Environmental Risk Assessment for Woodend Poultry Farm

Source of emission	Emission (e.g., ammonia, dust, run-off, spillage, noise, odour)	Receptor (e.g., air, water, land, humans, plants)	Description of impact and duration of impact i.e., short term (ST), medium term (MT) or long term (LT)	Significance of negative impacts Major +++ Moderate ++ Minor + Nil 0	Mitigation / management measures for this emission
1. Poultry production (for the complete production & cleaning cycle)	Ammonia	Humans	Adverse effect on air quality and health (LT)	+	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010 and Best Available Techniques (BAT) Reference Document; 2017:-
		Plants	Direct toxic effects (ST)	+	• Forced ventilation & a non-leaking drinking system (in case of solid floor with deep litter). • Reduce crude protein content using a nitrogen balanced diet based on the energy needs and digestible amino acids. • Multiphase feeding with a diet formulation adapted to the specific requirements of the production period. Provide chickens a minimum of three separate diets which contain increasingly lower crude protein. • Addition of controlled amounts of essential amino acids. Highly digestible amino acid analogues lysine, methionine, threonine, and valine added in milling to supplement otherwise low naturally occurring levels in wheat grains. • Designated nature conservation sites are sensitive receptors for ammonia. Mains Wood Site of Special Scientific Interest (SSSI) and Birchend SSSI within 5km. Ashperton Park Ancient Woodland (AW)/Local Wildlife Site (LWS), Eastwood AW, Garbrook AW, Hasnett Wood Broomy Lakes AW/LWS, Cooks Wood LWS, Lynewood LWS and two more LWS at the River Frome to the northwest and the canal (disused) to the northeast of the farm are within 2km. Excluded Little Hill SSSI and Perton Roadside Section and Quarry SSSI which have geological features. • Environment Agency advised applicant will need to submit detailed ammonia modelling with application for a permit for rearing broiler chickens in the Pre-application Report dated 10th January 2025, for Ashperton Park AW/LWS and Cooks Wood LWS. • A report on the modelling of the dispersion and deposition of ammonia from the existing turkey rearing houses and the proposed broiler rearing houses dated 25th June 2025 concluded process contributions to ammonia concentrations and nitrogen deposition
		Land	Nutrient enrichment of soils (e.g., hyper-eutrophication and acidification) (LT)	+	
		Land	Changes to sensitive ecosystems (LT)	+	

Source of emission	Emission (e.g., ammonia, dust, run-off, spillage, noise, odour)	Receptor (e.g., air, water, land, humans, plants)	Description of impact and duration of impact i.e., short term (ST), medium term (MT) or long term (LT)	Significance of negative impacts Major +++ Moderate ++ Minor + Nil 0	Mitigation / management measures for this emission
					rates would be significantly reduced from current levels at all the wildlife sites considered.
	Dust	Humans Humans Plants	Adverse effect on air quality and health (LT) Nuisance (ST) Covers leaves, inhibits photosynthesis (ST)	++ ++ ++	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010 and Best Available Techniques (BAT) Reference Document; 2017:- • Dwelling houses are sensitive receptors within 100m of the boundary. • Created a dust & bio-aerosol management plan with routine actions to minimise dust and bio-aerosols from sources onsite and contingency actions and a complaints investigation and reporting procedure if required.
	Noise	Humans	Nuisance (ST)	++	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010 and Best Available Techniques (BAT) Reference Document; 2017:- • Dwelling houses are sensitive receptors within 400m of the boundary. • Created a noise management plan with routine actions to minimise noise from sources onsite and contingency actions and a complaints investigation and reporting procedure if required.
	Odour	Humans	Nuisance (ST)	++	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010 and Best Available Techniques (BAT) Reference Document; 2017:- • Dwelling houses are sensitive receptors within 400m of the boundary.

Source of emission	Emission (e.g., ammonia, dust, run-off, spillage, noise, odour)	Receptor (e.g., air, water, land, humans, plants)	Description of impact and duration of impact i.e., short term (ST), medium term (MT) or long term (LT)	Significance of negative impacts Major +++ Moderate ++ Minor + Nil 0	Mitigation / management measures for this emission
					• Created an odour management plan with routine actions to minimise odour from sources onsite and contingency actions and a complaints investigation and reporting procedure if required.
	Pests	Humans	Nuisance caused by vermin and flies (ST)	+	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010:- • Carcasses stored in secure, non-leaking, containers & kept covered. • Containers removed weekly by an approved transporter under the National Fallen Stock scheme. Weekly collections considered to be adequate to avoid attracting flies. • Collection can be increased anytime e.g. in warm weather or in event of higher mortality. • Exchange filled containers for clean & disinfected containers. • Planned pest control with professional contractors licensed to use pest control products.
	Dirty water	Land Water Water	Nutrient enrichment of soils (LT) Nutrient enrichment in watercourses (ST) Changes to sensitive ecosystems (LT)	+ ++ ++	Measures are described in EPR 6.09 SGN; How to comply; Version2, 2010:- • Door gullies convey dirty water direct into below ground package storage tanks. • Concrete apron & kerbs channel dirty water into the below ground storage tanks via diverter valves. • Dirty water storage tanks encased in concrete with capacity for all the dirty water. • Farmworkers and cleaners keep roadways, areas around buildings, dirty water gullies and drains clear of litter, etc to avoid backing-up, pooling, or over spilling into surface water drains or on unmade land.

Source of emission	Emission (e.g., ammonia, dust, run-off, spillage, noise, odour)	Receptor (e.g., air, water, land, humans, plants)	Description of impact and duration of impact i.e., short term (ST), medium term (MT) or long term (LT)	Significance of negative impacts Major +++ Moderate ++ Minor + Nil 0	Mitigation / management measures for this emission
					• Professional contractors empty dirty water tanks after cleaning and avoid anaerobic conditions developing in the settled sludge. Frequency of emptying can be increased anytime • Planned preventive maintenance for buildings & equipment by company engineers or professional contractors in accordance with any manufacturer's instructions and keeping records of the work.
	Feed spillage	Land Water	Nutrient enrichment of soils (LT) Nutrient enrichment of water courses (MT)	+ ++	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010 and Best Available Techniques (BAT) Reference Document; 2017, and DEFRA Code of practice for the welfare of meat chickens and meat breeding chickens, updated January 2024:- • Feed stored in package silos and delivered into houses with package augers and pipes. • Silos & feed delivery equipment protected from collision damage from reversing vehicles by careful siting relative to traffic flows in between the houses and with kerbs or barriers. • Feed delivered direct from suppliers and blown directly into the silos. • Deliveries monitored by drivers & farmworkers and any spillage cleared up immediately. • Automatic equipment on which chickens depend inspected by farm workers not less than once per day to check there are no defects, any defects to be repaired immediately. • Planned preventive maintenance for buildings & equipment by company engineers or professional contractors in accordance with any manufacturer's instructions and keeping records of the work.

Source of emission	Emission (e.g., ammonia, dust, run-off, spillage, noise, odour)	Receptor (e.g., air, water, land, humans, plants)	Description of impact and duration of impact i.e., short term (ST), medium term (MT) or long term (LT)	Significance of negative impacts Major +++ Moderate ++ Minor + Nil 0	Mitigation / management measures for this emission
	Zoonoses & notifiable diseases	Humans & livestock	Human and livestock health implications (ST)	++	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010 and Best Available Techniques (BAT) Reference Document; 2017, and DEFRA (2018) Code of practice for the welfare of meat chickens and meat breeding chickens, updated January 2024:- • Farmworkers who are responsible for care of chickens at any point in time, including holiday cover, part-time & temporary workers will be appropriately trained and qualified. • Use a Health Plan with professional veterinary input as required. • Maintain the bio-security precautions. • Signage warning people against unauthorised entry. • Clean protective clothing for farmworkers and visitors. • DEFRA approved disinfectants for boot dips and cleaning houses. • Daily livestock inspections by farmworkers. • Dead chickens must be removed from poultry houses daily.
2. Storage facilities	Fuel, disinfectant, and other chemicals (e.g., due to spills or leakage)	Water Land	Contamination of surface & groundwater with consequential effects on animals (ST) Contamination of land (MT)	+++ +++	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010 and DEFRA; 2018 Code of practice for the welfare of meat chickens and meat breeding chickens:- • Emergency back-up generator with separate bunded fuel tank & regularly check level. • Automatic equipment on which chickens depend inspected by farm workers not less than once per day to check there are no defects, any defects to be repaired immediately. • Disinfectants, pesticides & veterinary medicines stored in dry, frost-free, fire-resistant stores, kept secure against unauthorised use and capable of retaining any spillage. • Package footbaths to be used to avoid overflowing.

Source of emission	Emission (e.g., ammonia, dust, run-off, spillage, noise, odour)	Receptor (e.g., air, water, land, humans, plants)	Description of impact and duration of impact i.e., short term (ST), medium term (MT) or long term (LT)	Significance of negative impacts Major +++ Moderate ++ Minor + Nil 0	Mitigation / management measures for this emission
					• Spent disinfectant from footbaths emptied into dirty water tanks. • Implement the accident management plan including using spill kit equipment if disinfectant poses risk of entering any surface or groundwater. • Planned preventive maintenance for buildings & equipment by company engineers or professional contractors in accordance with any manufacturer's instructions and keeping records of the work.
	Health risks due to contact with stored materials, inhalation, etc.	Humans	Human health issues (ST)	+	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010:- • Manufacturer's safety data sheets for materials kept onsite. • Measures set out in the accident management plan. • Planned preventive maintenance for buildings & equipment by company engineers or professional contractors in accordance with any manufacturer's instructions and keeping records of the work.
3. Surface water drainage system	Fuel, disinfectant & other chemicals (e.g., spills result of unauthorised persons, tampering,	Tarrington Brook – source to confluence River Frome waterbody	Contamination of surface water (MT) Contamination of land & groundwater (MT)	Minor Minor	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010:- • Perimeter fence & gates & no public access through any part of the site. • Poultry houses & stores will be securely locked at night. • Fuel oil tanks & LPG tanks will be secure & locked. • Keep a list of the substances that would harm the environment if they were to escape including in the raw materials inventory. • Relatively small inventory and quantities of potentially polluting substances stored onsite at any time including fuel oil for back-up generator & disinfectants, etc.

Source of emission	Emission (e.g., ammonia, dust, run-off, spillage, noise, odour)	Receptor (e.g., air, water, land, humans, plants)	Description of impact and duration of impact i.e., short term (ST), medium term (MT) or long term (LT)	Significance of negative impacts Major +++ Moderate ++ Minor + Nil 0	Mitigation / management measures for this emission
	vandalism, stealing).				• Environment Agency must be notified immediately of any spillage into unmade land and risk of entering into groundwater in accordance with the procedure in the permit.
	Fire & firefighting water	Tarrington Brook – source to confluence River Frome waterbody	Contamination of surface water (MT) Contamination of land & groundwater (MT)	Minor Minor	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010:- • Maintain general fire precautions at all times, in accordance with company fire safety procedures & training and farmworkers checking the precautions every day. • Store incompatible materials apart. • Limit size of stockpiles of combustible materials & surround them with fire breaks. • Not storing materials alongside the site boundary. • Store contaminated firewater onsite, where practicable e.g. in the underground dirty water storage tanks for offsite disposal. • Mandatory risk assessments & recommendations provided for buildings & precautions by professional contractors & insurers.
4. Surface water (flash flooding)	Dead birds, litter, dirty water, fuel, disinfectant boot dips etc	Tarrington Brook – source to confluence River Frome waterbody	Contamination of surface floodwater (ST) Contamination of land & groundwater (MT)	Minor Minor	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010:- • The yearly chance of surface water flooding onsite is very low staying at very low between 2040 to 2060, less than 0.1% chance of a flood each year. Highest risk of surface water flooding onsite is 1 in 30 year. • Extent of any surface water flooding predicted to be localised around the poultry houses where the ground level is probably lower than the concrete apron. Surface water flooding is sometimes known as flash flooding happens when rainwater cannot drain away through normal drainage systems.

Source of emission	Emission (e.g., ammonia, dust, run-off, spillage, noise, odour)	Receptor (e.g., air, water, land, humans, plants)	Description of impact and duration of impact i.e., short term (ST), medium term (MT) or long term (LT)	Significance of negative impacts Major +++ Moderate ++ Minor + Nil 0	Mitigation / management measures for this emission
					• According to the government website at check-long-term-flood-risk.service.gov.uk.
5. Ground water flooding	Litter, dirty water, fuel, disinfectant boot dips etc	Tarrington Brook – source to confluence River Frome waterbody	Contamination of surface floodwater (ST) Contamination of land & groundwater (MT)	Minor Minor	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010:- • Flooding from groundwater is unlikely in this area. • According to the government website at check-long-term-flood-risk.service.gov.uk.
6. Rivers and sea flooding	Dead birds, litter, dirty water, fuel, disinfectant boot dips etc	Tarrington Brook – source to confluence River Frome waterbody	Contamination of river and seawater (ST) Contamination of land & groundwater (MT)	Minor Minor	Measures are described in EPR 6.09 SGN; How to comply; Version2; 2010:- • The yearly chance of rivers and sea flooding onsite is very low staying at very low between 2036 and 2069, less than 0.1% chance of a flood each year. • According to the government website at check-long-term-flood-risk.service.gov.uk.