

**6b Climate change risk screening**

Category	Screening Question	Score
Timescales	How long will a permit be required for this site/activity? <i>Until 2060 or beyond (more than 40 years from now)</i>	5
Flooding	What is your site's risk of flooding from rivers or the sea? <i>Very low or low risk</i>	1
Water Use	If you use water for your site operations or fire prevention, what is the source of your water? <i>Water not required</i>	0

## Climate Change Risk Assessment

### Severn river basin district: climate change risk assessment worksheet

Name (as on your part A application form): Severn Trent Water, Kidderminster Sewage Treatment Works

Our permit reference number (if you have one): EPR/AP3437QJ/V002

Your document reference number: Application supporting document

### Risk assessment worksheet for the 2050s

Severn 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.	6	4	6	24	Risk of digesters heating beyond optimal operating temperature. Digesters are insulated against worse impacts.  Risk of increased odour from sewage processes. Tanks are covered and OCU's utilised as appropriate.	2	2	4

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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.	2	2	4	8	Digesters are insulated and equipped with heating coils. Therefore, may not need boilers or heat from CHP. May require new gas engine to utilise biogas, however, the current engine will need to be replaced prior to this, so an assessment of engine size can be undertaken then.	2	2	4
3. The biggest rainfall events are up to 20% more intense than current extremes (peak rainfall intensity)*.	2	2	2	4	Works design basis may be exceeded. However, this would apply to UWWTD operations at the site rather than permitted activities.			

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4. Average winter rainfall may increase by 29% on today's averages.	2	4	4	16	<p>Rainfall would increase strain on site drainage, however volume could be handled by the associated UWWTD works so no impact. May need to increase bund or containment volume.</p> <p>Potential for impact on land spreading activities, during winter months. Site has cake pad at present, which may need to be extended to take this into account.</p>	2	4	8
5. Sea level could be as much as 0.6m higher compared to today's level *.	1	1	1	1	<p>Although close to the river, the site sits away from the main channel and is outside the flood zone, so sea level rises being mirrored by the river should not impact on the permitted activity.</p>	1	1	1

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6. Drier summers, potentially up to 41% less rain than now.	1	1	1	1	May reduce total flow through the UWWTD, but should not impact on permitted activities.	1	1	1
7. At its peak, the flow in watercourses could be 40% more than now, and at its lowest it could be 65% less than now.	1	1	1	1	No impact on permitted activities.	1	1	1

\*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.