Bath & North East Somerset Council

Improving People's Lives

Environmental and Climate Change Risk Assessment

Bath Recycling Centre

19th December 2024

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Environmental and Climate Change Risk Assessment

Bath Recycling Centre

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1. INTRODUCTION

As part of an application for an environmental permit, operators must assess the risk to the environment and human health from the activities they seek to permit. There is also a requirement to consider the affects a changing climate may have on the environment and human health in relation to their activities.

This Environmental and Climate Change Risk Assessment has been undertaken in accordance with the online Environment Agency Guidance for undertaking environmental risk assessments, and sector-specific climate change risk assessments.

Environmental risks relevant to the site activities are:

- Points source emissions to air, water and land/ground;
- Noise;
- Odour
- Dust;
- Litter;
- Pests;
- Vandalism;
- Fire;
- Incompatible Feedstock; and
- Spillages and Leakages.

For each of the above environmental criteria the approach to the assessment has followed the following four stage process:

- Identify the risks;
- Assess the risks (assuming those control measures proposed are in place);
- Choose appropriate further measures to control these (if required); and
- Present the assessment.

Climate change hazards relevant to the site activities are:

- Increased Summer Temperatures;
- Decreased Summer Rainfall;
- Increased/Decreased Winter Temperature;
- Increased Winter Rainfall;
- Rising Sea Levels;
- Increased likelihood of storms; and
- Wildfires.

For each of the above environmental criteria the approach to the assessment has followed the following four stage process:

- Identify the hazards;
- Identify the risks;
- Evaluate the vulnerability of the site to the risk;
- Outline appropriate risk management and adaption measures to control these (if required); and
- Present the assessment.

The nearest sensitive receptors that have been identified around shown in Figure 1.1 overleaf

The nearest residential receptor are houses on Locksbrook Road, 40m northeast of the site.

2. SITE DETAILS

2.1 Site Location

The site is located at the former Bath Street Cleansing Depot on Locksbrook Road, Bath, BA1 3EL.

A Site Location Plan is provided below in **Figure 2.1**

2.2 Infrastructure and Design

2.2.1 Site Boundary

The Installation Boundary will be increasing as part of this permit variation. A figure showing the revised Installation Boundary is provided In **Appendix A** of this document.

All aspects of the plant have been designed in accordance to the Environment Agency's Pollution Prevention Guidance.

2.2.2 Site Layout and Design

The proposed site area covers approximately 0.26ha and consists of a mixture of visitor car parking and designated waste storage areas. The site layout plan can be seen below in **Figure 2.2.**

2.2.3 Drainage

The site utilises a sealed drainage system that covers both operational and non-operational areas of the site.

The proposed drainage system splits the site into three distinct catchments:

- Catchment A incorporates the western portion of the site where there will be clean runoff areas. Rainwater within these areas will be collected by new drainage channels which will discharge into the existing surface water sewer underneath Locksbrook Road to the north of the site.
- Catchment B incorporates the western portion of the site where street cleaning vehicles will be cleaned and black sack tipping and weeding waste bays are located. The runoff within this catchment area may be contaminated and will be collected by foul gullies and discharged to the foul water sewer beneath Locksbrook Road.
- Catchment C is the eastern half of the site where surface water will be collected by new rainwater gullies and permeable paving systems before discharging eastwards. The final point of discharge for the proposed surface water system will be to the existing Wessex Water sewer to the east of the development. The sewer lies in land owned by B&NES.

In the event of a fire, a penstock valve can be operated to isolate the drainage system and prevent potentially contaminated firewater from leaving the site.

A copy of the drainage plan can be found in below In **Figure 2.3.**

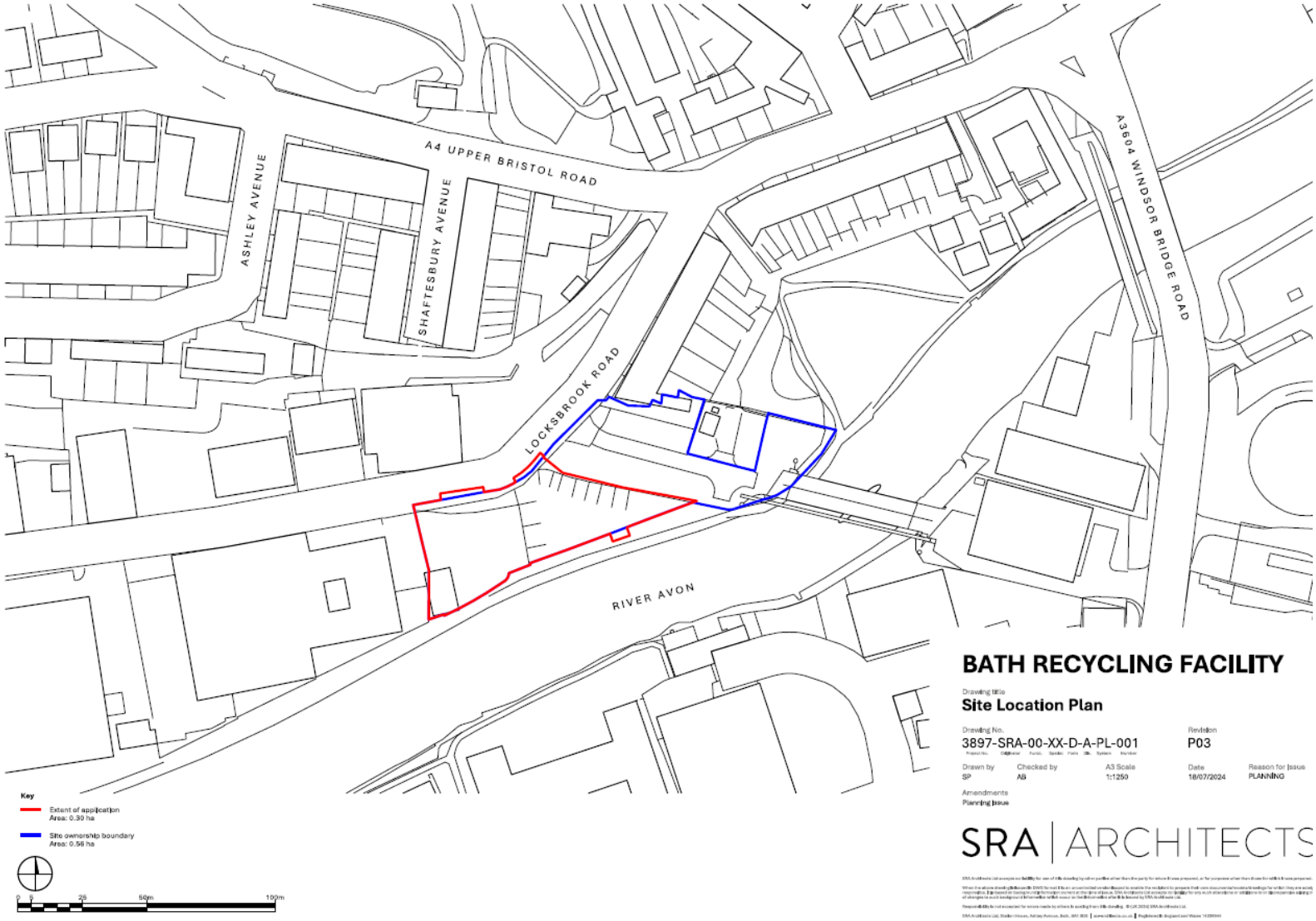

Figure 2.1 - Site Location Plan

Figure 2.2 – Proposed Site Layout

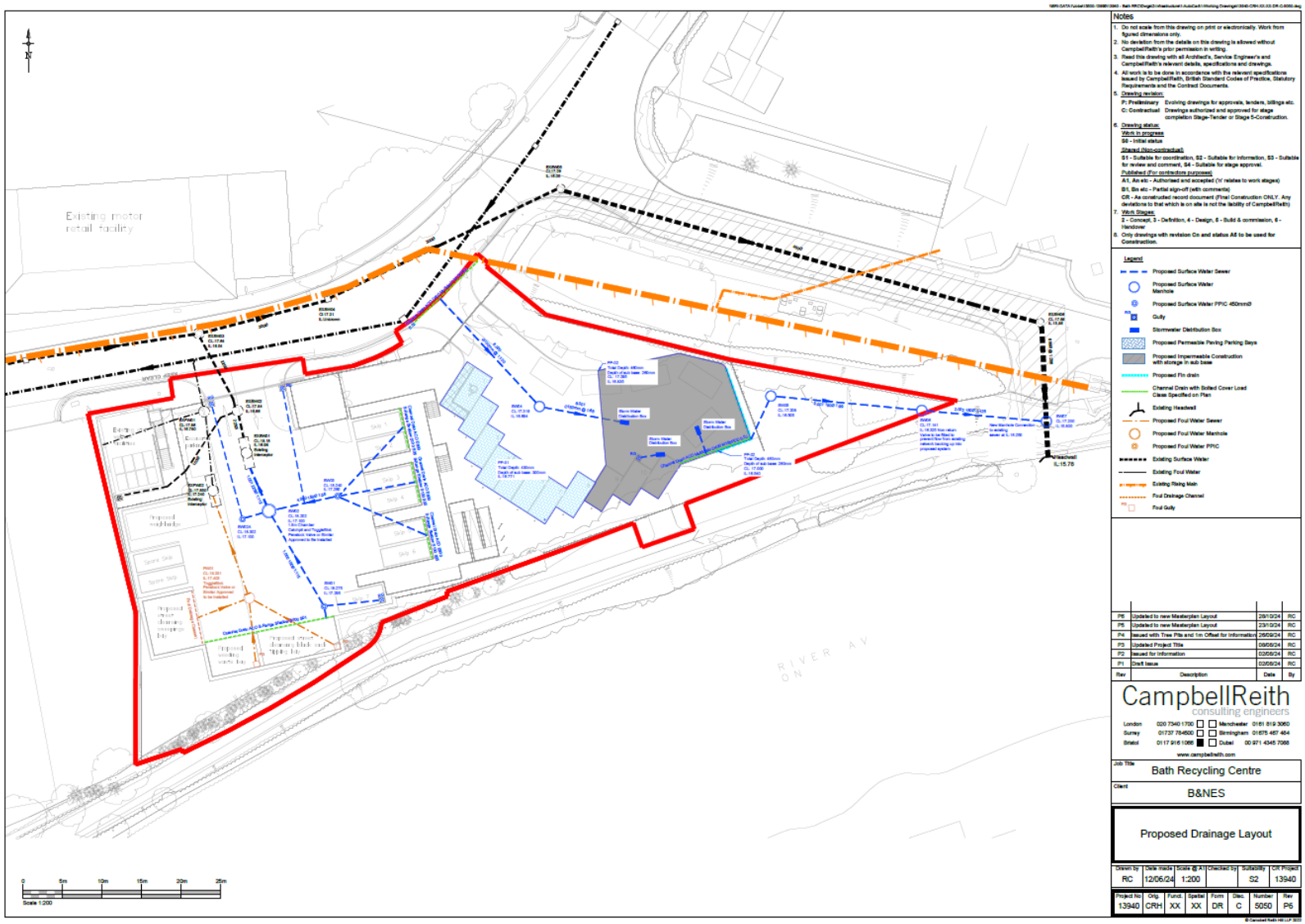

Figure 2.3 - Site Drainage Plan

2.3 Site Context

The following sections outline the site context, including surrounding site setting and any nearby sensitive receptors

2.3.1 Site Setting

The site is located in a mixed-use landscape, comprising of a blend of commercial, residential and recreational assets, as well as prominent ecological features. **Table 2.1** outlines the surrounding site setting in greater detail, including features in the immediate vicinity, within 500m and beyond 500m of the proposed site.

Table 2.1 – Surrounding Site Setting

Direction	Description
North	Immediate Vicinity: Locksbrook Road, Bath Volkswagen Within 500m: Residential areas (closest being Shaftesbury Ave) Offices and Local Businesses (e.g. SRA Architects, Bath Electrical Solutions), Locksbrook Cemetery Beyond 500m: Residential areas (closest being Audley Close)
East	Immediate Vicinity: Car Parking, Residential Housing (Locksbrook Road) Within 500m: Kelson's Field/Playground, River Avon, Commercial Units including PureGym Bath and Bath Auto Service, The Brook Student Accommodation, EON Bath Energy Centre Beyond 500m: Riverside Park, Residential Apartments (Frederick House, Leopold House)
South	Immediate Vicinity: Bristol and Bath Railway Path, River Avon Within 500m: Unite Students Accommodation, Mocca Cleaning Services, A36, Residential areas (closest being Vernon Park), Twerton Cemetery, Oldfield Park Railway Station, Railway Line, Linear Park Beyond 500m: Bricksfield Park, Dartmouth Avenue University of Bath, Residential housing (cloest being Ringwood Rd), Local amenities
West	Immediate Vicinity: Locksbrook Road, Horstman Defence Systems Within 500m: Bath Spa University Locksbrook Campus, Bath Veterinary Group, Halfords Auto Centre, Weston Cut Canal, Bristol and Bath Railway Path, Residential Housing, Keneth Copeland Ministries, Commercial properties Beyond 500m: Residential housing (closest being Locksbrook Road), Locksbrook Inn, Weston Cut Canal, Commercial units

2.3.2 Nearby Sensitive Receptors

The nearest residential areas to the site are on Locksbrook Road, located approximately 40m northeast of the site boundary.

Due to the proximity of the nearest residents, the site could be considered to be moderately sensitive in relation to potential emissions such as odour and/or dust. However, numerous operational measures for the control and mitigation of emissions have been applied to site to ensure that all potential releases are prevented, therefore reducing this risk.

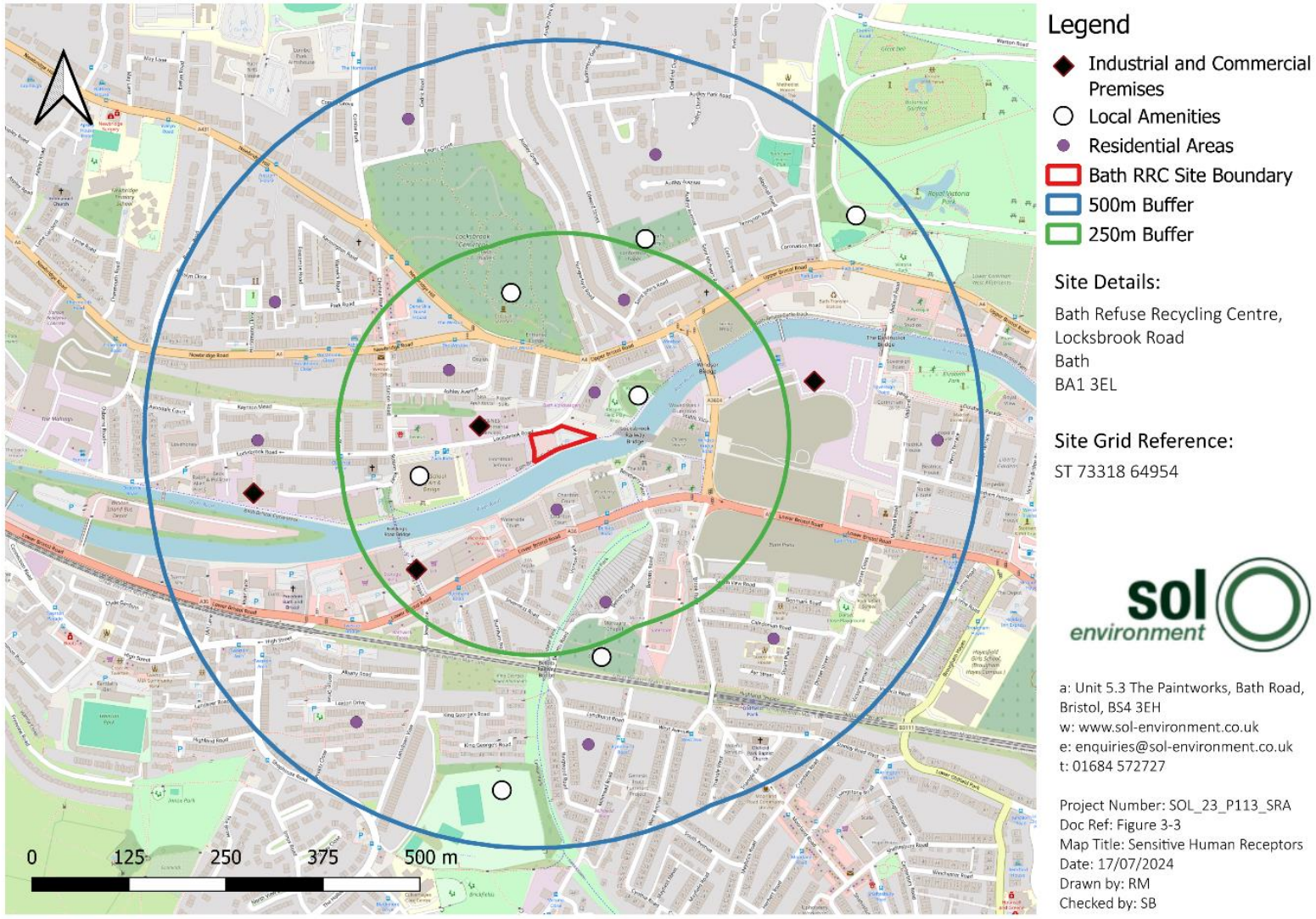

Figure 2.4 - Sensitive Human Receptors

The nearest ecological receptor to the site is Carrs Woodland Local Nature Reserve (LNR), located approximately 930m west of the site.

Table 2.2 – Designated Sites with 2km of the Site

Designated Site	Designation Status	Distance from Site
Cotswolds	AONB	1390m northwest
Carrs Woodland	LNR	930m west
Twerton Roundhill	LNR	1670m southwest
Newton St. Loe	SSSI	1930m northwest

Please refer to **Figure 2.5** below which shows the locations of nearest designated ecological receptors. The red line boundary at the centre of the buffer denotes the site boundary, The LNRs and SSSIs are labelled, and the Cotswolds AONB resides within the red dotted area to the north of the site.

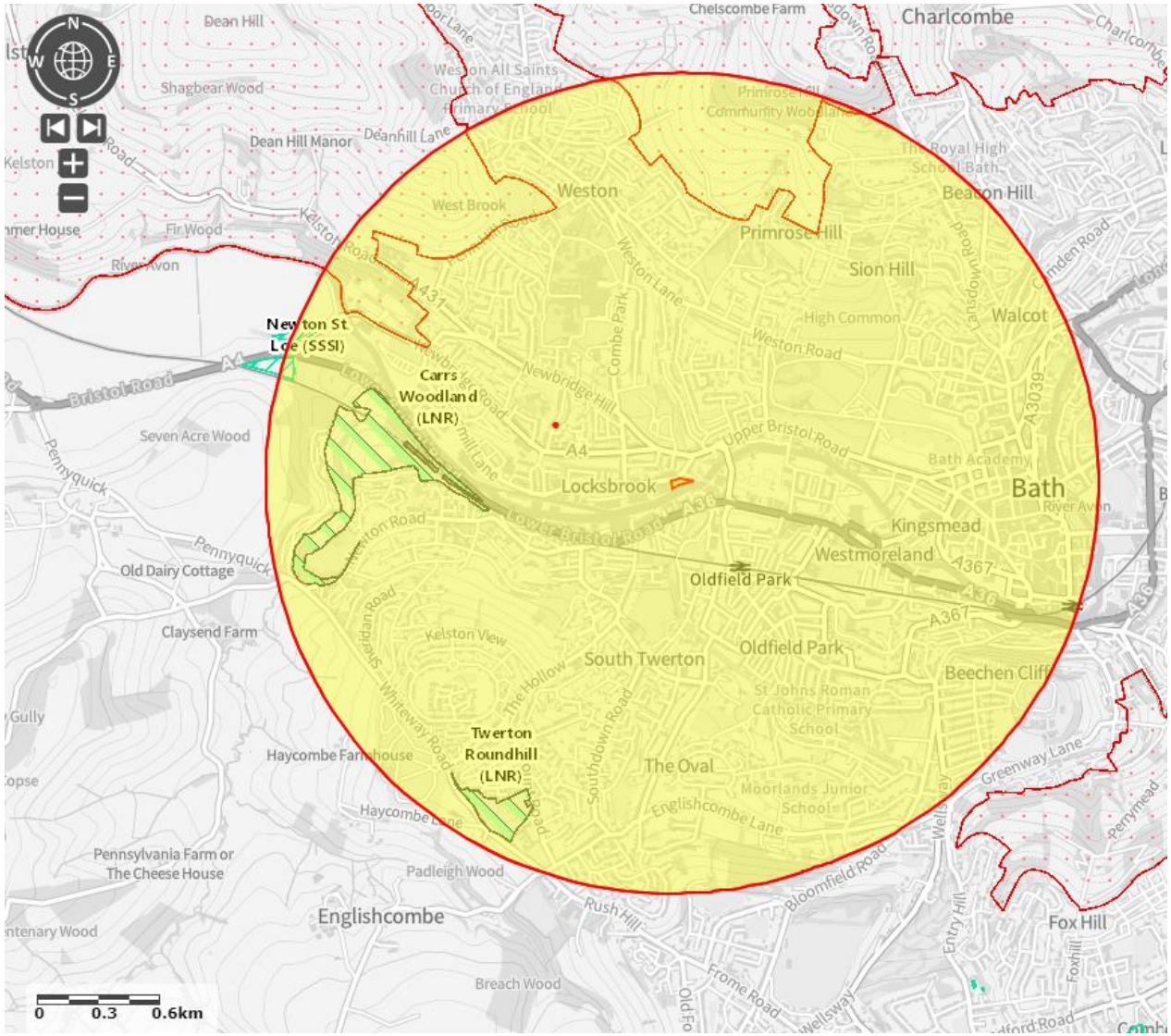

Figure 2.5 – Sensitive Ecological Receptors within 2km of the Site.

2.3.3 Wind Direction

The estimated wind direction for the proposed site comes from a predominantly westerly direction, based on historic wind direction recordings taken from the former RAF Colerne airfield located 9.13 km northeast of the site.

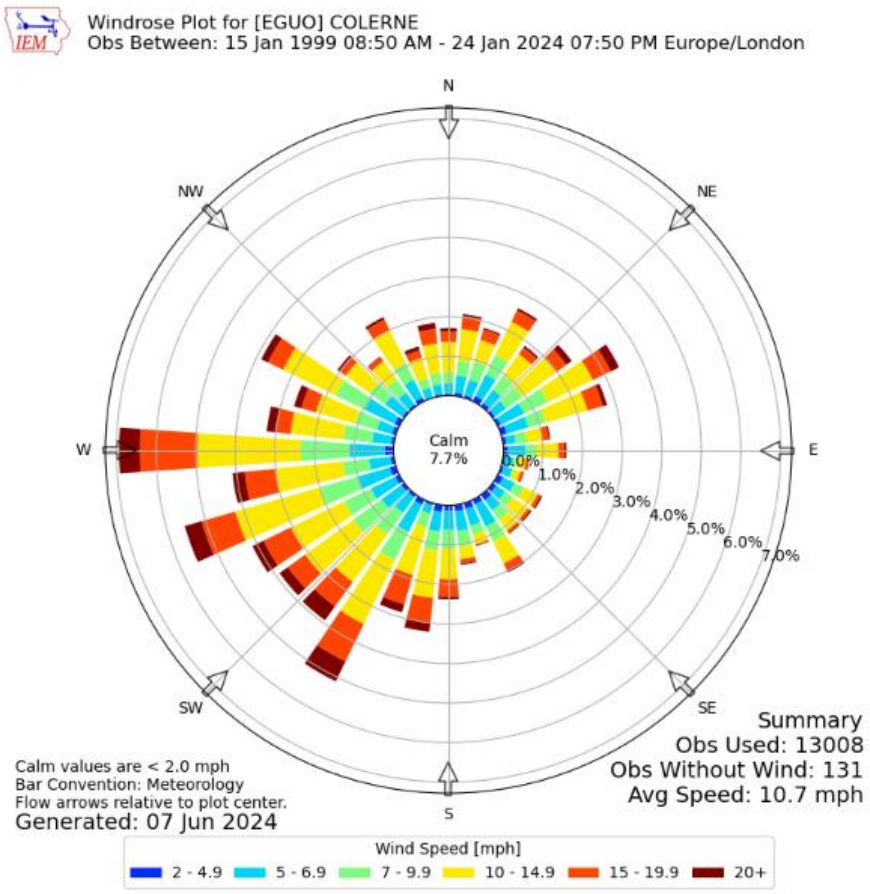

Figure 2.6 – Wind Rose for former RAF Colerne

2.3.4 Flood Risk

The site is located within flood zone 3, meaning there is a high probability of flooding from the nearby River Avon The extent of flooding from rivers is shown in **Figure 2.7** below.

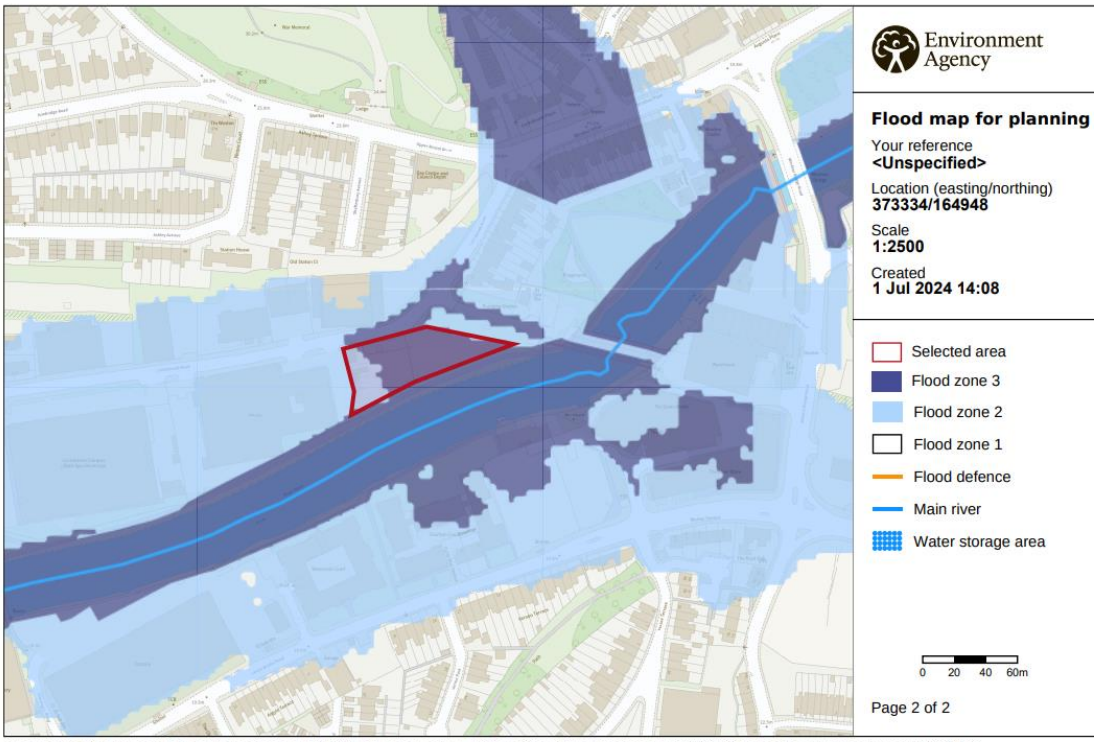

Figure 2.7 – Flood Risk of the Proposed Site

ENVIRONMENTAL AND CLIMATE CHANGE RISK ASSESSMENT

3. ENVIRONMENTAL AND CLIMATE CHANGE RISK ASSESSMENT

Table 3.1 - Environmental Risk Assessment

Environmental Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
Point Source Emissions to Air, Water or Land/Ground	Atmosphere	Airborne Runoff and percolation	There will be no point source emissions to air, water or land/ground arising from the facility. All operational areas of the site within the permitted area are concreted. Spill kits will be strategically located around site. See "Spillages and Leakages" for measures controlling accidental release.	None as there are no point source emissions arising from the activities on site	Air Pollution	NOT APPLICABLE as there are no point sources emissions arising from the activities on site
Noise	Sensitive Receptors as identified in Section 2 of this document. This may include local residents as well as commercial receptors	Airborne	A variety of mitigation measures have been employed to reduce the potential of noise impacts, as identified in the Noise Impact assessment conducted by Entran, dated 13th August 2024. Such measures include: • Minimising drop heights of waste to reduce noise caused by the deposition of waste into bays and containers. • Polyurethane rollers will be employed for on-site skips to reduce the sound emitted from contact between the skip rollers and concrete. • Tonal reversing alarms will be limited on site, with vehicles fitted with in-cab proximity alarms where practicable. • A barrier of at least 1.8m in height will be constructed to the north of the site to mitigate sound propagating to the north.	Medium: due to the nature of the activities, noise emissions offsite are possible	Nuisance	LOW due to the proposed risk management techniques

ENVIRONMENTAL AND CLIMATE CHANGE RISK ASSESSMENT

Environmental Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
			• The design of the site includes inherent mitigation to dwellings to the north and east, with the proposed skip locations providing screening between the operational area of the site and nearest receptors.			
Odour	Sensitive Receptors as identified in Section 2 of this document. This may include local residents as well as commercial receptors	Airborne	A variety of mitigation measures have been employed to reduce the potential of odour impacts. An Air Quality and Odour Impact Asesssment was conducted by Entran, dated 8th August 2024, which concluded that odour impacts beyond the site boundary are likely to be negligible. Measures to further reduce the risk of odour include: • Implementation of an Odour Management Plan that will be regularly reviewed and assessed for suitability. • Non-acceptance of inherently odorous waste. • Minimising storage time and storing all waste within semi-enclosed bays/containers to disrupt the pathway (i.e. wind effects are reduced). • Relatively low quantities of potentially odorous waste stored on site (i.e organic/biodegradable waste). • Random spot-checks of black bag waste will identify potentially odorous materials for removal offsite. • Periodic monitoring of odours on site and where necessary, offsite with	Medium: the occurrence of odour emissions from the site is possible	Nuisance	LOW due to the proposed risk management techniques

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Environmental Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
			corrective actions to address any issues that may arise.			
Dust	Sensitive Receptors as identified in Section 2 of this document. This may include local residents as well as commercial receptors	Airborne	The site does not accept any wastes that are deemed to have a high dust potential. There are no treatment activities undertaken on site that may give rise to dust emissions. All waste will be stored in high-sided containers or bays constructed out of concrete or high density metal that minimise wind-whipping potential. The Site Operations Manager and site staff are trained to observe for signs of dust and monitor incoming waste to ensure no waste with a high-dust potential is deposited.	Low: the occurrence of dust during waste deposition and storage is unlikely	Nuisance	LOW due to the proposed risk management techniques
Litter	Sensitive Receptors as identified in Section 2 of this document. This may include local residents as well as commercial receptors River Avon	Airborne	All waste is stored within designated bays and or containers that minimise the potential for litter to be transported offsite. The site regularly inspects the operational and public access areas, and where necessary, cleans up any traces of litter or debris that may have been accidentally dropped during waste deposition activities. Additional litter-picks or site cleans will be conducted at the site operations managers discretion. The perimeter fencing is fitted with micro netting to capture litter that may have been carried by the wind without site staff's knowledge. This reduce the potential for litter to escape offsite.	High: the occurrence of litter on site is likely	Nuisance	LOW due to the proposed risk management techniques

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Environmental Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
Pests	Sensitive Receptors as identified in Section 2 of this document. This may include local residents as well as commercial receptors	Airborne & migration	All waste will be stored in designated bays/containers, minimising access by potential pest species. No treatment of waste will occur on site and handling will be kept to a minimum, therefore reducing the potential for infestations to occur. During the summer months (and in particularly hot weather), any black bin waste that might have festered will be transferred off site in less than 3 days. Waste types accepted on site are unlikely to attract pests due to the nature of the waste. The quick turnover of waste on site (stored no longer than 3 days) further reduces attraction of pests. In the event that birds, vermin & insects are identified at the site, a specialist pest control contractor will be employed to undertake remedial measures. The Site Operations Manager will be responsible for implementing risk management measures in accordance with the designed operating procedures.	Low: the occurrence of pests on site is highly unlikely	Nuisance	VERY LOW due to the proposed risk management techniques
Vandalism	BANES/the site	The site could be subject to intentional vandalism and damage by intruders / trespassers who	The risk of vandalism does not increase as a result of this variation. The site has a 24/7 CCTV system in operation across the site.	Low: the occurrence of vandalism taking place on site is highly unlikely.	Nuisance, Damage or Fire	VERY LOW due to the proposed risk management techniques

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Environmental Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
		could cause damage or harm to the site or cause fires.	The site entrances are secured by lockable gates and security fencing to prevent unauthorised access. The site perimeter is inspected daily by operations staff to identify deterioration and damage and the need for repair. Fencing is maintained and repaired to ensure its continued integrity. If damage is sustained, repair will be made within the same working day. If this is not possible, suitable measures will be taken to prevent unauthorised access to the site and permanent repairs will be affected as soon as is practicable.			
Fire on site	Operator / Residential Properties	Windborne	Arson by intruders is controlled via CCTV, main steel security gates, perimeter walls and fences. The site is well lit and secured. A number of fire extinguishers are placed at strategic locations around the site. The risk of damaged or exposed electrical cables is controlled via the regular inspection and maintenance programme. Staff are only permitted to smoke within the designated smoking area. The site has a stringent Fire Prevention Plan.	Low: the occurrence of a fire taking place on site is highly unlikely	Fire	VERY LOW due to the proposed risk management techniques
Incompatible Wastes/Non-accepted Wates	Operator / Residential Properties	If incorrect waste is accepted on site, it could result in adverse	Where possible, only waste listed in the permit will be allowed on site. Given the nature of the site, it may not be entirely possible to prevent non-accepted or incompatible waste types being	Low: offsite receptor impacts	Nuisance / Adverse Emissions/Reactions between Wastes	LOW due to the proposed risk management techniques

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Environmental Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
		emissions or reactions between wastes	deposited. Site operatives will conduct visual checks and assist the public where possible with their waste deposits. Random spot checks of black bag waste will be undertaken, and potentially incompatible wastes/non-accepted wastes will be quarantined. Records of incidents involving incompatible substances will be kept on site together with a summary of the remedial action taken.			
Spillages and Leakages	Land, surface water, groundwater	Runoff and percolation	There will be limited quantities of fuels and oils stored on site for the purpose of fuelling and maintain service vehicles. Storage tanks will be constructed to the appropriate British Standard. Tanks will be inspected visually on a daily basis by the site staff to ensure the continued integrity of the tanks and identify the requirement for any remedial action. Minor spillages will be cleaned up immediately, using designated spill kits strategically located around the site. Materials suitable for absorbing and containing minor spillages will be maintained on site. In the event of a major spillage immediate action will be taken to contain the spillage and prevent liquid from entering surface water drains. The spillage will be cleared immediately and placed in	Low: the occurrence of spillages and leakages is unlikely	Contamination of surface water and/or groundwater	LOW - due to the proposed measures

ENVIRONMENTAL AND CLIMATE CHANGE RISK ASSESSMENT

Environmental Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
			containers for off-site disposal and the Environment Agency will be notified. A new drainage system will be installed as part of the proposed planning application and site modifications that will include oil interceptors to prevent greases and oils and other liquids in a spill discharging off site, as well as a penstock-type valve to be fitted and operating in an emergency, like contaminated firewater. There will be two interceptors on site, one for foul and one for surface water. The site staff will undertake daily monitoring for evidence of spillage and leakage. The site operations manager will be ultimately responsible for ensuring monitoring, inspections and where applicable, maintenance, is carried out.			

ENVIRONMENTAL AND CLIMATE CHANGE RISK ASSESSMENT

Table 3.2 - Climate Change Risk Assessment

Climate Change Adaption Risk Assessment						
Hazard	Risk	Vulnerability	Consequence(s)	Risk Management and Adaption Techniques	Likelihood of Occurrence after Adaption	Overall Risk (following Mitigation)
Summer Daily Maximum Temperature: EA state that this may be around 7°C higher compared to average summer temperatures now, with the potential to reach extreme temperatures as high as over 40°C with increasing frequency based on today's values.						
Impact 1: Potential for increased waste reactions or fires involving heat sensitive or combustible waste.	Low The risk is low due to the site operating with minimal storage times and limited storage capacity at any one time.	Medium The site has somewhat control over the wastes accepted, however it cannot be guaranteed that non-accepted wastes are not deposited by members of the public	Increased risk of fire, resulting in air pollution to the surrounding environment Potential damage to nearby infrastructure and neighbouring sites	Waste streams are segregated to prevent reactions between heat sensitive wastes. Continuous visual monitoring is undertaken by site staff to ensure non-compatible wastes are not deposited. Spot-checks are undertaken of black bag waste to remove, if necessary, any non-compatible wastes (e.g. batteries)	Low	Low
Impact 2: Potential for fire if the temperature exceeds the heat rating of components in electrical equipment or components are subjected to intense and direct sunlight.	Medium Electrical components, such as those in EV Charging points, may be exposed to direct heat from sunlight throughout periods of the day. Large waste electrical items are accepted on site.	Medium to Low The site has little control over heating rating of electrical components in plant and equipment The site has comprehensive procedures for	Potential damage to site infrastructure resulting from fire on site	Effective site Fire Prevention Plan Plant that is reviewed and assessed for suitability. Any electrical and waste electrical items to be monitored closely during periods of intense heat. Appropriate measures will be undertaken as deemed necessary.	Low	Low

ENVIRONMENTAL AND CLIMATE CHANGE RISK ASSESSMENT

Climate Change Adaption Risk Assessment						
Hazard	Risk	Vulnerability	Consequence(s)	Risk Management and Adaption Techniques	Likelihood of Occurrence after Adaption	Overall Risk (following Mitigation)
		managing WEEE waste on site				
Impact 3 - *Potential increase in high temperature expansion and stress of plant, pipework and fittings. UV degradation of plastic pipes and hoses causing them to fail.*	Low The site operates 360 plant with hydraulic pipework and pipework related to the wash-down area and associated hoses	Medium The site operates minimal pipework on site.	Temporary loss of use of wash-down area. Temporary loss of 360 plant.	Regular maintenance and inspections are carried out daily on all plant and equipment. Regular checks are made to the wash-down hoses to ensure there are no signs of degradation. Signs of degradation and/or leakages will prompt quick replacement.	Low	Low
Impact 4 *Potential increased dust emissions from processing areas, stockpiled material and site roads. Reduced availability of water for dust suppression.*	Very Low The site does not undertake processing, all waste is stored in bays or containers and there are minimal drivable surfaces on site that could generate dust	Very Low The site does not propose to use water for dust suppression	Negligible risk of increase dust emissions so no realistic consequences identified	The site will ensure the following measures are implemented to reduce dust potential: -reduce storage times; -storage of waste will be in bays or containers; -regular site housekeeping; -regular visual inspections; and -dust suppression when necessary.	Low	Low
Impact 5 *Long periods of hot and dry weather could lead to a drought*	Low The site will unlikely struggle to suppress fires even during periods of droughts.	Low: The site does not have a major reliance on water supplies other	Potential increase in fire frequencies. Potential increase in fire intensities. Decreased capacity for cleaning of plant and equipment	The site uses water sparingly in the present situation, using water only for cleaning of necessary areas of site and	Low	Low

ENVIRONMENTAL AND CLIMATE CHANGE RISK ASSESSMENT

Climate Change Adaption Risk Assessment						
Hazard	Risk	Vulnerability	Consequence(s)	Risk Management and Adaption Techniques	Likelihood of Occurrence after Adaption	Overall Risk (following Mitigation)
and may have an impact on water supplies	The risk of fire on site is minimal given the low volumes of waste stored at any one time, and the short storage times of waste whilst on site.	than from general cleaning and suppression in the unlikely event of a fire.		suppression of fire in the unlikely event one should occur. The site will review its water use regularly and make necessary adjustments to its usage accordingly. Additional measures may be deployed including rainwater harvesting, however the site currently have no plans to do so.		
Impact 6 *- Potential increased risk of pests and scavengers from stockpiled waste such as food and drink containers, food contaminated wastes and 'black bag' type wastes.*	Medium The site does accept black bag waste that may contain food and drink containers.	Medium The site does not experience high levels of pests at present but may experience an increase once operational under the proposed new conditions	Potential human-animal contact as pests and scavengers increases. Potential for disease introduction to the site	Daily checks are conducted to look for signs for pests or scavengers. Pest control to be called at first sign of pests or scavengers. Any green or organic waste is stored for as least time as possible as to not attract pests or scavengers. Maintaining good housekeeping practices to reduce the likelihood of attracting pests.	Low	Low

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Climate Change Adaption Risk Assessment						
Hazard	Risk	Vulnerability	Consequence(s)	Risk Management and Adaption Techniques	Likelihood of Occurrence after Adaption	Overall Risk (following Mitigation)
				Waste will be stored in containers where possible to minimise potential for contact with exclusively terrestrial animals (i.e. rats)		
***Impact 7** - Potential increased risk of wildfires impacting the site.*	Low Wildfires are deemed low risk as the site does not site near large areas of countryside that may ignite in hot weather	Low The site is located in a highly urban area that does not pose significant risk of wildfires	Damage to site buildings and/or infrastructure	Fire hydrants are located outside the site to fight any signs of fire The site has extensive fire management procedures in place	Low	Low
Winter Daily Maximum Temperature: EA state that this could be 4°C high than the current average with the potential for more extreme temperatures, both warmer and cooler than present						
***Impact 1:** Slightly higher winter maximums could generate regular odour complaints and pest infestations.*	Low Given that the site does not accept odorous waste and pests are not a significant issue on site, the risk is deemed low	Low The site stores waste for as little time as possible, meaning the potential for odour to be generated or pests attracted is low.	Potential for human-animal contact as pests and scavengers increase. Damaged relationships with neighbouring residential dwellings.	Regular reviews of odour management plans Maintaining good housekeeping practices Maintaining regular public and neighbour engagement regarding the potential impact of the site Regular engagement with neighbours to ensure positive relationships	Low	Low

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Climate Change Adaption Risk Assessment						
Hazard	Risk	Vulnerability	Consequence(s)	Risk Management and Adaption Techniques	Likelihood of Occurrence after Adaption	Overall Risk (following Mitigation)
Impact 2 - *Lower winter temperatures could result in an increased risk of pipes (or similar) freezing.*	Low This risk is low as the site does not have any exposed pipework that is critical to operations. The only pipework visible on site are drainpipes from the office block.	Low The site have limited pipework on site, except drainpipes from rooftops	Damage to roof drainage system	Pipework from buildings will be inspected as part of the site's regular inspections. Signs of damage or decay will be recorded and repairs made at the earliest opportunity All pipework will be new at the time of commissioning.	Low	Low
Daily Extreme Rainfall: EA state that rainfall intensity could increase by up to 20% on today's values						
Impact 1: Potential for increased site surface water and flooding.	High The risk is high as the site is located in Flood Zone 3, considered the highest possibility of flooding from rivers.	Medium The site has recorded examples of flooding on site, however flooding has not been extensive where significant damage or risk of pollution occurs	Damage to the site and its infrastructure. Pollution of waste carried in flood waters.	Site design has been considered to minimise the risk of flooding. These designs have been detailed in the recent planning application. Extensive reviews of the drainage system, as well as flood defences have been carried out as part of the planning application. Regular checks and inspections of the onsite drainage system to ensure no blockages or damage prevent flow	Low	Low

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Climate Change Adaption Risk Assessment						
Hazard	Risk	Vulnerability	Consequence(s)	Risk Management and Adaption Techniques	Likelihood of Occurrence after Adaption	Overall Risk (following Mitigation)
				If blockages do occur, or the volume of water overwhelms the drainage system, excess water will be pumped and removed from site to ensure the drainage system remains operational If surface water flooding increases in frequency, as recorded in the site inspections, a flood plan will be prepared to effectively manage these situations.		
Impact 2: *There is potential for drainage systems and interceptors to be overwhelmed.*	Medium The site is considered at a medium risk of having its drainage system overwhelmed given its closeness to the River Avon	Medium The drainage system is well maintained, however capacity may be overwhelmed under intense rainfall.	Surface water flooding from an overwhelmed drainage system Pollution caused by contaminants in the interceptors being washed out in flood waters Ceasing or slowing of site operations, resulting in longer processing times and a build-up of waste	See above	Low	Low
Average winter rainfall: EA State that the Average winter rainfall may increase by over 40% on today's averages.						
Impact 1: Potential for increased site surface water and flooding.	High The risk is high as the site is located in Flood Zone 3, considered the	Medium The site has recorded examples of flooding on site, however flooding	Damage to the site and its infrastructure. Pollution of waste carried in flood waters.	Site design has been considered to minimise the risk of flooding. These designs have been detailed in the recent planning application.	Low	Low

ENVIRONMENTAL AND CLIMATE CHANGE RISK ASSESSMENT

Climate Change Adaption Risk Assessment						
Hazard	Risk	Vulnerability	Consequence(s)	Risk Management and Adaption Techniques	Likelihood of Occurrence after Adaption	Overall Risk (following Mitigation)
	highest possibility of flooding from rivers.	has not been extensive where significant damage or risk of pollution occurs		Extensive reviews of the drainage system, as well as flood defences have been carried out as part of the planning application. Regular checks and inspections of the onsite drainage system to ensure no blockages or damage prevent flow. If blockages do occur, or the volume of water overwhelms the drainage system, excess water will be pumped and removed from site to ensure the drainage system remains operational. If surface water flooding increases in frequency, as recorded in the site inspections, a flood plan will be prepared to effectively manage these situations.		
Impact 2: *There is potential for drainage systems and interceptors*	Medium The site is considered at a medium risk of	Medium The drainage system is well maintained,	Surface water flooding from an overwhelmed drainage system	See above	Low	Low

ENVIRONMENTAL AND CLIMATE CHANGE RISK ASSESSMENT

Climate Change Adaption Risk Assessment						
Hazard	Risk	Vulnerability	Consequence(s)	Risk Management and Adaption Techniques	Likelihood of Occurrence after Adaption	Overall Risk (following Mitigation)
to be overwhelmed.	having its drainage system overwhelmed given its closeness to the River Avon	however capacity may be overwhelmed under intense rainfall.	Pollution caused by contaminants in the interceptors being washed out in flood waters Ceasing or slowing of site operations, resulting in longer processing times and a build-up of waste			
Sea level rise: The EA state that sea level rise which could be as much as 0.6m higher compared to today's level.						
Impact 1: If located near the coast, a site could experience increased: risk of flooding and associated impacts corrosion due to increase in saltwater spray	**Not Applicable** The site is not located near a sea					
Drier Summers: The EA state that summers could see potentially up to 40% less rain than now.						
Impact 5 *Long periods of hot and dry weather could lead to a drought and may have an impact on water supplies*	Low The site will unlikely struggle to suppress fires even during periods of droughts. The risk of fire on site is minimal given the low volumes of waste stored at any one time, and the short storage times of waste whilst on site.	Low: The site does not have a major reliance on water supplies other than from general cleaning and suppression in the unlikely event of a fire.	Potential increase in fire frequencies. Potential increase in fire intensities. Decreased capacity for cleaning of plant and equipment	The site uses water sparingly in the present situation, using water only for cleaning of necessary areas of site and suppression of fire in the unlikely event one should occur. The site will review its water use regularly and make necessary adjustments to its usage	Low	Low

ENVIRONMENTAL AND CLIMATE CHANGE RISK ASSESSMENT

Climate Change Adaption Risk Assessment						
Hazard	Risk	Vulnerability	Consequence(s)	Risk Management and Adaption Techniques	Likelihood of Occurrence after Adaption	Overall Risk (following Mitigation)
				accordingly. Additional measures may be deployed including rainwater harvesting, however the site currently have no plans to do so.		
Impact 2 There is potential increased impact of discharge to watercourse from on-site drainage systems where connected to water courses.	Not Applicable There are no discharges to watercourses from on-site drainage systems					
River Flow: The EA state the flow in the watercourses could be 50% more than now at its peak, and 80% less than now at its lowest.						
Impact 1: Increased impact from on-site drainage systems where they are connected to watercourses.	Not Applicable There are no discharges to watercourses from on-site drainage systems					
Storms: Storms could see a change in frequency and intensity. The unique combination of increased wind speeds, increased rainfall, and lightning during these events provides the potential for more extreme storm impacts.						
Impact 1 Potential for high winds to damage buildings and infrastructure and blow waste from the site	Low The site will be of a very modern construction once completed in 2025.	Low The site will be considered well designed with well-constructed buildings and infrastructure	N/A	Buildings will be inspected for signs of damage following storms and/or high winds Repairs will be undertaken as soon as possible to	Low	Low

ENVIRONMENTAL AND CLIMATE CHANGE RISK ASSESSMENT

Climate Change Adaption Risk Assessment						
Hazard	Risk	Vulnerability	Consequence(s)	Risk Management and Adaption Techniques	Likelihood of Occurrence after Adaption	Overall Risk (following Mitigation)
	This improves confidence in the rigidity and strength of existing ructures to resist damage in high winds	once the upgrade works are completed		repair any damage identified following an inspection.		
Impact 2 - *Potential for high winds to cause problems with stability of above ground storage tanks on jacks. This poses a risk to staff, plant infrastructure and the potential to release the contents of the storage tank.*	**Not Applicable** There are no storage tanks on jacks located on site					

ENVIRONMENTAL AND CLIMATE CHANGE RISK ASSESSMENT

APPENDIX A SITE BOUNDARY PLAN

ENVIRONMENTAL AND CLIMATE CHANGE RISK ASSESSMENT

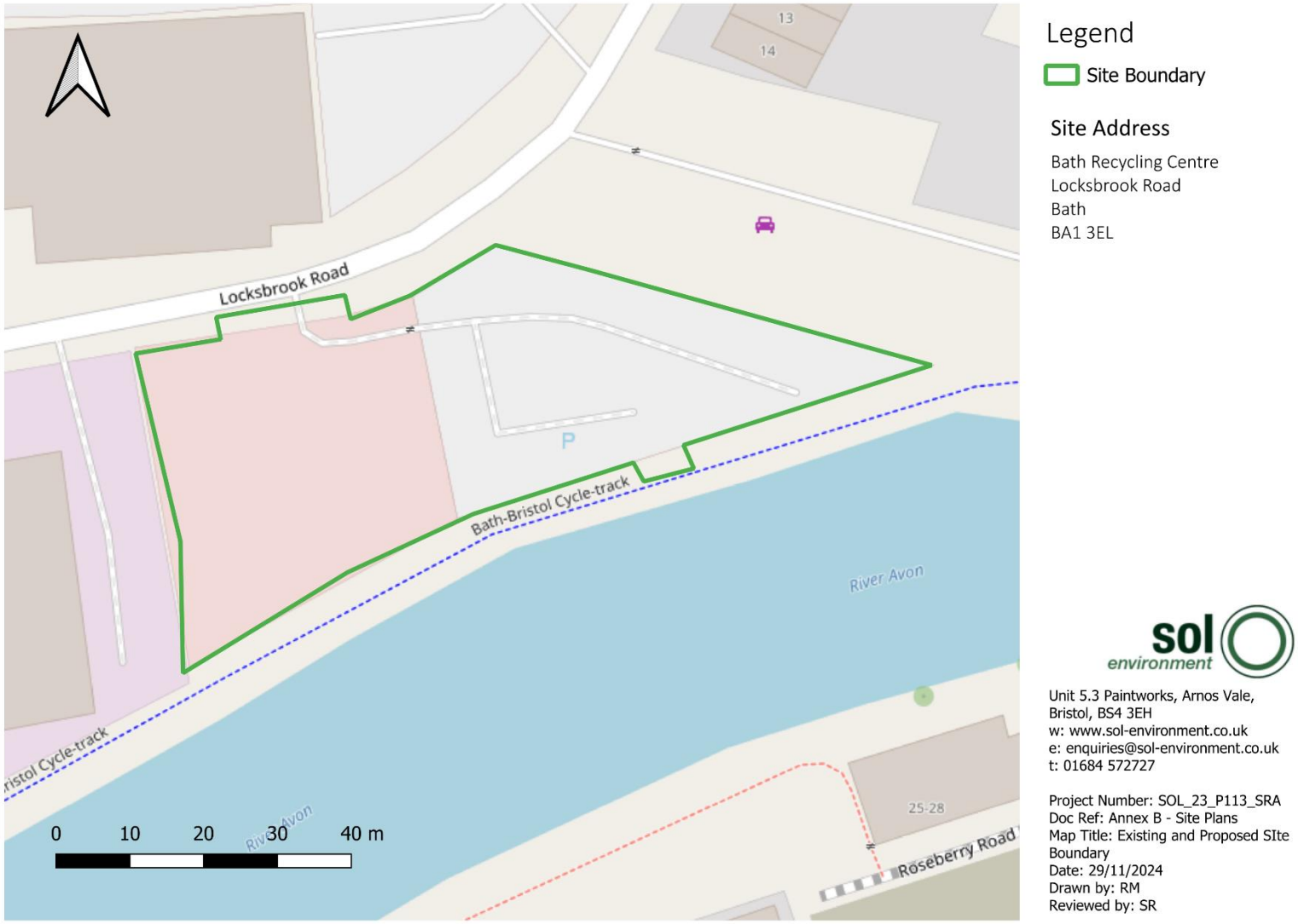

Figure 3.1 - Site Boundary