Appendix 7 6A - Environmental Risk Assessment

Table 7.a - Odour risk assessment and management plan

What do you do that can harm and what could be harmed			Managing the risk		Assessing the risk	
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
What has the potential to cause harm?	**What is at risk? What do I wish to protect?**	**How can the hazard get to the receptor?**	**What measures will you take to reduce the risk? If it occurs – who is responsible for what?**	**How likely is this contact?**	**What is the harm that can be caused?**	
• Odour from feed delivery and storage.	The few dwellings & commercial unit within 400m of the installation	Air	• All feeds delivered ready mixed. • Feed delivery will be sealed to minimise atmospheric dust. • Any spillage of feed around the bin is immediately swept up. • The condition of feed bins is checked frequently so that any damage or leaks can be identified	Very Unlikely	Odour annoyance	Not significant
• Odour arising from problems with housing ventilation system. • Inadequate air movement in the house leading to high humidity and **wet litter.** • Inadequate system design, causing poor dispersal of odours	The few dwellings & commercial unit within 400m of the installation	Air	• The ventilation system is be designed to efficiently remove moisture from the houses. • Daily litter management and adequate supplies of fresh shavings available • Stocking density maintained at or below levels set out in welfare regulations • Insulated walls and ceilings to prevent condensation. • Concrete floors to prevent water ingress	Unlikely	Odour annoyance	Not significant

What do you do that can harm and what could be harmed			Managing the risk		Assessing the risk	
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
Carcass disposal: • Inadequate storage of carcasses on site.	The few dwellings & commercial unit within 400m of the installation	Air	• Measures as described in How to comply - Intensive Farming. • Carcasses are placed in sealed containers immediately after they are removed from the house.	Very Unlikely	Odour annoyance	Not significant
• Odour from spreading of manure (no spreading at the Installation)	The few dwellings & commercial unit within 400m of the installation	Air	• Litter removed from site and handled by qualified contractors in line with our Section 106 (see appendix 3)	Very unlikely	Odour annoyance	Not significant if carefully managed
• End of Cycle – Turnaround • Odours arising from poorly managed litter collection, removal and distribution	The few dwellings & commercial unit within 400m of the installation	Air	• Turnaround activities sited to rear of sheds – to mitigate impact on neighbours • Litter is carefully placed into trailers positioned at the entrance to each house. When full, the trailer is covered. • Only approved and suitable cleaning products are used. • There is no storage of used litter outside the houses at any time. • Litter is transported in covered trailers. • Activity limited to flock cycle	unlikely	Odour annoyance	Not significant if carefully managed
• Odour from storage of dirty water	The few dwellings & commercial unit within 400m of the installation	Air	• Feed selection to minimise excretion of nutrients • Dirty water tank covered & emptied regularly	unlikely	Odour annoyance	Not significant if carefully managed

Table 7 B Noise risk assessment and management plan

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard **What has the potential to cause harm?**	**Receptor** **What is at risk? What do I wish to protect?**	**Pathway** **How can the hazard get to the receptor?**	**Risk management** **What measures will you take to reduce the risk? If it occurs – who is responsible for what?**	**Probability of exposure** **How likely is this contact?**	**Consequence** **What is the harm that can be caused?**	**What is the overall risk?**
Noise problems from large vehicles travelling to and from the farm.	The few dwellings & commercial unit within 400m of the installation	Air	• Measures as described in How to comply - Intensive Farming. • Vehicles are required to be driven onto and off site with due consideration for neighbours. • Deliveries of feed and fuel are made only during the daytime (between 0800 and 1500 hours), so that disturbance is minimised. • Catching of birds annually takes place at night, but all vehicles maintained so as to minimise engine noise and are driven slowly to and from the site.	Unlikely	Noise annoyance	Not significant if managed carefully.
Large vehicles on site for delivering feed, catching of birds at end of the cycle (lorries, Moffat etc.), removal of used litter from houses, removal of dirty water from underground tanks.	The few dwellings & commercial unit within 400m of the installation	Air	• Measures as described in How to comply - Intensive Farming. • Vehicles must be well maintained and must be driven slowly around the site. • Engines to be switched off when not in use. Vehicles which are fitted with an audible 'vehicle reversing' warning system are generally used only in the daytime. The exception to this is during removal of birds when such vehicles must be used at night.	Unlikely	Noise annoyance	Not significant
Small vehicles travelling to and from the farm (e.g. staff and visitor's cars, maintenance vehicles and deliveries etc.)	The few dwellings & commercial unit within 400m of the installation	Air	• Other small vehicles arrive during the normal working day and therefore are seen as low risk.	Very Unlikely	Noise annoyance	Not significant
Feed transfer from lorry to bins	The few dwellings & commercial unit within 400m of the installation	Air	Vehicles are well maintained and are designed so that noise during feed transfer is minimised.	Unlikely	Noise annoyance	Not significant

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard **What has the potential to cause harm?**	**Receptor** **What is at risk? What do I wish to protect?**	**Pathway** **How can the hazard get to the receptor?**	**Risk management** **What measures will you take to reduce the risk? If it occurs – who is responsible for what?**	**Probability of exposure** **How likely is this contact?**	**Consequence** **What is the harm that can be caused?**	**What is the overall risk?**
Operation of fans	The few dwellings & commercial unit within 400m of the installation	Air	• Efficient extractor fans used, maintained in good condition to avoid excessive noise. • Fans sited away from neighbours, and cowls used to muffle noise, as appropriate • Forced ventilation systems with automated controls to minimise run time and fan speed	Very Unlikely	Noise annoyance	Not significant
Alarm system and stand- by generator	The few dwellings & commercial unit within 400m of the installation	Air	• Weekly system test (required by law) will be carried out each Wednesday morning - timed to minimise nuisance to neighbours. • All electrics and equipment are routinely maintained so that the back-up systems rarely need to be used unless a power failure is outside of our control	Very Unlikely	Noise annoyance	Not significant
Chickens	The few dwellings & commercial unit within 400m of the installation	Air	• Noise from birds is not considered to be a likely cause for complaint. During loading, bird noise is minimised by careful handling and by prompt removal of the lorry from the site when full.	Very Unlikely	Noise annoyance	Not Significant
Personnel	The few dwellings & commercial unit within 400m of the installation	Air	• Staff, catchers, and other contractors are required to carry out their work without creating excessive noise from shouting and use of radios etc.	Very Unlikely	Noise annoyance	Not Significant
Repairs	The few dwellings & commercial unit within 400m of the installation	Air	• If repairs to the site are required, the work is undertaken with due regard for possible noise nuisance and during the normal working day. In the event of major repair work being undertaken which is likely to cause significant noise and disruption, Neighbouring residents will be notified in advance.	Unlikely	Noise annoyance	Not Significant

Table 7 C Fugitive emissions risk assessment and management plan

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard What has the potential to cause harm?	**Receptor** What is at risk? What do I wish to protect?	**Pathway** How can the hazard get to the receptor?	**Risk management** What measures will you take to reduce the risk? If it occurs – who is responsible for what?	**Probability of exposure** How likely is this contact?	**Consequence** What is the harm that can be caused?	**What is the overall risk?**
To Air						

Dust: (Includes bio aerosols) **Sources:** • Litter • Feed	• The few dwellings & commercial unit within 400m of the installation & our own staff & the poultry: - Nuisance, - Contributes to odours - Human & animal health - inhalation. • Surrounding vegetation: - covers leaves and inhibits photosynthesis. • Surrounding land: Nutrient enrichment of soils.	Air	• Staff wear appropriate PPE & Rotation of Duties. • Use of suitable litter materials, • Feed delivered in sealed systems, • Litter is tipped into trailers from minimal height, • Trailers are covered when full.	Dust is grounded by side ventilation.	Nuisance – - Dust on surrounding vegetation, cars, clothing. - Smothering and direct damage to nearby vegetation - Health, staff might get stressed or react to dust	Not significant if managed carefully.

Ammonia: **Sources:** • Poultry housing	• The few dwellings & the commercial unit within 400 m of the installation • Staff & poultry - high levels can cause respiratory problems • Also perceived as a nuisance as it contributes to odours • Surrounding vegetation: Direct toxic effect and changes to sensitive ecosystems • Surrounding land: Nutrient enrichment and acidification of soils	Air	• Measures as described in How to Comply – Intensive Farming. Litter kept dry and friable. • Feed formulated to match flock requirements. • Well trained Staff with appropriate PPE and Working Patterns.	• The impact of Ammonia air emissions from the installation have been assessed using the H1 methodology and detailed air dispersion modelling. - The results demonstrate there will be little likelihood of impact to nearby wildlife sites	• Aerial deposition and direct toxic effect on trees • Nutrient enrichment of soils and changes to sensitive ecosystems • Respiratory problems in humans and mammals	Not significant With regard to ammonia, the most sensitive receptors are environmentally sensitive landscapes such as Local/National Nature Reserves, County Wildlife Sites, SSSIs, SPAs, SACs and Ramsar sites. As the nearest is more than 2.3km away, it is likewise considered that the impact is considered to be low.
Zoonoses and notifiable diseases	Human health and livestock health	Air/Direct Contact	• Detailed biosecurity precautions in place e.g. frequent stock inspection, use of disinfectants and appropriate clean overalls, boots etc. for staff and visitors to prevent spread of disease • Secure site visitor policy	Unlikely	Human and livestock health implications	Not significant if managed carefully.

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
To Water						
Clean out water containing nitrites and phosphates run off to nearby water course	Nearby Water Course:	Land	• Wash out water run-off containing chemicals is diverted to underground storage tanks' • Clean water is directed to the Attenuation Basin. • Used litter spilt on yard/roadways	Unlikely Soils are free draining	Pollution of water course leading to eutrophication and poisoning of flora and fauna.	Not significant if managed carefully.
Spillages from storage and use of pesticides	Vulnerable soils/groundwater.	Land	• No storage of pesticides at the installation • Any need for pesticides are met by employing qualified contractors, using best practice and appropriate PPE.	Unlikely	Contamination of surface and groundwaters. Killing of flora and fauna	Not significant
Pests						
Flies on manure heap could move off- site and affect nearby residents	Neighbouring dwelling houses	Air	No Manure heap on site	Unlikely	Flies are a vector of pollution that can harm human health. Concerns about this pollution can cause offence and affect amenity.	Not significant if managed carefully.
Birds, Rats etc	Neighbouring dwelling houses		• Pest Management Plan in place • Feed bins are secure from pests • Rodent control programme in place	Unlikely	Rats are a vector of pollution that can harm human health. Concerns about this pollution can cause offence and affect amenity.	Not significant if managed carefully.

• Waste materials, packaging, etc. **Source:** Non-organic waste storage and disposal	Neighbouring dwellings and surrounding habitats and countryside	Air	• Policy to avoid production, where possible • Dedicated storage areas and facilities • Collected by licensed contractors for recycling or disposal • Regular checks made for rubbish dumped by third parties	Unlikely	• Amenity value of countryside spoilt by rubbish • Possibility of causing harm to wildlife	Not significant
To Land						

Spillages from pesticide and biocide handling and storage areas escaping	Potentially polluting liquids flow over yard to clean drain inlet/ ditch/stream/ pond/swale and surrounding land Also vulnerable groundwater beneath site	Flowing over yard or through cracks in poor impermeable surface and through the ground	Accident Management Plan in place No pesticides stored on site. Spill kits always available. Repair any infrastructure and design appropriate containment measures Maintenance and regular inspection procedure designed and implemented Foot dips on good concrete, only emptied into dirty water system, no gutters to cause run off. Wheel wash constructed from reinforced concrete with sealed joints Regular inspection of facilities and records kept Dedicated container for storage with impermeable hard standing within bund Removed from site by licensed contractor Damaged or suspect packaging rejected at time of delivery	Very unlikely	Contamination and destruction of flora and fauna and contamination of local groundwater	Not significant with measures indicated

Fuel oil in storage tank/vehicles escaping the containment	Land, local watercourse	The surface water drainage system/cracks in concrete	Regular inspection in accordance with the site maintenance and inspection procedure and complies with SSAFO regulations Barriers in place to prevent vehicles damaging tanks and equipment Concrete base and bund containing tank and fill point Double valves locked when not in use If spills occur, the oil spill equipment is located nearby	Very unlikely	Harm to flora and fauna & contamination of local watercourse	Not significant
Incorrect disposal of wash (dirty) water	Attenuation Basin, & local watercourse.	Drains, ditches, land	Staff trained to understand the use of the Attenuation Basin and to protect the integrity of the basin grasses and wider ecosystem. During washout management to check drains and visually check the Basin, All drains marked All drains shown on drainage plan	Very unlikely	Harm to flora and fauna, damage to ecosystem of Attenuation Basin & contamination of local watercourse	Not significant

Flooding and other storm damage	Surrounding land and surface and ground waters.	Concrete run off and drains.	Flood risk assessment prepared at planning stage, shows minimal risk of flooding. Small area to the left of the farm with slight risk of flooding – this will be taken into consideration during the build. Staff awareness of weather forecasts and warnings.	Very Low	Water and Soil pollution	Very Low
Acts of vandalism which cause damage to structures and fittings.	The Flock, staff and Surrounding land and surface and ground waters	Air, land, water	Site security	Low	Biosecurity. Contamination of soil and/or water	Low
Failure of automatic liquid level control sensors and devices.	Surrounding land and surface and ground waters.	Concrete run off and drains.	Regular and routine maintenance checks. Stand by generator with automatic start-up and switch over	Low	Dirty Water tank overflow	Low

Fire	Livestock, Staff, Buildings, Fuel &Oils, Chemicals, Feed, Local Habitats, flora & fauna. Wildlife & Neighbours.	Air/Dry vegetation	Construction of the premises. Working practices - Signalling Fire alarm., Fire doors Emergency lighting Escape signage Fire extinguishing appliances. Electrical cables or wiring attached or passing through panels to be fire resistant or enclosed within a non-combustible insulating sleeve or conduit The electrical installation for buildings containing poultry, other birds or eggs to be checked at least once in every period of 16 months in accordance with 'The NFU Mutual Poultry Farm Checklist', by a qualified electrician. All remedial work recommended by the electrician must be undertaken promptly. All extraction systems including flues, extraction motors, fans and the entire length of any associated ducting to be subject to a formal maintenance programme, which includes a thorough clean once every 16 months by a competent person. New installation works and electrical inspection testing of the fixed installation to be undertaken in accordance with the current edition of BS7671 Requirements for Electrical Installations. IET Wiring Regulations. The frequency of electrical inspection of the premises to be every 3 years in accordance with the recommendations of BS 7671 or Electricity at Work Regulations, or more frequently if advised by your electrician.	Unlikely	Injury or death to livestock/staff. Air pollution, water contamination, and the potential for wildfires. The burning of wood, litter, and feathers releases pollutants like dust, ammonia, and volatile organic compounds into the air. Additionally, the fire can contaminate runoff water with chemicals and pathogens, leading to water pollution.	With correct mitigations in place – Low.

Catchment tank or soil pipes rupture.	Dirty water flows to Attenuation Basin. Damage to the Basin eco-system. Flora and Fauna. Groundwaters.	Surface water drainage system.	Regular inspection of tanks Curbing to prevent water entering nearby watercourses Use of Defra/NOAH-approved disinfectants Block off drain inlet with sand bags kept by diesel tank If already entered drain, block off ditch with boards at point Y as indicated on Accident Management Plan Contact office or duty manager. If necessary, contact Environment Agency	Unlikely	Contamination of local watercourse	Not significant