



Environmental Risk Assessment

Davis Commercial Services Ltd



Helping clients prosper through compliance

SITE DETAILS

Davis Commercial Services Ltd

2 Baron Avenue

Earls Barton

Northampton

NN6 0JE

OPERATOR DETAILS

Davis Commercial Services Ltd

DCS House

12 Baron Avenue

Earls Barton

Northampton

NN6 0JE

PERMIT REFERENCE

EA/EPR/EB3100HN/V002

DOCUMENT REFERENCE

K256.1~09~014

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K256.1~20~030	Permit Boundary Plan	07/12/2023
K256.1~20~024	Sensitive Receptors Plan	07/12/2023

APPENDICES

REFERENCE	TITLE	DATE
Appendix A	ERA Tables	31/08/2023
Appendix B	Groundsure Report (GS-FJ7-5NH-AL8_GT7)	09/10/2023
Appendix C	H1 Risk Assessment printout	08/02/2024

1. INTRODUCTION

This document is the Environmental Risk Assessment (ERA) that accompanies the application for the Variation of Environmental Permit (EPR/EB3100HN/V002) to extend their current permit into a new site located within the same industrial estate in which the permit is already issued.

The facility currently operates under a Bespoke IED Installation permit for the recycling of commercial refrigeration, under Metal recycling and Waste Electrical and Electronic Equipment (WEEE) within their Approved and Authorised Treatment Facility (AATF).

DCS only accept end of life refrigeration units which do not contain Ozone Depleting Substances as a refrigerant or blowing agent in the insulating foam panels under their current bespoke permit, this is not set to be changed. The majority of units received at the site are classed as 'remote' due to the absence of refrigerant gas or oils, and the remainder are within the 'integral' classification, with the potential of containing gases and oils, although these may have also been extracted before reaching site due to the nature of the removal processes at their point of use.

This Environmental Risk Assessment has been produced on behalf of Davis Commercial Services Ltd. The ERA has been produced in line with Environment Agency guidance, 'Risk assessments for your environmental permit' available on Gov.uk, identifying potential environmental risks and proposing mitigating measures that can reduce adverse impacts and should be read in conjunction with the other supporting documents included within the application.

1.1. Scope

This risk assessment is based on the source-pathway-receptor approach. All potential sources of pollution associated with waste acceptance, storage and treatment for recovery activities have been assessed against the principal 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 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, which is approximately 1 ha, is located within the industrial estate located on Baron Avenue, Earls Barton, Northampton, NN6 0JE and is shown on K256.1~20~023 Site Location Plan.

The site is located in an established Industrial Estate, to the north-east of Earls Barton, approximately 5 km south-west of Wellingborough and 11km east north-east of Northampton city centre. The site is centred at National Grid Reference (NGR) 485514, 264571 (SP 85514 64571). The northern site boundary is approximately 255m south of the A4500, Main Road.

The site also includes a storage area located approximately 50m to the West, centred at NGR 485364, 264571 (SP 85364 64601). A map showing the site location and Permit Boundaries is provided in drawing K256.1~20~023.



Figure 1 Aerial image of the site, showing the permit boundary in green.

2.2. Humans and Property

The site is located in an established Industrial Estate on the outskirts of Earls Barton, with a population of 6,346 at the 2021 census. The residential dwellings of Earls Barton are approximately 135m South West of the site, along with further developments and residential dwellings throughout the 1km radius from the site, including the residential dwellings of the newly developed ‘The Wickets’ housing estate, located approximately 150m West from the extended site, and adjoined to the pre-existing boundary.

Immediately to the north of the site is Clock Close Allotments, of which separates the site from the Earls Barton Cemetery which is approximately 65m from the northern-most boundary of the site, and subsequently the Earls Barton Man Cave Community Garden Project. There are

numerous sensitive public use receptors within Earls Barton; the table of sensitive receptors within a 1km radius of the site is available below in this document.

There are numerous neighbouring businesses which operate within Mallard Close Industrial Estate, in which the site is located, as well as Titley Bawk Avenue, approximately 165m East of the site.

The site within Earls Barton is further surrounded by farmland, including Grange Farm approximately 280m South East of the site, and Main Road Farm, located approximately 355m North West.

2.3. Environmentally Sensitive Sites

Environmentally sensitive sites include;

Sites of Special Scientific Interest (SSSI); Special Areas of Conservation (SAC); Special Protection Areas (SPA); RAMSAR sites; National Nature Reserves (NNR); Ancient Woodlands (AW); Local Nature Reserves (LNR); County Wildlife Sites (CWS); World Heritage Sites; Areas of Outstanding Natural Beauty (AONB); National Parks; and Biodiversity Action Plan (BAP) priority habitats.

2.3.1. Designated Environmental Receptors

There are no Designated Sites of Ecological Interest within 1km of the site boundaries. The closest site of ecological interest is the Upper Nene Valley Gravel Pits, SPA, Ramsar and SSSI site, located approximately 2070m South East of the site.

A 10 km receptors plan has been created to show the location of designated environmental receptors in relation to the site.

The risk to these receptors from site activities has been deemed to not be increased by the increased storage and throughput of the operations, for the following reasons:

- The water and air H1 risk assessments carried out (APPENDIX C) screened out substances emitted to the air as having process contribution of insignificant environmental impact
- The lack of pathway between site emission points and the sensitive receptors.

Taking into account the nature of the operations, which remains relatively small, impact of the operations is low with the environmental protection currently in place as part of compliance with the current permit.

2.3.2. Non-Statutory Designated Receptors

A series of non-statutory designated environmental sites are located within 1 km of the permit boundary and summarised in Table 1 below. The locations relative to the permit boundary are also shown on the Site Setting Plan (K256.1~20~024) with IDs that correspond to the Receptors Table (ERA2) in Section 3.2.

Table 1 Non-Statutory Designated Sites

ID	DESCRIPTION	NEAREST LOCATION FROM SITE (APPROX.)	DIRECTION FROM SITE
1	Traditional Orchard – Priority Habitat	165m	E
2	Traditional Orchard – Priority Habitat	255m	NE
3	Traditional Orchard – Priority Habitat	265m	NNE
4	Traditional Orchard – Priority Habitat	440m	SW
5	Traditional Orchard – Priority Habitat	510m	W
6	Deciduous Woodland – Priority Habitat	590m	SE
7	Deciduous Woodland – Priority Habitat	955m	SW
8	Deciduous Woodland – Priority Habitat	965m	W

2.4. Past Land Use

2.4.1. Historical industrial land uses

Potentially contaminative land use features digitised from historical Ordnance Survey Mapping at 1:10,000 and 1:10,560 scale, identified a total of 58 historical industrial land uses within 500m of the site boundary.

Eight historical industrial land uses were identified on site, the groundsure report identified an 'Industrial Estate' dated 1988, 'Iron Stone Quarry' and 'Unspecified Quarry' both dated as 1950, 'Tramway Sidings' and 'Ironstone Quarry' both with a date of 1938. Three records of 'Cemetery' were identified on site, with the dates 1950-1971, 1988 and 1899.

2.4.2. Historical tanks

There are no records of historical tank features within 500m of the site boundary.

2.4.3. Historical energy features

There are eight records of historical energy features identified within 500m of the site boundary at 1:1,250 and 1:2,500 scales. One of which is located on site, being an electricity substation, present from 1989-1996.

2.4.4. Historical petrol stations

There are no identified records of historical petrol stations within 500m of the site.

2.4.5. Historical garages

There are six records of historical garages identified within 500m of the site from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. The closest record identified is located 163m east of the boundary, present between 1986 and 1989.

2.5. Waste and landfill

2.5.1. Active or recent landfill

There are no records identified within 500m of the site of active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulations.

2.5.2. Historical waste sites and landfills

There are no identified historical landfill sites or waste sites within 500m of the site.

2.5.3. Licensed waste sites

There is a single active waste site under the authority of Environment Agency/Natural Resources Wales regulation, this feature is located on site, being the current Earls Barton Fridge Recycling Facility of DCS. This licence is the subject of the application of the permit variation to extend into the new warehouse from their current site within the industrial estate on Baron Avenue. This site is of the MRS and WEEE type, with a treatment facility of 75ktpa,

a permitted size of 25,000 tonnes under the Environmental Permitting Regulations (Waste) Licence. EPR reference: EB3100HN/V002, issued 15/11/2016 and modified 29/07/2020.

2.6. Geology

2.6.1. Artificial Ground and Made Ground

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale, associated with potentially contaminated materials and unpredicted engineering conditions were provided by the Groundsure Report (Appendix B). 14 records were found within 500m of the site boundaries including infilled ground and worked ground (undivided). With one record of Artificial deposits identified on site, being 'Infilled Ground'.

'A qualitative classification of the permeability of the artificial ground permeability on site has a 'mixed' flow type, with a maximum permeability of 'very high' and a minimum permeability of 'low'.'

2.6.2. Superficial and Drift Geology

Superficial geological deposits, recorded at 1:10,000 scale, were identified within a 500m radius of the site. There were four records identified within this radius, with the closest being 295m East of the boundary, being 'Diamicton' – an Oadby member. These are the youngest geological deposits, formed during the Quaternary Period, they rest on older deposits or rocks referred to as 'bedrock'. Between approximately 330m and 390m North / North West of the site there are three records of Alluvium – Clay and Silt deposits.

2.6.3. Bedrock and Solid Geology

Bedrock geology features displayed on the Geology 1:10,000 scale within the Groundsure Report identified 16 features within 500m of the site boundary.

Two of these records identified are on-site, the first being 'Stamford Member – Sandstone and Siltstone, Interbedded' of the Bathonian to Bajocian Age. The other on-site feature being 'Northampton Sand Formation – Ooidal Ironstone' of the Aalenian Age.

There are no records of Bedrock Faults or other Linear Features within 500m of the site boundary.

2.7. Hydrogeology

2.7.1. Superficial Aquifers

Aquifer status of groundwater held within superficial geology records within 500m of the site identified four features. The closest, approximately 295m East, has the designation of 'Secondary Undifferentiated'.

'Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.'

Located between approximately 300m north-west and 370m north-west from the site, 'Secondary A' designated superficial deposits were identified.

'Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.'

2.7.2. Bedrock Aquifers

Aquifer status of groundwater held within bedrock geology identified within 500m of the site produced 11 records. On-site one bedrock aquifer has been identified, being of the 'Secondary A' designation.

'Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.'

Further identified within 500m of the site included 'Unproductive' and 'Secondary B' Bedrock Aquifer designations.

'Unproductive' aquifers were identified 178m north west, 343m north, 356m north west, 440m south, and 482m north west of the site, these Unproductive aquifers are described below:

'These rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.'

A 'Secondary B' aquifer, identified approximately 380m east of the site, has been described as:

‘Predominantly lower permeability layers, which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.’

2.8. Groundwater vulnerability

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one-kilometre square grid. Groundwater vulnerability on site is described as: *Secondary Bedrock Aquifer – High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer*. With a high leaching class, an infiltration value of >70% and a dilution value of <300mm per year of the soil and surface.

The superficial geology has not been ranked on vulnerability or aquifer type, but has a recorded thickness of <3m, a patchiness value of <90%.

The bedrock geology on site has a high recorded vulnerability, an aquifer type of secondary and a flow mechanism described to be well connected fractures.

2.9. Hydrology

There is one surface water feature identified within 250m of the site, this is a small pond feature located within the housing development area of ‘the wickets’, bordering A4500 and Packwood Cres.

Table 2 Surface Water Features

DESCRIPTION	NEAREST LOCATION FROM SITE (APPROX.)	DIRECTION FROM SITE
Unnamed inland river (not influenced by normal tidal action). Catchment area: Nene.	355m	N
Swanspool Brook.	1010m	NE
Sywell Brook	1240m	W
Sywell Reservoir	1990m	WNW

2.10. Flood Risk

2.10.1. Risk of Flooding from Rivers and Sea

The site is located within a Flood Zone 1 area, rated as low probability of flooding. The risk of flooding from Rivers and Sea (RoFRaS) flood rating is ‘Very Low Risk’.

2.10.2. Surface Water Flooding

According to the UK Government website², there is a Very Low risk of Surface Water Flooding at the site. The Groundsure Report proposes a Highest Risk of a 1 in a 30 year event of 0.3m-1.0m at the site in relation to Surface Water flooding.

2.10.3. Groundwater Flooding

There is a 'negligible' risk of Groundwater Flooding on the site, based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM), there are no records or evidence of groundwater flooding on site although geological conditions indicate that there may be a possible risk.

2.11. Air Quality

The site does not lie within an Air Quality Management Area (AQMA).

2.12. Radon

The property is in a Radon Affected Area, with 'Between 10% and 30%' of properties being above the Action Level. The property is in an area where Radon Protection measures are necessary at a 'Full' level.

2.13. 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 principal risk factors to receptors within the site vicinity.

3. METHODOLOGY

3.1. Hazard Identification

A hazard is something with potential to cause harm to something else. Table ERA1 below identifies the principal hazard types which may be associated with the proposed activity; and indicates where hazards are identified and determined to be of significant potential risk to determine further assessment. Potential hazards from this activity are as follows:

ERA1 Identified Hazard Types

PRINCIPAL HAZARD TYPE	SUB-HAZARD TYPE	POTENTIAL SOURCE	RISK	REQUIRES FURTHER ASSESSMENT
Odour	Odour	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Waste types accepted at this site are not considered to be odorous. 	No
Point Source Emissions to Air	Pentane gas (flammable)	<ul style="list-style-type: none"> Treatment process. 	<ul style="list-style-type: none"> Cutting and compaction of insulating panels containing pentane may liberate flammable gas. 	ERA7 Below
Fugitive Emissions to Air	Dust and Particulate Matter	<ul style="list-style-type: none"> Waste delivery. Treatment process. Material dispatch. 	<ul style="list-style-type: none"> Dust and particulate matter liberated from external areas only during dry conditions. 	ERA8 Below
	Litter and Debris	<ul style="list-style-type: none"> Waste delivery. Treatment process Material dispatch. 	<ul style="list-style-type: none"> Loss of material during unloading, treatment and dispatch of waste. 	ERA9 Below
Fugitive Emissions – Pests	Pests, vermin, scavengers	<ul style="list-style-type: none"> Waste delivery. 	<ul style="list-style-type: none"> There is potential for putrescible material in refrigerators. May attract pests. 	ERA10 Below
Fugitive Emissions – Mud and Debris	Litter & debris	<ul style="list-style-type: none"> Waste delivery. Treatment process. Material dispatch. 	<ul style="list-style-type: none"> Loss of material during unloading, treatment and dispatch of waste. 	ERA11 Below
Fugitive Emissions – to Water	Contaminated runoff	<ul style="list-style-type: none"> Waste storage: run off from stored waste pre-treatment or post treatment. Surface water runoff. Fire waters. 	<ul style="list-style-type: none"> Contamination of surface water, ground water and land. Discharge of contaminated waters. 	ERA12 Below
Accidents	Transferring substances	<ul style="list-style-type: none"> Waste delivery. Failure of tanks. 	<ul style="list-style-type: none"> Loss of waste from vehicle. Spillages from processing equipment. 	ERA13 Below
	Plant or equipment failure	<ul style="list-style-type: none"> Waste delivery. Failure of tanks. 	<ul style="list-style-type: none"> Spillages from vehicles bringing waste to site. Leakage from waste fuel/oil tanks 	
	Flooding	<ul style="list-style-type: none"> RoFRaS. Groundwater. Surface Water. 	<ul style="list-style-type: none"> Site is located within Flood Zone 1 (<1 in a 1000, very low chance of RoFRaS in any year). Negligible potential for Groundwater flooding. Very low risk of surface water flooding. 	

PRINCIPAL HAZARD TYPE	SUB-HAZARD TYPE	POTENTIAL SOURCE	RISK	REQUIRES FURTHER ASSESSMENT
	Vandalism	<ul style="list-style-type: none"> • Unauthorised access. 	<ul style="list-style-type: none"> • Damage to critical elements of process or storage containment. 	
	Fire	<ul style="list-style-type: none"> • Stored waste. • Mobile plant/process equipment. 	<ul style="list-style-type: none"> • Emissions of smoke and fire water. 	
Noise and Vibration		<ul style="list-style-type: none"> • Delivery of waste. • Treatment processes. • Material dispatch. 	<ul style="list-style-type: none"> • Nuisance to closest sensitive receptors. 	ERA 14 Below
Climate Change	Extreme maximum & minimum temperature	<ul style="list-style-type: none"> • Stored waste • Mobile plant / process equipment • Flood risk from rivers or the sea • Surface water flooding 	<ul style="list-style-type: none"> • Uncontrolled emissions or smoke and fire water • Increased dust emissions from processing areas, stockpiled materials and site roads • Reduced availability of water from dust suppression • Long periods of hot and dry weather leads to drought – significant impact on water supplies. 	No
	Extreme rainfall			
	Drier summers			
	River flow			
	Sea level rise			

Where a hazard with the potential for environmental impact has been identified within the process these critical points have been identified as Environmental Risk Points (ERP). These are identified on ERA7 *Environmental Risk Points* presented in Section 4 of this ERA Document.

3.2. Receptors

A receptor is the object (e.g., person, organism, resource, or property) impacted by a hazard. For example, odour may cause offence to a human (the receptor). When identifying receptors which may be at risk from the site, the following have been considered:

- Ancient woods
- Locations 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
- Roads and railways

- Groundwater beneath the site
- Homes, or groups of homes
- Playing fields and playgrounds
- Private drinking water supplies
- Regionally important geological sites
- Schools, hospitals, and other public buildings
- Water
- Conservation and habitats protected areas and areas of scientific interest

Sensitive receptors within 1 km of the permit boundary are shown on the Site Setting Plan (K256.1~20~021). The IDs on the Site Setting Plan correspond to the Receptors Table (ERA2) below.

ERA2 Receptors

RECEPTOR TYPE	ID	DESCRIPTION	DISTANCE	DIRECTION
HUMANS AND PROPERTY	-	Site Workers	On site	-
	-	Site Visitors	On site	-
	INHABITANTS OF RESIDENTIAL PROPERTIES			
	1	Residential Dwellings off Pygthle Road	60m	WSW
	2	151 Wellingborough Road	120m	ENE
	3	Residential Dwellings 102-128 Wellingborough Rd	135m	E
	4	Residential Dwellings from Hornby Road, Housing Development 'The Wickets' and surrounding roads.	150m	W
	5	Residential Dwellings 134-150 Wellingborough Rd	165m	ENE
	6	Residential Dwellings of Kings Close and Neighbouring Roads	195m	S
	7	Residential Dwellings South from Elizabeth Way and Manor Rd	300m	SW
	8	Residential Dwelling of Grange Farm	325m	SSE
	9	Residential Dwellings South of High St, North of B573	420m	S
	10	Residential Dwellings North East of B573	670m	W
	11	Residential Dwellings North of A4500	750m	NE
	12	Residential Dwellings off Park Street	825m	SW
	13	Residential Dwellings South of B573, East of Station Rd	830m	S
	14	Residential Dwellings off Station Rd	880m	SSW
	15	Residential Dwellings South West of B573	945m	W
	SENSITIVE PUBLIC USE			
	1	Earls Barton Cemetery	75m	N
	2	St John's Ambulance	415m	WSW
	3	'Community' Building	550m	W
	4	Earls Barton Fire Station	580m	SW
	5	Earls Barton Primary School	715m	SW
	6	All Saints' Church, Earls Barton	725m	SW
	7	Earls Barton Youth Club	745m	SW
	8	Earls Barton Library and Community Centre	785m	SW
	9	Earls Barton Medical Centre	995m	SW
COMMERCIAL USE				
1	Industrial Estate – Mallard Close	On site.	-	
2	Tradecars Direct	160m	N	
3	Titley Bawk Avenue Industrial Estate	165m	E	

RECEPTOR TYPE	ID	DESCRIPTION	DISTANCE	DIRECTION	
	4	AES Rescue – Vehicle Recovery, Repairs and Servicing 24/7	315m	N	
	5	The Stags Head and Tescom Services	510m	SSW	
	6	White House Industrial Estate	520m	WNW	
	7	Vista Limousines and Events	630m	SW	
	8	New Lodge Vineyard	795m	W	
	9	The Old Swan and Industrial Estate off B573	840m	SW	
	10	Newman & Reidy	850m	W	
	RECREATIONAL AREAS				
	1	The Grange – Earls Barton Cricket Club	450m	W	
	2	Gravity Skatepark and Earls Barton Recreational Grounds	525m	SW	
	3	Earls Barton Bowling & Tennis Club CASC	950m	SW	
	AGRICULTURAL				
	1	Allotment Gardens	5m	N	
	2	Earls Barton Man Cave Community Allotments	170m	N	
	3	Grange Farm	280m	SE	
	4	Main Road Farm	355m	NW	
	5	Brookhill Farm	680m	NE	
	6	Hockerhill Farm	740m	N	
	ROADS AND RAILWAYS				
	-	Wellingborough Rd	125m	E	
	-	A4500	255m	N	
	-	B573	660m	W	
	-	A45	1345m	SE	
	PUBLIC RIGHTS OF WAY				
	-	Public Footpath	260m	SW	
-	Public Footpath	445m	W		
-	Public Footpath	540m	SW		
-	Public Footpath	665m	S		
-	Public Footpath	710m	SW		
WATER	SURFACE WATER				
	-	Unnamed inland river (not influenced by normal tidal action). Catchment area: Nene.	355m	N	
	-	Swanspool Brook.	1010m	NE	
	-	Sywell Brook	1240m	W	

RECEPTOR TYPE	ID	DESCRIPTION	DISTANCE	DIRECTION
	-	Sywell Reservoir	1990m	WNW
ENVIRONMENTALLY SENSITIVE SITES	DESIGNATED SITES			
	1	Upper Nene Valley Gravel Pits, SPA, Ramsar and SSSI site, located approximately 2070m South East of the site	2070m	SE
	NON-STATUTORY DESIGNATED SITES			
	1	Traditional Orchard – Priority Habitat	165m	E
	2	Traditional Orchard – Priority Habitat	255m	NE
	3	Traditional Orchard – Priority Habitat	265m	NNE
	4	Traditional Orchard – Priority Habitat	440m	SW
	5	Traditional Orchard – Priority Habitat	510m	W
	6	Deciduous Woodland – Priority Habitat	590m	SE
	7	Deciduous Woodland – Priority Habitat	955m	SW
	8	Deciduous Woodland – Priority Habitat	965m	W
HERITAGE SITES	LISTED BUILDINGS, PARKS & SCHEDULED MONUMNETS			
	1	Cluster of Grade 2 listed buildings along High Street	540m	SSW
	2	Sandpit Barn – Grade 2 listed building	575m	NE
	3	All Saints’ Church Earls Barton – Grade 1 listed building	730m	SSW
	4	Features and sculptures associated with All Saints’ Church – Grade 2 Listed	735m	SSW
	5	K6 Telephone kiosk – Grade 2 listed building	795m	SSW
	6	The Old Swan – Grade 2 listed building	815m	SSW
	7	No 17. Doddington Road and outbuildings – Grade 2 Listed Buildings	820m	S
	8	Cluster of Grade 2 listed buildings on The Square	825m	SSW
	9	Cluster of Grade 2 listed buildings on West Street	845m	SW
	10	Doddington Barn – Grade 2 listed building	975m	E
11	The Priory – Grade 2 Listed Building	975m	SSW	

3.3. Prevailing Wind Direction

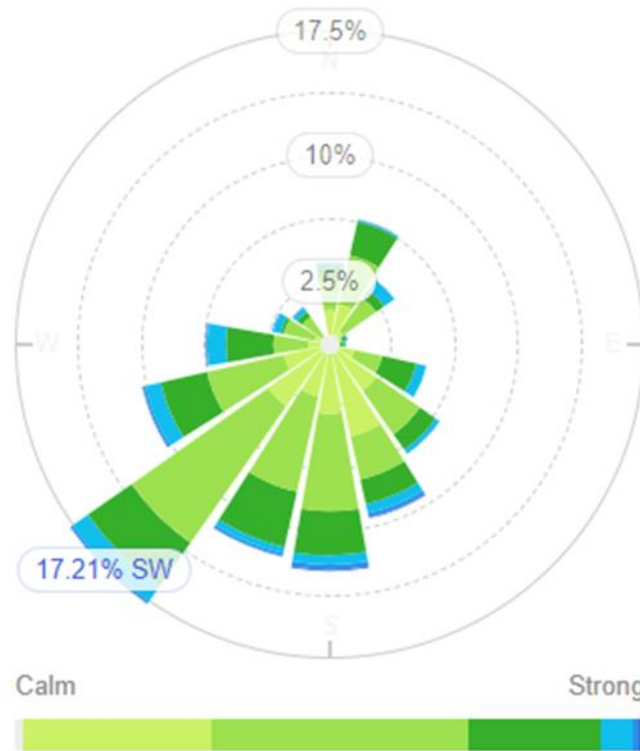


Figure 2 Bedford wind rose. Annual 5-year average, 2018-2023 (willyweather.co.uk).

The closest observing station where wind statistic data is available is at Bedford, approximately 20km south east of the permit boundary. Figure 2 presents the wind statistics on a wind rose as an annual average using data from the previous 5 years (2018-2023). The wind rose indicates that the sensitive receptors located towards the North East of the site are potentially at greatest risk from hazards transmitted through the air.

3.4. Pathways

The pathway is the means by which the hazard reaches the receptor and forms the link between the two. For example, a dust hazard may reach a receptor by travelling through air, with the air therefore being the pathway.

The source-pathway-receptor link must be present for there to be a risk. Management measures applied at the site act to minimise the overall risk by impeding or removing the pathway.

ERA3 Pathways

RECEPTOR	HAZARD	PATHWAY
Humans and Property	Odour	Transmitted through the air
	Dust and Particulate Matter	Transmitted through the air
	Noise	Transmitted through the air
	Birds, Vermin & Insects	Physical travel
	Fire	Physical contact and spread
Groundwater	Contaminated runoff	Infiltration through the ground
Surface Water	Contaminated runoff	Direct discharge from site
Environmentally Sensitive Sites	Dust and Particulate Matter	Transmitted through the air
	Noise	Transmitted through the air
	Fire	Physical contact and spread
Atmosphere	Dust and Particulate Matter	Transmitted through the air

3.5. Risk

Assessment of risk is based on the probability of receptor exposure to the identified hazards and the consequences of such exposure. The initial assessment of risk is made assuming no risk management practices are applied.

A matrix is used to determine overall risk and uses the following definitions:

ERA4 Probability of Exposure

PROBABILITY OF EXPOSURE
HIGH – <i>exposure is probable</i> : direct exposure likely with no / few barriers between hazard, source and receptor.
MEDIUM – <i>exposure is fairly probable</i> : feasible exposure possible, barriers to exposure less controllable.
LOW – <i>exposure is unlikely</i> : several barriers exist between hazards source and receptors to mitigate against exposure.
VERY LOW – <i>exposure is very unlikely</i> ; effective, multiple barriers in place to mitigate against exposure.

ERA5 Consequences of Exposure

CONSEQUENCES OF EXPOSURE
HIGH – <i>the consequences are severe</i> : sufficient evidence that short or long term exposure may result in serious damage.
MEDIUM – <i>consequences are significant</i> ; 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 – <i>consequences are minor</i> ; damage not apparent though reversible adverse changes may occur.

CONSEQUENCES OF EXPOSURE
VERY LOW – <i>consequences are negligible; no evidence of adverse changes following exposure.</i>

Comparison between probability and consequence provides the overall risk which is reached as follows:

ERA6 Assessing Overall Risk

		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

3.6. Risk Management

Risk management practices for the key hazards identified above are summarised in Section 4 of this ERA. The information presented below is supported by various documents and this is clearly indicated within each table presented. In addition, risk management measures have been developed with reference to relevant guidance documents, the following being of particular note:

- Environmental Management – Guidance: Risk assessment for your environmental permit¹
- Guidance: Noise and vibration management: environmental permits²
- Guidance: Control and monitor emissions for your environmental permit³
- Sector Guidance Note S5.06: Recovery and disposal of hazardous and non-hazardous waste.⁴

This risk assessment details the key management measures for identified risks.

¹ [Risk assessments for your environmental permit - GOV.UK \(www.gov.uk\), Updated 31 August 2022](https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit)
² [Noise and vibration management: environmental permits - GOV.UK \(www.gov.uk\), Updated 31 January 2022](https://www.gov.uk/guidance/noise-and-vibration-management-environmental-permits)
³ [Control and monitor emissions for your environmental permit - GOV.UK \(www.gov.uk\), Updated 24 November 2022](https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit)
⁴ [Sector Guidance Note S5.06: recovery and disposal of hazardous and non-hazardous waste - GOV.UK \(www.gov.uk\), Updated 10 October 2018](https://www.gov.uk/guidance/sector-guidance-note-s5.06-recovery-and-disposal-of-hazardous-and-non-hazardous-waste)

3.7. Residual Risk

The application of management practice results in a residual risk which is detailed in Section 4 of this document.

4. RISK ASSESSMENT

The key hazards identified for the activity have been subject to a risk assessment against management practice. Each hazard is assessed in a separate table (Appendix A). The information presented is, as appropriate, supported by other documents and these are referenced.

Many of the hazards identified in the tables located in Appendix A relate to 'Environmental Risk Points (ERP)' identified throughout the processes:

ERA7 Environmental Risk Points (ERP)

REFERENCE	PROCESS
ERP1	Reception
ERP2	Storage
ERP3	Treatment processes
ERP4	Material dispatch

5. APPENDICES

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Appendix A

Environmental Risk Assessment Tables

(30/08/2023)

Appendix B

Groundsure Report (GS-FJ7-5NH-
AL8_GT7)

(09/10/2023)

Appendix C

H1 Risk Assessment printout



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