Thames river basin district: climate change risk assessment worksheet

Name (as on your part A application form):: Molecular Products Ltd

Our permit reference number (if you have one): To be allocated

Your document reference number: **EP010**

Risk assessment worksheet for the 2050s

Thames 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 7°C higher compared to average summer temperatures now.	1. Increased Ambient temperature may make safe working for operators difficult	3	3	9	New installation has been equipped with air conditioning. Provide frequent breaks for operators to rest and hydrate and refuge area	3	1	3
2. Winter daily maximum temperature could be 4°C more than the current average.	Negative impact not expected	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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3. The biggest rainfall events are up to 20% more intense than current extremes (peak rainfall intensity)*.	(a) Bunds may be filled more quickly and overfilled with rainwater (b)Surface water drainage system overloaded.	3 3	1 2	3 6	(a) Surface water management plan must take increases into consideration (b) Increase surface water drainage capacity	3 3	1 1	3 3
4. Average winter rainfall may increase by 36% on today's averages.	(a) Bunds may be filled more quickly and overfilled with rainwater (b)Surface water drainage system overloaded.	3 3	2 3	6 9	(a) Surface water management plan must take increases into consideration (b)I ncrease surface water drainage capacity if necessary	3 3	1 1	3 3
5. Sea level could be as much as 0.6m higher compared to today's level *.	/site inland. Low impact expected	2	2	4	Monitor permanent change to local river levels and plan for flood defences if appropriate.	2	2	4
6. Drier summers, potentially up to 42% less rain than now.	(a) Water required for normal processing may be restricted (b) Water required for emergency situations may be restricted.	3 3	1 2	3 6	(a) Amounts of water required for permitted process is tiny (b) Review water usage across site in order to reduce usage on a periodic basis to identify opportunities to reduce consumption.	3 3	1 1	3 3
7. At its peak, the flow in watercourses could be 35% more than now, and at its lowest it could be 75% less than now.	(a) Increased peak flow could result in surface water drainage system being overloaded. (b) Reduced flow could result in restrictions to water supply	3 3	2 2	6 6	(a) Increase surface water drainage capacity if necessary (b) Review water usage across site in order to reduce usage on a periodic basis to identify opportunities to reduce consumption.	3 3	1 1	3 3

*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.