

# Caulmert Limited

Engineering, Environmental & Planning  
Consultancy Services

## Atlantic Household Waste Recycling Centre

FCC Waste Services (UK) Limited

## Environmental Permit Variation Application

## Environmental Risk Assessment

**Prepared by:**

**Caulmert Limited**

**Office:** Strelley Hall, Main Street, Strelley, Nottingham, NG8 6PE

**Tel:** 01773 749132

**Email:** [andystocks@caulmert.com](mailto:andystocks@caulmert.com)

**Web:** [www.caulmert.com](http://www.caulmert.com)

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**Project Manager:** Andy Stocks

**Caulmert Limited:** Strelley Hall, Main Street, Strelley, Nottingham, NG8 6PE

<b>Author</b>	Enlli Roberts Environmental Consultant	<b>Date</b>	09/09/2024
<b>Reviewer</b>	Andy Stocks Director of Environment	<b>Date</b>	23/04/2025
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## Environmental Risk Assessment

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## 1.0 INTRODUCTION

### 1.1 Application Overview

- 1.1.1 Caulmert Limited have been appointed by FCC Environment Limited to prepare an environmental permit variation application for additional EWC codes to the current Atlantic Household Waste Recycling Centre (HWRC) (hereafter referred to as 'the Site'), located in Barry, Vale of Glamorgan, South Wales, CF63 3RF.
- 1.1.2 The Site is located within an industrial estate on the outskirts of Barry, the closest residential properties are approximately 156m to the north of the Site. The nearest Site of ecological interest is the Hayes Point to Bendrick Rock SSSI approximately 35m to the south.
- 1.1.3 Caulmert Limited have been appointed by the Operator to prepare an application to vary the existing waste operation permit (ref. EPR/UP3395VQ/V003) to include for eleven additional EWC codes within Schedule 2 of the Permit. In addition, this variation will correct an error in Table S2.1 where incorrect descriptions and an incorrect code was used under waste code 13 (oil waste and wastes from liquid fuels).

### 1.2 Document Structure

- 1.2.1 This report is an Environmental Risk Assessment which forms part of the environmental permit variation application for the Site.
- 1.2.2 This risk assessment considers any potential risks associated with the proposed addition of these eleven waste codes to sensitive receptors. It is expected that the risks will be low (with controls in place) with respect to odour, pests, dust, litter, noise, and other fugitive emissions and accidents from Site operations.
- 1.2.3 This risk assessment has been compiled in accordance with the current Environment Agency guidance 'Risk Assessments for your Environmental Permit' (last updated 3<sup>rd</sup> January 2025).

### 1.3 Site Setting and Location

- 1.3.1 The Site is located to the southeast of the town of Barry in South Wales. The Site operates from the Atlantic Trading Estate, an industrial estate situated near the mouth of the Cadoxton River which flows into the Bristol Channel at the Bendricks to the southeast of the Barry Docks. The Atlantic Trading Estate is accessed via Wimbourne Road from Ffordd-y-Mileniwm near Weston Square, Cadoxton or from Hayes Road from the B4267 Sully Moors Road, southwest of the village of Sully. It covers an area of 3.73 ha. The centre of the Site can be found at OS Grid Reference ST 13648 67209 (postcode: CF63 3RF). The proposed permit boundary is shown in **Figure 1** below.
- 1.3.2 The area from the west to the east of the Site, forming an arc towards the north is populated predominantly by industrial sites. The opposite side of the Site, towards the south, opens up to the Bendricks, a stretch of coastline and important paleontological site in the Vale of Glamorgan, and further south, the Bristol Channel.



## 1.4 Proposed Variations

- 1.4.1 The Site is being utilised as a household waste recycling centre for the southeast of Barry.
- 1.4.2 The Operator proposes to prepare an application to vary the existing waste operation permit (ref. EPR/UP3395VQ/V003) to include for eleven additional EWC waste codes within Schedule 2 of the Permit.
- 1.4.3 In addition, this variation will correct an error in Table S2.1 where incorrect descriptions and an incorrect code was used under waste code 13 (oil waste and wastes from liquid fuels).

### The waste codes proposed to be added are as follows:

- 15 01 01 - "Paper and cardboard packaging"
- 15 01 02 - "Plastic packaging"
- 15 01 04 - "Metallic packaging"
- 15 01 05 - "Composite packaging"
- 15 01 06 - "Mixed packaging"
- 15 01 07 - "Glass packaging"
- 15 01 09 - "Textile packaging"
- 16 02 11\*- "Discarded equipment containing chlorofluorocarbons, HCFC, HFC"- Similar to 20 01 23\*
- 16 02 13\*- "Discarded equipment containing hazardous components other than those mention in 16 02 09 to 16 02 12"- Similar to 20 01 35\*
- 16 05 04\*- "Gases in pressure containers (including halons) containing hazardous substances"- Similar to 16 05 05
- 16 02 14 - "Discarded equipment other than those mentioned in 16 02 09 to 16 02 13" – Similar to 20 01 36

### The corrections are as follows:

- 13 02 05\*- "Mineral-based non-chlorinated engine, gear and lubricating oils"
- 13 02 06\*- "Synthetic engine, gear and lubricating oils"
- 13 02 07\*- "Readily biodegradable engine, gear and lubricating oils"

## 2.0 SENSITIVE RECEPTORS

### 2.1 Overview

2.1.1 This report assesses the potential risks to nearby sensitive receptors from the proposed addition of waste codes at Atlantic HWRC. A sensitive receptor search has been conducted of the surrounding area within 1km radius of Atlantic HWRC using Defra's Magic Maps website<sup>1</sup> and other publicly available sources. The sensitive receptors identified are listed below in Table 1 and shown on the attached 'Sensitive Receptor Plan' drawing ref. 6326-CAU-XX-XX-DR-V-1800. The distance to each receptor is measured from the Barry HWRC permit boundary ('the Site').

2.1.2 The receptor search radius in relation to the Site boundary are shown below in **Figure 2**:



**Figure 2 – 1km radius from the Site boundary.**

<sup>1</sup> DEFRA Magic Maps 2021: <https://magic.defra.gov.uk/MagicMap.aspx>

## **2.2 Sensitive Receptors**

- 2.2.1 The closest human receptors are users of the Atlantic Trading Estate road network which abuts the eastern and southern boundaries of the Site. The closest residential receptors are the residential properties situated along Bendrick Road located 153m north-northeast of the Site. The largest potential group of sensitive receptors are the commercial and industrial properties operating within the industrial estate, the closest of which are approximately 18m northeast and 75m east-southeast. Additional potential receptors include residential properties along Wimborne Road and Hayes Road, as well as the residential apartments located approximately 630m east-northeast of the Site. There are no schools within 1km of the Site. The closest hospital is Tŷ Hafan Children's Hospice located 962m east-northeast of the Site boundary.
- 2.2.2 The Site is not located within a Drinking Water Safeguard or a Source Protection Zone (SPZ).

## **2.3 Designated Sites of Ecological Importance & Other Habitats**

- 2.3.1 The closest statutory designation is Hayes Point to Bendrick Rock SSSI located 35m south of the Site boundary. The 28ha area has been designated due to its special geological aspects of national importance as it provides a significant insight into Triassic lake and river deposits. The nearest Special Area of Conservation (SAC) is the Severn Estuary located 5km east of the Site boundary. There are no Special Protection Areas (SPAs) or Ramsar sites within 1km of the Site, the nearest of which are located 2km east-northeast on Sully Island. There are no National Nature Reserves (NNRs), or Areas of Outstanding Natural Beauty (AONBs) within 5km of the Site. The closest Priority Habitat Designations include a lowland calcareous grassland and a lowland meadow, located approximately 2km east-northeast in Sully, and 2.7km southwest on Friar's point, respectively.

## 2.4 Summary of Identified Sensitive Receptors

2.4.1 A summary of the identified sensitive receptors within 1km is detailed in Table 1 below. The distance to each receptor is measured in metres from the closest part of the Site boundary.

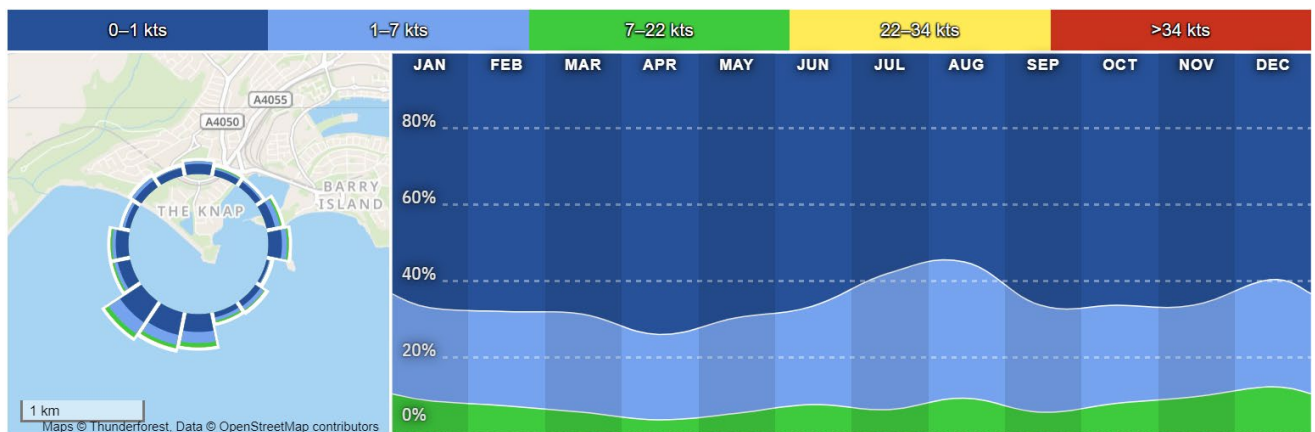
**Table 1 – Summary of Sensitive Receptors within 1km of the Site boundary.**

Receptor	Receptor Type	Distance/Direction
Principle Aquifer	Groundwater	Below Site
Users of the Atlantic Trading Estate Road Network	Public Road	Abuts the eastern and southern boundaries of the Site
Lydon SGB Scaffolding	Commercial / Industrial	18m NE
Hayes Point to Bendrick Rock	SSSI	35m S
Accsys Wood Supplier	Commercial	75m ESE
Techniflow UK	Commercial	93m ENE
Atlantic Secure Self Storage	Commercial	110m ENE
Espex Batteries	Commercial	111m W
Install Skip Hire	Commercial / Industrial	139m NNW
LB Osteopathy	Commercial	142m WSW
Kits 'n Bits Auto electrical Service	Commercial	145m NE
Bendrick Road	Residential	153m NNE
Scott FPS	Commercial	170m NNE
Functional Fitness	Commercial / Recreational	177m W
Window Cleaning Warehouse	Commercial	178m NNE
Firebug Photography	Commercial	180m NE
Veesu Taxis	Commercial	187m NNE
Spartan Equipment Sales	Commercial	274m W
A&L Scrap Car Dealers	Commercial / Industrial	225m WNW
Peacock Scaffolding Solutions	Commercial / Industrial	202m NW
Heinnie Haynes	Commercial	264m NNE
Denise's Cafe	Commercial / Recreational	273m NE
Cadoxton River	Surface Water / Habitat	273m WNW
Kellaway Commercial Limited	Commercial	280m NE
Tim Hayward Car Sales	Commercial	288m ENE
Scafftag Safety	Commercial	291m NE
Vale Cleaning Services	Commercial	312m NE
Café Atlantic	Commercial / Recreational	325m N
Chaseblue Loans	Commercial	329m ENE
Users of Hayes Lane	Public Road	338m NE
G Wood Flooring	Commercial	339m NE
Users of Lon Felin Wynt	Public Road	361m NNE
Users of Hayeswood Road	Public Road	386m NNE
Residential Properties on Wimborne Road	Residential	399m N
Residential Properties on Hayes Road	Residential	406m NNE
Nearby Solar Panel Array	Commercial	465m WNW
Atlantic Salvage	Commercial / Industrial	472m NW
Wardle Painters	Commercial	510m NW

Receptor	Receptor Type	Distance/Direction
Vale Aggregates	Commercial / Industrial	511m N
APC Wales	Commercial	544m NNW
O'Reilly Precast	Commercial	547m NW
Users of Atlantic Way	Public Road	550m WNW
Pink Self Storage	Commercial	564m NNW
Alembic Manufacturing	Commercial / Industrial	565m NW
Dragon Windscreens	Commercial	568m NW
Courtlands Apartments	Residential	628m ENE
Headlands Apartments	Residential	631m ENE
Scott Pallets	Commercial	637m W
Barry Port Office	Commercial	792m WSW
Shua Cat Sanctuary	Animal Care Facility	831m NE
Bruno Timber Products	Commercial / Industrial	848m NW
S&K Haulage Glamorgan	Commercial / Industrial	852m NW
Palletways Cardiff	Commercial	859m WSW
Users of David Davies Road	Public Road	944m NW
Tŷ Hafan Children's Hospice	Healthcare Facility	962m ENE
Users of Queen's Way	Public Road	970m W
Users of Ffordd Darwin	Public Road	989m W
Users of Ffordd Wallace	Public Road	1km WNW

**2.5 Meteorological Setting**

- 2.5.1 Fugitive emissions of dust, litter, odour and noise from the Site are likely to be affected by local weather conditions, in particular by wind direction and strength.
- 2.5.2 The closest meteorological station to the Site actively recording wind statistics is the Old Knapp weather station, located approximately 3km southwest. Wind statistics from this weather station are considered to be representative of the typical conditions at the Site (see **Figure 3** below).
- 2.5.3 A review of the data recorded daily between April 2012 and March 2021 on the Windfinder.com website<sup>2</sup> indicates that the prevailing wind direction is from the south-southwest. Therefore, there is limited potential fugitive emission propagation towards the majority of sensitive receptors which are located northwest of the Site, including the majority of the identified residential receptors. The primary receptors to the northeast are industrial sites.



**Figure 3 – The Old Knapp Weather Station, average wind direction & strength 2012 to 2021.**

<sup>2</sup> Windfinder website 2023, found here: [https://www.windfinder.com/windstatistics/lawford-heath\\_rugby](https://www.windfinder.com/windstatistics/lawford-heath_rugby)



## 3.0 RISK ASSESSMENTS

### 3.1 Assessments for the Proposed Operations

- 3.1.1 Risk assessment tables have been completed for odour, noise and vibration, fugitive emissions (dust, litter, mud and debris, pests and surface water run-off), visible plumes and accidents in line with the GOV.UK guidance 'risk assessments for your environmental permit' (last updated 3<sup>rd</sup> January 2025).
- 3.1.2 It is considered that the biggest risk associated with the permitted operations are emissions resulting from dust, and noise, however all emissions have been considered in detail.

### 3.2 Risk Assessments - Tables

- 3.2.1 Possible hazards as a result of the proposed operations at the Site that require risk assessment comprise:
- Table 2 - Sources of Odour.
  - Table 3 - Sources of Noise and Vibration.
  - Table 4 - Fugitive Emissions (dust, litter, mud and debris, pests, surface water run-off).
  - Table 5 - Visible emissions (smoke or visible plumes).
  - Table 6 - Accidents (leaks and spillages, fire etc).
- 3.2.2 The hazards identified above have the potential to escape beyond the Site boundary and cause an amenity nuisance to sensitive receptors or harm the environment and human health. For each possible hazard, an assessment of the risk that it poses to potential sensitive receptors has been carried out, considering the control measures that will be in place.
- 3.2.3 The following Tables 2 to 6 give further detail on each hazard source, pathway and sensitive receptor, the risk management measures to be implemented, probability of exposure, consequences of exposure and an overall risk rating from Low (little or no risk) to High once all risk management measures have been taken into account.

**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 has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Odour from any incoming waste materials.	Workers and visitors to Atlantic HWRC Site.  Local human population, residential dwellings nearby (closest 153m NNE).  Users of nearby Atlantic Trading estate road network.	Via air.	Due to the nature of the waste types to be accepted at the Site, they are very unlikely to generate odours.  Waste acceptance procedures at the Site will prevent odorous wastes being accepted – only waste types listed in the permit will be accepted which are inherently not odorous, nor likely to contain biodegradable or putrescible materials that could release odours.  Daily Site inspections will include checks to assess that odours from Site operations are not excessive beyond the Site boundary.  In the unlikely event any non-conforming wastes are discovered in a waste load after checking and depositing at the Site, the following will be done:  <ul style="list-style-type: none"> <li>• The load will either be immediately reloaded onto the delivery vehicle and rejected from Site.</li> </ul>	<b>Unlikely</b> - due to strict waste acceptance procedures and permitted waste types unlikely to generate odours.  Odour is transient in nature which means any odour will dissipate with distance and wind movement outside.	Odour may cause an amenity nuisance/disturbance to local people.	<b>Low – if control measures are implemented</b>

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			<ul style="list-style-type: none"> <li>Or the load will be temporarily stored in a quarantine holding area. The quarantine area will be outside and well ventilated. The quarantined waste will be removed from Site as soon as possible.</li> </ul> <p>All measures and responsibilities to be outlined in the management system for the Site.</p>			

**Table 3 – Noise & Vibration 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 has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Noise and vibrations from vehicle movements and off-loading of waste.	Workers and visitors to Atlantic HWRC Site.  Local human population, residential dwellings nearby (closest 153m NNE).  Users of nearby Atlantic Trading estate road network.  Wildlife in nearby woodlands and along the coastline to the east and south of the	Through air and ground.	It is considered that the impacts of noise and vibration beyond the Site boundary is unlikely given the small scale nature of operations and typical pedestrian traffic. All Site operations will be carried out within the normal Site operational hours. Daily Site inspections will include checks to assess that noise and vibration from Site operations are not excessive beyond the Site boundary. All staff will have an awareness of noise levels and will report to Site management any excessive noise levels. The Site Manager/Nominated Deputy will make a general observations of audible noise emissions and record any excessive noise levels in the Site diary and operations at the time.  Drop heights when unloading and moving materials will be naturally low, but minimised if needed to reduce the	<b>Moderately likely</b> – noise and vibrations will not be excessive beyond the Site boundary. Low level noise may be audible beyond the Site boundary. The noise is likely to consist of continuous low level Site plant noise and intermittent traffic noise during Site operational hours only.	Noise may cause annoyance to people in nearby residential areas or passing the Site on roads.	<b>Low – if control measures are implemented</b>

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
	Site boundary, respectively.		<p>potential for generating noise and vibration emissions.</p> <p>Site vehicle engines will be turned off when idle and excessive revving will be discouraged.</p> <p>Site speed limits will be enforced to reduce noise from vehicles.</p> <p>Site surfacing and roads will be maintained, and potholes will be filled and inspected to ensure the road surfaces are kept in good condition to reduce noise and vibration from the rolling and shaking of the vehicle upon impact with the potholes.</p> <p>Plant and machinery will be serviced regularly and maintained in accordance with manufacturer’s specifications in order to ensure noises potentially caused by damaged or poorly maintained equipment are kept to a minimum i.e. engines running smoothly, moving parts kept lubricated to reduce rattling or rubbing sounds etc.</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?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			<p>The management plan for the site will include procedures to minimise noise from the operations on site.</p> <p>Fully trained and competent plant operators, and/or trainees under supervision to operate machinery.</p> <p>The site is in the vicinity of several industrial sites such as Lydon Scaffolding Ltd, Install Skip Hire Ltd, and A&amp;L Scrap Car Dealers. There may therefore be a reduced likelihood of adverse impacts from potential noise and vibration disturbances.</p>			

**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 has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
<b>Dust</b>						
Release of dust and particulate matter from movement of Site vehicles and plant associated with the recycling centre.	<p>Workers and visitors to Atlantic HWRC Site.</p> <p>Local human population, residential dwellings nearby (closest 153m NNE).</p> <p>Users of nearby Atlantic Trading estate road network.</p> <p>Wildlife in nearby woodlands and along the coastline to the east and south of the</p>	Through air – wind borne.	<p>The proposed wastes accepted are inherently not dusty. The management plan for the Site will include procedures to minimise dust from all the operations on Site if applicable.</p> <p>Specific measures taken to prevent dust emissions from these activities:</p> <ul style="list-style-type: none"> <li>Excessively dusty waste loads or wastes consisting solely or mainly of dusts are to be excluded from Site, in accordance with the permit.</li> <li>Drop heights should be minimised where applicable when loading and unloading wastes.</li> <li>Daily Site inspections will include visual monitoring for dust in storage areas.</li> <li>All Site staff will be trained in visual dust inspections and notify Site management immediately if a dust issue arises at the Site.</li> </ul>	<b>Moderately likely</b> - nearby residential receptors close to boundary of Site. Dust will be managed by strict waste acceptance procedures and trained staff conducting Site inspections.	<p>Dust may cause annoyance to people by settling on clothing, cars and buildings nearby.</p> <p>Potential smothering of flora and fauna inhibiting photosynthesis in nearby habitats.</p>	<b>Low – if control measures implemented.</b>

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
	Site boundary, respectively.		<ul style="list-style-type: none"> <li>Site roads will be assessed for potential to cause dust emissions and if needed Site roads will be wetted using clean water as appropriate or cleaned by a road sweeper.</li> <li>Ensure that all vehicles leaving the Site with waste loads have their load securely sheeted to prevent dust and fine particles being blown from their vehicles.</li> </ul> <p>In the event of dust emissions from the Site being detected: -</p> <ul style="list-style-type: none"> <li>The incident must be reported to the Site manager.</li> <li>A record must be made of the incident and actions taken.</li> <li>Waste storage and handling procedures should be reviewed, and additional dust control measures imposed as deemed necessary by the Site manager.</li> </ul> <p>The Site is in the vicinity of several industrial Sites such as Lydon Scaffolding Ltd, Install Skip Hire Ltd, and A&amp;L Scrap Car Dealers. There may therefore</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?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			be a reduced likelihood of adverse impacts from potential release of dust.			
<b>Surface Water Run-off</b>						
Run off from waste areas into surface water and groundwater receptors.	Surface waters downstream of Site. Site lies on a principal aquifer.	Surface run-off/overland flow and infiltration down into ground.	<p>The Site is equipped with infrastructure and procedures to minimise the risk of surface water run-off containing contaminants.</p> <p>External hard-surfaced areas are designed to direct water to the surface drainage system. Run-off from the concrete pad storage area is captured by bunding and directed through oil interceptors and silt traps.</p> <p>Regular inspection of interceptors and drainage systems ensures the infrastructure effectively reduces the risk of contamination in surface water run-off.</p> <p>The waste types to be accepted will have negligible contaminant or leaching potential.</p>	<b>Unlikely</b> – due to strict waste acceptance criteria and procedures and use of settlement pond.	Detriment to the quality of surface water could affect fish and other wildlife within the watercourse. Contamination of surface water and groundwater.	<b>Low – if control measures are implemented.</b>

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
<b>Pests</b>						
Rats/flies/birds and other pests carrying pathogens or harmful microorganisms.	Workers and visitors to Atlantic HWRC Site.  Local human population, residential dwellings nearby (closest 153m NNE).  Users of nearby Atlantic Trading estate road network.  Wildlife in nearby woodlands and along the coastline to the	Rats or other pests migrating onto nearby premises, then humans or farm animals getting into contact with them.	Provided that the waste acceptance procedures are adhered to, the risk from pests is minimal.  Due to the nature of the waste types to be accepted at the Site, they are very unlikely to attract pests. Only permitted waste types accepted which are unlikely to contain biodegradable or putrescible materials likely to attract pests.  Daily Site inspections will include checks to assess that pests are not an issue on site.  Non-conforming waste loads brought to Site that contain putrescible materials or infestations of pests i.e. flies, will be rejected from Site.	<b>Unlikely</b> – nature of inert wastes will not attract pests.	Nuisance to human population and vermin are vectors of pathogens i.e. Weils Disease.	<b>Low – if control measures are implemented.</b>

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
	east and south of the Site boundary, respectively.					
<b>Mud/Litter</b>						
Mud and debris from and collection vehicles.	Workers and visitors to Atlantic HWRC Site.  Local human population, residential dwellings nearby (closest 153m NNE).  Users of nearby Atlantic Trading estate road network.	Deposited by waste collection vehicles tyres entering and leaving Site.	Daily Site inspections by trained Site staff to assess Site roads potential to mud and debris emissions and if needed Site roads will be cleaned by a road sweeper.  Drivers of vehicles entering and leaving the Site will be trained in checking their vehicle for build-up of mud and debris and to take measures to reduce this prior to leaving.  A road sweeper will be employed to clean adjacent public roads around Site if this is identified as a problem.  Good housekeeping will be maintained around Site, with mud & debris regularly swept up.  Any accidental spillages of waste on the Site roads will be cleaned up immediately or temporarily	<b>Unlikely</b> - unlikely potential for mud and debris to be tracked from surfaced area on Site onto public roads. However, vehicles leaving Site and external roads will be monitored and cleaned.	Nuisance and possible safety issues to other road users.	<b>Low – if control measures implemented.</b>

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
	Wildlife in nearby woodlands and along the coastline to the east and south of the Site boundary, respectively.		fenced off prior to clean up to prevent Site vehicles tracking debris off-site.			
Litter from incoming wastes.	Workers and visitors to Atlantic HWRC Site.  Local human population, residential dwellings nearby (closest 153m NNE).  Users of nearby Atlantic Trading estate road network.	Via air (windblown) and across ground	Waste loads found to be containing litter or not conforming to the permitted waste list during waste acceptance checks will be rejected from Site.  Wastes found to generate litter are stored in containers.  Daily Site inspections by trained staff will identify if litter is on Site and escaping site boundary.  If litter is present, it will be reported to the Site manager, litter picking will be arranged, and the source investigated and recorded in the Site diary.	<b>Moderately Likely</b> - Local residents and users of footpaths often sensitive to litter, however permitted waste types will be stored correctly in contained bays and closed containers.	Nuisance to people nearby and potential pollution of nearby habitats.	<b>Low – if control measures implemented.</b>

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
	Wildlife in nearby woodlands and along the coastline to the east and south of the Site boundary, respectively.					

**Table 5 – Visible Plumes 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 has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Potential visible plumes.	Nearby receptors.	Air.	N/A –No routine activities carried out will result in visible plumes.	N/A	N/A	N/A

**Table 6 – Accidents 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 has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Spillage or leak of fuel or other hazardous liquids from collection vehicles and plant on Site.	Underlying ground, groundwater, and surface waters (specifically the Bristol Channel and the Cadoxton River).  Wildlife in nearby woodlands and along the coastline to the east and south of the Site boundary, respectively.	Through Site surface / ground or over land.	Fuels and oils associated with vehicles collecting waste materials to Site, vehicles moving around Site and stationary plant could potentially leak or spill fuel or oils during use.  Vehicles and plant regularly serviced and maintained to manufacturers specifications to ensure no leaks or spillages.  All plant, vehicles and machinery will be inspected regularly for leaks.  Refuelling will be undertaken in a designated refuelling area provided with impermeable surfacing.  Spill kits available on Site should there be any leaks or spillages – incident recorded in the Site diary and any spill kits replaced.  Spillage action plan with training of all relevant staff on implementing the plan	<b>Unlikely</b> - very unlikely that any accidental spills or leaks of fuels/oils (small in size) would reach surface waters or groundwater.	Pollution to ground below Site, groundwaters and potentially surface waters.	<b>Low – if control measures implemented.</b>

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			<p>and in the use of spill pads and booms, which will be available.</p> <p>Penstock valves that can be shut off to prevent contaminated surface water drainage leaving the site.</p> <p>The manager also responsible for review of what caused the spillage/leakage incident and whether changes in procedures are needed as a result.</p>			
Flooding of Site	<p>Underlying ground, groundwater, and surface waters.</p> <p>Site lies on a principal aquifer.</p>	Overland flow of flood water.	<p>Waste materials to be accepted at Site are not likely to pollute water if caught in flood waters, as they will not be contaminated, have negligible leaching potential, and are stored in closed containers.</p> <p><b>Actions</b> in the event of flooding: In the unlikely event of flood warnings for the area, the Site manager or technically competent manager should consider the possibilities of moving waste materials or any other materials with hazardous properties (i.e. fuels stored on Site).</p>	<b>Unlikely</b> - Permitted waste types will have low leaching potential.	Nuisance or pollution of nearby water courses.	<b>Low - if control measures are implemented.</b>

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			<p>Where flooding could reach areas where electrical equipment is used, electricity to that area should be switched off and isolated.</p> <p>After flood waters have receded, the areas outside the Site should be inspected and any materials or litter which has escaped the Site boundary should be dealt with appropriately.</p>			
Fire	<p>Workers and visitors to Atlantic HWRC Site.</p> <p>Local human population, residential dwellings nearby (closest 153m NNE).</p> <p>Users of nearby Atlantic Trading estate road network.</p>	<p>Air transport of smoke and vapours.</p> <p>Firewater overland.</p>	<p>Fires could occur as a result of arson, self-combustion or from sources of ignition – likely vehicles, plant or temporary buildings.</p> <p>Plant and machinery on Site will be maintained and checked regularly as per manufacturers specifications to ensure electrical faults or other issues such as leaking hydraulic oils from damaged pipes are prevented and fires do not break out.</p> <p>Inert restoration materials to be used are inherently not likely to burn.</p>	<p><b>Unlikely -</b> Permitted waste types to be accepted at Site will not contain combustible fractions. Even with measures in place to prevent the occurrence of fires, it is possible that fires could break out. Measures in place to prevent the</p>	<p>Smoke fumes impacting local receptors.</p> <p>Nuisance or pollution of nearby water courses, sensitive habitats (i.e. LWS) and residences.</p>	<p><b>Low - if control measures are implemented.</b></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?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
	Wildlife in nearby woodlands and along the coastline to the east and south of the Site boundary, respectively.		<p>Daily Site inspections of storage areas and plant to identify any signs of smoking or smouldering.</p> <p>Site security with fencing and locked gates out of hours will prevent fires caused by arson or vandalism.</p> <p>There will be a No Smoking policy on Site.</p> <p>Waste Acceptance at the weighbridge will ensure that hot loads, smouldering, or smoking loads of waste are not accepted.</p> <p>Actions in the event of fire call fire service on 999.</p> <p>Trained Site staff and/or emergency fire crews will use water to extinguish any fires on-site and the resulting firewater has the potential to be contaminated and will be contained and disposed of appropriately.</p> <p>Where possible and safe, combustible materials will be isolated from the fire.</p>	fire spreading or to limit its consequences will significantly reduce the probability of receptors being affected by a fire.		

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			A Fire Prevention & Mitigation Plan has been produced doc ref. 6326-CAU-XX-XX-RP-V302 (Appendix 2)			
Vandalism – damage to Site vehicles/plant, and Site infrastructure.	Workers and visitors to Atlantic HWRC Site.  Local human population, residential dwellings nearby (closest 153m NNE).  Users of nearby Atlantic Trading estate road network.	Over land or by air.	If vandalism to Site security, Site infrastructure, buildings or vehicles occurs, Site management will be informed and emergency procedures as stated in the Management System will be followed, including reporting vandalism to Police and reviewing situation to improve Site security.  Any potential emissions from Site will be dealt with in accordance with the above risk assessments (Tables 2 to 5) to prevent contact with sensitive receptors.  Trained Site staff will conduct daily Site inspections to detect vandalism or vulnerable areas of Site likely to be targeted.	<b>Unlikely</b> – Site bounded by security fences to prevent unauthorised access.	Nuisance to nearby human receptors and pollution to nearby receptors from leaks or spills caused by vandalism.	<b>Low – if control measure implemented.</b>

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
			No unauthorised access to Site allowed and all visitors required to sign in and out at weighbridge / Site office. All Site visitors to be accompanied by a competent member of staff and any trespassers will be escorted off-site once identified.			

## 4.0 CONCLUSION

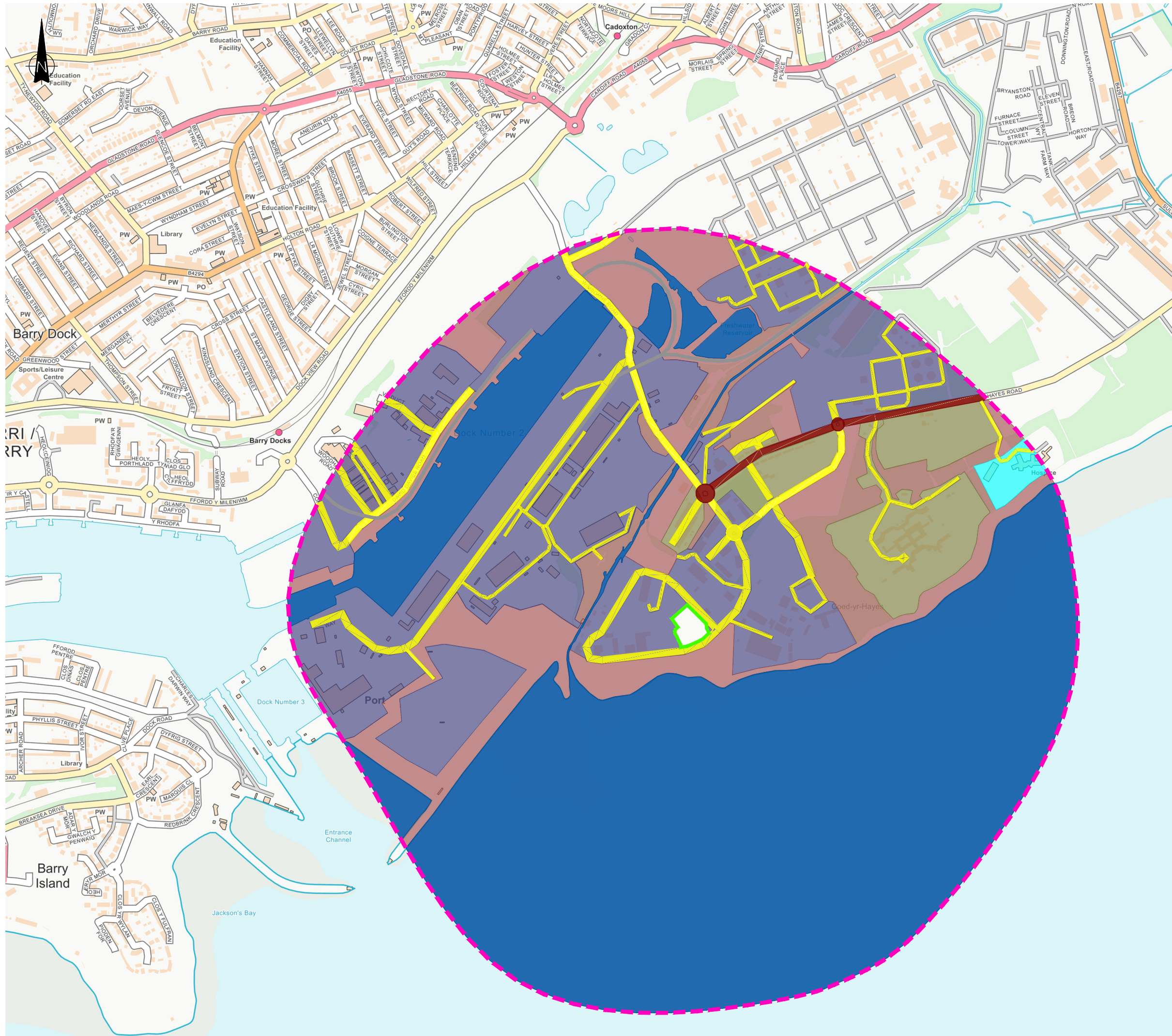
- 4.1.1 The risk assessments above enable identification of appropriate mitigation measures to control the amenity and accident risks from the proposed activities. All identified risk mitigation measures will be incorporated within the management system for the Site.
- 4.1.2 The risk assessments indicate that provided the identified risk mitigation measures, which are identified in the tables above, are implemented at the Site, the risk of nuisance or pollution from odour, noise and vibration, fugitive emissions including dust, litter, mud and debris, contaminated surface run-off, pests or accidents such as fire and spillages is low.
- 4.1.3 Also included within this permit application are the following documents relating to potential emissions from the Site:
- Fire Prevention & Mitigation Plan ref. 6326-CAU-XX-XX-RP-V-0302

## 5.0 REFERENCES

- 1) Natural Resources Wales guidance 'How to Carry Out a Risk Assessment for an Environmental Permit' (last updated 17<sup>th</sup> July 2024), found at: <https://naturalresources.wales/permits-and-permissions/installations/how-to-carry-out-a-risk-assessment-for-an-environmental-permit/?lang=en>.

**DRAWINGS**

**5526-CAU-XX-XX-DR-V-1800 Sensitive Receptor Plan**



**LEGEND**

- PERMIT BOUNDARY
- 100m OFFSET
- SURFACE WATER
- WOODLAND / SCRUBLAND
- COMMERCIAL / INDUSTRIAL
- EDUCATIONAL FACILITY
- RESIDENTIAL
- MEDICAL FACILITY
- MAJOR ROAD
- MINOR ROAD
- RAIL

P01	ISSUED FOR INFORMATION	EJD	ER	ER	13.09.24
REV	MODIFICATIONS	BY	RE	AP	DATE
PURPOSE OF ISSUE				STATUS	
FOR INFORMATION				S2	
CLIENT:					
PROJECT:					
ATLANTIC HWRC					
TITLE:					
SENSITIVE RECEPTOR PLAN					
DESIGNED BY	DRAWN BY	REVIEWED BY	AUTHORISED BY		
EJD	EJD	ER	ER		
DATE	SCALE @ A3	JOB REF:	REVISION		
13.09.2024	1:10000	6326	P01		
DRAWING NUMBER					
6326-CAU-XX-XX-DR-V-1800					

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[WWW.CAULMERT.COM](http://WWW.CAULMERT.COM)



Registered Office: InTec, Parc Menai, Bangor, Gwynedd, LL57 4FG

**Tel:** 01248 672666

**Email:** [contact@caulmert.com](mailto:contact@caulmert.com)

**Web:** [www.caulmert.com](http://www.caulmert.com)