



Climate Change Adaptation Risk Assessement

				5 Probable 4 Likely 3 Possible 2 Unlikely 1 Improbable	5 Catastrophic 4 Major 3 Serious 2 Minor 1 Minimal	Low Risk 1-5 Medium Risk 6-15 High Risk >16	No additional controls required Consider using additional control measures to reduce risk Reduce risk to acceptable level by additional control measures	
Risk	Details	Business Area	Potential Impacts	Likelihood (A)	Severity (B)	Risk Level (AxB)	Existing control measures	Additional control measures required
Summer daily maximum temperatures	~7°C higher compared to average summer temperatures now	Processing	Increased odour from processing activities	N/A	N/A	N/A	Robust Odour Management Plans covering processing activities and the storage, treatment and disposal of ABPs and other potentially odours waste All key activities take place inside buildings (odour containment) All potentially odorous exhausts/stacks have odour abatement	
			An increase in the potential for odour generation from effluent treatment systems, including storage tanks and lagoons	N/A	N/A	N/A	Monitor and maintain effluent plant performance to include maintaining oxygen levels as required Review plant design to minimise the potential for fugitive emissions	
			Increased risk of amenity issues (fly infestations, etc)	N/A	N/A	N/A	Pest Management Plan in place (as required)	
			Increased energy and water consumption due to added load on refrigeration and cooling systems and the amount of food waste generaed due to refrigeration system failures	N/A	N/A	N/A	Optimise system efficiency and review required capacity All energy and water consumption is monitored and any peaks/dips in usage trigger an alert so that the cause can be investigated Where unavoidable, ensure that the food waste hierarchy is applied for recovery and disposal options	
			Increased consumer demand for some food and drink products affecting raw material consumption and increased emissions from process	N/A	N/A	N/A	Consumer demand is unlikely to fluctuate considerably for our products	

Risk	Details	Business Area	Potential Impacts	Likelihood (A)	Severity (B)	Risk Level (AxB)	Existing control measures	Additional control measures required
Summer daily maximum temperatures	~7°C higher compared to average summer temperatures now	Farms	Ventilation systems and infrastructure unable to maintain optimum temperatures within livestock housing and poultry may experience heat stress.	2	4	8	Gable end fans installed. Misting systems installed in broiler farms which are more susceptible to heat stress. Farms 'MOT' checks carried out to ensure that farms are maintained to the highest standard, that all equipment is kept in good working order and that infrastructure, such as insulation, is at the levels required to ensure bird health and wellbeing. Vets carry out regular visits to farms to address any potential bird welfare issues.	Risk assessment carried out daily during periods of extreme heat, looking at age of birds, location of farms and any planned activities. Changes to be made to plans as required (eg. catching at night to avoid stress on birds during excessive heat during the day). Reduced stocking of farms during warmer weather. Consulting with Technical on management strategies to prevent heat stress
			Increased risk of fire in biomass and chemical storage areas	1	3	3	Minimal amounts of material stored on site Designated storage areas with suitable containment and away from heat sources or direct sunlight	
		Farms	Increased risk of flies and odour	3	2	6	Robust amenity management plans in place. Minimal risk of flies from Broiler activities and minimal odour risk from Breeder farms.	Misting systems on higher risk farms to reduce odours. Litter and dirty water removed from site regularly.
			Risk of feed ingredients heating and spoiling	1	3	3	All feed stored in sealed designated storage silos. All silos made from steel or fibreglass. Feed levels monitored to ensure minimal amounts stored on site at any time.	
			Risk of wildfires damaging buildings and infrastructure	2	4	8	All farms have areas of concrete around the boundary which should minimise the risk of any wildfires in the area spreading on to farms	Consider mowing surrounding vegetation as low as possible during periods of prolonged hot and dry weather
			Increase in the occurrence and severity of animal diseases	1	3	3	Strict biosecurity measures in place across all farms to minimise the risk of animal diseases	

Risk	Details	Business Area	Potential Impacts	Likelihood (A)	Severity (B)	Risk Level (AxB)	Existing control measures	Additional control measures required
Winter daily maximum temperature	4°C more than the current average and potential for more extreme temperatures, both warmer and colder	Processing	Reduced effluent plant performance in colder weather	N/A	N/A	N/A	Monitor and maintain effluent plant performance Contingency plans in place for disposal off site at times of reduced treatment efficiency	
			Risk of pipework freezing	N/A	N/A	N/A	All exposed pipework at risk of freezing is fully lagged	
			Increased risk of snow and ice causing travel disruption	N/A	N/A	N/A		
			Reduced landbank availability for landspreading of waste due to prolonged freezing	N/A	N/A	N/A		
		Farms	No negative impact expected	1	1	1	N/A	
Daily extreme rainfall	Could increase by up to 20%	Processing	Flooding could lead to:				All sites in flood risk areas have signed up to receive early alerts to flood warnings.	
			Power failure	N/A	N/A	N/A		
			Process disruption	N/A	N/A	N/A		
			Infrastructure damage	N/A	N/A	N/A		
			Restrictions on site access for staff and emergency services	N/A	N/A	N/A		
			Potential for contaminated floodwater causing site pollution	N/A	N/A	N/A		
		Farms	Drainage channels and gutters unable to cope	3	1	3	Drainage systems are designed to cope with additional flow. Drainage and gutters kept free from debris.	
			Increased flows to clean and dirty water systems Soakaways could be overwhelmed	3	1	3	Rainwater harvesting systems installed where possible. Clean and dirty water systems separate on each farm and clean water systems are discharged to the local water environment	
			Flooding could lead to:				All farms have functional and tested standby generators. No new farms built in areas that are highly likely to flood Essential equipment and electrics located as high as possible within poultry sheds. Emergency response equipment kept centrally which can be deployed 24/7, should it be required on any farm.	
			Power failure	2	2	4		
			Animal welfare issues	2	4	8		Sign up to and take heed of EA flood warnings
			Water ingress bringing disease into buildings	3	3	9		Collect sand bags from Oakside and deploy as required
			Infrastructure damage	2	2	4		
			Restrictions on site access for staff and emergency services	3	1	3		
			Potential for contaminated floodwater causing site pollution	3	3	6		As above and follow flood guidance advice in farm EMS and Broiler Handbook documentation.
			Dilution of food dips and risk of overflowing	2	1	2	Foot dips kept covered to avoid rainwater ingress	

Risk	Details	Business Area	Potential Impacts	Likelihood (A)	Severity (B)	Risk Level (AxB)	Existing control measures	Additional control measures required
Average winter rainfall	May increase by over 40% on today's averages	Processing	Reduced landbank availability for landspreading of waste due to prolonged wet weather	N/A	N/A	N/A		
			Higher flows to effluent treatment plants affecting plant performance	N/A	N/A	N/A		
			Increased risk of flooding and associated impacts	N/A	N/A	N/A		
		Farms	Increased site surface water and flooding	3	3	6	No new farms built in areas that are highly likely to flood Essential equipment and electrics located as high as possible within poultry sheds Emergency response equipment kept centrally which can be deployed 24/7, should it be required on any farm.	Sign up to and take heed of EA flood warnings Follow farms' flood risk assessment and mitigation plans as appropriate
			Surface water drainage systems unable to cope with increased flows	2	2	4	Rainwater harvesting systems installed where possible. Clean and dirty water systems separate on each farm and clean water systems are discharged to the local water environment	
			Reduced landbank availability for landspreading of dirty water and manure due to prolonged wet weather	4	1	4	The end destination of most litter is to a power station. Some dirty water is spread to land but other disposal routes are available (eg. WRCs)	
Sea level rise	Could be as much as 0.6m higher	Processing & Farms	Increased risk of flooding	1	4	4	No sites close to the sea	
Drier summers	Could see up to 40% less rain	Processing & Farms	Drought restrictions on water abstraction affecting the availability and quality of water	2	2	4	Should the quality of borehole water be compromised, mains water would be used instead.	
			Risk of disruption to mains water supply	2	4	8	As a food processor, the mains water supply to our sites would be prioritised over some other industries if a drought should occur. However all sites rely on mains water and minimal contingencies are in place.	All Farms store enough water on site to provide roughly 24 - 48 hours contingency. Consider tankering water in or depleting early, etc.
River flow	Flow in watercourses could be 50% more at peak and 80% less at it lowest	Processing & Farms	Reduced dilution available in receiving watercourse for discharge of effluent, causing increased pollution	1	1	1	Treated effluent not discharged to watercourses. Trade effluent is discharge to local WRCs.	
			Reduced flow in watercourses may affect the quality of abstracted water	1	1	1	No surface water abstraction on any sites. (Groundwater abstraction only)	
Storms	Change in frequency and intensity (increased wind speeds, increased rainfall, lightening etc)	Processing & Farms	Damaged to buildings and increased potential for fugitive emissions	3	1	3	All buildings checked and maintained to ensure they are structural sound Emergency back up power on sites (tested weekly to check functionality) All sites kept tidy and free from unnecessary waste or debris.	