Recycling and recovery UK

Thorverton Road Distribution Hub

Transfer Station

1.3 Environmental Risk Assessment

July 2024

DOCUMENT DETAILS

Document title	Thorverton Road Distribution Hub Environmental Risk Assessment
Version	2.0
Date	July 2024
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Distribution	SUEZ - Site Copy SUEZ - EIR Department Environment Agency

DOCUMENT REVIEW HISTORY

Date	Description	Summary of Changes
November 2023	Version 1.0	Original Document.
July 2024	Version 2.0	Original Document produced to meet the new SUEZ template. This document supersedes all previous versions of the environmental risk assessment.

CONTENTS

TABLES

APPENDICES

1 INTRODUCTION

1.1.1 This Environmental Risk Assessment (ERA) has been prepared to support an application for an environmental permit (permit) at Thorverton Road Distribution Hub (the site).

1.1.2 Further details of the site operations are contained in the Operations Management Plan (Document Reference 1.2).

1.1.3 This ERA is an assessment of the risks to the environment and human health from odour, noise, and fugitive emissions that may be associated with the site activities. The site also has a separate Accident Prevention and Management Plan (Document reference 1.4) that covers an assessment of reasonably foreseeable accidents on site.

2 RISK ASSESSMENT METHODOLOGY

2.1.1 This assessment follows the methodology set out in 'Risk assessments for your environmental permit' at: https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit.

2.1.2 The ERA methodology for a bespoke permit requires:

- identification of the potential risks associated with the activity (Section 3)
- the receptors that may be at risk (Section 4 and Table 1)
- the possible pathways from the sources of the risk to the receptors (Tables 2 - 5)
- if identified risks are considered too high, control measures are required (Tables 2 - 5)

2.1.3 The aim of the assessment is to identify any significant risks and demonstrate that the risk of pollution or harm will be acceptable by taking the appropriate measures to manage these risks.

2.1.4 Environment Agency (EA) guidance requires all receptors that are near the site and that could reasonably be affected by the proposed activities, to be identified and considered as part of the assessment.

2.1.5 For the purposes of this assessment a 1km radius has been adopted in reviewing potential receptors of ecological importance along with receptors such as sites of cultural and natural heritage, residential, commercial, industrial, agricultural and surface water.

2.1.6 The risk is determined by the probability of a hazard occurring and the likely consequences of any impact. The assessment of risk considers the residual risk that remains after implementation of the preventative measures.

2.1.7 Risk assessment definitions and the risk estimation matrix are presented in Appendix A.

3 SOURCE OF RISK

3.1.1 The site is permitted as a Transfer Station (TS) with an annual waste acceptance limit of 75,000 tonnes. The activities at the site predominantly involve handling, processing, storage and transfer of hazardous and non-hazardous household, commercial and industrial waste.

3.1.2 The potential risk of odour, noise and fugitive emissions from the site activities have been considered in Section 5 and are detailed in Tables 2 to 4.

4 SITE SETTING AND RECEPTORS

4.1 Site Setting

4.1.1 The site is located at Thorverton Road, Matford Business Park, Exeter, EX2 8FS at National Grid Reference (NGR) SX 93076 89848. The site location and permit boundary are presented in site infrastructure plans (document reference 1.1).

4.1.2 The site is located approximately 3km South of Exeter city centre and 2.5km northwest of Exminster. Access to the site is achieved via Thorverton Road, located to the north of the site. The area immediately surrounding the site is predominantly industrial in nature. The closest residential receptor is located approximately 700m south of the site boundary.

4.1.3 A Nature and Heritage Conservation Screen (Reference Number EPR/CB3807CF/P001) was requested from the EA. This screen determines the presence of any sites of nature and heritage conservation, or protected species or habitats that may be impacted by the proposal. The results of the screen identified one European site of ecological significance (i.e. Special Protection Areas, Special Areas of Conservation or Ramsar sites) within 1km of the site and two Local Wildlife Sites (LWS). Details of these sites are provided in Table 1.

4.2 Receptors

4.2.1 The nearest sensitive receptors to the site are identified in the receptor plan within the site infrastructure plan (Document Reference 1.1). The distance of these receptors to the site boundary and their direction relative to the site is detailed in Table 1 below.

Table 1 – Sensitive Receptors

No.	Receptor	Category	Distance (m)	Direction from site
0	Groundwater	Water Body	<50	-
1	Alphin Brook	Water Body (LWS)	200	E-NE
2	Exeter Ship Canal	Water Body (LWS)	275	E

No.	Receptor	Category	Distance (m)	Direction from site
3	River Exe (SPA, SSSI, Ramsar)	Water Body (SPA, SSSI, Ramsar)	430	E-NE
4	Matford Brook	Water Body	640	S
5	Matford Business Park	Industrial and Commercial	<50	W-NW
6	Exeter Eagles BMX Club	Recreational	100	N
7	Exeter Aces Cycle Speedway	Recreational	150	N
8	Double Locks Pub	Commercial	250	E-NE
9	Kiddi Caru Nursery	Amenity	300	S
10	Riverside Valley Park	Recreational	400	NE
11	Matford Centre	Amenity	500	W-SW
12	Matford Park and Ride	Industrial and Transport	540	SW
13	University of Exeter Dukes Meadow	Recreational	600	NE
14	Ancient and Semi-natural Woodland	Woodland	600	SW
15	River Exe Country Park	Recreational	700	E
16	The Devon Hotel	Residential and Commercial	700	S
17	Urban and Rural Plants Garden Centre	Commercial	750	S
18	RSPB Matford Marshes	Nature Reserve	800	SE
19	Marsh Barton Trading Estate	Industrial and Commercial	800	NW
20	Marsh Barton Train Station	Industrial and Transport	800	NW
21	Residential Properties	Residential	850	W-SW

No.	Receptor	Category	Distance (m)	Direction from site
22	Residential Properties	Residential	850	S
23	Matford Barton Farm	Residential and Agricultural	900	SW
24	Residential Properties	Residential	910	E-NE
25	ISCA Academy	Educational	1000	N
26	Exeter and Devon Crematorium	Amenity	1000	N
27	Residential Properties	Residential	1000	N

5 RISK ASSESSMENT AND MANAGEMENT MEASURES

5.1.1 The risk assessment and management measures are detailed in Tables 2 to 4 below. This assessment considers potential risks associated with:

- Odour
- Noise
- Fugitive emissions, specifically
    - To air – including dust and particulates
    - To water – including contaminated surface water run-off
    - Pests
    - Mud and litter

Table 2 – Odour Risk Assessment

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	**Receptor**	**Pathway**	**Risk Management**	**Probability of Exposure**	**Consequence**	**What is the overall risk?**
What is the agent or process with the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard come into contact with the receptor?	What measures are taken to reduce the risk? If it occurs who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Odour from storage of waste	Receptors 5 to 27	Air	The types of wastes accepted at site are unlikely to generate odour. Storage and treatment operations on site are not deemed associated with odour generation. Putrescible wastes are not accepted at the site. Any wastes causing an immediate amenity risk in respect of odour are considered unauthorised waste and the application of waste acceptance and inspection procedure from the IMS reduces the risk of accepting this waste. Malodourous wastes that are identified on site will be removed as soon as practicable.	**Low –** the management procedures should prevent emissions of odour.	**Medium/Low** - Nuisance	**Low** – The management procedures employed will reduce the likelihood of impact.

			IMS site inspection checklist or Vision App includes a daily requirement for site staff to qualitatively assess odour; if perceived to be excessive, measures will be taken to identify the source of any malodourous and take appropriate remedial action. Areas of site used to store waste that may contain odorous material will be cleaned at the discretion of the site manager as and when this is required. All complaints received associated with odour will be recorded and investigated in line with company procedures.			

Table 3 – Noise Risk Assessment

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	**Receptor**	**Pathway**	**Risk Management**	**Probability of Exposure**	**Consequence**	**What is the overall risk?**
What is the agent or process with the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard come into contact with the receptor?	What measures are taken to reduce the risk? If it occurs who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Noise and vibration from site mobile plant and vehicles delivering waste to the site.	Receptors 5 to 27	Noise through the air and vibration through the ground	H&S Legislation is in place to ensure SUEZ protects its employees from the effects of noise. All plant will be regularly and effectively maintained to prevent noise/vibration increases indicative of potential mechanical failure. Mobile plant on site is fitted with “white noise” reversing beacons which minimise the intrusive nature of the safety measure. A maximum speed limit of 5mph is set for vehicles onsite. This will minimise the generation of excessive noise arising from higher vehicle speeds.	**Low** – operations occur during the daytime as stipulated in the Planning Permission.	**Medium/Low** – Nuisance	**Low** – The management procedures employed will reduce the likelihood of impact.

			Site operations are designed to facilitate traffic movement and minimise reversing manoeuvres. This reduces noise and vibration arising from moving, queueing an idling of vehicles. Site staff ensure the delivery, processing and loading of waste takes place in a controlled manner so that noise and vibration generation is kept to a minimum. The site is underlain by an impermeable concrete hardstanding which attenuates any vibration generated from site operations detectable beyond the permitted area. The integrity of the concrete hardstanding is inspected in accordance with the IMS. IMS site inspection checklist or Vision App includes a daily requirement for site staff to qualitatively assess noise; if perceived to be excessive, measures will be taken to identify the source of any noise and take appropriate remedial action. All complaints received associated with noise will be recorded and investigated in line with company procedures.			

Noise and vibration from physical waste treatment processes	Receptors 5 to 27	Noise through the air and vibration through the ground	H&S Legislation is in place to ensure SUEZ protects its employees from the effects of noise. All machinery will be regularly and effectively maintained to prevent noise/vibration increases indicative of potential mechanical failure. IMS site inspection check sheets include a daily requirement for site staff to qualitatively assess noise; if perceived to be excessive, measures will be taken to identify the source of any noise and take appropriate remedial action. All complaints received associated with noise will be recorded and investigated in line with company procedures.	**Low** – operations occur during the daytime as stipulated in the Planning Permission.	**Medium/Low** – Nuisance	**Low** – The management procedures employed will reduce the likelihood of impact.

Table 4 – Fugitive Emissions Risk Assessment

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	**Receptor**	**Pathway**	**Risk Management**	**Probability of Exposure**	**Consequence**	**What is the overall risk?**
What is the agent or process with the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard come into contact with the receptor?	What measures are taken to reduce the risk? If it occurs who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
To Air						
Dust and particulates during waste deposit, storage and loading operations.	Receptors 5 to 27	Air transport and deposition	Permitted waste types not likely to give rise to significant amounts of dust. Waste that is accepted at the site will be stored within a building, containers or bays. The majority of waste on site is baled. The building benefits from roller shutter doors which will be kept closed during non-operational hours. In addition, pedestrian doors are also closed when not in direct use. This will minimise the risk of dust to impact receptors beyond the site boundary.	**Low** – the management actions should prevent emissions of dust	**Medium / Low –** human health risk in immediate vicinity, nuisance risk to nearby vehicles and property.	**Low** - The management procedures employed will reduce the likelihood of impact.

			The delivery and loading of waste will be undertaken in a controlled manner to keep dust generation to a minimum. A maximum speed limit of 5mph is set for vehicles operating on site. All delivery vehicles are required to be sheeted or netted where possible and if deemed necessary. Periodic maintenance/cleaning of hard surfaced areas to ensure they remain reasonably free of dust generating materials. Dampening down of surfaces with water from hose pipes during dry conditions. Further dust suppression measures will be identified and implemented if there is any risk identified of dust emanating past the site boundary, with attention to meteorological conditions which may exacerbate potential dust issues. IMS site inspection checklist or Vision App includes a daily requirement for site staff to qualitatively assess dust; if perceived to be excessive measures will be taken to identify the source of any dust/particulates and take appropriate remedial action.			

Dust and particulates from physical waste treatment processes	Receptors 5 to 27	Air transport and deposition	Mechanical treatment of waste undertaken within the baler building and the covered WEEE storage area to prevent fugitive emissions beyond the permit boundary. Any activities causing particulates emissions from the facility will be immediately suspended until climatic conditions improve and/or appropriate dust suppression measures are implemented. Further dust suppression measures will be identified and implemented if there is any risk identified of dust emanating past the site boundary, with attention to meteorological conditions which may exacerbate potential dust issues. IMS site inspection check sheets include a daily requirement for site staff to qualitatively assess dust; if perceived to be excessive measures will be taken to identify the source of any dust/particulates and take appropriate remedial action.	**Low** – operations occur during the daytime as stipulated in the Planning Permission.	**Medium/Low –** Nuisance	**Low** – The management procedures employed will reduce the likelihood of impact.

To Water						
Contaminated rainwater from contact with wastes	Receptors 0 to 4	Run off of contaminated water	The nature of the wastes accepted on site is such that highly contaminative run off is unlikely to occur. The site is provided with impermeable concrete surfaces to prevent the transmission of potentially contaminated liquids into groundwater beneath the site. The drainage system discharges to foul sewer via Interceptors or sediment traps. IMS site inspection checklist or Vision App includes a requirement for site staff to undertake visual inspections of the status of the drainage. The results of the inspections are recorded. Any remedial actions required are recorded in the site diary.	**Low** – The engineered systems and infrastructure are designed to prevent any discharge of contaminated rainwater run off	**Medium –** contamination of local water bodies and/or groundwater	**Low -** due to the design of the site
Storage of oil, fuel, or hydraulic fluid	Receptors 0 to 4	Run off of contaminated water	Fuel storage will be provided, and storage will be in line with latest legislation. All deliveries of fuel will be supervised to ensure no spillages occur. Chemicals provided with secondary containment, within a dedicated storage area. The site is provided with impermeable concrete surfaces to prevent the transmission of potentially contaminated liquids into groundwater beneath the site.	**Low** – The engineered systems and infrastructure are designed to prevent any discharge of contaminated rainwater run off	**Medium –** contamination of local water bodies and/or groundwater	**Low -** due to the design of the site

			Emergency spillage procedures are in place to ensure any oil, hydraulic fluids etc. are dealt with before they enter the drainage system. A supply of absorbent granules is stored on site within the spill kits. The drainage system will be sealed off to prevent discharge in the event of an incident. The drainage system discharges to foul sewer via interceptors or sediment traps. The interceptors and sediment traps are cleaned at suitable intervals to maintain effectiveness. IMS site inspection checklist or Vision App includes a requirement for site staff to undertake visual inspections of the status of the drainage. The results of the inspections are recorded. Any remedial actions required are recorded in the site diary.			

Pests						
Scavenging birds or animals attracted to site and carrying waste off site. Flies and vermin breeding in waste stockpiles.	Receptors 5 to 27	Air – waste dropped by birds. Land – waste removed from site by scavenging animals.	The waste accepted on site is deemed unattractive to pests as putrescible waste is not accepted on site. The majority of waste on site is held in the Transfer Station building. The contained and/or baled nature of the external waste storage on site minimises the risk of pest infestation. Tight controls of the waste levels will prevent long residency time at the site which will minimise the possibility of attracting vermin. Vehicles will be sheeted/netted if necessary, when entering/leaving the site to minimise the risk of pests. Any wastes found to contain flies on entry to the site will either be treated appropriately with fly spray or rejected from the site. Routine inspections are undertaken as required by our IMS and appropriate action will be taken in the event that the inspections indicate the presence of any pests or vermin. A pest control contractor will be appointed to attend the site at appropriate intervals in accordance with IMS procedures. Additionally, the pest control contractor will be called to site to deal with any vermin/pest related problems that may arise between scheduled visits.	**Low –** The management actions should reduce the risk	**Medium** - Nuisance, property damage and risk of vermin spread infections.	**Low** – the management procedures in place will reduce the likelihood of impact.

Mud/Litter						
Litter, debris and mud on the public highway.	Receptors 5 to 27	Debris, mud and litter tracked onto local highways by vehicles leaving the site.	No particular mud issues associated with the site due to the impermeable surface of the site and local highways. The contained/ baled nature of the waste storage on site minimises the risk of mud and litter. Site staff complete cleaning, sweeping and litter picking as part of housekeeping operations in accordance with the IMS. This reduces the migration of mud, debris and litter across site and beyond the permitted area. Any excessive spillage of waste anywhere within the site or on the adjacent highway will be dealt with immediately by sweeping of the surface and litter picking if required. The site has perimeter fencing which prevents the escape of debris and litter beyond the site permitted area. Vehicles will be sheeted/netted if necessary when entering/leaving the site to prevent fugitive emissions of litter/waste materials onto the public highways. IMS procedures require that all vehicles leaving the site are inspected for cleanliness, any vehicles not reaching the required standard will be manually cleaned before leaving site to prevent material being tracked onto local highways.	**Low** – the management actions should prevent materials being tracked/dropped onto local highways	**Medium** - Nuisance and potential health and safety hazard caused by waste on the highway.	**Low** – The management procedures in place will reduce the likelihood of impact.

			A street sweeping vehicle will be contracted in to attend to any specific instances of mud/debris being tracked onto local highways and site staff will regularly undertake litter picking as required.			

6 CONCLUSION

6.1.1 The risk assessments in Tables 2 to 4 identify appropriate mitigation measures to control the potential environmental risks from the proposed activities. All identified risk mitigation measures will be incorporated within the management system for the site.

6.1.2 The environmental risk assessment indicates that provided the risk mitigation measures identified in the tables above are implemented, the overall environmental risks can be summarised in Table 5 below.

Table 5 - Summary of Environmental Risk

Hazard	Overall Risk	Detailed Management Plan Required?
Odour	Low	No
Noise	Low	No
Pests	Low	No
Dust	Low	No
Mud/Litter	Low	No

Appendix A

Risk Assessment Definitions and Risk Estimation Matrix

RISK ASSESSMENT DEFINITIONS

Hazard: A property or situation that in particular circumstances could lead to harm.

Probability: The chance that a hazard will evolve and that the hazard will follow a pathway to a receptor:

Probability	Definition
High (H)	Will definitely occur
High/Medium (H/M)	High possibility of occurrence
Medium (M)	Likely to occur
Medium/Low (M/L)	Low possibility of occurrence
Low (L)	Very unlikely to occur

Consequence: The adverse effects or impacts of a hazard being realised upon a receptor:

Consequence	Definition
High (H)	Possible irreparable damage to environmental resources and or human life
High/Medium (H/M)	Possible irreparable damage to environmental resources
Medium (M)	Possible damage to environmental resources which are limited within a regional context
Medium/Low (M/L)	Possible effects might be transient damage to environmental resources which are common place on a regional basis and alternative resources are readily available
Low (L)	The effects are negligible or might cause very slight temporary deterioration in the current environmental resource quality.

Risk: A combination of the probability, or frequency of occurrence of a defined hazard and the consequence and magnitude of impact. The general High (H), High/Medium (H/M), Medium (M), Medium/Low(M/L) and Low (L) ratings listed in the risk assessment tables are for use as a guide only based on:

Matrix for the Estimation of the Risk					
	Consequence				
Probability of the Risk	**High**	**High/Medium**	**Medium**	**Medium/Low**	**Low**
High	High	High	High/Medium	Medium	Medium
High/Medium	High	High/Medium	Medium	Medium	Medium
Medium	High/Medium	Medium	Medium	Medium	Medium/Low
Medium/Low	Medium	Medium	Medium	Medium/Low	Low
Low	Low	Low	Low	Low	Negligible