

Wastege Waste Management Limited

Climate Change Risk Assessment

Application for a Bespoke Environmental Permit for a Waste
Transfer Station

Gibson Lane South, Melton, Hull, East Riding of
Yorkshire, HU14 3HN

Report Ref: CE-GL-1817-RP05-CC-Final v1



CRESTWOOD ENVIRONMENTAL LTD

ENVIRONMENT	LANDSCAPE	NOISE	LIGHTING
ECOLOGY	HERITAGE	WATER	TREES
MINERALS / WASTE	AIR QUALITY	LAND QUALITY	VISUALISATION

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1 INTRODUCTION

1.1 BACKGROUND

1.1.1 Crestwood Environmental Ltd ('Crestwood'), has been commissioned by Wastege Waste Management Ltd. to carry out a bespoke Environmental Permit application for a waste transfer station at Gibson Road South, Melton, Hull, HU14 3HN (*the Site*).

1.1.1 This Climate Change Risk Assessment (CCRA) has been produced on behalf of Wastege Waste Management Ltd. in line with Environment Agency guidance on 'Adapting to climate change: risk assessment for your environmental permit'¹ to support an application for a new bespoke Environmental Permit for a waste operation under the Environmental Permitting (England and Wales) Regulations 2016 (as amended).

1.2 ACTIVITY

1.2.1 The Site will accept both hazardous and non-hazardous waste streams. Given that no more than 10 tonnes of hazardous wastes will be received per day with no more than 50 tonnes stored on-Site at any one time, the Site is classified as a Schedule 9 'Waste Operation' under the Environmental Permitting (England and Wales) Regulations 2016 and not under Schedule 1 of the Regulations as it is not an Installation.

1.2.2 There is a dedicated building on-Site with four bays constructed from fireproof concrete for the storage of wastes. Hazardous flammable and non-flammable streams will be strictly segregated from one another within dedicated bays within the building. Ventilation is fitted in accordance with The Health and Safety Executive (HSE) HSG71 Chemical Warehousing: The storage of packaged dangerous substances (Fourth Edition, 2009) and Storage of flammable liquids in containers (Third Edition, 2015).

1.2.3 No treatment of wastes will take place at the facility other than the separation, storage and transfer of waste for recovery or disposal. Additionally, under the confines of the canopy which will extend across the entire external yard, there will be a shredder for aerosols which will have the capacity to shred no more than ten IBC's per week.

1.3 LOCATION

1.3.1 The Site, centred on National Grid Reference: SE 96885 25640 is located in the village of Melton, East Riding of Yorkshire approximately 13km west of the city centre of Hull. Access to the Site is gained via Gibson Lane on the eastern edge of the Site which in turn is accessed from the A63 to the north. Bayram Timber is the closest business unit located directly west of the Site's permit boundary and extending to the south.

1.4 AIMS

1.4.1 This assessment aims to consider the potential climate change hazards associated with the activity, to identify impacts and to determine the influence which management practices have on reducing risks.

¹ Available online at <https://www.gov.uk/guidance/adapting-to-climate-change-risk-assessment-for-your-environmental-permit> (last accessed 17.08.2021)

1.5 SCORING MATRIX

1.5.1 The risk assessment in **Error! Reference source not found.** is based upon the severity and likelihood scoring in the guidance on ‘Adapting to climate change: risk assessment for your environmental permit’.

Severity of impact:

- severe impact (4): short-term, acute impact to operations resulting in permanent compliance breaches.
- medium impact (3): short-term, acute impact to operations resulting in multiple temporary compliance breaches.
- mild impact (2): short-term, acute impact to operations resulting in single temporary compliance breach.
- minor impact (1): short or long-term impact to operations resulting in additional measures for compliance.

Likelihood:

- highly likely (4): event appears very likely in the short term and almost inevitable over the long term, or there is evidence of the event already happening.
- likely (3): it is probable that an event will occur, or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term.
- low likelihood (2): circumstances are such that an event could occur, but it is not certain even in the long term that an event would occur and it is less likely in the short term.
- unlikely (1): circumstances are such that it is improbable the event would occur even in the long term.

2 METHODOLOGY

2.1.1 This Climate Change Risk Assessment has been produced in accordance with Environment Agency guidance on ‘Adapting to climate change: risk assessment for your environmental permit’.

2.1.2 The CCRA applies to bespoke waste and installation permits which are expected to operate for more than five years, even if the operations are expected to cease prior to 2050. This includes the commissioning and aftercare phases, as predicted changes may come into effect prior to this.

2.1.3 The risk assessment enables the qualitative assessment of how the Site and processes are likely to be affected by climate change.

2.2 RISK SCREENING

2.2.1 The results of the screening tool are reproduced in **Table 1** below.

Table 1 Climate Change Risk Screening

Category	Screening Questions	Score	Your Score
1) TIMESCALES	How long will a permit be required for this site/activity?		3 – Unknown length of operations. Score

	<p>5 years or less of operation. No need to fill in the rest of the screening. You do not need to fill in a risk assessment. Please go straight to question 7.</p> <p>Less than 20 years of operation</p> <p>Until between 2040 and 2060 (between 20 and 40 years from now)</p> <p>Until 2060 or beyond (more than 40 years from now)</p>	<p>0</p> <p>1</p> <p>3</p> <p>5</p>	<p>selected to provide a conservative estimate.</p>
2) FLOODING	<p>What is your site's risk of flooding from rivers or the sea?</p> <p>Not in a flood risk zone</p> <p>Very low or low</p> <p>Medium</p> <p>High</p>	<p>0</p> <p>1</p> <p>2</p> <p>5</p>	<p>5 – Parts of the Site are located within a Flood Zone 3.</p>
3) WATER USE	<p>If you use water for your site operations or fire prevention, what is the source of your water?</p> <p>Water not required</p> <p>Mains water</p> <p>Surface water or groundwater abstraction</p>	<p>0</p> <p>1</p> <p>5</p>	<p>1 – No surface or water abstractions will be required</p>
TOTAL SCORE	<p>9 – CCRA required.</p>		

1.1.2 The CCRA has been reproduced in Table 2 below 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)	H Residual risk (F x G)
1. Summer daily maximum temperature may be around 7°C higher compared to average summer temperatures now.	Ventilation in building unable to regulate the temperature	2	3	6	Install an extra cooling system such as air conditioning if hot days persist. Maintain a log with the amount of hot days per annum	2	1	3
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.	Negligible impact	1	1	2	No mitigation required as the score is under 5	1	1	1
3. The biggest rainfall events are up to 20% more intense than current extremes (peak rainfall intensity)*.	Overtopping bunds around the perimeter	3	3	9	Increase the height of the bunds and prepare a flood plan in line with the guidance “Preparing for flooding. A guide for sites regulated under EPR and COMAH (June 2015)”	2	2	4
4. Average winter rainfall may increase by 41% on today’s averages.	Overtopping bunds around the perimeter	3	3	9	Increase the height of the bunds around the perimeter of the facility and prepare a flood plan with reference to “Preparing for flooding. A guide for sites regulated under EPR and COMAH (June 2015)”	2	2	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)	H Residual risk (F x G)
5. Sea level could be as much as 0.6m higher compared to today's level *.	The site is moderately remote from the sea which is approximately 35 km to the east but the site is located some 220m north of the humber estuary and river. Potential for the sump to be overloaded	3	3	9	If there are permanent changes to the level of the Humber River, flood defences will be planned for	2	1	2
6. Drier summers, potentially up to 45% less rain than now.	Less water for dust suppression	3	2	6	Increase surface water storage	3	1	3
7. At its peak, the flow in watercourses could be 40% more than now, and at its lowest it could be 80% less than now.	There are no discharges from the site to the river	3	3	9	On-Site drainage scheme with SuDS holding tank and bunding surrounding the boundary will serve to protect and mitigate against flooding of the Site	1	1	1

3 CONCLUSION

- 3.1.1 Further to the results of the climate change risk assessment screening tool (refer to Table 1) which gave a score of more than 5, a climate change risk assessment has been carried out in accordance with Environment Agency guidance on 'Adapting to climate change: risk assessment for your environmental permit'.
- 3.1.2 The risk assessment considered the likelihood and severity of potential impacts, with and without mitigation in place, that the Site could pose to the quality of air, water and land in the event of seven changing climate variables.
- 3.1.3 Variables considered include extreme rainfall events, rises in sea levels, an increase and decrease in the peak flow of watercourses, an increase in summer daily average temperatures and potentially warmer and colder average winter temperatures when compared with the present.



- 3.1.4 Results indicate that with measures implemented to mitigate the risk, the likelihood of operations impacting climate change have a maximum score of 3 (defined as 'likely: it is probable that an event will occur, or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term.') and a minimum score of 1 (defined as 'unlikely: circumstances are such that it is improbable the event would occur even in the long term').
- 3.1.5 In terms of severity, results show that after mitigation, of the seven potential climate change variables, two give results of 2 (defined as 'mild impact: short-term, acute impact to operations resulting in single temporary compliance breach') and five resulted in a score of 1 (defined as 'minor impact: short or long-term impact to operations resulting in additional measures for compliance').

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