**Introduction**

* All permitted pig and poultry farms are required to have a Climate Change Adaptation Risk Assessment as part of their management system. This should detail both the risks and outline potential mitigations.
* This model template provides an example of a completed risk assessment for a pig farm. There is a separate example for a poultry farm. It includes risk scoring for before and after mitigation, but this is optional. If you choose to include risk scoring this will help to prioritise what mitigation actions need to be considered first.
* Guidance on how to produce this risk assessment is available at [Climate change: risk assessment and adaptation planning in your management system - GOV.UK (www.gov.uk)](https://www.gov.uk/guidance/climate-change-risk-assessment-and-adaptation-planning-in-your-management-system)
* Intensive farming specific examples of climate related risks and possible mitigations are available at [Intensive farming: examples for your adapting to climate change risk assessment - GOV.UK (www.gov.uk)](https://www.gov.uk/government/publications/adapting-to-climate-change-industry-sector-examples-for-your-risk-assessment/intensive-farming-examples-for-your-adapting-to-climate-change-risk-assessment)
* Keep your completed risk assessment with your management system records on farm and this will be checked as part of an Environment Agency compliance inspection.
* By 31 October 2026 all permitted farms should have appropriate climate change adaptation planning embedded into their management system. As part of this process, you’ll need to look at the mitigation options you’ve identified in this risk assessment and plan for how you are going to implement them. It will be site specific depending on the risks e.g. of flooding. Further guidance on this will be available soon.
* Note that the examples below are not exhaustive, there may be additional risks and mitigation options relevant for your farm.

**Risk scoring**

* You can score the likelihood and impact for each climate change scenario - multiply the likelihood by the impact, both before mitigation and then after mitigation, to give a risk score. The higher the score, the higher the risk.
* Use the following suggested risk scoring:
	+ Likelihood score – rare = 1, unlikely = 2, moderate = 3, likely = 4, almost certain = 5
	+ Impact score – insignificant = 1, minor = 2, moderate = 3, major = 4, severe = 5
* When you consider how and when to implement mitigation measures, focus initially on the scenarios with the highest risk scores.
* The risk scores in the examples below are for illustrative purposes – change the scoring for your farm depending on the local environment and site specific features.

**Pig farm example**

| **Potential changing climate variable**  | **AImpact** | **BLikelihood** | **CImpact** | **DRisk**(B x C) | **EMitigation**(what you'll do to mitigate this risk) | **FLikelihood**(after mitigation) | **GImpact**(after mitigation) | **H****Residual risk**(F x G) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1. Summer daily maximum temperature** This may be around 7°C higher compared to average summer temperatures now, with the potential to reach extreme temperatures as high as over 40°C with increasing frequency based on today’s values. | Sheds are naturally ventilated. Pigs may experience heat stress. RSPCA Assured recommends temperature is kept between15°C and 18°C. |  e.g. 3 |  e.g. 3 |  e.g. 9 | Keep a log of any hot days that occur each yearKeep a log of temperature in pig shedsEnsure extra space is provided per pig, to allow pigs to lie away from each otherEnsure all vents/windows are open to allow airflowEnsure drinking systems are maintainedConsult with veterinarian on management strategies to prevent heat stress |  e.g. 3 |  e.g. 2 |  e.g. 6 |
| Sheds are fully controlled ventilation. Ventilation system not being able to maintain optimum temperatures. Pigs may experience heat stress/ increased risk of animal mortality. | e.g. 3 | e.g. 3 |  e.g. 9 | Keep a log of any hot days that occur each yearKeep a log of temperature in pig shedsEnsure ventilation is optimally maintained and fans are in working orderEnsure extra space is provided per pig, to allow pigs to lie away from each other. Reduce stocking denisty during these months if nessesaryInstall additional cooling such as misting systemsEnsure drinking systems are maintainedAdjust the lighting to encourage animals to rest during peak hoursConsult with veterinarian on management strategies to prevent heat stress | e.g. 3 | e.g. 2 |  e.g. 6 |
| There could be an increased risk of fire in biomass feedstock store, straw store and agrochemicals store.  | e.g. 2 | e.g. 3 | e.g. 5 | Store less material on the farm where possible Regularly check stores | e.g. 2 | e.g. 1 | e.g. 2 |
| There could there be an increased risk of flies and odour. | e.g. 4 | e.g. 2 | e.g. 8 | Ensure ventilation is optimally maintained and fans are in working orderApply chemical deterents where neededUtilise slurry management systems such as cooling, acidiforcation or slurry separation | e.g. 3 | e.g. 2 | e.g. 5 |
| There is a risk of feed ingredients heating and spoiling. | e.g. 2 | e.g. 2 | e.g. 4 | Upgrade to more suitable feed silos such as galvanised steel  | e.g. 1 | e.g. 2 | e.g. 2 |
| **2. Winter daily temperatures**This could be 4°C more than the current average with the potential for more extreme temperatures, both warmer and colder than present. | Increased ventilation requirement.There could there be potential benefits such as: \* less energy used to heat animal housing\* less risk of water freezing and damaging pipes  | e.g. 2 | e.g. 1 | e.g. 2 | Conduct a review of ventilation and energy requirements | e.g. 2 | e.g. 1 | e.g. 2 |
| Risk of pipework freezing | e.g. 2 | e.g. 3 | e.g. 5 | Insulate pipeworkProvide a contingency water supply | e.g. 2 | e.g. 2 | e.g. 4 |
| **3. Daily extreme rainfall**Daily rainfall intensity could increase by up to 20% on today’s values. | Surface water drainage system overloadedSlurry lagoon overloadedPotential for increased site surface water and flooding leading to:\* power failure\* animal welfare issues\* infrastructure damage \* restrictions on site access for staff and emergency services | e.g. 2 | e.g. 3 | e.g. 6 | Drains and lagoon managed thoughout year Install additional surface water drains | e.g. 2 | e.g. 2 | e.g. 4 |
| Gutters may not be able to cope or could overflow | e.g. 2 | e.g. 2 | e.g. 4 | Clear gutters of debris Upgrade gutters for a larger capacity | e.g. 2 | e.g. 1 | e.g. 2 |
| Soakaways and swales could be overwhelmed | e.g. 2 | e.g. 2 | e.g. 4 | Install diverter valves to alternative areas | e.g. 1 | e.g. 2 | e.g. 2 |
| Weather conditions not allowing spreading | e.g. 3 | e.g. 4 | e.g. 12 | Calculate the need for and install additional slurry storage | e.g. 2 | e.g. 3 | e.g. 5 |
| Potential for contaminated floodwater and surface water run-off from the site to cause pollution | e.g. 3 | e.g. 4 | e.g. 12 | Store all chemicals securelyManage drainage systems, including any interceptors, to avoid uncontrolled release of pollutants | e.g. 2 | e.g. 3 | e.g. 6 |
| Foot dips could be become diluted by additional rainwater and risk overflowing, becoming ineffective in the process | e.g. 4 | e.g. 4 | e.g. 16 | Change foot dips for dips with a cover to keep out rainwater | e.g. 2 | e.g. 2 | e.g. 4 |
| **4. Average winter rainfall**Average winter rainfall may increase by over 40% on today’s averages. | Surface water drainage system overloaded with liklihood of flooding | e.g. 3 | e.g. 2 | e.g. 6 | Increase surface water storage capacityInstal additional surface water drains | e.g. 2 | e.g. 2 | e.g. 4 |
| **5. Sea level rise**Sea level rise which could be as much as 0.6m higher compared to today’s level. | Inland site. Low impact expected. | e.g. 1 | e.g. 1 | e.g. 1 | Follow guidance from a more at risk site if action is required |  |  |  |
| Site located near the coast or an estuary. Potential increased risk of flooding with inaccessible fields, or above field capacity, leading to reduced land availability for spreading manure or slurry. | e.g. 3 | e.g. 4 | e.g. 16 | Additional landbank for spreading Alternative or additional storage and disposal routesAlternative outlets such as anaerobic digestion | e.g. 3 | e.g. 3 | e.g. 9 |
| **6. Drier summers**Summers could see potentially up to 40% less rain than now. | Increased dust – less water to suppress | e.g. 4 | e.g. 1 | e.g. 4 | Ensure a mains water supply is available as back-upReduce high volume traffic | e.g. 2 | e.g. 1 | e.g. 2 |
| Stress on groundwater supply, which may become unavailable for use on-farm for drinking water | e.g. 4 | e.g. 5 | e.g. 20 | Calculate the need for and install additional supply | e.g. 4 | e.g. 3 | e.g. 12 |
| Risk of disruption to the mains water supply for use on-farm for drinking water and cleaning out | e.g. 3 | e.g. 5 | e.g. 15 | Investige the feasibility of a borehole for groundwater abstractionInstall winter storage reservoir and treatment system so water can be used on-farm | e.g. 3 | e.g. 2 | e.g. 4 |
| **7. River flow**The flow in the watercourses could be 50% more than now at its peak, and 80% less than now at its lowest. | Risk of on-farm flooding if the water level in the adjacent ditch rises above the discharge pipe, resulting in backflow to the farm | e.g. 3 | e.g. 3 | e.g. 9 | Raise the level of the discharge pipe to the ditchInstall a non-return valve in the discharge pipeContinue drainage ditch maintenance | e.g. 2 | e.g. 2 | e.g. 4 |
| **8. Storms**Storms could see a change in frequency and intensity. The unique combination of increased wind speeds, increased rainfall, and lightning during these events provides the potential for more extreme storm impacts. | Storms and high winds could damage building structures with increased potential for odour and dust emissions and loss of power | e.g. 2 | e.g. 3 | e.g. 6 | Review the design of vulnerable structures and buildings, reviewing wind loading calculationsProvide reinforcement if necessary to maintain building integrityEnsure well maintained emergency backup powerKeep the site tidy and secure any equipment or objects that could blow around | e.g. 2 | e.g. 2 | e.g. 4 |
| Power cuts caused by extreme weather could affect ventiliation systems and on farm real time monitoring | e.g. 3 | e.g. 4 | e.g. 12 | Ensure well maintained emergency backup power | e.g. 2 | e.g. 3 | e.g. 6 |

