

Nash Road Transfer Station

Environmental Permit Variation Application

Environmental Risk Assessment

SUEZ Recycling and Recovery UK Ltd

October 2023

Prepared on Behalf of Tetra Tech Environment Planning Transport Limited.
Registered in England number: 03050297

Document Control

Document:	Environmental Risk Assessment
Project:	Nash Road Permit Variation
Client:	SUEZ Recycling and Recovery UK Ltd
Job Number:	B0338859
File Origin:	\\southampton14\Data\Projects\Suez Recyc & Rec UK Ltd (S21300)\B033859 (Nash Road Variation)\Reports

Revision:	-	Status:	Final
Date:	October 2023		
Prepared by: Gemma Allan	Checked by: Andrew Bowker	Approved by: Andrew Bowker	
Description of revision:			

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	ENVIRONMENTAL RISK ASSESSMENT.....	2

APPENDICES

Appendix A – Environmental Risk Assessment

Appendix B – Nature and Heritage Conservation Screen (EPR/TP3405PT/V003)

DRAWINGS

Receptor Plan - SUEZ/B033859/REC/01

1.0 INTRODUCTION

1.1 REPORT CONTEXT

- 1.1.1 This section of the Environmental Permit application corresponds to Section 6 of Part C2 and B2 of the Environmental Permit application form, and has been prepared on behalf of the Operator, SUEZ Recycling and Recovery UK Ltd (SUEZ), by Tetra Tech.
- 1.1.2 This document relates to SUEZ's permitted facility located at Nash Road (the site), Trafford Park, Greater Manchester, Lancashire, M17 1SX.
- 1.1.3 This Environmental Risk Assessment (ERA) has been prepared to support an application to vary the environmental permit (EPR/TP3405PT) to change the nature of the facility from an In-Vessel Composting (IVC) facility to a non-hazardous Household, Commercial and Industrial (HCI) waste transfer station. In addition, SUEZ are seeking to increase the annual throughput of the site from 50,000 tonnes to 90,000 tonnes.
- 1.1.4 This Environmental Risk Assessment is limited to a qualitative assessment of the potential risks to the environment and human health specifically related to the proposed changes at Nash Road. This report will identify any significant risk and demonstrate that the risk of pollution will be acceptable by taking the appropriate measures to manage the risk.

2.0 ENVIRONMENTAL RISK ASSESSMENT

2.1 METHODOLOGY

2.1.1 This report has been prepared following the Environment Agency's (EA) Risk Assessment guidance. It specifically relates to the potential risks associated with the following risk types: -

- Odour;
- Noise and vibration;
- Fugitive emissions; and,
- Accidents and incidents.

2.1.2 This risk assessment addresses the above, and is based on the following methodology: -

- Identification of potential sources of risk;
- Identification of all potential receptors to risk; and,
- Risk assessment of each risk type.

2.1.3 The ERA is a tool used to identify the pollutant linkage i.e., source – pathway – receptor. For most risks, the atmosphere is the main pathway and will always exist. Therefore, the ERA deals primarily with the sources and receptors. The ERA is provided in Appendix A of this document and is summarised below.

2.1.4 A 'Nature and Heritage Conservation Screen' (EPR/TP3405PT/V003), was requested from the EA. The screen determines the presence of any site of nature and heritage conservation, or protected species or habitats that may be impacted by the proposal. A copy of the results is in Appendix B of this document.

2.1.5 The results of the screen indicate that the EA have not identified any nature and heritage conservation interests at risk of being impacted by the proposal at the site.

2.2 SOURCES

2.2.1 The potential sources of risks have been considered for each risk type, as provided in Appendix A of this document, and summarised below: -

Odour

- Waste materials.

Noise and vibration

- Engine noise from vehicles;
- Use of reverse vehicle warnings; and,
- Use of plant and machinery.

Fugitive emissions

- Particulate matter i.e., dust;
- Scavenging birds, pests and vermin;
- Mud; and,
- Litter.

Accidents

- Fire;
- Leaks and spillages; and,
- Unauthorised access.

2.3 PATHWAYS

2.3.1 The pathways have been identified for each risk type as shown in Table 1.

Table 1: Potential Pathways

Risk Type	Pathway
Odour	Atmosphere
Noise and vibration	Atmosphere
Fugitive emissions	Atmosphere
Accidents	Atmosphere
	Surface water run-off
	Infiltration
	Percolation

2.4 RECEPTORS

2.4.1 Receptors within 1km of the proposed application boundary have been listed in Table 2 and are shown on Drawing Number SUEZ/B033859/REC/01. The main pathway for the identified sources will be the atmosphere and as such, atmospheric conditions can affect dispersion rates and hence potential risk. As a result, the location of each receptor in relation to the site may influence the potential impact of the risk, as summarised in Appendix A.

Table 2: Location of Potential Receptors within 1km of the Site

ID	Receptor	Direction from Operational Area	Minimum Distance from the Permit Application Boundary (approx. m)
Domestic Dwellings			
1	Properties in Eccles	NW	350
2	Properties on Caledonian Drive	NW	500
3	Properties on Falkirk Drive	NW	475
4	Properties on Blyth Avenue	NW	430
5	Properties on Aqueduct Way	NW	395
6	Properties on Boardman Street	N	380
7	Properties on The Grove	N	530
8	Properties in Charter House Flats	N	650
Commercial and Industrial Premises			
9	Industrial units in Trafford Park industrial estate	SE	Adjacent
10	Industrial units off Lankro Way (Eccles)	NE	483
11	West One Retail Park	NE	810
12	Eccles Shopping Centre	N	875
Schools / Hospitals / Shops/Amenities			
13	St Andrews Primary School	N	600
14	Eccles Recreation Ground	N	680
15	Holy Cross and All Saints RC School	W	920
16	St Mary's Primary School	N	820
Highways or Minor Roads			
17	Ashburton Rd W (B5214)	SE	160
18	Bentcliffe Way (A57)	N	560
19	Barton Lane (B5230)	NW	630
20	Centenary Way (A576)	NE	725
21	Redclyffe Rd (B5211)	SW	980
Surface Water e.g. rivers and streams			

22	Manchester Ship Canal	N	160
23	Bridgewater Canal	SW	590
Groundwater (sensitivity)			
According to the Multi-Agency Geographic Information for the Countryside's (MAGIC) website, the site is not situated in a Groundwater Source Protection Zone (GSPZ). In terms of aquifers, the MAGIC website indicates that the site is in a Principal Aquifer (Bedrock).			

2.5 RISK ASSESSMENT

2.5.1 The ERA (Appendix A) looks at each specific hazard identified and assesses the likelihood of those hazards impacting on the receptors. This is achieved by fulfilling the following objectives: -

- Identify the location and nature of each hazard; Identify the specific receptors potentially at risk and assess the sensitivity of each receptor;
- Provide a qualitative assessment of the risk posed to each sensitive receptor;
- Identify management and monitoring techniques; and,
- Provide recommendations for more detailed assessments where necessary.

2.6 SUMMARY OF ERA

2.6.1 The ERA (Appendix A) indicates that the proposed changes at the site will have no significant impacts in terms of odour, noise and vibration, and fugitive emissions, and the likelihood of accidents is minimal.

DRAWINGS

Receptor Plan - SUEZ/B033859/REC/01

APPENDICES

APPENDIX A – ENVIRONMENTAL RISK ASSESSMENT

Table A1: Odour Risk Assessment and Management Plan

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 has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take 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 putrescible waste (Biowaste).	Domestic dwellings listed in Table 2. Commercial and industrial units' users listed in Table 2.	Atmosphere.	<p>Any waste that is accepted at the site will be stored in the waste transfer building. This building benefits from roller shutter doors which will be kept closed when not in use (i.e., arrival or departure of vehicles) and during non-operational hours. This will minimise the potential for any odour generated on site to impact receptors beyond the site boundary.</p> <p>Storage of putrescible waste will be limited to 72 hours from the date of receipt.</p> <p>Waste will be accepted at manageable volumes to avoid a backlog of wastes. In the event of odorous materials being received at the site, or materials becoming odorous during storage, these will be prioritised before other materials already stored at the site.</p> <p>SUEZ's Integrated Management System (IMS) includes site inspection check sheets that include 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 malodorous and take appropriate remedial action.</p>	Low – the management procedures should prevent emissions of odours.	Medium/Low - Odour annoyance.	Low – The management procedures employed reduce the likelihood of impact.

			Odour will be managed in accordance with the Odour Management Plan (Appendix E of the Environmental Permit Application).			
Odour from the storage of waste on site during contingencies such as mechanical breakdown.	Domestic dwellings listed in Table 2. Commercial and industrial units users listed in Table 2.	Atmosphere.	<p>Any odourous wastes will be removed from the site as soon as practicable.</p> <p>Storage of putrescible waste will be limited to 72 hours from the date of receipt.</p> <p>All putrescible wastes are stored in the waste transfer building prior to removal from the site. This building benefits from roller shutter doors which will be kept closed when not in use (i.e., arrival or departure of vehicles) and during non-operational hours. In addition, pedestrian doors are also closed when not in direct use. This will minimise the potential for any odour generated on site to impact receptors beyond the site boundary.</p> <p>Odour only likely to arise if waste is stored on site for extended periods of time. The waste storage will be managed to minimise retention time on site.</p> <p>In accordance with SUEZ's IMS, site inspection check sheets include 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.</p> <p>Odour will be managed in accordance with the Odour Management Plan (Appendix E of the Environmental Permit Application).</p>	Low – the management procedures should prevent emissions of odours.	Medium/Low - Odour annoyance.	Low – The management procedures employed reduce the likelihood of impact.

Table A2: Noise Risk Assessment and Management Plan

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 has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take 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.
<p>Noise and vibration from site plant and vehicles delivering waste to the site.</p> <p>Noise and vibration caused by the operation of plant and machinery.</p>	<p>Domestic dwellings listed in Table 2.</p> <p>Commercial and industrial units' users listed in Table 2.</p>	Atmosphere.	<p>The site is located within an operational industrial estate which undertakes similar operations (including waste) using fixed and mobile plant. As such, it's considered that there are no particularly sensitive local receptors.</p> <p>H&S Legislation is in place to ensure SUEZ protects its employees from the effects of noise.</p> <p>All noise generating activities will be confined to the operational hours as permitted under the planning permission.</p> <p>The site will provide a facility for the storage and bulking up of waste prior to transfer off site for disposal or recovery. There is no intention to undertake any mechanical treatment (e.g. screening, crushing, and shredding) of the waste that's accepted at the site. As such, this minimises the risk of noise that is typically associated from the treatment of waste,</p> <p>All waste activities will take place within the main waste transfer building. This building benefits from roller shutter doors which will be kept closed when not in use (i.e. arrival or departure of vehicles) and during non-operational hours. In addition, pedestrian doors are also closed when not in direct use. As such, any noise arising from the waste operation will be effectively attenuated by the walls and roof of the building.</p> <p>The site is designed to facilitate traffic flow/movement to reduce queues and idling. This reduces noise and vibration from transport on site.</p>	Low - Intermittent during operating hours.	Medium/Low - Intermittent noise and vibration disturbance.	Low – The management procedures employed reduced the likelihood of impact.

			<p>The use of modern plant and equipment shall be practiced and will be maintained in accordance with the manufacturer's requirements. This will minimise the risk of mechanical failure which could result in increased noise emissions.</p> <p>Plant on site is fitted with "white noise" reversing beacons which minimise the intrusive nature of the safety measure.</p> <p>In accordance with SUEZ's 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.</p> <p>All complaints received associated with noise will be recorded and investigated in line with company procedures.</p> <p>In addition to the above, a Noise Impact Assessment (NIA) and a Noise Management Plan (NMP) have been prepared which provides an assessment of noise from the proposed activities and how noise will be managed at the site. The NIA and NMP are provided as Appendix H of the Environmental Permit Application.</p>			
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Table A3: Fugitive Emissions Risk Assessment and Management Plan

What do you do that can harm and what could be harmed?			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Hazard	Receptor	Pathway	Hazard
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What has the potential to cause harm?
To Air						
Dust and particulates during waste storage and handling operations.	Domestic dwellings listed in Table 2. Commercial and industrial units' users listed in Table 2.	Atmosphere.	<p>Waste that is accepted at the site will be stored in the waste transfer building. This building benefits from roller shutter doors which will be kept closed when not in use (i.e., arrival or departure of vehicles) and 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.</p> <p>The site will provide a facility for the storage and 'bulking up' of non-hazardous waste. There is no intention to undertake any mechanical treatment (e.g., screening, crushing and shredding) of the waste that's accepted at the site. As such, this minimises the risk of dust that's typically associated from the treatment of waste,</p> <p>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 if deemed necessary.</p> <p>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.</p> <p>In accordance with SUEZ's 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.</p>	Low – the management actions should prevent emissions of dust.	Low – human health risk in immediate vicinity, nuisance risk to nearby vehicles and property.	Low – The management procedures employed reduced the likelihood of impact.

			Dust on site will be managed in accordance with the Dust Management Plan that is provided as Appendix G of the Environmental Permit Application.			
To Water						
Contaminated rainwater from contact with putrescible wastes. Run off of contaminants from wastes or non-wastes (e.g. oil, fuel).	Groundwater. Surface waters identified in Table 2.	Direct surface water run-off from site. Infiltration. Percolation.	<p>Waste that is accepted at the site will be stored in the waste transfer building and therefore will minimise contact with rainwater.</p> <p>The site is provided with impermeable concrete surfaces and a sealed drainage system to prevent the transmission of potentially contaminated liquids into groundwater beneath the site.</p> <p>Potential contaminated waters from inside the building and within waste storage areas will be collected within the building and pumped and tankered off site.</p> <p>Surface water discharges to surface water sewer after passing through a Class 1 interceptor.</p> <p>Fuel storage will be provided, and storage will be in line with latest legislation.</p> <p>All deliveries of fuel will be supervised to ensure no spillages occur.</p> <p>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 will be stored on site. The drainage system will be sealed off to prevent discharge in the event of an incident.</p> <p>Interceptors are cleaned at suitable intervals to maintain their effectiveness and are fitted with high level alarms.</p> <p>The hardstanding and drainage system are inspected as required by the IMS. The results of the inspections are recorded. Any remedial actions required are recorded in the site diary.</p>	Low – The engineered systems and infrastructure are designed to prevent any discharge of contaminated rainwater runoff.	Medium – contamination of local water bodies and/or groundwater.	Low - due to the design of the site.

			Weekly check sheets include a requirement for site staff to undertake visual inspections of the status of the drainage.			
Pests/Scavenging birds						
Scavenging birds or animals attracted to site and carrying waste off site.	Domestic dwellings listed in Table 2. Commercial and industrial units' users listed in Table 2.	Air – dropped by birds. Terrestrial – removed from site by vermin.	<p>Vehicles will be sheeted/netted if necessary when entering/leaving the site to minimise the risk of pests.</p> <p>All putrescible wastes are stored in a building prior to removal from the site. This building benefits from roller shutter doors which will be kept closed when not in use (i.e., arrival or departure of vehicles) and during non-operational hours. In addition, pedestrian doors are also closed when not in direct use.</p> <p>Storage of putrescible waste will be limited to 72 hours from the date of receipt.</p> <p>Waste acceptance procedure include a requirement for incoming waste to be checked for fly infestation either at the weighbridge or as the load is tipped.</p> <p>Any wastes found to contain flies on entry to the site will either be treated appropriately with the fly spray or rejected from the site.</p> <p>Routine inspections are undertaken as required by the IMS and appropriate action will be taken in the event that the inspections indicate the presence of any pests or vermin.</p> <p>A pest control contractor will be appointed to attend the site at regular intervals (to be determined) by the contractor 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.</p> <p>Pests will be managed in accordance with the Pest Management Plan that is provided as Appendix I of the Environmental Permit Application.</p>	Low – The management actions should reduce the risk.	Medium - Nuisance, property damage and risk of vermin spread infections.	Low – the management procedures in place reduce likelihood of impact.

Litter/Debris and Mud						
Litter/debris and mud on public highway.	Domestic dwellings listed in Table 2. Commercial and industrial units' users listed in Table 2.	Litter – atmosphere and terrestrial (likely to be in accordance with prevailing wind direction) Mud – Terrestrial.	<p>All waste accepted at the site will be stored in the waste transfer building. This building benefits from roller shutter doors which will be kept closed when not in use (i.e., arrival or departure of vehicles) and during non-operational hours. In addition, pedestrian doors are also closed when not in direct use. This will minimise the risk of wind-blown litter.</p> <p>The site benefits from a concrete surface and therefore the risk of mud is considered to be low.</p> <p>Vehicles will be sheeted/netted if necessary when entering/leaving the site to prevent fugitive emissions of litter/waste materials onto the public highways.</p> <p>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.</p> <p>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 undertake litter picking as required.</p>	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 minimise the likelihood of impact.

Table A4: Accident and Incident Risk Assessment and Management Plan

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 has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take 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.
Spillage of oil, fuel or hydraulic fluid from plant colliding with infrastructure, mechanical failure, leak during refuelling or maintenance.	Groundwater. Surface waters identified in Table 2.	Surface run-off. Infiltration. Percolation.	<p>The fuel oil storage facility on site is fully bunded in compliance with the Control of Pollution (Oil Storage) (England) Regulations 2001 and are located on an impermeable concrete surface.</p> <p>All other fuel/oil storage on site takes place in accordance with relevant legislation and in suitably bunded containers.</p> <p>The site is provided with impermeable concrete surfaces to prevent the transmission of potentially contaminated liquids into groundwater beneath the site.</p>	Low – the Management actions should prevent accidents and the engineered systems and infrastructure are designed to prevent any discharge of contaminated water run-off.	Medium - Pollution of local water courses, groundwater and aquifers.	Low - The management procedures in place should prevent this occurring.
Vandalism / theft – damage to waste containment and fuel storage infrastructure.	Groundwater. Surface water features identified in Table 2. Domestic dwellings listed in Table 2. Commercial and industrial units users	Unauthorised entry to the site.	<p>Although the proposal is to change the nature of the facility from an IVC facility to a non-hazardous waste transfer station, there are no proposed changes to the site boundary and therefore the risk of unauthorised access is not expected to increase.</p> <p>Nevertheless, the following measures are currently in place at the site and will continue to be implemented to minimise the risk of unauthorised access.</p> <p>All waste accepted at the site will be stored in the waste transfer building. This building benefits from roller shutter doors which will be kept closed when not in use (i.e., arrival or departure of vehicles) and during non-operational hours. In addition, pedestrian doors are also closed when not in direct use.</p>	Low – the management actions should prevent unauthorised access and the engineered systems and infrastructure are designed to prevent any discharge of harmful liquids.	Medium - Pollution of local water courses, groundwater and aquifers.	Low - The management procedures in place should prevent this occurring.

	listed in Table 2.		<p>Site security, perimeter fencing, and gates are installed to prevent unauthorised access to the site outside operational hours.</p> <p>A CCTV system is installed to deter and record any unauthorised activity.</p> <p>Procedures within SUEZ's IMS include a daily requirement to check the condition of the security measures and take appropriate remedial action in the event of any damage.</p>			
Arson/fire from self-combustion of waste.	<p>Groundwater.</p> <p>Surface water features identified in Table 2.</p> <p>Domestic dwellings listed in Table 2.</p> <p>Commercial and industrial units users listed in Table 2.</p>	<p>Infiltration.</p> <p>Contaminated rainwater runoff.</p>	<p>Smoking is only permitted in designated areas.</p> <p>Site security measures are in place to prevent unauthorised access to the site.</p> <p>Vehicles and plant are stored away from stockpiles of material when not in use as a precaution against electrical fire.</p> <p>Stockpiles of combustible materials are kept at volumes below the maximum stockpile size outlined in the EA fire prevention plan guidance.</p> <p>Stockpiles are separated by a 6m gap or a partition and concrete impermeable surfacing to act as a fire break and prevent the spread of fire from one stockpile to another.</p> <p>Fire water will be retained within the footprint of the building (Transfer Station and Re-use shop)</p> <p>Waste storage times are minimised and are such that self-heating process that could cause fire are unlikely.</p> <p>Daily checks are made on the condition of stockpiles of combustible wastes as required by the IMS procedures.</p> <p>Daily checks of fire safety equipment are carried out in accordance with SUEZ's IMS.</p> <p>Firefighting equipment is located at strategic locations.</p>	Low – the management actions should prevent fire.	Medium - possible respiratory irritation from smoke inhalation Nuisance from smoke and emissions of particulates.	Low – due to Management system in place.

			Fire will be managed in accordance with the Fire Prevention Plan Appendix F of the Environmental Permit Application).			
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**APPENDIX B - NATURE AND HERITAGE CONSERVATION SCREEN
(EPR/TP3405PT/V003)**