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Solihull
Community Housing
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Solihull Community Housing

Climate Change Risk Assessment

Application to Vary Environmental Permit EPR/PP3692FS
Chapelhouse Road Asset Management Hub, Chapelhouse Road,
Chelmsley Wood, Solihull, B37 5HA

25 February 2026

Our Reference: SCC-CCRA, RP02 (Final)



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SCC-CCRA, RP02 (Final)

Version & Status	Date Produced	Prepared by:	Checked and Authorised by:
Draft v1.0	01/12/2025	Waste and Industry Compliance Ltd.	Waste and Industry Compliance Ltd.
Draft v2.0	03/12/2025	Waste and Industry Compliance Ltd.	Waste and Industry Compliance Ltd.
Final	25/02/2026	Waste and Industry Compliance Ltd.	Waste and Industry Compliance Ltd.

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1 INTRODUCTION

1.1 BACKGROUND

- 1.1.1 This Climate Change Risk Assessment has been prepared on behalf of Solihull Community Housing **(the Operator)** for their Waste Transfer Station at Chapelhouse Road Asset Management Hub, Chapelhouse Road, Chelmsley Wood, Solihull, B37 5HA (the Site). It has been prepared in accordance with [www.gov.uk guidance 'Climate change: risk assessment and adaptation planning in your management system'](https://www.gov.uk/guidance/climate-change-risk-assessment-and-adaptation-planning-in-your-management-system) (<https://www.gov.uk/guidance/climate-change-risk-assessment-and-adaptation-planning-in-your-management-system>).
- 1.1.2 The Site has the benefit of an Environmental Permit (EPR/PP3692FS), which was issued on 30 September 1999 and authorises the receipt of up to 5,000 tonnes per annum of predominantly non-hazardous household, commercial and industrial waste. In addition, S1 and S2 exemptions are currently registered for the Site (exemption reference WEX424596).
- 1.1.3 The Operator seeks to vary the permit to include wastes currently received under S1 and S2 exemptions, with the intention of deregistering the exemptions immediately before permit variation issue.
- 1.1.4 The Site comprises a fully concreted external yard that is drained to foul sewer, via an interceptor.
- 1.1.5 Wastes are stored and bulked-up in a series of dedicated sealed roll on roll off containers, skips, bins and compactor containers. Wastes are not tipped or stored directly on the ground.
- 1.1.6 Guidance 'Climate change: risk assessment and adaptation planning in your management system' states that climate projections show that there will be an increased risk of:
- Extreme rainfall, leading to more frequent and severe floods;
 - Heat waves;
 - Drought;
 - Rise in sea levels and tidal surges;
 - Storms;
 - Wildfires.
- 1.1.7 The guidance requires that operators take into account the implications of climate change projections in their environmental management system, via:
- Preparation;
 - Identification of potential impacts;
 - Carrying out a risk assessment;
 - Finding control measures;
 - Writing an adaption plan;

- Monitoring, recording and reviewing the adaption plan.

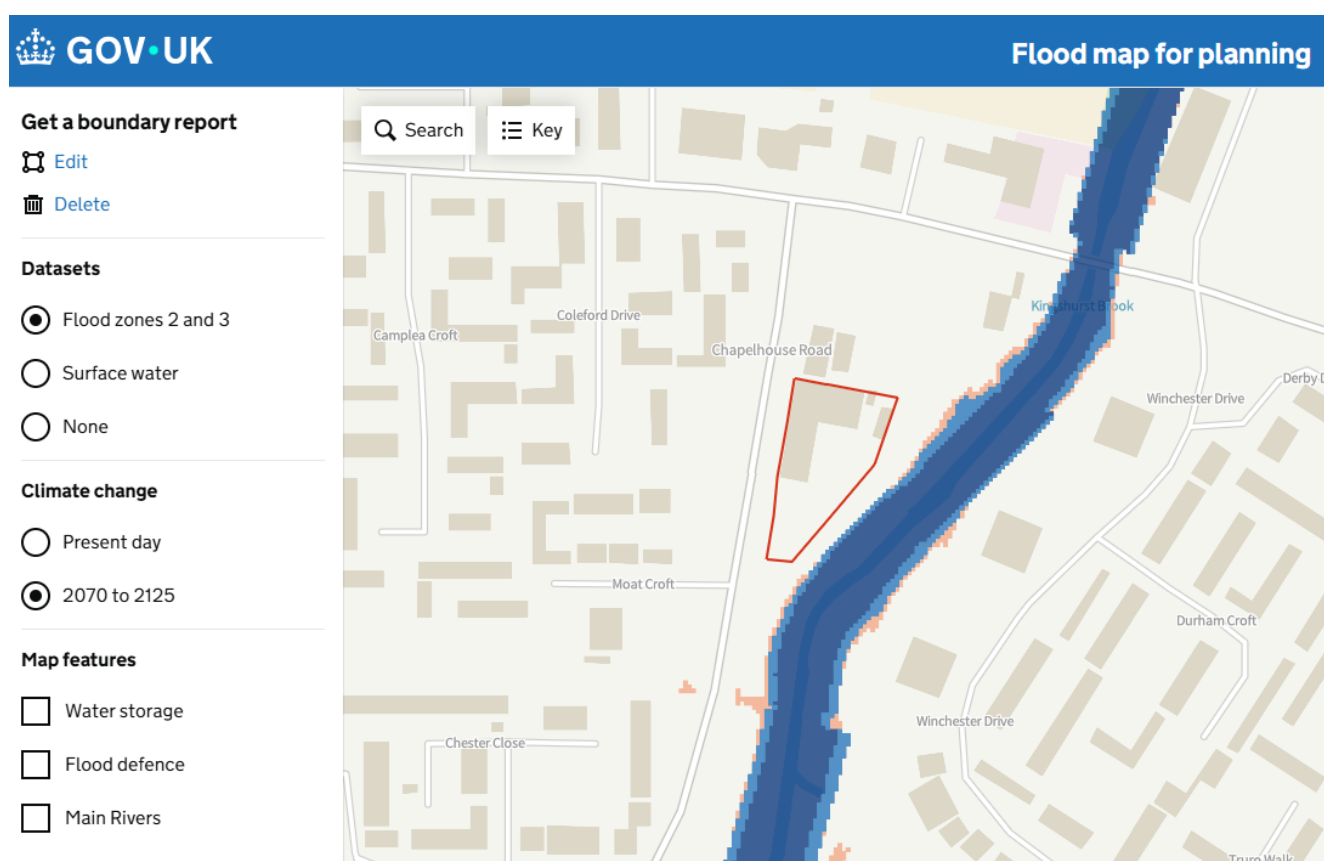
2 PREPARATION

- 2.1.1 The Operator will incorporate this Climate Change Risk Assessment into the Site's Environmental and Emergency Management System.
- 2.1.2 As part of this process, the Logistics Manager and Logistics Co-ordinator will review any non-conformances or complaints, the date of any incidents (including any that arise due to climate change, such as flooding, heat waves, wildfires etc), who reported the incident, a description of the incident, who investigated the incident, what were the actions or outcomes of the investigation (including any mitigation measures) and whether the incident has been addressed and closed or is still ongoing.
- 2.1.3 The Operator will undertake an annual audit of the Site's Environmental and Emergency Management System and associated procedures. The findings and results of the audit will be conveyed to senior management, who will review the findings and implement any recommended or required actions. Senior management will also review environmental performance during the previous year, including any impacts that arose due to climate change (such as flooding, heat waves, wildfires etc) and the mitigation and improvement measures that were taken. The purpose is to ensure the Site is:
- Continually improving;
 - Minimising the risk of pollution and climate change incidents and preventing any significant impacts to sensitive receptors, including detriment to local amenity;
 - Operated in accordance with the latest regulatory guidance;
 - Meeting environmental objectives independent of the permit.
- 2.1.4 Senior management will ensure the findings of the audit are conveyed to appropriate staff and any additional training that may be required will be provided to relevant personnel, to ensure the Site is minimising any potential adverse impacts from climate change.

3 IDENTIFICATION OF POTENTIAL IMPACTS

- 3.1.1 The Site is located in the Tame Lower Rivers and Lakes Operational Catchment, specifically in the reach classed as the Hatchford - Kingshurst Brook, from Source to the River Cole Water Body, <https://environment.data.gov.uk/catchment-planning/WaterBody/GB104028042490>.
- 3.1.2 The Flood Map for Planning (<https://flood-map-for-planning.service.gov.uk>) shows that the Site is located in a Flood Zone 1. Although the Site is in close proximity to the Kingshurst Brook, it is located outside the area liable to flood, including when climate change predictions for the years 2,070 to 2,125 are taken into account. The Site boundary is outlined in red in Figure 1 below.

Figure 1: River and Coastal Flooding



- 3.1.3 Flood Zone 1 and has a low probability of flooding, i.e. less than 1 in 1,000 annual probability of river or sea flooding.
- 3.1.4 The following Government guidance (<https://www.gov.uk/government/publications/adapting-to-climate-change-industry-sector-examples-for-your-risk-assessment>) (updated 17 May 2023) has been used to identify all the potential climate impacts at the Site:
- Hazardous waste and treatment: examples for your adapting to climate change risk assessment;
 - Non-hazardous and inert waste treatment: examples for your adapting to climate change risk assessment.
- 3.1.5 The likelihood and severity of each climate impact is scored to provide the risk rating for each climate impact (Risk = Likelihood x Severity). Where the risk rating for a climate impact is greater than 5, mitigation measures are required to reduce the impact to an acceptable level. The residual likelihood and severity of the climate impact is then re-rated after mitigation to demonstrate the residual risk is at an acceptable level.
- 3.1.6 The guidance sets out the scoring criteria for severity and likelihood of impact etc and is reproduced in Table 1 below.

Table 1 - Risk Score Calculation Methodology

	Severe Impact = 4	Medium Impact = 3	Mild Impact = 2	Minor Impact = 1
Highly likely = 4	16	12	8	4
Likely = 3	12	9	6	3
Low Likelihood = 2	8	6	4	2
Unlikely = 1	4	3	2	1

3.1.7 Risk categories are:

- 12 to 16 = high
- 8 to 9 = moderate to high
- 4 to 6 = moderate to low
- 1 to 3 = low

3.1.8 Guidance 'Climate change: risk assessment and adaptation planning in your management system' states that operators should allow for a 4°C rise by 2100 and a 2°C rise by 2050. However, Government guidance 'Adapting to climate change: industry sector examples for your risk assessment' states that summer temperatures may be around 7°C higher compared to current average summer temperatures and winter temperatures may be 4°C more than the current average, with the potential for more extreme temperatures, both warmer and colder than present. This Climate Change Risk Assessment considers the potential 'worst case scenario impacts' identified in the guidance.

4 RISK ASSESSMENT

4.1.1 The Climate Change Risk Assessment is shown in Table 2 below.

Table 2 Climate Change Risk Assessment

Potential changing climate variable	A Impact	B Likelihood	C Severity	D Risk (B x C)	E Mitigation (what will you do to mitigate this risk)	F Likelihood (after mitigation)	G Severity (after mitigation)
1. Summer daily maximum temperature may be around 7°C higher compared to average summer temperatures now, e.g. at least a 2°C global mean temperature rise by 2050 and a projected 4°C rise by 2100.	Potential for increased waste reactions or fires involving heat sensitive or combustible waste.	2	4	8	The Site will receive up to 5,000 tonnes per annum of non-hazardous and hazardous wastes from house clearance and waste removal works from tenanted and leased domestic properties belonging to Solihull Metropolitan Borough Council. In addition, wastes will arise from the modernisation and refurbishment of the Council's housing stock. All waste removal from these properties will be undertaken by Solihull Community Housing or its approved contractors. During waste removal or modernisation or refurbishment works, Solihull Community Housing or their approved contractors complete appropriate Waste Transfer Notes and/or Hazardous Waste Consignment Notes electronically, which confirm the address/origin of the waste, the waste types and relevant European Waste Catalogue (EWC) codes and waste quantity. These are used by site staff to check the details and ensure that only authorised materials are delivered to the Site. Any unacceptable or non-permitted loads will be refused entry to the facility and directed by site staff to a more suitable, properly authorised site. In the event that any inadvertently delivered wastes are detected, they will be removed and placed in a secure quarantine skip for priority removal from the Site to authorised facilities. The Site operates a first in, first out policy to ensure that wastes are received, processed and dispatched from the facility as quickly as possible, with a maximum storage time of 3 months (apart from asbestos wastes, which are inherently non-combustible).	1	4

Potential changing climate variable	A Impact	B Likelihood	C Severity	D Risk (B x C)	E Mitigation (what will you do to mitigate this risk)	F Likelihood (after mitigation)	G Severity (after mitigation)
1. Summer daily maximum temperature may be around 7°C higher compared to average summer temperatures now, e.g. at least a 2°C global mean temperature rise by 2050 and a projected 4°C rise by 2100 (continued).					This ensures that heat build-up is avoided, by minimising the waste storage time and the potential for internal heat generation. All wastes are stored in sealed containers, which provide either complete (i.e. fully enclosed containers) or partial shading (e.g. roll on roll off containers) from direct sunlight. The lids of covered containers will be kept closed other than when site operatives are loading materials inside. Wastes are stored in dedicated containers, according to the waste type they contain. Oil, lead acid batteries, alkaline batteries, paint tins, fluorescent tubes, hazardous WEEE etc are stored in separate dedicated containers, which are clearly labelled to ensure that materials are not accidentally mixed together. Wastes types, including hazardous and non-hazardous materials, are kept separate, which reduces any potential for incompatible reactions. Waste storage areas are subject to daily visual inspection, with a more detailed weekly check undertaken. CCTV cameras cover all waste storage areas at the Site, as well as the entrance to the facility and the boundary fencing. A Fire Prevention Plan has been prepared for the Site, for the approval of the Environment Agency as part of the permit variation application.		
	Potential for fire if the temperature exceeds the heat rating of components in electrical equipment or components are subjected to intense and direct sunlight.	2	4	8	All site plant and equipment will be subject to regular inspection and a detailed maintenance programme, as specified by the supplier. Electrical equipment will be subject to inspection and maintenance by suitably qualified electricians.	1	4

Potential changing climate variable	A Impact	B Likelihood	C Severity	D Risk (B x C)	E Mitigation (what will you do to mitigate this risk)	F Likelihood (after mitigation)	G Severity (after mitigation)
	Potential increase in high temperature expansion and stress of plant, pipework and fittings.	2	3	6	All site plant and equipment will be subject to regular inspection and a detailed maintenance programme, as specified by the supplier.	1	3
1. Summer daily maximum temperature may be around 7°C higher compared to average summer temperatures now, e.g. at least a 2°C global mean temperature rise by 2050 and a projected 4°C rise by 2100 (continued).	Potential increased dust emissions from processing areas and site surfaces.	2	3	6	The Operator will ensure efficient and regular housekeeping measures are used to maintain the Site in a tidy condition and to minimise any risks of dust. All wastes are stored in sealed containers, which are clearly labelled to show the contents. Wastes are not stored on the ground or in open stockpiles. Mixed construction and demolition wastes (bricks, tiles, concrete, rubble) and scrap metal are stored in dedicated roll-on roll-off containers, within a netted area circa 5m high. A water sprinkler system is installed to provide coverage of the roll-on roll-off containers for dust suppression. The netting also acts as a backup to prevent any inadvertent dust or litter emissions. Site cleaning procedures include sweeping areas used to store wastes, including the corners, to ensure all materials are removed and potentially dusty residues do not remain in-situ. The Site will be swept during the course of the working day to ensure the facility remains clean and tidy. A hose will be used to damp down the site surface, entrance and external yard during potentially dry or dusty conditions.	1	3
1. Summer daily maximum temperature may be around 7°C higher compared to average summer temperatures now, e.g. at least a 2°C global mean temperature rise by 2050 and a projected 4°C rise by 2100 (continued).	Long periods of hot and dry weather could lead to a drought and may have an impact on water supplies for: - emergency water usage - cooling systems - fire fighting	4	3	12	In the event of warmer, dryer summers or prolonged periods of dry weather due to climate change, the capacity of water availability on site could be increased, so that additional dust suppression, fire suppression etc can be applied. The Site has the potential to store mains water in IBCs for additional dust and fire suppression if required.	1	3

Potential changing climate variable	A Impact	B Likelihood	C Severity	D Risk (B x C)	E Mitigation (what will you do to mitigate this risk)	F Likelihood (after mitigation)	G Severity (after mitigation)
1. Summer daily maximum temperature may be around 7°C higher compared to average summer temperatures now, e.g. at least a 2°C global mean temperature rise by 2050 and a projected 4°C rise by 2100 (continued).	Potential increased risk of pests and scavengers from stockpiled waste.	2	3	6	Pest control measures include: - Refusing any waste loads where pre-acceptance documentation or visual inspection on arrival, shows them to be infested or likely infested with vermin, insects or other pests; - Immediate quarantining of any infected loads that are inadvertently received at the Site, by placing them in a sealed, enclosed and lidded skip or container and arranging for their emergency treatment by a pest control contractor and removal off-site to a suitably authorised facility; - Ensuring waste is processed on a first in first out basis; - Sweeping waste storage areas to ensure a high standard of cleanliness and prevent wastes accumulating over a significant period of time or becoming putrescible; - Ensuring that waste does not accumulate in inaccessible areas such as behind plant and equipment and containers; - Site staff undertake regular site inspections to highlight any sources of pest infestation. If any remedial action is required the site staff will initially inform the Site Logistics Co-ordinator, who then would contact internal SCH Better Places Pest Control Services Department; - The SCH Better Places Pest Control Services Department conduct monthly site inspection to highlight any sources of pest infestation and address any remedial action required.	1	3

Potential changing climate variable	A Impact	B Likelihood	C Severity	D Risk (B x C)	E Mitigation (what will you do to mitigate this risk)	F Likelihood (after mitigation)	G Severity (after mitigation)
1. Summer daily maximum temperature may be around 7°C higher compared to average summer temperatures now, e.g. at least a 2°C global mean temperature rise by 2050 and a projected 4°C rise by 2100 (continued).	Potential increased risk of wildfires impacting the site.	2	4	8	All the Site surface comprises engineered concrete pavement and there are no areas of vegetation within the boundary. Areas of vegetation are located to the immediate east and south of the Site. Should vegetation encroach onto the Site it will be cut back, cleared and removed. Daily observations will be made to ensure there is no fire off-site (such as a wildfire) that could encroach onto the premises. The Site is equipped with fire extinguishers and a water hose that could be used to douse any nearby vegetation to minimise any risk of it catching fire and presenting a risk to the Site. Site personnel will be made aware of any potential for wildfires during periods of prolonged dry and hot weather.	1	4
2. Winter daily maximum temperature could be 4°C more than the current average, with the potential for more extreme temperatures, both warmer and colder than present.	Slightly higher winter maximums could generate regular odour complaints and pest infestations	2	3	6	An Odour Management Plan has been prepared for the Site. This will be subject to a minimum of annual review and updated, as necessary, to incorporate any additional requirements as a result of climate change. Duration of waste storage times will be minimised and materials will be processed on a first in first out basis to ensure wastes are processed as quickly as possible. Wastes are stored in dedicated containers. Compactor containers are emptied at least twice weekly, meaning that any materials that have the potential to become odorous are quickly removed from the Site. Pest control measures are detailed above.	1	3

Potential changing climate variable	A Impact	B Likelihood	C Severity	D Risk (B x C)	E Mitigation (what will you do to mitigate this risk)	F Likelihood (after mitigation)	G Severity (after mitigation)
	Lower winter temperatures could result in an increased risk of pipes (or similar) freezing.	2	3	6	All site plant and equipment will be subject to daily inspections during periods of very cold weather (<4°C) and plant will not be operated in the event of frozen pipes etc. Detailed maintenance programmes, as specified by the suppliers, will be implemented.	1	3
3. The biggest rainfall events are up to 20% more intense than current extremes (peak rainfall intensity).	Potential for increased site surface water and flooding. There is potential for drainage systems to be overwhelmed.	3	3	9	The Site is located in a Flood Zone 1 and has a low probability of flooding. Land in a Flood Zone 1 has a less than 1 in 1,000 annual probability of river or sea flooding. Although the Site is located in close proximity to the Kingshurst Brook (circa 23m at the closet point), the Flood Map for Planning (https://flood-map-for-planning.service.gov.uk) shows that the facility is outside the area liable to flood, including when climate change predictions for the years 2,070 to 2,125 are taken into account. The drainage system is subject to weekly visual inspection and is suitably maintained, as required. The Environmental and Emergency Management System will be kept up to date with the latest data from the Environment Agency on flood risk in the local area.	1	3
4. Average winter rainfall may increase by 40% on today's averages.	Potential for increased site surface water and flooding. There is potential for drainage systems and interceptors to be overwhelmed.	3	3	9	Implement mitigation measures as identified above for largest rainfall events.	1	3

Potential changing climate variable	A Impact	B Likelihood	C Severity	D Risk (B x C)	E Mitigation (what will you do to mitigate this risk)	F Likelihood (after mitigation)	G Severity (after mitigation)
5. Sea level could be as much as 0.6m higher compared to today's level *.	If a site is located near the coast there is potential increased risk of flooding.	1	4	4	The Site is not located in a coastal area and local rivers and streams etc are not tidal.	1	4
6. Drier summers, potentially up to 40% less rain than now.	Potential increased use and reliance on mains water for dust suppression, cleaning and fire water.	3	3	9	There is the potential to store water in a storage tank or IBCs for use on site, e.g. for dust suppression. In addition, water could be sourced by drilling a groundwater abstraction borehole at the Site, subject to any abstraction licence and approval required from the Environment Agency.	1	3
7. At its peak, the flow in watercourses could be 50% more than now, and at its lowest it could be 80% less than now.	Increased impact from on-site drainage systems where they are connected to watercourses.	3	3	9	All site run-off is directed to an interceptor, which is subject to weekly visual inspection and regular emptying of accumulated silt etc by a road tanker for transfer to an authorised facility.	1	3
	Increased risk of water course flows being too high to allow discharge and drainage backs up on site.	3	3	9	As above.	1	3
8. 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	Potential for high winds to damage buildings and infrastructure and blow waste from the site	2	3	6	The Site comprises an external yard, with a series of waste storage containers. There are no high buildings associated with waste activities carried out under the permit.	1	3
	Potential for high winds to cause problems with stability of above ground storage tanks on jacks.	1	3	3	Other than a relatively low-level diesel tank, oil storage tank and waste storage containers, there are no other above ground storage tanks or high-rise structures on site. Potentially IBCs could be used to store water for dust suppression use, e.g. in the event of dry and dusty conditions, but these would be stored on the ground and would not exceed a height of just over 1m.	1	3

Potential changing climate variable	A Impact	B Likelihood	C Severity	D Risk (B x C)	E Mitigation (what will you do to mitigate this risk)	F Likelihood (after mitigation)	G Severity (after mitigation)
	Potential for lightning strikes to damage buildings and infrastructure	1	4	4	At this stage it is not considered necessary to install lightning conductors on the Site. However, this will be kept under review at least annually as a result of climate change.	1	4

5 CONTROL MEASURES

- 5.1.1 Control measures are detailed in Column E of the Climate Change Risk Assessment (see above).
- 5.1.2 In addition to this report, the Environmental and Emergency Management System, Environmental Risk Assessment, Dust Emissions Management Plan, Odour Management Plan and Fire Prevention Plan will be kept under review and updated as climate changes to ensure the control measures remain effective and based on the latest available information.

6 ADAPTATION PLAN

- 6.1.1 Solihull Community Housing recognises that climate change adaptation is becoming increasingly important as risks to disruption will increase significantly. The company therefore supports this Climate Change Risk Assessment as part of the Environmental Permit variation application and is committed to integrate the recommendations of climate change research into their business plans and operational procedures at the Site.
- 6.1.2 The company also recognises that the impact of climate change on waste management infrastructure is likely to become increasingly important and that measures must be put in place to ensure that resilience to such events is adequate.
- 6.1.3 The principle of tackling climate change and supporting the transition to net zero is supported by the company. In addition, the regulation of waste recovery activities as a means of promoting sustainable environmental practices and increasing carbon efficiency is supported throughout the organisation.

7 MONITOR, RECORD AND REVIEW ADAPTATION PLAN

- 7.1.1 Solihull Community Housing commits to monitor this Climate Change Risk Assessment, including adaptation plans to:
- Ensure objectives are met;
 - Risks from climate change are adequately managed;
 - Procedures to combat climate risks remain effective;
 - Improvement measures are identified and implemented when required.
- 7.1.2 The Operator commits to record:
- Severe weather events and any associated incidents or 'near misses' at the Site, including date, extent of incident, damage or effect to business or the local environment, immediate actions undertaken, proposed future prevention and mitigation measures;
 - Any impacts on emissions control and abatement measures at the Site;
 - Any downtime to site operations as a result of the weather event or near miss.
- 7.1.3 This Climate Change Risk Assessment and Adaptation Plan will be reviewed at least annually by senior site management. Review will be undertaken of complaints history, environmental performance, objective and targets and future planned improvements.

7.1.4 The purpose of the review will be to:

- Ensure the objectives of the Adaptation Plan were achieved;
- Identify if enhanced prevention or mitigation measures are required;
- Ensure the Adaptation Plan is continually improving;
- Minimise the risks of incidents or near misses and any associated pollution or detriment to amenity and the local environment as a result of climate change;
- The Climate Change Risk Assessment and Adaptation Plan meet the requirements of the latest regulatory guidance at the time;
- The Site remains compliant with the Environmental Permit.