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RGE Recycling Ltd Royal Eagle Close

Climate Change Adaptation Assessment

EnviroAwards

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Author	Kieran Ball
Checked	Stephen Griffiths

This document will be review and updated annually to ensure the strategies and actions remain relevant and effective in addressing the evolving challenges posed by climate change.

This document forms part of the Environmental Management System.

Version Control Log

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EnviroAwards Ltd
Office 62
Wilkinson Place
Witney
Oxfordshire
OX28 6JT

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1. Forecast: Site-based Impacts

The site is located at Royal Eagle Close, Rochester, ME2 4NF, the site is a hard surfaced yard 84m from Whitewell Creek (tidal Medway). The National Grid Reference is TQ 75341 69618

In accordance with climate data, the mean yearly temperature for Rochester is 10 degrees C. In line with the Environment Agency guidance there should be a predicted rise in temperature of 2 degrees Celsius by 2050 and 4 degrees C by 2100. This would bring a new predicted mean temperature for the area in 2050 to 12 degrees C and 14 degrees C in 2100.

From looking at the environment agencies flood risk maps the site fall predominately into a Flood Zone 3 category and therefor at risk of flooding via the River Medway. As for the risk of Surface Water flooding the risk is lower on site but has still been highlighted as displayed within Figure 2: Surface Water. It is to be noted that the industrial estate sits in an area benefiting from flood defences

UKCP18 indicates larger rises in the south-east at Sheerness (estuary reference near Medway), extreme sea-level projections underpinning planning show continuing rise under all scenarios.

Figure One: Present day flood risk zoning

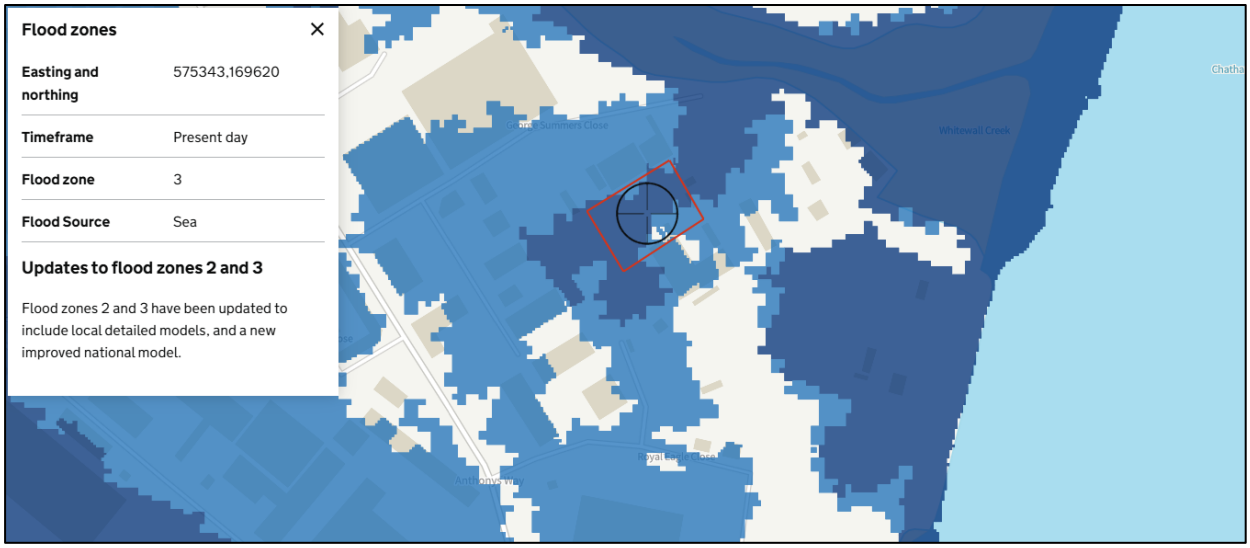
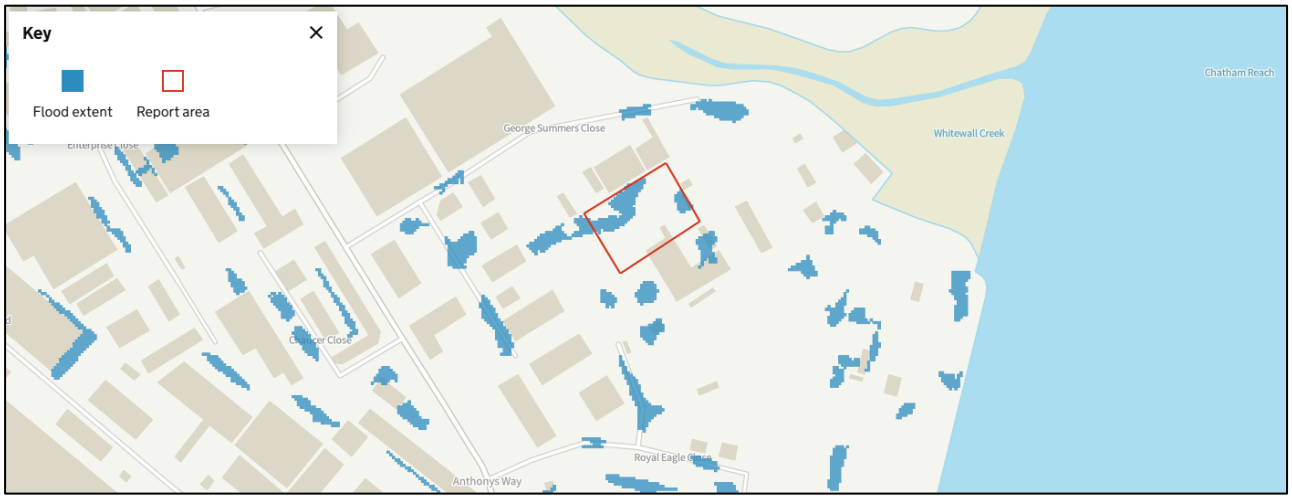
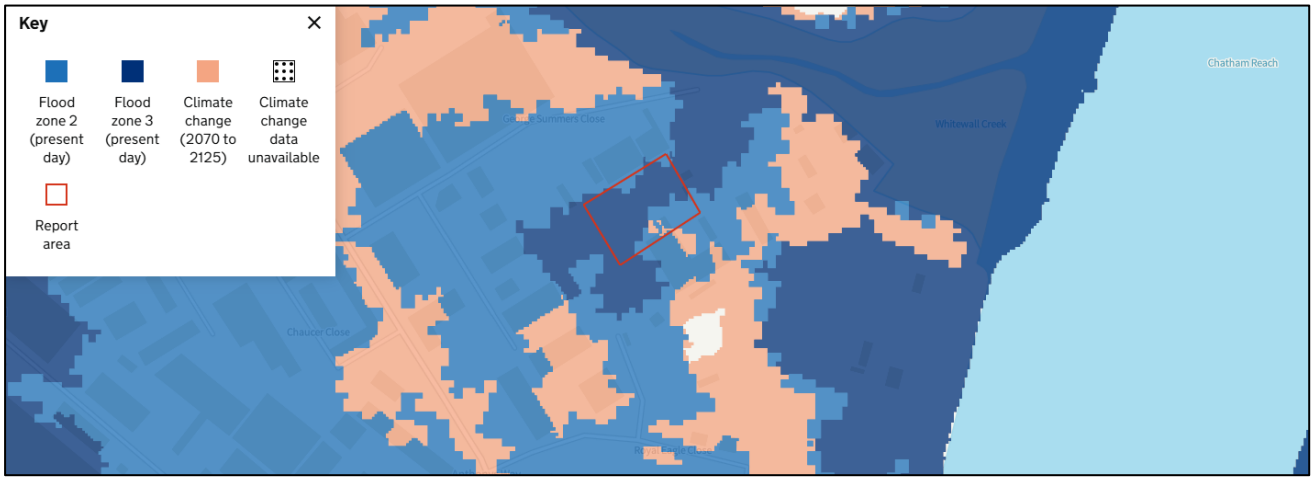


Figure Two: Surface Water



In accordance with the Environment Agency Flood Mapping for 2070-2125 the area higher been projected for a higher risk of than at present day as seen in Figure Three: 2070-2125 Flood Risk Projections.

Figure Three: 2070 – 2125 Flood Risk Projections



Regarding the threat of wildfires. The site is surrounded by predominately industrial land with no green spaces close to the site's boundary. Therefor the risk is negligible in the worst-case scenario the site will need to make sure to follow the FPP and that all FPP measures are up to date and reviewed.

The risk from a failure of essential services will remain low. The drainage system can handle an increase in ingress of rainwater, if there were to be a larger scale flood event waste would need to be diverted from site and if the event that electricity is needed and cannot be supplied by the provider, generators can be brought onto site.

Significant receptors:

- The nearest surface water body is Whitewall Creek/River Medway approximately 84m from site. Under the Water Framework Directive Medway has been described as transitional. Last reported overall moderate, with a chemical fail and the ecologically to be moderate.
- Migratory routes for Allis, Shad, European Eel, Lampreys and Smelt have been recorded within 500m of the site.

2. Forecast: Sector-based Impacts

It is difficult to predict how the changing climate will affect the operations of associated business and the potential supply chains linked with essential operations of the company. Moving forward it can be presumed that some facilities may be negatively affected and therefore the operator cannot solely depend on a singular provider for products and services. Moving forward the operator will be mindful and observant of the issues and make sure to have contingencies in place as generally this is good practice from an economic standpoint.

3. Identification of Environmental Risks

Substances stored on site:

- Diesel contained within a double bunded.
- Engine oil
- Screen Wash
- AdBlue
- Hydraulic oil
- Waste oils from maintenance

Storage Facilities:

- COSHH Cupboard
- Designated secure area for fuels and maintenance fluids.
- IBC's
- Intermediate storage within transfer equipment

4. Climate Change Adaptation Assessment

Summer Daily Maximum:

Impact	Risk	Mitigation
Potential for increased waste reactions or fires involving heat sensitive or combustible waste	Low	There is suitable segregation and separation of waste types.
Dry vegetation in and around the site presents an increased fire risk during extremely dry weather.	Low	No green spaces in the vicinity of site.
Potential increase in elevated temperature expansion and stress of plant, pipework, and fittings	Medium	All fixed and mobile plant is inspected daily and weekly before the start of every shift. This will mitigate the risk of elevated temperature stress to the machinery. All fixed and mobile plant is operated within a ventilated indoor setting, if operating outdoors during periods of extreme heat the plant will be brought inside at regular intervals and stored inside when not in use to lessen the risk of overheating and corrosion to pipework through UV degradation.
Potential increased dust emissions from processing areas and site roads.	Medium	The Emissions Management Plan will be followed and reviewed when deemed necessary.
Stockpile waste piles attracting increased number of pests, leading to an increased incidence of odour emissions.	Low	Due to the nature of the waste accepted the risk of this is minimal – no cans are accepted onto site. The waste acceptance procedure in place to prevent odorous or insect-infested loads being deposited at the site.

		Waste is deposited and turned around rapidly.

Winter Daily Maximum:

Impact	**Risk**	**Mitigation**
Slightly higher winter maximums could generate odour complaints and pest's infestations.	Low	There are series of pest traps within the site which will reduce the risk of pests. Due to the nature of the waste accepted the risk of this is minimal – no cans are accepted onto site. The waste acceptance procedure in place to prevent odorous or insect-infested loads being deposited at the site. Waste is deposited and turned around rapidly.
Lower winter temperatures could result in ana increased risk of pipes freezing.	Medium	Each piece of mobile plant is inspected on a daily and weekly basis to ensure that there are no ruptured pipes or leaking fluids (coolant or hydraulic). Each piece of machinery is also serviced at the recommended manufactures intervals.

Dailey Extreme Rainfall:

Impact	**Risk**	**Mitigation**
There is potential for drainage systems and interceptors to be overwhelmed.	Medium	Suitable measures are in place for the management of anticipated surface water and flood waters.

		Drainage systems are inspected and maintained regularly. In a flood event waste will be diverted from site and operations will cease until flood risks have minimised.
Higher levels of surface water ingress.	Medium	There will be regular inspections on the drainage systems checking it for damage, cracks, or blockages. Any maintenance or repairs needed to the drainage system will be done in a timely manner. There is suitable drainage systems on site capable on managing higher levels of rainfall.

Average Winter Rainfall:

Impact	**Risk**	**Mitigation**
There is potential for drainage systems and interceptors to be overwhelmed.	Medium	There are suitable measures in place for the management of anticipated surface water and flood waters. Drainage systems are inspected and maintained regularly. External areas where wastes are handled or stored are provided with contained drainage.

Sea Level Rise:

Impact	Risk	Mitigation
The site is not located near the coastline can the River Medway way be affected by rising sea levels,.	Medium	The industrial estate the site sits within benefits from flood defences.

Drier Summers:

Impact	Risk	Mitigation
Potential increased use and reliance on mains water for dust suppression, cleaning, and firewater.	Medium	The site is located within 100m's of a mains hydrant point that is serviced by the FRA. If needed a standpipe license may be acquired for the use of the hydrant for additional water supply.
The potential increase in dust emissions from the site.	Low	Due to the waste type accepted the risk of dust is lower.

River Flow:

Impact	Risk	Mitigation
The site does not discharge to the local watercourse.	Nil	Nil
The site does not abstract from the local watercourse.	Nil	Nil

Storms:

Impact	Risk	Mitigation
Storms and high winds could damage buildings, site fencing and other structures with the potential to increase fugitive dust emission through the loss of containment and control systems.	Medium	Site infrastructure will be inspected daily as part of the walk around checks. After a storm event site will be checked for damages and any damages be required as soon as possible.

		In the event of an impending storm with the ability to cause damage the building will be secured against driving winds. The site is surrounded by bunds which will act as a wind break to lower the risk of damage received to the site via driving winds.
Higher levels of surface water ingress.	Low	There will be regular inspections on the drainage systems checking it for damage, cracks, or blockages. Any maintenance or repairs needed to the drainage system will be done in a timely manner. There is suitable drainage systems on site capable on managing higher levels of rainfall.

5. Training

This Climate Change Adaption Plan will form a part of the EMS and therefor will need to be made accessible to the site operatives. Training will be delivered to all site operatives on the mitigation plans as part of the EMS training and refresher training.

6. Monitor, Record and Review

Severe weather events and near misses will need to be recorded in the digital site diary which is used to record all daily activities, if at any time, a breach or accident has occurred this information is logged within the digital system and can be accessed at any time retrospectively in the future.

The following points are to be recorded:

- Date
- Weather event
- Extent of incident
- Damage or effect to the business or environment
- Immediate action taken.
- Proposed prevention or mitigation measures

This Climate Change Adaptation Plan will be periodically reviewed and will link into the total EMS reviewal process. The plan may be reviewed sooner if the business has been affected by an extreme weather event or near miss, or if important new climate change information becomes available.

During the review the following will be considered:

- The objectives of the adaption intervention and if these were achieved.
- If more, less or a different intervention is needed.
- If the forecasting for the site plan is still relevant and appropriate
- If there is anything that can be learned from neighbouring business in the industry, information released from industry associations such as CIWM, IEMA and updates to government resource/guidance documents.

End of Document