site, a Special Area of Conservation (SAC) and a Special Protection Area (SPA).
- 1.2.8 No other statutory sites are located within 1km of the proposed site.
- 1.2.9 The site is also located within 1km of five sites with non-statutory Sites of Importance for Nature Conservation (SINC) designation; Lamby Way SINC, Lamby North SINC, Rhymney Grassland East SINC, Lamby Salt Marsh SINC and River Rhymney SINC. The sites have been designated due to the presence of the following priority habitats:
- **Lamby Way SINC:**
    - Lowland Meadow, purple moor-grass and rush pasture
  - **Lamby North SINC:**
    - Coastal Saltmarsh
  - **Rhymney Grassland East SINC:**
    - Lowland meadow and lowland calcareous meadow
  - **Lamby Salt Marsh SINC:**
    - Coastal Saltmarsh
  - **River Rhymney SINC:**
    - River
- 1.2.10 The site is not located within 1km of a designated Air Quality Management Area (AQMA) as stated by DEFRA. The closest AQMA is the Stephenson Court AQMA under Cardiff City Council which declares the pollutant Nitrogen Dioxide (NO<sub>2</sub>) and is located c.3km to the southwest of the proposed site.
- 1.2.11 A review of dominant wind directions indicates that the prevailing wind blows in from the West/West-Southwest
- 1.2.12 The site is not located within a Nitrate Vulnerable Zone (NVZ) as designated by DEFRA and Natural Resources Wales.
- 1.2.13 Risks have been considered during the operational phases of both the Hazardous Waste Transfer and the Non-Hazardous Waste Transfer Activities at Lamby Way.

## 2.0 FUGITIVE EMISSIONS RISK ASSESSMENT & MANAGEMENT PLAN

### 2.1 Risk Assessment Methodology

2.1.1 The scoring methodology employed in the H1 Guidance is used as a framework for assessing the risk from various accident scenarios identified. The scoring system attributes a nominal score to the likelihood and consequence of an identified scenario, and then uses a matrix to identify whether the risk is acceptable. The scoring system is outlined below.

#### Likelihood categories

Category	Description	Score
Extremely unlikely	Incident occurs between once per 100 years and once every 1000 years	1
Very unlikely	Incident occurs between once per 50 years and once every 100 years	2
Unlikely	Incident occurs between once per 10 years and once every 50 years	3
Somewhat unlikely	Incident occurs between once per 5 years and once every 10 years	4
Fairly probable	Incident occurs between once per year and once every 5 years	5
Probable	Incident occurs at least once per year	6

#### Consequence categories

Category	Description	Score
Minor	<ul style="list-style-type: none"> <li>nuisance on site only (no off-site effects)</li> <li>no outside complaint</li> </ul>	1
Noticeable	<ul style="list-style-type: none"> <li>noticeable nuisance off-site e.g. discernible odours</li> <li>minor breach of Permitted emission limits, but no environmental harm</li> <li>one or two complaints from the public</li> </ul>	2
Significant	<ul style="list-style-type: none"> <li>severe and sustained nuisance, e.g. strong offensive odours or noise disturbance</li> <li>major breach of Permitted emissions limits with possibility of prosecution</li> <li>numerous public complaints</li> </ul>	3
Severe	<ul style="list-style-type: none"> <li>hospital treatment required</li> <li>public warning and off-site emergency plan invoked</li> <li>hazardous substance releases into water course with ½ mile effect</li> </ul>	4
Major	<ul style="list-style-type: none"> <li>evacuation of local populace</li> <li>temporary disabling and hospitalisation</li> <li>serious toxic effect on beneficial or protected species</li> <li>widespread but not persistent damage to land</li> <li>significant fish kill over 5 mile range</li> </ul>	5
Catastrophic	<ul style="list-style-type: none"> <li>major airborne release with serious offsite effects</li> <li>site shutdown</li> <li>serious contamination of groundwater or watercourse with extensive loss of aquatic life</li> </ul>	6

### Risk assessment matrix

Likelihood	Consequence					
	Minor	Noticeable	Significant	Severe	Major	Catastrophic
Extremely unlikely	1	2	3	4	5	6
Very unlikely	2	4	6	8	10	12
Unlikely	3	6	9	12	15	18
Somewhat unlikely	4	8	12	16	20	24
Fairly probable	5	10	15	20	25	30
Probable	6	12	18	24	32	36

### Risk scores

Magnitude of risk	Score
Acceptable	6 or less
Acceptable if reduced as much as reasonably practical	8 to 12
Unacceptable	15 or more

## 2.2 Hazard Risk Assessment & Management Plan

2.2.1 **Table 2** and **Table 3** provide an assessment of the potential fugitive emissions and odour emissions arising from site operations respectively and an outline of the management procedures in place to control the risks to an acceptable level.



**Table 2: Fugitive Emissions Risk Assessment Matrix**

Hazard	Pathway	Receptor	Likelihood	Consequence	Overall score	Acceptability of risk	Justification for acceptability (description of risk management measures)
<p>Dust emissions from vehicle movement around the site;</p> <p>Particulates from waste storage and treatment.</p>	Airborne.	<p>Residential properties to the north, east and east northeast associated with Rumney as well as commercial &amp; industrial properties within 1000m of the site.</p> <p>Designated ecological conservation areas within 1000m of the site.</p>	<p>4 (Somewhat unlikely)</p>	<p>2 (Noticeable)</p>	8	Acceptable if reduced as much as reasonably practical.	<ol style="list-style-type: none"> <li>1. All vehicles hauling waste or re-packaged materials will be sheeted/netted or enclosed.</li> <li>2. Vehicles will be supervised during loading</li> <li>3. A site speed limit will be enforced to limit dust suspension by vehicle wheels.</li> <li>4. Regular sweeping of the hard surfaces will ensure that dust release from the site is minimised.</li> <li>5. The whole site comprises concrete preventing tracking of mud and dust from vehicles</li> <li>6. Wastes will arrive on site within packaging and/or sealed containers and will leave the site packaged which will severely reduce the potential for dust emissions.</li> <li>7. Waste storage will be conducted in accordance with good housekeeping procedures, furthermore, owing to the waste type, it is unlikely to give rise to fugitive emissions via 'wind whipping'.</li> <li>8. Daily routine visual dust monitoring at the site to identify any dust/mud build up or aerial emissions will be performed as part of the management procedures.</li> <li>9. No residential receptors are located downwind of the proposed site.</li> </ol>

Hazard	Pathway	Receptor	Likelihood	Consequence	Overall score	Acceptability of risk	Justification for acceptability (description of risk management measures)
Mud and debris from vehicle movements.	Tracked by vehicles and washed by rainfall as suspended solids.	Residential properties to the north, east and east northeast associated with Rumney as well as commercial & industrial properties within 1000m of the site.  Fugitive emissions to surrounding land.	4 (Somewhat unlikely)	1 (Minor)	4	Acceptable	<ol style="list-style-type: none"> <li>1. Vehicles will be supervised during loading.</li> <li>2. All vehicles hauling waste will be sheeted or fully enclosed.</li> <li>3. .</li> <li>4. A site speed limit will be enforced to limit dust suspension by vehicle wheels.</li> <li>5. All haul routes have sealed surfaces either concrete or tarmac. Other areas of operations are covered with hardstanding and all treatment is conducted upon impermeable concrete surfacing.</li> <li>6. Daily inspection of the site for mud and debris will be performed as part of the management procedures.</li> <li>7. A road sweeper will be used to clean affected haul routes, in response to the identification of dust/litter build up by the Technically Competent Manager (or Nominated Deputy) during daily site inspections.</li> </ol>

Hazard	Pathway	Receptor	Likelihood	Consequence	Overall score	Acceptability of risk	Justification for acceptability (description of risk management measures)
Scavenging animals and birds.	Airborne and over land.	<p>Residential properties to the north, east and east northeast associated with Rumney as well as commercial &amp; industrial properties within 1000m of the site.</p> <p>Designated ecological conservation areas within 1000m of the site.</p>	<p>4 (Somewhat unlikely)</p>	<p>1 (Minor)</p>	4	Acceptable	<ol style="list-style-type: none"> <li>1. Waste types accepted for processing are generally not of the type that could attract scavengers i.e. non-putrescible.</li> <li>2. Waste accepted to the site will be packaged and therefore, not directly open to the atmosphere.</li> <li>3. All vehicles hauling waste will be sheeted/netted or fully enclosed.</li> <li>4. Waste storage and operations are to take place within covered bays.</li> <li>5. Strict compliance with waste acceptance procedures will be required at all times.</li> <li>6. Good housekeeping will be promoted in order to keep storage areas as clean as possible. No food will be consumed on site within the operational area, only within the site's welfare facilities.</li> <li>7. Regular visits from a registered pest controller can be programmed, if required.</li> </ol>

Hazard	Pathway	Receptor	Likelihood	Consequence	Overall score	Acceptability of risk	Justification for acceptability (description of risk management measures)
<p>Litter from waste transport vehicles;</p> <p>Litter from waste storage area;</p> <p>Litter from site office and welfare facilities</p>	Airborne.	<p>Residential properties to the north, east and east northeast associated with Rumney as well as commercial &amp; industrial properties within 1000m of the site.</p> <p>Designated ecological conservation areas within 1000m of the site.</p>	<p>4 (Somewhat unlikely)</p>	<p>1 (Minor)</p>	4	Acceptable	<ol style="list-style-type: none"> <li>1. The types of waste accepted are unlikely to lead to litter issues.</li> <li>2. All vehicles hauling waste will be sheeted/netted or enclosed.</li> <li>3. The waste storage and processing areas are within enclosed buildings; reducing the risk of 'wind whipping' and litter emissions.</li> <li>4. Non-conforming wastes will be hand or mechanically extracted and stored within a covered bay.</li> <li>5. Strict compliance with waste acceptance procedures will be required at all times.</li> <li>6. The site operator will maintain site in a clean and tidy manner by a combination of appropriate site management practices such as inspections with subsequent regular sweeping and litter collection.</li> <li>7. Good housekeeping will be promoted in order to keep storage areas as clean as possible.</li> <li>8. Daily inspection of the site for windblown fraction will be performed as part of the management procedures including the site boundary fence (where necessary).</li> <li>9. If necessary remedial action such as litter picking will be carried out. Should this be required an investigation into the source of the litter will be carried out to avoid a repeat of the littering. Any actions taken will be recorded in the Site Diary.</li> </ol>

Hazard	Pathway	Receptor	Likelihood	Consequence	Overall score	Acceptability of risk	Justification for acceptability (description of risk management measures)
Noise and vibration.	Noise through the air and vibration through the ground.	Residential properties to the north, east and east northeast associated with Rumney as well as commercial & industrial properties within 1000m of the site.  Designated ecological conservation areas within 1000m of the site.	4 (Somewhat unlikely)	1 (Minor)	4	Acceptable	<ol style="list-style-type: none"> <li>1. A noise survey has been carried out and recommends that there will be a low probability of adverse impact.</li> <li>2. All machinery used on site will be operated and maintained in accordance with manufacturers' recommendations;</li> <li>3. Site activities will be restricted to sociable hours when background noise levels are appreciably higher;</li> <li>4. Any static processing plant noise sources will be housed within appropriate sound proofed cladding.</li> <li>5. Treatment operations will be carried out internally which will reduce the levels of noise being emitted from the site.</li> <li>6. There will be no site activities taking place at night (i.e. between 11pm – 7am).</li> <li>7. All haul roads will be maintained to an appropriate standard that prevents body slap.</li> <li>8. The site is located within established industrial area. Noise levels will not be appreciably higher than those currently experienced at the site.</li> <li>9. The nearest residential receptors are situated c.50m north of the site boundary, beyond established trees and hedgerows and the Cardiff to London Paddington mainline railway; all of which will provide a noise buffer and, in the case of the railway line, background noise levels.</li> <li>10. Further noise mitigation measures can be applied if found to be necessary.</li> </ol>

Hazard	Pathway	Receptor	Likelihood	Consequence	Overall score	Acceptability of risk	Justification for acceptability (description of risk management measures)
<p>Infestations in incoming waste loads; and</p> <p>Infestations in stored waste.</p>	Airborne and overland.	<p>Residential properties to the north, east and east northeast associated with Rumney as well as commercial &amp; industrial properties within 1000m of the site.</p> <p>Designated ecological conservation areas within 1000m of the site.</p>	<p>4 (Somewhat unlikely)</p>	<p>1 (Minor)</p>	4	Acceptable	<ol style="list-style-type: none"> <li>1. Waste types accepted for processing are generally not of the type that could contain infestations.</li> <li>2. Incoming loads of waste will be visually checked at either the site entrance/weighbridge or during off-loading in the recycling area. Infested wastes will be rejected or stored in enclosed receptacles in the quarantine area.</li> <li>3. All wastes will be removed from site within 6 months.</li> <li>4. Regular visits from a registered pest controller can be programmed, if required.</li> </ol>

Hazard	Pathway	Receptor	Likelihood	Consequence	Overall score	Acceptability of risk	Justification for acceptability (description of risk management measures)
Contaminated Surface Water	Run off from storage areas.	<p>Infiltration to surrounding land. Groundwater. Parc Tredeleirch, Rhymney River and Rhosog Fach Reen.</p> <p>Designated ecological conservation areas within 1000m of the site.</p>	<p>2 (Very Unlikely)</p>	<p>3 (Significant)</p>	6	Acceptable	<ol style="list-style-type: none"> <li>1. Materials will arrive, be stored and be transferred off-site within packaging. During storage at the proposed site, all waste will be located within storage bays isolated from the site wide Sustainable Drainage System. Each storage bay will be equipped with a dedicated drainage system and isolated storage tank into which any liquid generated within the storage bay will be collected and subsequently tankered off-site for treatment and/or disposal and a suitable licenced facility.</li> <li>2. Surface water run-off collected within Sustainable Drainage System servicing the external site areas will pass through a series of fuel interceptors prior to discharge into public surface water drain.</li> <li>3. The Sustainable Drainage System servicing the external areas of the site is fitted with a flow control valve at the consented discharge point which will be shut in the event if there is a risk of firewater being discharged from the site.</li> <li>4. All concreted areas will be maintained in a safe condition to provide impervious surface that facilitates everyday cleaning and adequate storage.</li> <li>5. Highest risk operations will be undertaken over impermeable surfacing with dedicated drainage storage tanks.</li> <li>6. Spill kits, absorbent granules are available for immediate deployment.</li> <li>7. Surfaces will be inspected and maintained at regular intervals and any defects or damage will be repaired.</li> <li>8. Good housekeeping will be promoted in order to keep storage areas as clean as possible.</li> </ol>

**Table 3: Odour Emissions Risk Assessment Matrix**

Operating Status	Odour Source	Most Sensitive Receptors	Probability	Consequence	Risk (without control measures)	Control Measures	Residual Risk	Action if odour causes problem	Responsibility
Normal Operations (accounting for ambient weather conditions)	Waste during delivery and weighing of incoming wastes (incl. spillages)	R1, R2, R3, R4, R6, R13 & R23	5 (Fairly Probable)	2 (Noticeable)	10	<ul style="list-style-type: none"> <li>Waste types accepted for storage, treatment, re-packaging and onward transfer arrive in packaging and/or sealed containers and are stored within internal storage bays. This arrangement prevents the release of potential odours from accepted wastes.</li> <li>Containers / pallets visibly checked for damage;</li> <li>Incoming waste to be visually checked at either the site entrance/weighbridge or during off-loading.</li> <li>All vehicles hauling waste will be sheeted or fully enclosed;</li> <li>Any waste deemed to be particularly malodorous will be rejected from the site;</li> <li>Rejected waste to be diverted directly to landfill or further treatment.</li> </ul>	3 (Acceptable)	<ul style="list-style-type: none"> <li>Damaged containers repackaged or over-drummed immediately;</li> <li>Rejection of waste from site.</li> </ul>	Site Chemist to make initial assessment.
	Spillages of wastes during unloading, handling, and loading activities	R1, R2, R3, R4, R6, R13 & R23	5 (Fairly Probable)	2 (Noticeable)	10	<ul style="list-style-type: none"> <li>Induction / forklift training provided to chemist / operative;</li> <li>Containers / pallets visibly checked for damage as part of daily inspections;</li> <li>Good housekeeping standards (incl. spillage kits) will ensure that the site areas are kept clean to remove and waste spillages waste;</li> <li></li> </ul>	3 (Acceptable)	<ul style="list-style-type: none"> <li>Damaged containers repackaged or over-drummed immediately;</li> <li>Spills to be cleaned immediately in accordance with relevant procedure;</li> <li>Reject or isolate and transfer malodorous waste as soon as possible for disposal or further treatment;</li> <li>Review housekeeping and handling procedures;</li> </ul>	<p>Operator / Site Chemist to ensure unloading, handling, storage and loading procedures are adhered to.</p> <p>Competent Person undertaking the daily Operation and Maintenance Checks.</p>



Operating Status	Odour Source	Most Sensitive Receptors	Probability	Consequence	Risk (without control measures)	Control Measures	Residual Risk	Action if odour causes problem	Responsibility
Normal Operations (accounting for ambient weather conditions)	Waste leakages during storage	R1, R2, R3, R4, R6, R13 & R23	5 (Fairly Probable)	2 (Noticeable)	10	<ul style="list-style-type: none"> <li>Containers / pallets visibly checked for damage as part of daily inspections;</li> <li>Daily olfactory monitoring for odour to be performed (as appropriate) as part of the management procedures;</li> <li>Good housekeeping standards (incl. spillage kits) will ensure that the site areas are kept clean to remove and waste spillages waste.</li> <li>Waste is to be stored internally in storage bays at the site which will aid in controlling odour emissions.</li> </ul>	3 (Acceptable)	<ul style="list-style-type: none"> <li>Damaged containers repackaged or over-drummed immediately;</li> <li>Spills to be cleaned immediately in accordance with relevant procedure;</li> <li>Review housekeeping procedures;</li> <li>Review handling procedures.</li> </ul>	<p>Operator / Site Chemist to ensure unloading, handling, storage and loading procedures are adhered to.</p> <p>Competent Person undertaking the daily Operation and Maintenance Checks.</p>
	Spillages during waste sampling	R1, R2, R3, R4, R6, R13 & R23	5 (Fairly Probable)	2 (Noticeable)	10	<ul style="list-style-type: none"> <li>Containers / pallets visibly checked for damage prior to sampling;</li> <li>Containers / pallets are only open to air for as long as required to collect required sample;</li> <li>Training provided to Operator / Site Chemist to ensure correct sampling procedure is adhered to;</li> <li>Good housekeeping standards (incl. spillage kits) will ensure that the site areas are kept clean to remove and waste spillages waste.</li> </ul>	3 (Acceptable)	<ul style="list-style-type: none"> <li>Damaged containers repackaged or over-drummed immediately;</li> <li>Spills to be cleaned immediately in accordance with relevant procedure;</li> <li>Review housekeeping procedures;</li> <li>Review handling procedures.</li> </ul>	<p>Operator / Site Chemist to ensure unloading, handling, storage and loading procedures are adhered to.</p> <p>Competent Person undertaking the daily Operation and Maintenance Checks.</p>

Operating Status	Odour Source	Most Sensitive Receptors	Probability	Consequence	Risk (without control measures)	Control Measures	Residual Risk	Action if odour causes problem	Responsibility
Normal Operations (accounting for ambient weather conditions)	Bulking and Blending of Liquids, Solids and Mixing of incompatible wastes during bulking	R1, R2, R3, R4, R6, R13 & R23	5 (Fairly Probable)	2 (Noticeable)	10	<ul style="list-style-type: none"> <li>Compatibility testing to be carried out before bulking;</li> <li>Waste containers will remain sealed and will only be opened to facilitate bulking activities;</li> <li>Only qualified chemist to carry out compatibility testing;</li> <li>Chemist to exercise due care when carrying out compatibility testing;</li> <li>Only wastes passed for bulking to be bulked;</li> <li>Bulking to be carried out by chemist, or by trained operatives as supervised by the chemist;</li> <li>Chemist / operative to exercise due care when bulking waste;</li> <li>Chemist / operative to remain aware for any chemical reactions during bulking of waste;</li> <li>Good housekeeping standards (incl. spillage kits) will ensure that the site areas are kept clean to remove and waste spillages waste.</li> <li>Waste is to be bulked, blended and mixed internally in the waste processing area which will aid in controlling odour emissions.</li> </ul>	3 (Acceptable)	<ul style="list-style-type: none"> <li>Emergency procedures to be followed in the event of an incident;</li> <li>Review bulking procedures.</li> </ul>	Site Chemist / Operatives under the supervision of the Site Chemist to ensure that all bulking procedures are adhered to.

Operating Status	Odour Source	Most Sensitive Receptors	Probability	Consequence	Risk (without control measures)	Control Measures	Residual Risk	Action if odour causes problem	Responsibility
Normal Operations (accounting for ambient weather conditions)	Spillages during Unpacking/ Repackaging of Lab Smalls	R1, R2, R3, R4, R6, R13 & R23	5 (Fairly Probable)	2 (Noticeable)	10	<ul style="list-style-type: none"> <li>Waste containers will remain sealed and will only be opened to facilitate bulking activities;</li> <li>Activities to be carried out by chemist, or by trained operatives as supervised by the chemist;</li> <li>Waste is to be unpackaged /repackaged internally in the waste processing area which will aid in controlling odour emissions.</li> <li>Good housekeeping standards (incl. spillage kits) will ensure that the site areas are kept clean to remove and waste spillages waste;</li> <li>Chemist to ensure that any spills are cleared completely.</li> </ul>	3 (Acceptable)	<ul style="list-style-type: none"> <li>Emergency procedures to be followed in the event of an incident;</li> <li>Spills to be cleaned immediately in accordance with relevant procedure;</li> <li>Review bulking procedures.</li> </ul>	Site Chemist / Operatives under the supervision of the Site Chemist to ensure that all bulking procedures are adhered to.
	Spillage of residues during washing of contaminated containers	R1, R2, R3, R4, R6, R13 & R23	5 (Fairly Probable)	2 (Noticeable)	10	<ul style="list-style-type: none"> <li>Operative to exercise due care when washing contaminated drums;</li> <li>Containers will remain sealed until washing commences;</li> <li>Washing of emptied storage containers will be undertaken within an internal storage bay;</li> <li>All washings to be collected in separate drum for disposal which will remain sealed unless contents are being added to;</li> <li>Good housekeeping standards (incl. spillage kits) will ensure that the site areas are kept clean to remove and waste spillages waste.</li> </ul>	3 (Acceptable)	<ul style="list-style-type: none"> <li>Emergency procedures to be followed in the event of an incident;</li> <li>Spills to be cleaned immediately in accordance with relevant procedure;</li> <li>Review container washing procedures.</li> </ul>	Site Chemist / Operatives under the supervision of the Site Chemist to ensure that all washing procedures are adhered to.
	Spillage of residues during drum crushing and shredding of plastic containers	R1, R2, R3, R4, R6, R13 & R23	5 (Fairly Probable)	2 (Noticeable)	10	<ul style="list-style-type: none"> <li>Chemist / operative to check that drums are nominally empty before crushing;</li> <li>Drums / containers will remain sealed for as long as possible prior to crushing and shredding;</li> <li>Good housekeeping standards (incl. spillage kits) will ensure that the site areas are kept clean to remove and waste spillages waste.</li> </ul>	3 (Acceptable)	<ul style="list-style-type: none"> <li>Emergency procedures to be followed in the event of an incident;</li> <li>Spills to be cleaned immediately in accordance with relevant procedure;</li> <li>Review drum crushing and container shredding procedures.</li> </ul>	Site Chemist / Operatives under the supervision of the Site Chemist to ensure that all crushing and shredding procedures are adhered to.

Operating Status	Odour Source	Most Sensitive Receptors	Probability	Consequence	Risk (without control measures)	Control Measures	Residual Risk	Action if odour causes problem	Responsibility
Abnormal Conditions	Delivery of large volume of incoming waste over a short period of time (accounting for ambient weather conditions)	R1, R2, R3, R4, R6, R13 & R23	3 (Somewhat Unlikely)	4 (Severe)	12	<p>Biffa will exercise the following with regards to their waste suppliers:</p> <ul style="list-style-type: none"> <li>Defined maximum tonnages that can be accepted daily;</li> <li>Agree delivery schedule with consideration of public holidays;</li> <li>Stipulate the remit for the rejection of wastes if the facility is over supplied and daily recording of quantity of waste accepted into facility;</li> <li>Contingency plan for management of over- supply of waste, including possible diversion to other facilities to accept rejected loads and options to return to supplier.</li> </ul>	2 (Acceptable)	<ul style="list-style-type: none"> <li>Rejection of incoming wastes.</li> </ul>	<p>Management team to negotiate supplier policy and contingency plan.</p> <p>Weighbridge operator to record quantity of waste accepted daily.</p> <p>Competent person to decide if waste should be rejected and whether it should be returned to supplier, sent to another licensed waste facility, or disposed of direct to landfill.</p>
Abnormal Conditions	Delivery of malodorous waste (accounting for ambient weather conditions)	R1, R2, R3, R4, R6, R13 & R23	3 (Somewhat Unlikely)	4 (Severe)	12	<ul style="list-style-type: none"> <li>Site chemists to identify malodorous waste;</li> <li>Rejection of malodorous waste loads;</li> <li>.</li> </ul>	2 (Acceptable)	<ul style="list-style-type: none"> <li>Waste rejected upon inspection and reloaded on to delivery vehicle for off-site disposal;</li> <li>Waste isolated and prioritised for onward transport to disposal facility.</li> </ul>	Competent persons as weighbridge operator and plant operative.
	Plant and equipment malfunction / breakdown	R1, R2, R3, R4, R6, R13 & R23	3 (Somewhat Unlikely)	4 (Severe)	12	<ul style="list-style-type: none"> <li>Planned preventative maintenance and regular inspections;</li> <li>Planned preventative maintenance and regular inspections;</li> <li>Availability of maintenance operatives.</li> </ul>	2 (Acceptable)	<ul style="list-style-type: none"> <li>Repairs to be undertaken as quickly as possible.</li> <li>If repair is not possible, a replacement will be procured as quickly as practicable.</li> </ul>	Competent person to ensure plant / equipment is repaired as quickly as possible

### **3.0 CONCLUSION**

- 3.1.1 It is concluded that the proposed Waste Transfer Station activities, and associated emissions, are unlikely to have any effect on the receptors within 1km of the proposed waste activity site boundary.
- 3.1.2 Fugitive emissions, incorporating the control measures stated in the above table, are therefore not considered to be a risk from this site.