



Recycling and recovery UK

Cowen Road Household Waste Reception and Recycling Centre (HWRC)

1.3 Environmental Risk Assessment

September 2025

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CONTENTS

1	INTRODUCTION	1
2	RISK ASSESSMENT METHODOLOGY	1
3	SOURCE OF RISK.....	2
4	SITE SETTING AND RECEPTORS.....	2
5	RISK ASSESSMENT AND MANAGEMENT MEASURES.....	5
6	CONCLUSION.....	16

FIGURES

Figure 1 Site location plan
Figure 2 Indicative site layout and permit boundary plan
Figure 3 Receptor plan

APPENDICES

Appendix A Risk Assessment Definitions and Risk Estimation Matrix

1 INTRODUCTION

- 1.1.1 This environmental risk assessment (ERA) has been prepared to support the operation of Cowen Road Waste Reception and Recycling Centre/HWRC (the Site).
- 1.1.2 The site is operated as a household waste recycling centre and transfer station in accordance with Environmental Permit ERP/XP3093NK. Further details of the operations undertaken on the site are contained in the Operations and Emissions 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 household waste recycling centre (HWRC) and transfer station (TS). The site's annual waste acceptance limit is 71,350 tonnes.
- 3.1.2 The waste types permitted to be accepted at the HWRC comprise those that are non-hazardous and hazardous waste typically expected to arise from households, which are received directly from members of the public.
- 3.1.3 Additionally, highways waste is accepted in bays of the adjacent highways depot, including hardcore, asphalt and street sweepings. These materials have been generated by the Council in the process of highways maintenance activities.
- 3.1.4 The site has been designed to receive, store and subsequently load highways waste and household and similar wastes for onward transport.
- 3.1.5 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 Cowen Road, Blaydon, Gateshead, NE21 5TW (National Grid Reference (NGR) NZ 19156 63335). The site is located approximately 6km west of the centre of Newcastle upon Tyne.
- 4.1.2 Cowen Road Waste Recycling Centre adjoins the east boundary of Cowen Road Gateshead Council Depot, operated by Gateshead Council. Industrial units are to the north, south & west of the site. The nearest residential receptors are located 400m southwest on Shibdon Road.
- 4.1.1 The nearest nature and heritage conservation sites have been screened using Defra's Magic Maps tool (<https://magic.defra.gov.uk/magicmap.aspx>). The screening identified no designated Ancient Woodland or European Sites within 1km. Shibdon Pond Local Nature Reserve is located 60m east of the permit boundary and is also designated as a SSSI 300m east of the permit boundary.

4.2 Receptors

- 4.2.1 The nearest sensitive receptors to the site are identified in Figure 3. 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 Name	Category/Type	Approx. Distance in metres	Direction from Site
0	Groundwater	Water	0	N/A
1	Electricity pylons	Infrastructure	30	N
2	Waste/Recycling site	Industrial commercial	50	NWN

No.	Receptor Name	Category/Type	Approx. Distance in metres	Direction from Site
3	Gateshead council	Industrial commercial	30	E
4	Various Industrial buildings	Industrial commercial	85	E/ESE
5	Fuel station	Industrial commercial	365	WSW
6	Blaydon Shopping centre	Commercial	465	W
7	St Cuthberts community hall	Recreation	475	SW
8	Blaydon cemetery	Recreation	500	SSW
9	Playing fields	Open space	350	S
10	Shibdon pond local nature reserve/SSSI	Habitat/open space	60/ 300	SSE
11	Blaydon youth & community centre	Recreation	545	S
12	Blaydon leisure centre	Recreation	850	ESE
13	Derwenthough Industrial Estate	Industrial commercial	675	E
14	Various Industrial buildings around Tundry Way	Industrial commercial	850	NNE
15	Various Industrial buildings around Scotswood Road	Industrial commercial	600	NE
16	Blaydon Industrial Park	Industrial commercial	225 - 616	N/NNE
17	B&Q Warehouse	Industrial commercial	910	NNE
18	Various Industrial buildings around Bells Close	Industrial commercial	995	N
19	Various Industrial buildings Newburn Riverside	Industrial commercial	695 - 980	NW
20	Various Industrial buildings around Greenfinch Way	Industrial commercial	880 - 1000	NW
21	Residential properties around Murray Street	Residential	605 - 1000	WSW
22	Residential properties around Shibdon Park	Residential	850 - 1000	SSE
23	Residential properties around Woodlands Park Drive	Residential	690 - 1000	SSW
24	Residential properties around Western Way	Residential	670 - 1000	SSW
25	Railway line	Transport	60	N
26	A1 road	Transport	275	E
27	A695 Blaydon Highway	Transport	165	N

No.	Receptor Name	Category/Type	Approx. Distance in metres	Direction from Site
28	Blaydon West Primary School	Education	740	W
29	Blaydon Station	Transport	620	NW
30	River Tyne	Water course	450	NW
31	Priority Habitat – Lowland Meadows	Habitat	900	NW
32	Priority Habitat – Lowland Fens	Habitat	420	SE
33	Priority Habitat – Reedbeds	Habitat	420	SE
34	Priority Habitat – Lakes	Habitat	510	SE
35	Priority Habitat – Deciduous Woodland	Habitat	150	SE

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 2 to 29	Air	<p>The permitted waste types accepted at the site are considered to contain limited putrescible waste by its nature and therefore are unlikely to generate a significant amount of odour. However, any particularly odorous wastes that are identified on site will be removed as soon as practicable.</p> <p>Routine olfactory monitoring will be undertaken daily by an appointed person to detect any odours that may have the potential to migrate beyond the site boundary. Monitoring will be undertaken by site operatives during waste handling operations.</p> <p>Odour checks will also be undertaken by site management in accordance with the daily and weekly checklist. The records of the daily and weekly checks are kept on site. All complaints received associated with odour will be recorded and investigated in line with company procedures.</p>	Low – the management procedures should prevent emissions of odour.	Medium/Low - Nuisance	Low – The management procedures employed will reduce the likelihood of impact.

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 2 to 29	Noise through the air and vibration through the ground	<p>Health and Safety 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 that are stipulated within the planning permission with the exception of emergency repairs.</p> <p>The delivery and loading of waste is overseen by site staff and will take place in a controlled manner to keep noise/vibration to a minimum.</p> <p>All plant will be regularly and effectively maintained to prevent noise/vibration increases indicative of potential mechanical failure.</p> <p>Plant onsite is fitted with 'white noise' reversing beacons which minimise the intrusive nature of the safety measure.</p> <p>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>	Low – The management actions should minimise the risk of excessive noise emissions.	Medium/Low - Noise Nuisance	Low - the nature of the activity and the management procedures reduce the likelihood of noise impact



		All complaints received associated with noise will be recorded and investigated in line with company procedures.			
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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 from waste during deposit, storage and loading operations	Receptors 2 to 35	Air transport and deposition	Permitted waste types are not likely to give rise to significant amounts of dust. The delivery and loading of waste will be undertaken in a controlled manner to keep dust generation to a minimum. Any waste storage containers from which significant dust is emanating will be covered. Bays are sheltered from the prevailing wind, preventing entrainment of particulate into the air. Maintenance/cleaning of hard surfaced areas to ensure they remain free of dust generating materials. Dampening down of surfaces with water during dry conditions if necessary. A maximum speed limit of 10mph is set for vehicles operating on site.	Low – the management actions should prevent emissions of dust	Low – human health risk in immediate vicinity, nuisance risk to nearby vehicles and property.	Negligible

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?
			<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>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>			
To Water						
Contaminated rainwater from contact with wastes	Receptor 0 and 32	Run off of contaminated water	<p>Sealed containers are used for wastes which could cause contaminated run-off.</p> <p>Waste oils are stored within a double skinned container with bunding capacity of 110%.</p> <p>The site is provided with impermeable concrete surfaces to prevent the transmission of potentially contaminated liquids into groundwater beneath the site.</p> <p>The HWRC water drainage network directs the uncontaminated run off to surface water.</p> <p>Highways depot waste bays drain to combined sewer. The Highways Depot drains to combined sewer and it was confirmed by Northumbrian Water in February 2025 that a</p>	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

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?
			<p>Trade Effluent Consent is not required due to the nature and composition of wastes stored in the external bays.</p> <p>Emergency spillage procedures are in place to ensure any oil, hydraulic fluids etc. are dealt with before they enter the drainage system. Spill kits are provided at key locations around site.</p> <p>The hardstanding and drainage system are inspected as required by the site IMS. The results of the inspections are recorded. Any remedial actions required are recorded in the site diary.</p> <p>Weekly check sheets include a requirement for site staff to undertake visual inspections of the status of the drainage. If damage or other problems are identified they are rectified as soon as possible.</p>			
Pests						
Scavenging birds or animals attracted to site and carrying waste off site. Flies and vermin breeding in waste stockpiles.	Receptors 2 to 35	<p>Air – waste dropped by birds.</p> <p>Land – waste removed from site by scavenging animals.</p>	<p>Wastes are stored within dedicated skips/bins/containers, which minimises the risk of pest infestation.</p> <p>Wastes with the potential to contain putrescible material will be stored for short periods, minimising the risk of infestation.</p>	<p>Low – The management actions should reduce the risk</p>	<p>Medium - Nuisance, property damage and risk of vermin spread infections.</p>	<p>Low – the management procedures in place will reduce the likelihood of impact.</p>

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?
			<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 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>			
Mud/Litter						
Litter, debris and mud on the public highway.	Receptors 1-35	Debris, mud and litter tracked onto local highways by vehicles leaving the site.	<p>The site benefits from a hardstanding surface and therefore it is unlikely that any vehicle will track over any mud while they are on site. Local highways are also constructed of hard surfacing.</p> <p>Haulage 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>	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.

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?
			<p>Remedial arrangements will be employed in response to any specific instances of significant mud/debris being tracked onto local highways, such as contract of a street sweeping vehicle.</p> <p>Site staff will regularly undertake litter picking as required.</p>			
Accidents						
Spillage of oil, fuel or hydraulic fluid from plant colliding with infrastructure, mechanical failure, leak during refuelling or maintenance or leak from storage containers.	Receptor 0 and 29	Run off of contaminants to surface water or groundwater.	<p>All oil storage on site takes place in accordance with relevant legislation and in suitably bunded containers.</p> <p>Only staff in possession of the appropriate plant certificates will be permitted to operate waste handling equipment.</p> <p>The IMS requires daily inspections to check the containment of any fuel/oil storage on site and availability of spill kits to ensure early detection of any spillages/leaks or damage to pollution control infrastructure.</p> <p>Any bunding to be kept clear of accumulating liquids to ensure capacity of containment systems is maintained.</p> <p>The site's water drainage network directs the uncontaminated run off to surface water.</p> <p>The IMS includes emergency spillage procedures to ensure that spillages/leaks onto the hardstanding are</p>	Low – The site infrastructure and management procedures are designed to prevent any discharge of contaminated run off	Medium - Pollution of local water courses, groundwater and aquifers	Low

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?
			<p>cleared immediately upon detection before entering the drainage system using absorbent granules. The waste granules are sent to a suitably licensed disposal facility.</p>			
Vandalism/ theft – damage to waste containment and fuel/oil storage infrastructure	Receptors 0 and 29	Run off of contaminants to surface water or groundwater.	<p>Site security, perimeter fencing and gates are installed to prevent unauthorised access to the site outside operational hours.</p> <p>IMS procedures include a daily requirement to check the condition of the security measures and take appropriate remedial action in the event of any damage.</p> <p>A CCTV system is installed around the site to act as a further deterrent and to record any unauthorised activity.</p>	Low – the site infrastructure and management actions act to prevent unauthorised access and discharge of contaminated waters	Medium - Pollution of local water courses, groundwater and aquifers	Low
Arson or fire from self-combustion of waste	Receptors 0 - 35	Air (smoke) causing respiratory irritation/illness Direct run off of fire water to surrounding land and controlled waters Thermal radiation	<p>An approved FPP is implemented at the site.</p> <p>Site security measures are in place to prevent unauthorised access to the site.</p> <p>Site staff are trained in fire safety awareness and in the use of firefighting equipment.</p> <p>Smoking is not allowed on site.</p>	Low – the management actions should prevent fire	Medium - possible respiratory irritation from smoke inhalation Nuisance from smoke and emissions of particulates Detriment to the local amenity	Low

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?
			<p>Vehicles and plant are stored away from stockpiles of material when not in use as a precaution against electrical fire.</p> <p>A Fire Watch is undertaken by site staff at the end of the working day.</p> <p>Waste storage times are minimised and are such that self-heating process that could cause fire are unlikely.</p> <p>Firefighting equipment is located at strategic locations.</p> <p>Contractors required to undertake hot works will be required to provide risk assessments and follow approved safe working procedures.</p> <p>Hardstanding to prevent infiltration of contaminated water to groundwater. Drain mats available to prevent contaminated water entering surface water drainage system.</p>		<p>Danger to life and property</p>	

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

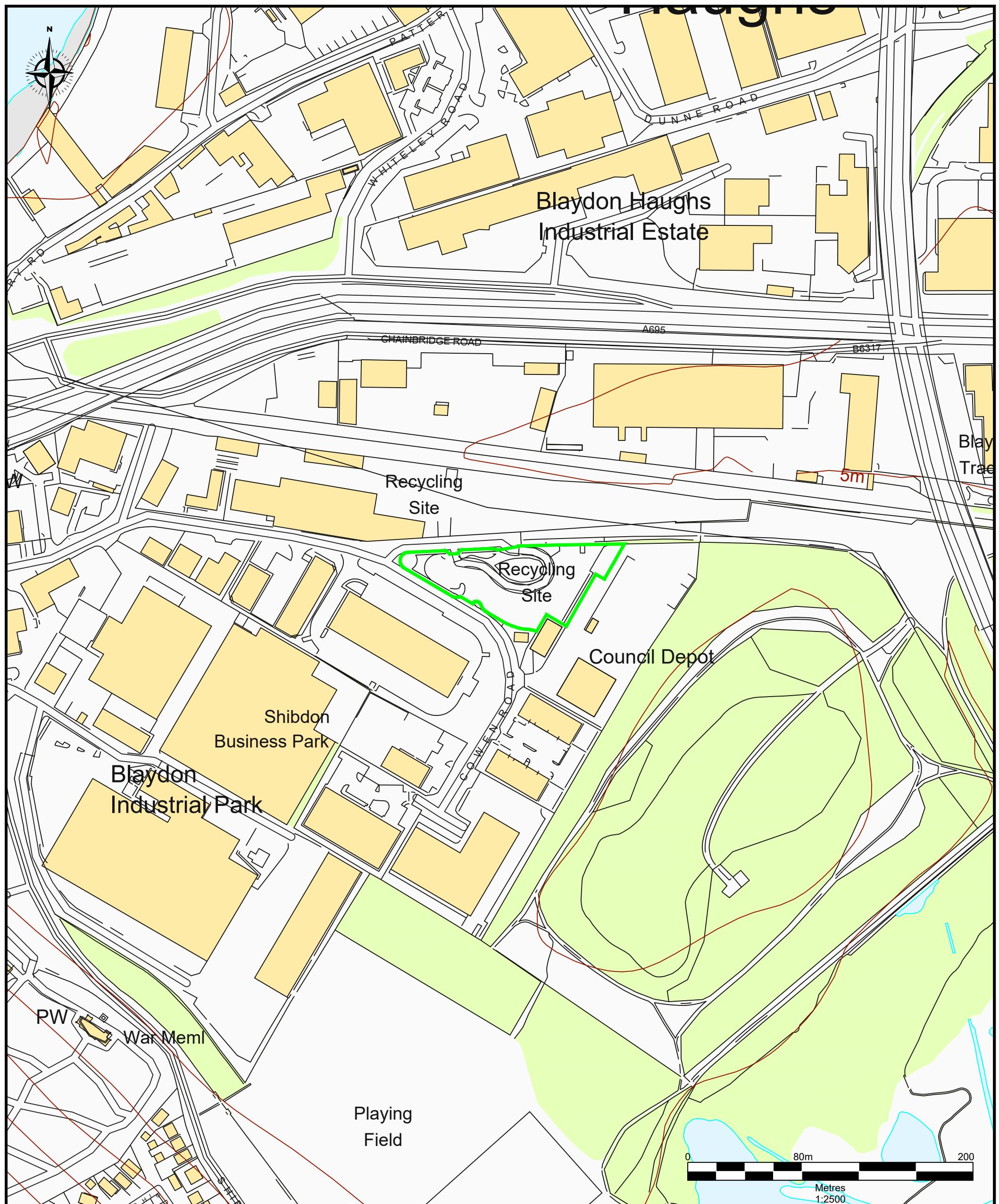
Hazard	Overall Risk	Detailed Management Plan Required?
Odour	Low	Yes – See 2.1 Odour Management Plan
Noise	Low	No
Pests	Low	No
Dust	Negligible	No
Mud/Litter	Low	No



FIGURES



Figure 1
Site Location Plan



<p>SUEZ Darwen Resource Recovery Park, Lower Eccleshill Road, Darwen, BB3 0RP Tel: (01254) 819700, Fax: (01254) 819749, Email: richard.bisset@site.co.uk</p>	<p>Site Cowen Road HWRC Title Site Location Plan</p>	<p>Scale 1:2,500 @ A3 Date August 2025 Drawing Ref Cwn-PLN-1123-01b</p>	<p>Drawn by JA Checked by SW</p>	<p>Rev A B</p>	<p>subject Updated Layout Permit Boundary Adjusted</p>	<p>date March 2025 August 2025</p>



Figure 2
Indicative Site Layout and Permit Boundary Plan



Notes

1. Reproduced from the Ordnance Survey Map with the permission of the Controller of Her Majesty's Stationery Office, Crown Copyright, Licence Number 100004910.

 Permit Boundary

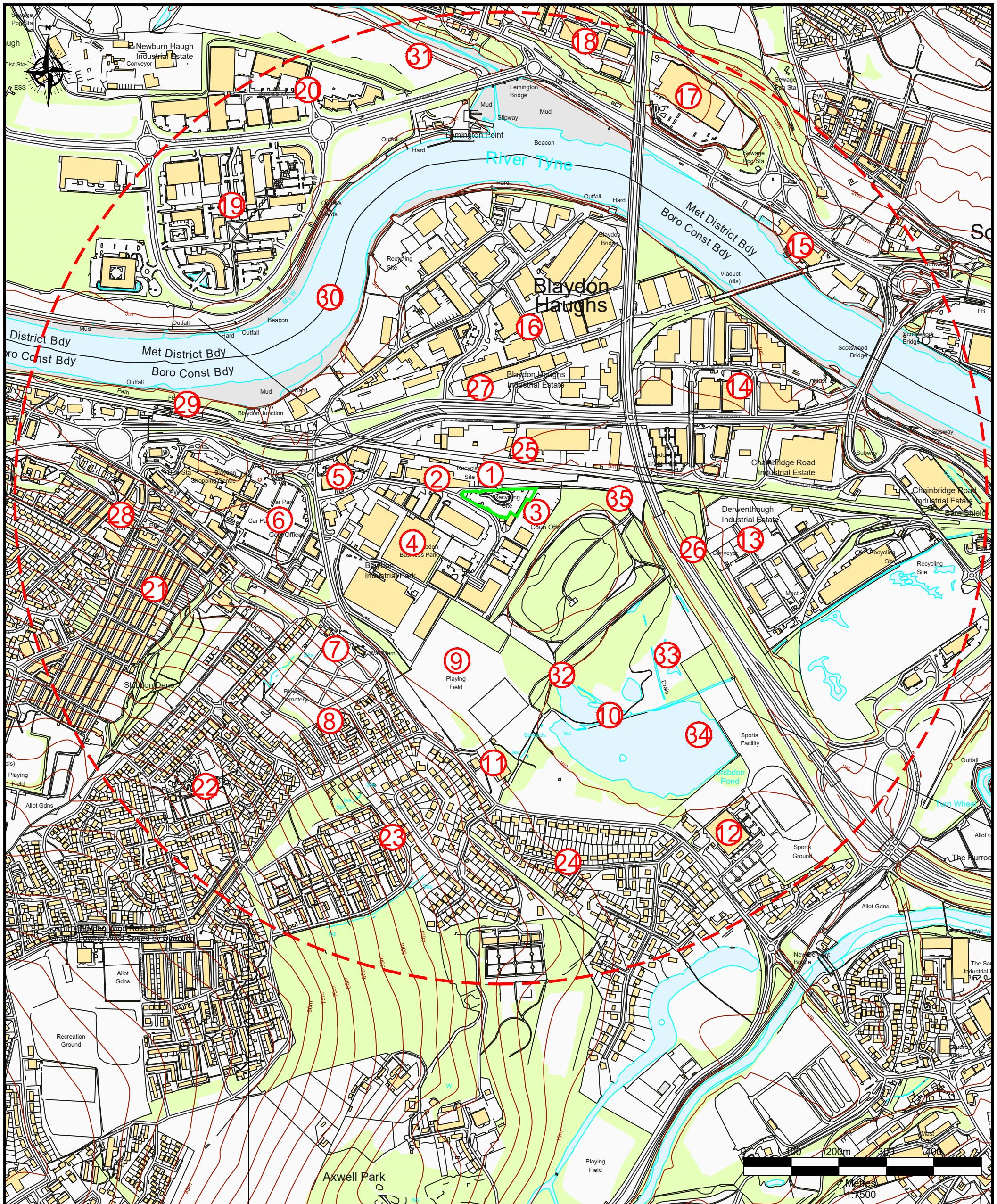


Rev	subject	date
A	Permit Boundary Adjusted	August 2025
SUEZ Darwen Resource Recovery Park, Lower Eccleshill Road, Darwen, BB3 0RP Tel: (01254) 819700, Fax: (01254) 819749, Email: richard.bisset@sita.co.uk		
Site Cowen Road HWRC		
Title Indicative Site Layout		
Scale 1:500 @ A3		
Date August 2025		
Drawing Ref Cwn-LAY-1124-01a		Drawn by JA
		Checked by SW



Figure 3

Receptor Plan



Notes

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Ordnance Survey AC0000808122/100004910.

— Permit Boundary
- - - 1km Offset

① Receptors



APPENDICES



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