UMBRELLA ENVIRONMENTAL

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Environmental Risk Assessment

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1 INTRODUCTION

1.1 Scope

This risk assessment is based on the source-pathway-receptor approach. All potential sources of pollution associated with the acceptance, treatment and storage of permitted inert and non-hazardous waste activities have been assessed against the principle receptor types identified within the site's vicinity.

The requirement for risk management measures is then dependent on a viable pathway being present between the source and the receptor. Where such a pathway exists, management measures are required to reduce risk.

1.2 Aims

This assessment aims to consider potential environmental hazards associated with the activity, to identify sensitive receptors which these may impact, and determine the influence management practice has on reducing risk.

2 SITE SETTING

2.1 Location

The site is situated at national grid reference SD 58148 32763, within Unit 21-22 Roman Way, Langridge Road, Preston PR2 58B. It is located approximately 3.5 km from the centre of the commuter town of Langridge and 6 km northeast of Preston City Centre. The site is positioned within an industrial area that offers convenient access to Junction 31a of the M6 motorway.

Specifically, the site is located within the Red Scar Industrial Estate, on the outskirts of Langridge. The surrounding area comprises a mixed land use, including residential, industrial, and agricultural zones, providing a diverse environment around the site.

2.2 Humans and Property

There are no local train stations in Longridge or the immediate surrounding area. The main line to Birmingham or other surrounding areas is via the main train station at Preston, 6.6km from the site.

Bus services serve the centre of Longridge and surrounding area, collecting frequently from the main routes adjacent to the Roman Way Industrial Area and Red Scar Business Park.

The industrial area is within easy access to J31a M6. Recreational

The closest recreational area to the site is Red Scar Woods located approximately 635m south from the installation.

There are no educational facilities within 500 m of the site, Grimsargh St Michael's C of E Primary School is the closest at approximately 1.3km north from the installation. The next closest school is Highfield Priory School and Nursery and St Maria Goretti Catholic Primary School approximately 1.6km south west from the installation.

2.3 European Designated Receptors

	DESIGNATED SITES		
-	Preston Green Belt Area	620 m	SSE
-	South Ribble Green Belt Area	714 m	SSE
1	SSSI & Ancient Woodland - Red Scar & Tun Brook Woods	728 m	ESE
2	Local Nature Reserve - Pope Land Open Space	923 m	S
3	Local Nature Reserve - Grange Valley	1286 m	SW
4	Ancient Woodland - Big Wood	1555 m	E
5	Local Nature Reserve - Hills & Hollows	1625 m	WSW
6	Local Nature Reserve - Fishwick Bottoms	1680 m	SSW
-	SSSI - Darwen River Section	4458 m	SE
-	SSSI - Beeston Brook Pasture	4963 M	SSE

2.4 Designated Receptors

	NON-DESIGNATED SITES		
1	BAP - Pockets of Deciduous Woodland off Longridge Road	122 m	NW
2	BAP - Pockets of Deciduous Woodland at Preston Crematorium	266 m	S
3	BAP - Pockets of Deciduous Woodland adjacent to River Ribble	641 m	SE
4	Pockets of Deciduous Woodland west of Longridge Road	654 m	NE
5	BAP - Pockets of Deciduous Woodland adjacent to Turn Brook	1050 m	E
6	BAP - Pockets of Deciduous Woodland adjacent to M6	1167 m	SW
7	BAP - Coastal & Floodplain Grazing Marshes north of River Ribble	1169 m	SE
8	BAP - Pockets of Deciduous Woodland south of Bluebell Way	1242 m	WSW
9	BAP - Pockets of Deciduous Woodland north of Bluebell Way	1245 m	WNW
10	BAP - Coastal & Floodplain Grazing Marshes west of River Ribble	1400 m	SSE
11	BAP - Pockets of Deciduous Woodland between Turn Brook & River Ribble	1542 m	E
12	BAP - Pockets of Deciduous Woodland adjacent to Savick Brook	1712 m	NW

2.5 Geology

Table 1 Geology

Superficial and Drift Geology	Superficial Layer - Secondary A Aquifer
Bedrock and Solid Geology	Bedrock Geology - Principal Aquifer

2.6 Hydrogeology

The bedrock underlying the site is classified as a Principal aquifer, defined as "These are layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer

2.7 Hydrology

There are drains which lie to the south west of the site which eventually drain to the river ribble.

	SURFACE WATER		
-	Pond off Longridge Road	215 m	WSW
-	Multiple Ponds within Arable Land east of Longridge Road	462 m	ENE
-	Multiple Ponds within Arable Land west of Longridge Road	665 m	NNW
-	River Ribble	743 m	SSE
-	Tun Brook	759 m	SE
-	Multiple Attenuation Ponds east of M6	1495 m	S

-	Savick Brook	1670 m	NW
-	Bezza Brook	1813 m	SSE

2.8 Flood Risk

The site lies within flood zone 2 – medium risk.

2.9 Air Quality

Site is not located in an AQMA for PM^{10} monitoring/restrictions.

2.10 Nature of Risk Assessment

This document provides a broad and general assessment of the risk factors considered to be of significance for the site, and an evaluation of the impact from the principle risk factors to receptors within the site vicinity.

3 METHODOLOGY

3.1 Hazard Identification

A series of risk assessments to reveal the potential impact of the sites waste activities of their releases upon the local environment.

3.2 Types of Waste Activity Hazards

Hazard		Sources	Risk	Further Assessment
Odour	• Odour from storage • Odour from processing • Odour from Transfer	1. Waste delivery 2. Storage 3. Treatment Process 4. Material dispatch	• Non Conforming wastes	• Table 8 Odour
Noise and Vibration	• Engine Noise (idling) • Noise from vehicle and plant movement. • Noise form reverse warnings • Noise form waste processing • Vibration from plant and vehicle movements	1. Waste delivery 2. Storage 3. Treatment Process 4. Material dispatch	• Processing and storage occurs inside a building.	• Table 9 Noise and Vibration
Fugitive Emissions	• Dust from waste processing • Dust from Stored Waste • Litter form waste storage and/or treatment • Litter from vehicle movements • Pest form waste storage • Runoff from site operations	1. Waste delivery 2. Storage area run-off pre and post treatment 3. Treatment Process 4. Material dispatch 5. Fire Water	• Dust and particulate matter liberated from external areas only during dry conditions. • Loss of material during unloading, treatment and dispatch of waste.	• Table 10 Fugitive Emissions

Hazard		Sources	Risk	Further Assessment
Accidents	• Leak from onsite oil storage • Transfer of substances • Plant of Equipment Failure • Fire in waste materials • Flooding • Vandalism	1. Waste delivery 2. Storage 3. Treatment Process 4. Material dispatch 5. Fire Water 6. Flood risk from Rivers, Sea or surface water. 7. Unauthorised access	• Loss of waste from vehicles • Spillages from processing equipment and vehicles transferring waste in to and out of site. • Damage to processing equipment and site infrastructure by vandals. • Uncontrolled emissions of fire water and smoke.	• Table 11 Accidents
Sensitive Areas	• Damage to protected ecosystems	1. Waste delivery 2. Storage 3. Treatment Process 4. Material dispatch 5. Fire Water	• Sensitive receptors located around site impacted by normal operating activities and those during an incident.	• Table 8 Odour • Table 9 Noise and Vibration • Table 10 Fugitive Emissions • Table 11 Accidents

Identified hazards that may have an environmental impact have been identified had have been provided mitigation in Section 4 of this document.

3.3 Identify Receptors

Receptors are those sites/activities that are at risk form the hazards that a waste activity may have impact on and are defined as below:

- Protected sites and species
- Anywhere used to grow food or to farm animals or fish
- Drain and sewer systems
- Factories and other businesses
- Fields and allotments used to grow food
- Footpaths
- Groundwater, groundwater source protection zone
- Homes, or groups of homes (such as villages or housing developments
- Playing fields and playgrounds
- Private drinking water supplies
- Regionally important geological
- Schools, hospitals and other public buildings
- Water, for example ponds, streams, rivers, lakes or the sea –
- Conservation and habitats protected areas and areas of scientific interest

The receptors most likely to be impacted by the waste sites activities are listed below in Table 2 Key Receptors

Table 2 Key Receptors

TYPE OF RECEPTOR	ID #	DESCRIPTION	DISTANCE FROM BOUNDARY (M)	DIRECTION
HUMANS & PROPERTY	-	Site Workers	On site	-
	-	Site Visitors	On site	-
		COMMERCIAL		
	1	Units at Roman Way Industrial Estate	0 m	E, S, W
	2	Multiple Units at Astra Business Centre	0 m	NW
	3	Distribution Centre off Longridge Road (ANBO International)	154 m	SW
	4	Multiple Units at Rough Hey Industrial Estate	157 m	NW
	5	Multiple Units at Red Scar Business Park	322 m	WSW
	6	Solar Farm off Longridge Road	490 m	ENE
	7	Distibution Centre off Bowland View (SPAR)	597 m	WNW
	8	Multiple Industrial Units off Longridge Road	652 m	WSW
	9	Multiple Distribution Centres south of Lancashire Way	749 m	WSW
	10	Multiple Industrial Units off Longridge Road	787 m	NE
	11	Depot off Longridge Road (Jhn Turner Construction Group)	815 m	NNE
	12	Multiple Retail Units off Bluebell Way	1211 m	WNW
	13	Multiple Car Showrooms off Bluebell Way	1499 m	W
		RESIDENTIAL		
	1	Multiple Residential Properties off Longridge Road	357 m	N
	2	Residents of Grimsargh	854 m	NNE
		ROADS & RAILWAYS		
	-	Roman Way	0 m	E, S

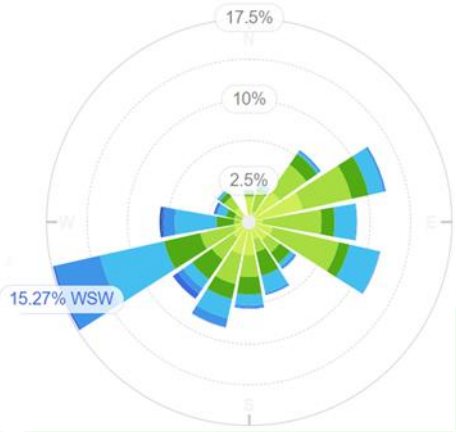
TYPE OF RECEPTOR	ID #	DESCRIPTION	DISTANCE FROM BOUNDARY (M)	DIRECTION
	-	B6243	154 m	NW
	-	B6242	645 m	WSW
	-	M6	1073 m	WSW
		PUBLIC USE		
	1	Preston Crematorium	368 m	SSE
	2	Grimsargh Parish Church	967 m	NNE
	3	Grimsargh St. Michaels CE Primary	1146 m	NNE
	4	St. Maria Goretti Catholic School & Parish Centre	1176 m	WSW
	5	Highfield Priory School	1280 m	WSW
	6	Preston Grange Primary School	1306 m	WSW
	7	Moor Nook Community Primary School	1695 m	SSW
	8	Sir Tom Finney Community High School	1859 m	SW
	9	The Rainbow Nursery	1903 m	WSW
		RECREATIONAL		
	1	Hills & Hollows Nature Reserve	1310 m	WSW
	2	Brockholes Playground	1402 m	SSE
	3	Grange Park	1424 m	SSW
	4	Grimsargh Recreational Ground	1612 m	NNE
	5	Sion Park	1793 m	SW
WATER		**SURFACE WATER**		
	-	Pond off Longridge Road	215 m	WSW
	-	Multiple Ponds within Arable Land east of Longridge Road	462 m	ENE
	-	Multiple Ponds within Arable Land west of Longridge Road	665 m	NNW
	-	River Ribble	743 m	SSE
	-	Tun Brook	759 m	SE
	-	Multiple Attenuation Ponds east of M6	1495 m	S
	-	Savick Brook	1670 m	NW
	-	Bezza Brook	1813 m	SSE
		GROUNDWATER		
	-	Bedrock Geology - Principal Aquifer	On site	-
	-	Superficial Layer - Secondary A Aquifer	On site	-
ENVIRONMENTALLY SENSITIVE		**DESIGNATED SITES**		
	-	Preston Green Belt Area	620 m	SSE
	-	South Ribble Green Belt Area	714 m	SSE
	1	SSSI & Ancient Woodland - Red Scar & Tun Brook Woods	728 m	ESE
	2	Local Nature Reserve - Pope Land Open Space	923 m	S
	3	Local Nature Reserve - Grange Valley	1286 m	SW
	4	Ancient Woodland - Big Wood	1555 m	E

TYPE OF RECEPTOR	ID #	DESCRIPTION	DISTANCE FROM BOUNDARY (M)	DIRECTION
	5	Local Nature Reserve - Hills & Hollows	1625 m	WSW
	6	Local Nature Reserve - Fishwick Bottoms	1680 m	SSW
	-	SSSI - Darwen River Section	4458 m	SE
	-	SSSI - Beeston Brook Pasture	4963 M	SSE
		NON-DESIGNATED SITES		
	1	BAP - Pockets of Deciduous Woodland off Longridge Road	122 m	NW
	2	BAP - Pockets of Deciduous Woodland at Preston Crematorium	266 m	S
	3	BAP - Pockets of Deciduous Woodland adjacent to River Ribble	641 m	SE
	4	Pockets of Deciduous Woodland west of Longridge Road	654 m	NE
	5	BAP - Pockets of Deciduous Woodland adjacent to Turn Brook	1050 m	E
	6	BAP - Pockets of Deciduous Woodland adjacent to M6	1167 m	SW
	7	BAP - Coastal & Floodplain Grazing Marshes north of River Ribble	1169 m	SE
	8	BAP - Pockets of Deciduous Woodland south of Bluebell Way	1242 m	WSW
	9	BAP - Pockets of Deciduous Woodland north of Bluebell Way	1245 m	WNW
	10	BAP - Coastal & Floodplain Grazing Marshes west of River Ribble	1400 m	SSE
	11	BAP - Pockets of Deciduous Woodland between Turn Brook & River Ribble	1542 m	E
	12	BAP - Pockets of Deciduous Woodland adjacent to Savick Brook	1712 m	NW
		HERITAGE SITES		
	1	Grade II Listed Feature - Grimsargh War Memorial	583 m	NNE
	2	Grade II Listed Building - Grimsargh Village Hall	819 m	NNE
	3	Grade II Listed Building - Haighton House	1529 m	NW
	4	Grade II Listed Buildings - Elston Cottage & Place House Farmhouse	1601 m	ESE
	5	Grade II Listed Building - Former Railway Station on Former Longridge Railway	1603 m	WSW
	6	Grade II Listed Building - Samlesbury Lower Hall	1880 m	SE

3.4 Wind Rose

Wind rose shows the prevailing wind direction for the waste site.

Figure 1 Wind Rose



3.5 Pathways

Table 3 Potential Pathways

Hazard	Potential Receptors	Pathway
Odour	Humans/Property/ Sensitive Areas (Designated)	Atmosphere
Noise and Vibration		Atmosphere, Physical
Fugitive Emissions	Ground Water/Humans/Property/ Sensitive Areas (Designated)	Atmosphere, Physical
Fire, Spills and Contaminated surface water.		Atmosphere, Physical, Infiltration via the ground
Vermin, Birds, Insects	Humans/Property/ Sensitive Areas (Designated)	Atmosphere, Physical

3.6 Risk

Environmental Risk is the probability of an receptor being exposed to an environmental hazard and the impact of such exposure. The Primary risk is assessed with no mitigation in place such as managerial procedures and physical engineering.

To assess risk the probability and the consequence of exposure have to be assessed see below tables.

Table 4 Probability of Exposure

Probability of exposure
HIGH – exposure is probable: direct exposure likely with no / few barriers between hazard, source and receptor.
MEDIUM – exposure is fairly probable: feasible exposure possible, barriers to exposure less controllable.
LOW – exposure is unlikely: several barriers exist between hazards source and receptors to mitigate against exposure.

Probability of exposure
VERY LOW – exposure is very unlikely; effective, multiple barriers in place to mitigate against exposure.

Table 5 Consequence of Exposure

Consequences of Exposure
HIGH – the consequences are severe: sufficient evidence that short or long term exposure may result in serious damage.
MEDIUM – consequences are significant; sufficient evidence that exposure to hazard may result in damage that is not severe in nature and reversible once exposure ceases (e.g. irritant).
LOW – consequences are minor; damage not apparent though reversible adverse changes may occur.
VERY LOW – consequences are negligible; no evidence of adverse changes following exposure.

Application of the probability and consequences of an hazard gives a risk rating as shown by the matrix below in

Table 6 Risk Matrix

		Consequences			
		Very Low	Low	Medium	High
Likelihood	High	Low	Medium	High	High
	Medium	Low	Medium	Medium	High
	Low	Low	Low	Medium	Medium
	Very Low	Very Low	Low	Low	Low

3.7 Management of Risk

For all the hazards identified in section 3.2 above, managerial procedures and hard infrastructure engineering have been developed in accordance with relevant guidance documents[1][2][3]

Residual risk will remain and these are detailed in Table 8 Odour, Table 9 Noise and Vibration, Table 10 Fugitive Emissions, Table 11 Accidents.

Table 7 Activity Risks

Reference	Process
AR1	Waste receipt
AR2	Waste storage pending treatment or recovery/disposal
AR3	Waste treatment processes
AR4	Material dispatch for recovery/disposal

[1] https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit#odour-management-plan
[2] Sector Guidance Note S5.06: Recovery and disposal of hazardous and non-hazardous waste
[3] H3 Noise Assessment and Control (Part 2)

Table 8 Odour

Odour							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
AR1 **Reception** (delivery of waste to the site) Vehicle Movements (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2** **Storage (Secure Storage)** **AR3** **Treatment processes** (Treatment consisting	**Humans & Property** **Protected Nature Conservation Sites** **Atmosphere** *Inhalation of particles.* *Deposition of dust/particles on property and land.*	**Air**	**LOW**	**MEDIUM**	**MEDIUM**	• All vehicles delivering and collecting materials to/from the site are covered. • Daily maintenance and inspection of storage areas. • All vehicles, plant and machinery would be operated and maintained in accordance with manufacturer's specifications. • All plant based on the site would be equipped with upward facing exhausts. • Process equipment regularly cleaned to remove particulates. • Vehicle speeds are restricted to a maximum of 10 mph.	**LOW**

only of sorting, separation, screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). **AR4** **Material Dispatch** (Recovery/disposal)						• 027.1_05_004 EMS_Op Tech provides managerial procedures to prevent odour.	

Table 9 Noise and Vibration

Noise and Vibration							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
AR1 **Reception** (delivery of waste to the site) **Vehicle Movements** (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2**	**Noise sensitive locations**[4] **Protected Nature Conservation Sites** .	**Air,** **Land**	**HIGH**	**MEDIUM**	**HIGH**	• Machinery is inspected and maintained regularly in line with manufacturer's recommendations. • Daytime operations only. • Rural location • 027.1_05_004 EMS_Op Tech provides managerial procedures to prevent noise and vibration • Site as part of original application produced an NIA which identified there would be no impact. During Pre app this	**MEDIUM**

[4] **Notes:** Noise–sensitive location defined in H3 *Horizontal Guidance for Noise Part 2 – Noise Assessment and Control* published by the Environment Agency as - *'Any dwelling, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity, which for its proper enjoyment requires the absence of noise at nuisance levels'.* Part 1 of H3 suggests that '*commercial premises may be* [noise sensitive]*, depending upon the activities undertaken there'.*

Storage (Secure Storage) **AR3** **Treatment processes** (Treatment consisting only of sorting, separation, screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). **AR4** **Material Dispatch (Recovery/disposal)**						was identified as not being required as no significant change to activities.	

Table 10 Fugitive Emissions

Litter and Debris							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
AR1 **Reception** (delivery of waste to the site) **Vehicle Movements** (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2** **Storage** (Secure Storage) **AR3** **Treatment processes** (Treatment consisting	**Humans & Property** **Protected Nature Conservation Sites** *Litter Nuisance*	**Air;** **windblown, physical transport and deposition**	**LOW**	**LOW**	**LOW**	• All vehicles delivering and collecting materials to/from the site are covered. • Type of waste is unlikely to produce litter. • Daily housekeeping of site surfaces to remove litter and debris and prevent spread. • Daily maintenance and inspection of storage areas. • Training provided to all relevant staff to collect loose litter and debris on a see it pick it up basis. • All waste activities occur inside see site plan 027.1_09_004. • 027.1_05_004 EMS_Op Tech provides managerial procedures to prevent litter and debris	**VERY LOW**

Litter and Debris							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
only of sorting, separation, screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). **AR4** **Material Dispatch (Recovery/disposal)**							

Water							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
AR1 **Reception** (delivery of waste to the site) **Vehicle Movements** (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2** **Storage** (Secure Storage) **AR3** **Treatment processes** (Treatment consisting only of sorting, separation,	**Protected Nature Conservation Sites** **Surface Water** **Groundwater** *Contamination*	**Land, water, runoff**	**LOW**	**LOW**	**LOW**	• All waste transfers are overseen by a competent person. • Daily site inspections and good housekeeping procedures in place – recorded in site diary. • Spill kits on site and employees are trained in their use and disposal. • Fuel/oil storage is in accordance with the Oil Storage Regulations and provided with secondary containment. • No waste stored within 10 m of a water course • No waste stored within 50 m of any spring or borehole • All waste stored internally undercover	**VERY LOW**

Water							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). **AR4** **Material Dispatch (Recovery/disposal)**						• Separate drainage system for roof water. • Waste stored on impermeable siter surface within a building. • 027.1_05_004 EMS_Op Tech provides managerial procedures to prevent ingress of rain water.	

Mud and Debris							
Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
AR1 **Reception** (delivery of waste to the site) **Vehicle Movements** (waste delivery, movement of waste within the site and transfer of waste out of site) **AR4** **Material Dispatch (Recovery/disposal)**	**Humans & Property** *Amenity impact*	**Direct deposition**	**MEDIUM**	**MEDIUM**	**MEDIUM**	• Daily inspections by site staff and records kept. • Road sweeping as required. • Transport vehicles inspected when leaving site and cleaned as required. • Waste is not known to originate from locations that are muddy. • Waste is inherently non muddy. • 027.1_05_004 EMS_Op Tech provides managerial procedures to prevent mud and debris escaping.	**LOW**

Pest, Vermin, Scavengers		
Identifying the harm and what could be harmed	**Assessing the risk**	**Managing the risk**

Hazard	Receptor	Pathway	Probability of exposure	Consequence	Overall risk	Risk Management	Residual risk
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
N/A - Given types of wastes accepted at site unlikely to give rise to significant pest issues.	**Humans & Property** **Protected Nature Conservation Sites**	**Air; Ground depending on vector**	**LOW**	**MEDIUM**	**LOW**	• Daily site inspections and good housekeeping procedures in place. • Permitted wastes unlikely to attract scavenging animals • Waste stored in a building • 027.1_05_004 EMS_Op Tech provides managerial procedures to prevent pest and vermin.	**VERY LOW**

Table 11 Accidents

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
TRANSFERRING SUBSTANCES							
AR1 **Reception** (delivery of waste to the site) **Vehicle Movements** (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2** **Storage** (Secure Storage) **AR3** **Treatment processes** (Treatment consisting	**Humans & Property** **Protected Nature Conservation Sites** **Surface Water** **Groundwater** **Atmosphere** *Adverse impact*	**Land, air, water**	**LOW**	**LOW**	**MEDIUM**	• All vehicles delivering and collecting materials to/from the site are covered. • All waste that arrives is either containerised or on pallets • All waste transfers are overseen by a competent person. • Fuel/oil storage is in accordance with the Oil Storage Regulations and provided with secondary containment. All stored within secured perimeter. • Limited vehicle movements on site and 10 mph speed limit • Spill kits on site and employees are trained in their use and disposal.	**LOW**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
only of sorting, separation, screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). **AR4** **Material Dispatch (Recovery/disposal)**						• Deposit of waste occurs within a designated area. • 027.1_05_004 EMS_Op Tech provides managerial procedures to prevent accidents	

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
PLANT OR EQUIPMENT FAILURE							
AR1 **Reception** (delivery of waste to the site) **Vehicle Movements** (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2** **Storage** (Secure Storage) **AR3** **Treatment processes** (Treatment consisting only of sorting, separation,	**Humans & Property** **Protected Nature Conservation Sites** **Surface Water** **Groundwater** **Atmosphere** *Adverse impact*	**Land, air, water**	**LOW**	**LOW**	**MEDIUM**	• Limited vehicle movements within site reduces risk of accident. • Critical spares held on site • Planned maintenance program limits failure of key process components. • Daily inspections of plant, equipment and site infrastructure • 027.1_05_004 EMS_Op Tech provides managerial procedures to prevent plant or equipment failure.	**LOW**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). **AR4** **Material Dispatch (Recovery/disposal)**							

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
FLOODING							

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
AR1 **Reception** (delivery of waste to the site) **Vehicle Movements** (waste delivery, movement of waste within the site and transfer of waste out of site) **AR2** **Storage** (Secure Storage) **AR3** **Treatment processes** (Treatment consisting only of sorting, separation,	**Humans & Property** **Protected Nature Conservation Sites** **Surface Water** **Groundwater**	**Land, Water**	**M**	**M**	**M**	• Sign up to local flood warning services. • Ensure external drainage is cleaned and maintained in an operating order.	**M**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). **AR4** **Material Dispatch (Recovery/disposal)**							
VANDALISM							
Entire Process	**Humans & Property** **Protected Nature Conservation Sites** **Surface Water**	**Land, air, water**	**LOW**	**MEDIUM**	**MEDIUM**	• Site is secured by fencing and gated. • CCTV • Site operators live in adjacent • All waste is stored and processed internally see 027.1_09_004 site plan	**LOW**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
	Groundwater **Atmosphere** *Adverse impact*					• 027.1_05_004 EMS_Op Tech provides managerial procedures to prevent vandalism.	

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
FIRE							
AR1 **Reception** (delivery of waste to the site) **Vehicle Movements** (waste delivery, movement of waste within the site and	**Humans & Property** **Protected Nature Conservation Sites** **Atmosphere**	**Spread through physical contact; fanned by winds**	**LOW**	**HIGH**	**MEDIUM**	• Fire Prevention Plan in operation, 027.1_05_005 • Waste storage areas will be separated with appropriate fire breaks or fire resistant barriers between combustible materials.	**LOW**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*
transfer of waste out of site) **AR2** **Storage** (Secure Storage) **AR3** **Treatment processes** (Treatment consisting only of sorting, separation, screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate). **AR4** **Material Dispatch (Recovery/disposal)**	*Loss of life and property, loss of habitat, destruction and loss of amenity*					• Incoming waste is source segregated. • CCTV. • Potential ignition sources will be removed from waste storage areas. • The operational section of the site is a no smoking area. All areas are subject to daily housekeeping.7 • 027.1_05_004 EMS_Op Tech provides managerial procedures to prevent fire.	

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
Potential to cause harm?	*What's the risk? What do I wish to protect?*	*Route of hazard to the receptor?*	*Likelihood of this contact?*	*Harm that can be caused?*	*Remaining Risk*	*Measures to reduce the risk?*	*Residual risk after the application of managerial procedures?*

4 APPENDICES

Appendix 1 Flood Map

Environment Agency

Flood map for planning

Your reference	Location (easting/northing)	Created
Unspecified	**358134/432768**	**10 November 2025 16:02**

Your selected location is in flood zone 2, an area with a medium probability of flooding.

This means:

- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see https://www.gov.uk/guidance/flood-risk-assessment-standing-advice)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence which sets out the terms and conditions for using government data. https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3

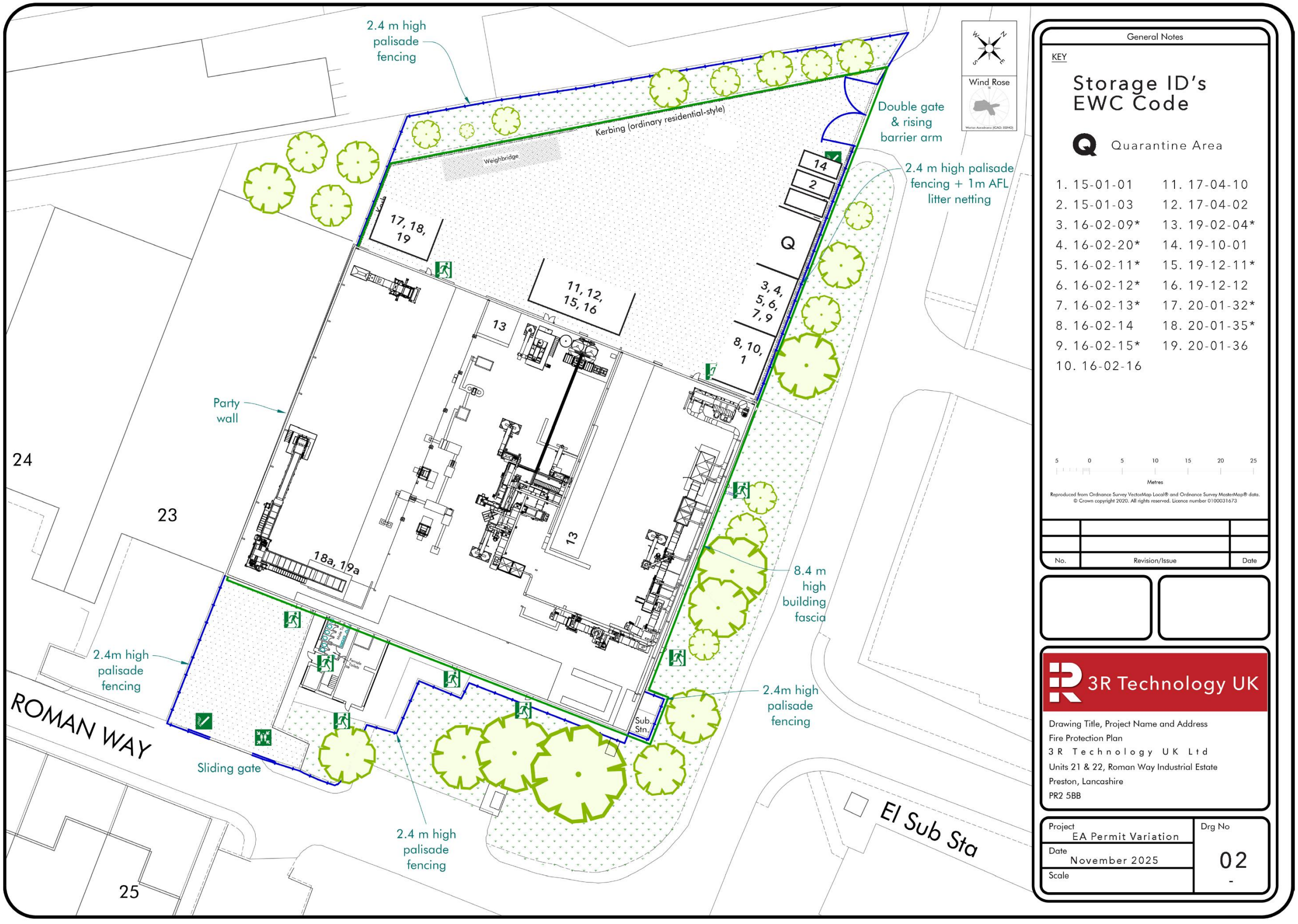
Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2025 AC0000807064. https://flood-map-for-planning.service.gov.uk/os-terms

Page 1 of 2


Environment Agency
Flood map for planning
Your reference
Unspecified
Location (easting/northing)
358134/432768
Scale
1:2,500
Created
10 Nov 2025 16:02
Selected area
Flood zone 3
Flood zone 2
Flood zone 1
Flood defence
Main river
Water storage area
0 20 40 60m
Page 2 of 2
Roman Way
Roman Way
N
©Environment Agency copyright and/or database rights 2025. All rights reserved. © Crown copyright and database rights 2025 Ordnance Survey licence number AC0000807064.

5 DRAWINGS

Drawing 1 Site Plan



General Notes

KEY

Storage ID's EWC Code

Q Quarantine Area

1. 15-01-01	11. 17-04-10
2. 15-01-03	12. 17-04-02
3. 16-02-09*	13. 19-02-04*
4. 16-02-20*	14. 19-10-01
5. 16-02-11*	15. 19-12-11*
6. 16-02-12*	16. 19-12-12
7. 16-02-13*	17. 20-01-32*
8. 16-02-14	18. 20-01-35*
9. 16-02-15*	19. 20-01-36
10. 16-02-16	

5 0 5 10 15 20 25

Metres

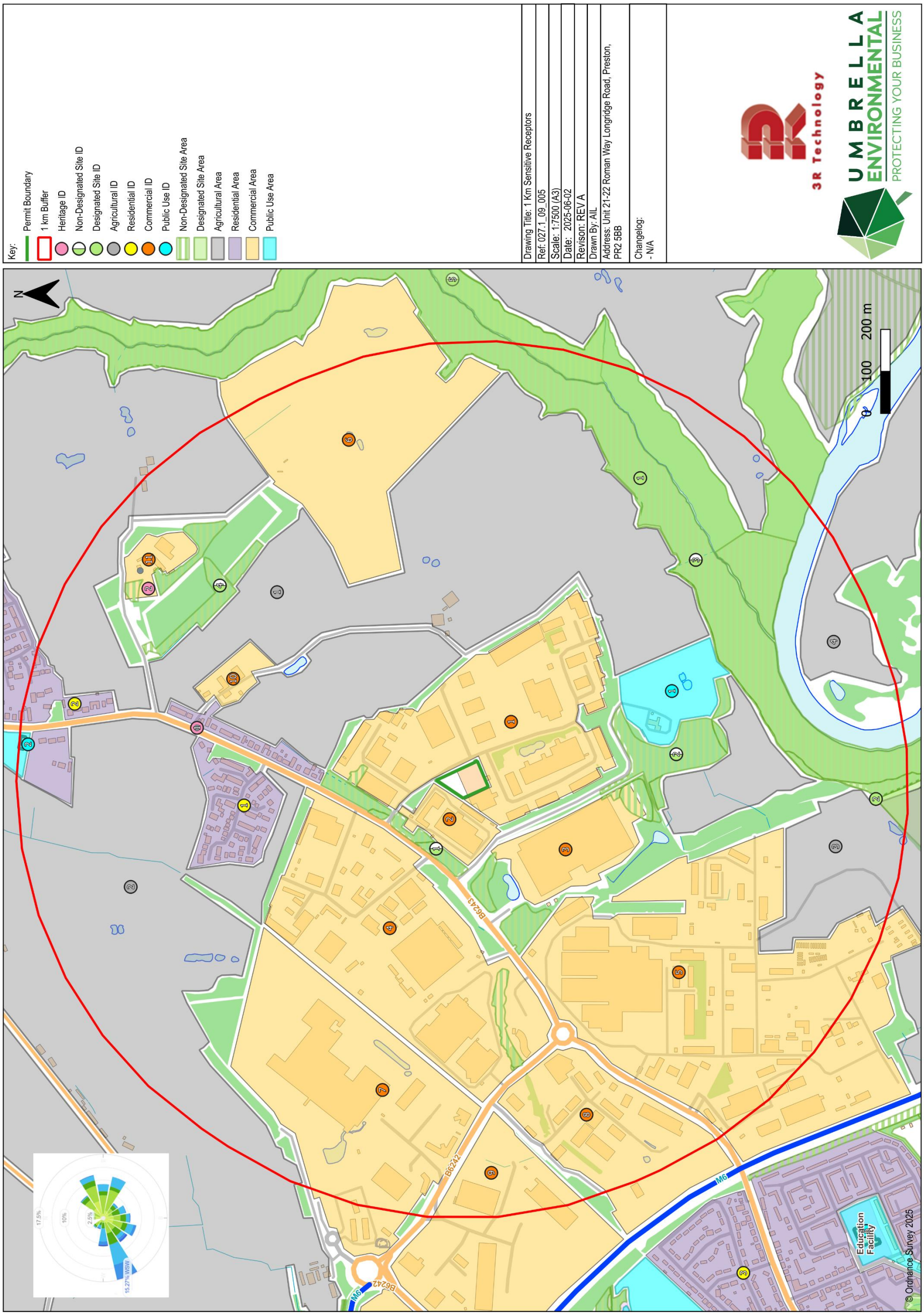
No.	Revision/Issue	Date

3R Technology UK

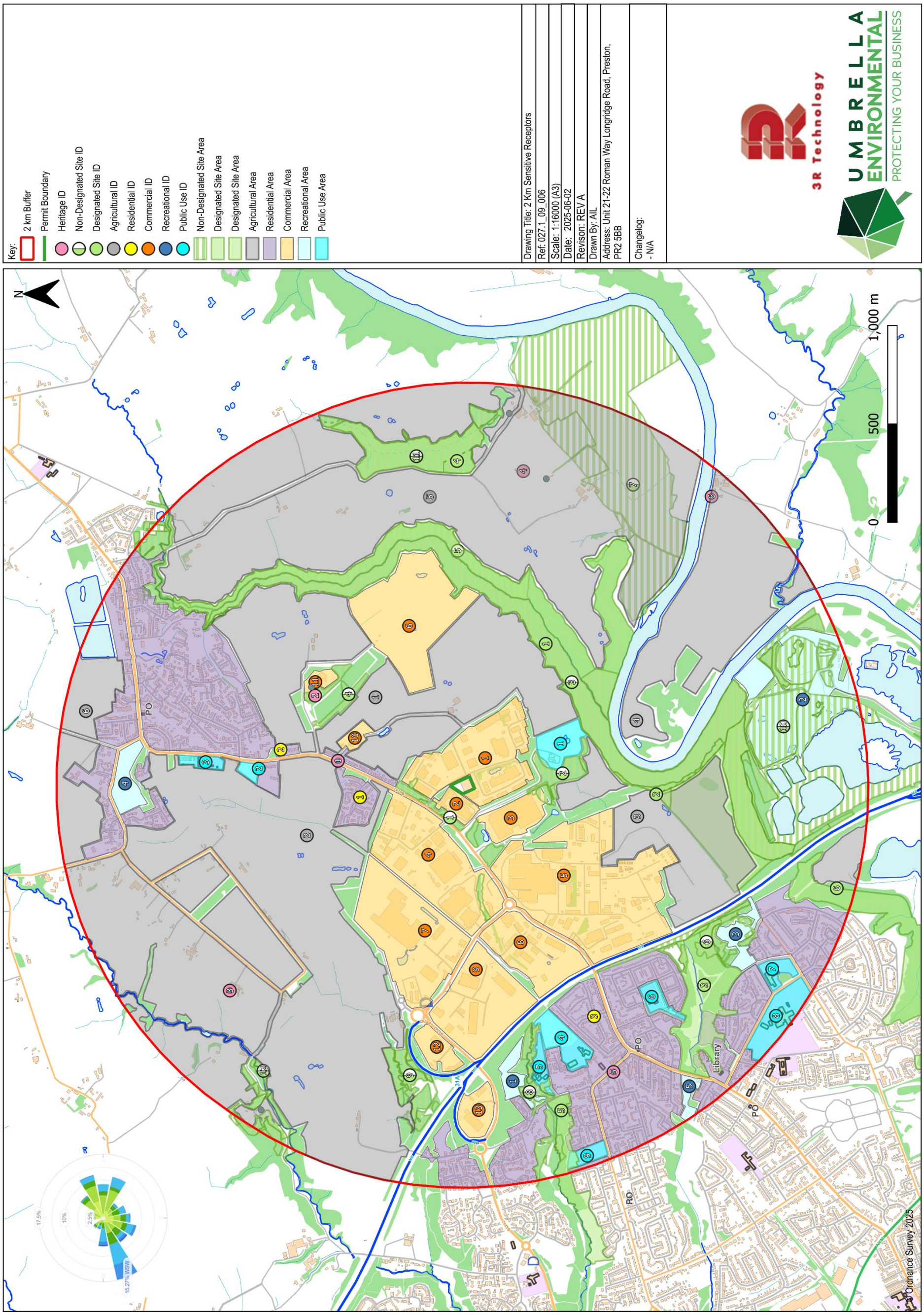
Drawing Title, Project Name and Address
Fire Protection Plan
3 R Technology UK Ltd
Units 21 & 22, Roman Way Industrial Estate
Preston, Lancashire
PR2 5BB

Project: EA Permit Variation	Drg No: 02 -
Date: November 2025	
Scale:	

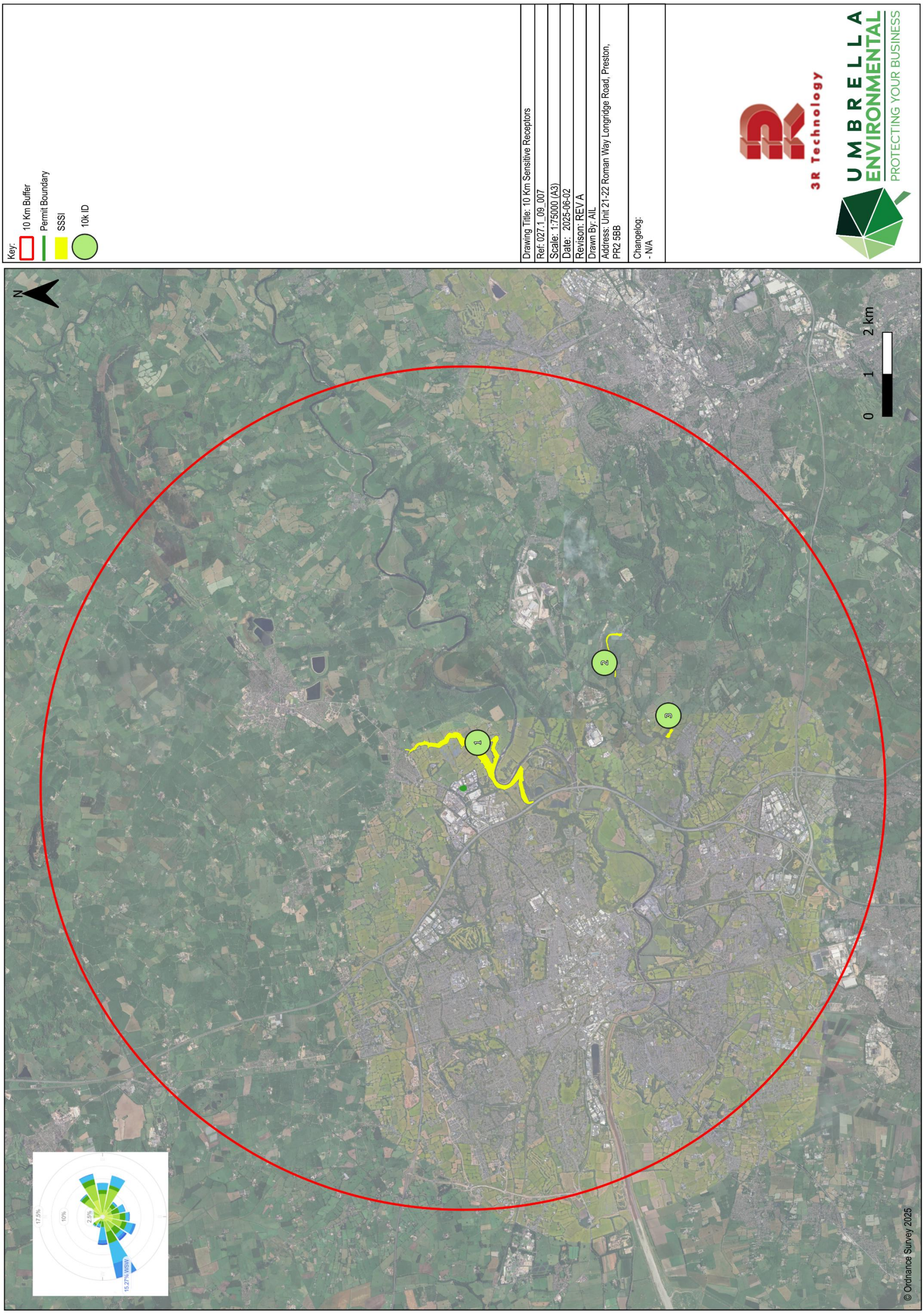
Drawing 2 1 km Sensitive Receptors



Drawing 3 2 km Sensitive Receptors



Drawing 4 10 km Sensitive Receptors



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