Humber river basin district: climate change risk assessment worksheet

Name (as on your part A application form): Holmfirth Dyers Ltd

Our permit reference number (if you have one): No Reference

Your document reference number: HFD Climate Change Adaption Plan

Risk assessment worksheet for the 2050s

Humber river basin district

You must carry out a climate change risk assessment for any new bespoke waste and installations permit applications if you expect to operate for more than 5 years. Use the user guide to complete the table. You can add in extra pages if necessary.

Consider how your operations will be affected by the changes in weather and climate described in the table. Consider any changes to average climate conditions that may impact on your operations, for example extreme rainfall.

Also consider:

- critical thresholds - where a 'tipping point' is reached, for example a specific temperature where site processes cannot operate safely
- changes to averages - for example an entire summer of higher than expected rainfall causing waterlogging
- where hazards may combine to cause more impacts

You can add in other climate variables if you wish.

If you have stated on your application form that you do not expect to be operational in 2050, you must still consider climate change risks for the time you do intend to operate. Whilst the variables are for the 2050s, this is an estimated date and you may experience these conditions before then.

This worksheet will sit in your management system. It must appear on the management system summary you submit with your application, even if you do not need to submit the whole risk assessment with your application.

If your pre-mitigation risk score (column D) is 5 or higher, you must complete columns E to H.

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 6°C higher compared to average summer temperatures now.	Water supply restrictions due to drought (from River Ribble)	3	4	12	Decrease flow rate of river abstraction. Increase demand on borehole abstraction. Optimise process methods to reduce overall demand for water.	3	2	6
	Ventilation system unable to maintain optimum temperatures within operational environments	3	3	9	Monitor increasing temperatures and implement additional cooling strategies, such as the installation of ground source heat pumps, when required.	1	3	3
	Air conditioning systems unable to maintain optimum temperatures with operational and office areas	2	3	6	Monitor increasing temperatures and implement additional cooling strategies, such as the installation of ground source heat pumps, when required.	1	3	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.	No anticipated impact – activities expected to remain within normal operating parameters	1	1	1	No mitigation required as very low risk. Score is under 5	1	1	1
3. The biggest rainfall events are up to 20% more intense than current extremes (peak rainfall intensity) *.	Damage to plant/machinery	3	4	12	Maintain access to flood warnings. Prepare flood defence plan. Install flood defence barriers.	2	3	6
	Overtopping of bunds or effluent treatment facility leading to chemical contamination of surface water	3	4	12	Maintain access to flood warnings. Prepare flood defence plan. Consider surface falls when designing storage locations. Install flood defence barriers.	2	3	6
	Overload of local drainage systems	3	2	6	Maintain access to flood warnings. Prepare flood defence plan. Maintain and monitor discharge consent conditions.	2	2	4
	Flooding of abstraction ponds	2	3	6	Monitor rainfall predictions. Temporarily cease abstraction from river and borehole.	1	2	2
4. Average winter rainfall may increase by 29% on today's averages.	Flooding of abstraction ponds	1	3	3	No mitigation required as low risk. Score is under 5	1	3	3
	Potential overload of local drainage systems	3	2	6	Maintain access to flood warnings. Prepare flood defence plan. Maintain and monitor discharge consent conditions.	2	2	4

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5. Sea level could be as much as 0.6m higher compared to today's level *.	No anticipated impact on day-to-day operations due to height of region above sea-level (169m)	1	1	1	No mitigation required as very low risk. Score is under 5	1	1	1
6. Drier summers, potentially up to 34% less rain than now.	Water supply restrictions due to drought	3	4	12	Decrease flow rate of river abstraction. Increase demand on borehole abstraction. Optimise process methods to reduce overall demand for water.	3	2	6
7. At its peak, the flow in watercourses could be 30% more than now, and at its lowest it could be 65% less than now.	Water supply restrictions due to low flow in local watercourse would result in issues with production	3	4	12	Decrease flow rate of river abstraction. Increase demand on borehole abstraction. Optimise process methods to reduce overall demand for water.	3	2	6

*Indicates data has come from climate change allowances as part of the spatial planning process. Evidence from your planning submission is acceptable evidence for this worksheet.