B2.7 ENVIRONMENTAL RISK ASSESSMENT

This assessment has been prepared after consulting:-

- Horizontal Guidance Note H1 – Environmental Risk Assessment for Permits and
- Horizontal Guidance Note H1 – Annex (b) Intensive Farming

The main impacts of poultry keeping are the effects of odour, noise and ammonia associated with the houses and with the removal of litter from the site.

The H1 Environmental Risk Assessment framework has been used to assess the farming activities, based on the following stages:-

1. Identify risks
2. Complete risk assessments for these
3. Choose control measures

The assessment is presented in this document based on risk assessments and management plans for odour, noise, fugitive emissions and accidents.

Odour risk assessment

What can harm, what could be harmed			Managing the risk		Assessing the risk	
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
Odour from the selection of feed.	Neighbouring dwelling houses etc. within 400m of the installation	Air	Measures as described in How to comply - Intensive Farming. No on site milling. Feed specifications will be prepared by the feed compounder's nutrition specialist.	Unlikely	Odour annoyance	Not significant
Odour from feed delivery and storage.	Neighbouring dwelling houses etc. within 400m of the installation	Air	Measures as described in How to comply - Intensive Farming. Feed delivery will be sealed to minimise atmospheric dust. Any spillage of feed around the bin will be immediately swept up. The condition of feed bins will be checked frequently so that any damage or leaks can be identified	Unlikely	Odour annoyance	Not significant
Odour arising from problems with ventilation systems, inadequate air movement leading to high humidity and wet litter.	Neighbouring dwelling houses etc. within 400m of the installation	Air	Measures as described in How to comply - Intensive Farming. The ventilation system will be regularly adjusted and checked according to the age and requirements of the flock. The ventilation system will be designed to efficiently remove moisture from the house.	Unlikely	Odour annoyance	Not significant
Litter management: Odours arising from wet litter (see above). The use of insufficient or poor quality litter. Spillage of water from drinking systems. Disease outbreaks, leading to wet litter.	Neighbouring dwelling houses etc. within 400m of the installation	Air	Measures as described in How to comply - Intensive Farming. Controls on feed and ventilation (see above) will help to maintain litter quality. Additional controls include: Insulated walls and ceilings to prevent condensation. Concrete floors to prevent water ingress. Stocking density at optimal levels to prevent overcrowding. Use of a health plan, with specialist veterinary input used as necessary.	Unlikely	Odour annoyance	Not significant
Carcass disposal e.g. inadequate storage or disposal of carcasses	Neighbouring dwelling houses etc. within 400m of the installation	Air	Measures as described in How to comply - Intensive Farming. Carcasses will be placed in frozen storage and will be transported off-site for final disposal	Unlikely, unless major mortality	Odour annoyance	Not significant if managed carefully
House clean-out	Neighbouring dwelling houses etc. within 400m of the installation	Air	Litter will be carefully placed into trailers, positioned at the entrance to each house. Minimal tipping. When full, trailers will be covered and the litter taken off-site. Dirty water will be contained in a sealed system. Spreading of litter and dirty water will be in accordance with a manure management plan. Odour from chemicals used for clean-out not considered a risk	Unlikely	Odour annoyance	Not significant if managed carefully

Noise risk assessment

What can harm, what could be harmed			Managing the risk		Assessing the risk	
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
Noise from large vehicles travelling to and from the farm.	Neighbouring dwelling houses etc. within 400m of the installation	Air	Measures as described in How to comply - Intensive Farming. Vehicles will be required to be driven onto and off site with due consideration for neighbours. Deliveries of feed and fuel will be made only during the daytime so that disturbance is minimised. Catching of birds may have to take place at night, but all vehicles will be maintained so as to minimise engine noise and will be driven slowly to and from the site.	Unlikely	Noise annoyance	Not significant if managed carefully.
Noise from large vehicles on site for delivering feed or transporting birds. Equipment used to clean houses and vehicles used to remove used litter and dirty water from underground tanks.	Neighbouring dwelling houses etc. within 400m of the installation	Air	Measures as described in How to comply - Intensive Farming. Vehicles will have to be well maintained and driven slowly around the site. Engines will be switched off when not in use. Vehicles which are fitted with an audible 'vehicle reversing' warning system will generally be used only in the daytime. The exception to this will be during removal of birds when such vehicles may have to be used outside normal working hours.	Unlikely	Noise annoyance	Not significant
Small vehicles travelling to and from the farm (e.g. staff and visitor's cars, courier van deliveries etc.)	Neighbouring dwelling houses etc. within 400m of the installation	Air	Measures as described in How to comply - Intensive Farming. Small vehicles will generally arrive during the normal working day and therefore are seen as low risk.	Unlikely	Noise annoyance	Not significant
Feed transfer from lorry to bins	Neighbouring dwelling houses etc. within 400m of the installation	Air	Vehicles will be well maintained and designed so that noise during feed transfer is minimised.	Unlikely	Noise annoyance	Not significant
Operation of fans	Neighbouring dwelling houses etc. within 400m of the installation	Air	Efficient extractor fans will be used, maintained in good condition to avoid excessive noise.	Unlikely	Noise annoyance	Not significant
Alarm system and stand-by generator	Neighbouring dwelling houses etc. within 400m of the installation	Air	Weekly system test (required by law) will be timed in order to minimise nuisance to neighbours. All electrics and equipment will be routinely maintained so that the back-up systems will rarely be needed.	Unlikely	Noise annoyance	Not significant

What can harm, what could be harmed			Managing the risk		Assessing the risk	
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
Chickens	Neighbouring dwelling houses etc. within 400m of the installation	Air	Noise from birds is not considered to be a likely cause for complaint during production. During loading, bird noise will be minimised by careful handling and by prompt removal of the lorry from the site when full.	Unlikely	Noise annoyance	Not significant
Personnel	Neighbouring dwelling houses etc. within 400m of the installation	Air	Staff, catchers and other contractors will be required to carry out their work without creating excessive noise	Unlikely	Noise annoyance	Not significant
Building work / repairs	Neighbouring dwelling houses etc. within 400m of the installation	Air	If work is required, it will be undertaken with due regard for possible noise nuisance and during the normal working day. If significant noise and disruption is likely, neighbouring residents likely to be affected may be notified in advance.	Unlikely	Noise annoyance	Not significant

Fugitive emissions risk assessment

What 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?**
Fugitive Emissions To Air						
Dust from litter and feed	Neighbouring dwelling houses etc. within 400m of the installation: Nuisance, contributor to odours, possible human health issues. Vegetation: covers leaves and inhibits photosynthesis. Surrounding land: Nutrient enrichment of soils.	Air	Use of suitable litter materials and feed delivered in sealed systems, litter will be tipped into trailers from minimal height and trailers will be covered when full. Ventilation systems will ensure good dispersal of air from the houses	Some potential exposure for nearest neighbours	Nuisance and possible health effects. Smothering and direct damage to nearby vegetation	Not significant if managed carefully.
Ammonia from poultry houses	Neighbouring dwelling houses etc. within 400m of the installation: Nuisance, contributor to odours, possible human health issues. Vegetation: direct toxic effect and changes to sensitive ecosystems. Surrounding land: nutrient enrichment of soils.	Air	Measures as described in How to Comply – Intensive Farming. Litter will be kept dry and friable and feed will be formulated to match flock requirements.	The impact of ammonia air emissions has been assessed using the H1 methodology.	Aerial deposition and direct toxic effect on trees. Nutrient enrichment of soils and changes to sensitive ecosystems.	Not significant
Zoonoses and notifiable diseases	Human health and livestock health	Air/Direct Contact	Detailed biosecurity precautions will be 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	Unlikely	Human and livestock health implications	Not significant if managed carefully.
To Water						
Wash water run off to nearby water course	Adjacent water courses	Land	Wash water run-off will be diverted to an underground storage tank so that wash water will not enter clean water systems. Used litter spilt on yard/roadways will be swept up.	Unlikely	Pollution of water course leading to eutrophication and poisoning of flora and fauna.	Not significant if managed carefully.
Pests						
Flies	Neighbouring dwelling houses etc.	Air	Dry litter and no storage of used litter outside the houses. All carcasses will be kept in frozen storage prior to incineration off-site	Unlikely	Vector for pollution & disease. Negative impact on amenity	Not significant if managed carefully.

Accident risk assessment

What can harm, what could be harmed			Managing the risk		Assessing the risk	
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
Spillages from chemical handling and storage	Vulnerable groundwater beneath site.	Cracks in hard surfaces and through the ground.	Maintain infrastructure, use suitable facilities and practices. Regular inspection procedures to be implemented.	Very unlikely	Contamination of local groundwater and potential nearby abstractions.	Not significant with measures indicated in place.
Oil in storage facilities escaping the containment	Local water course	Surface water drainage system	Regular inspection in accordance with the site maintenance procedure. Barriers will be in place to prevent vehicles damaging equipment. Levels will be measured to prevent overfilling. Bunding in place, spillage could be contained if it occurred.	Very unlikely	Contamination of local water course	Not significant
Feed spillage	Local water course	Surface water drainage system	Any spillage of feed around the bin will be swept up. The condition of feed bins will be checked frequently so that any damage or leaks can be identified in accordance with the site maintenance and inspection procedure. Bins which are vulnerable will be protected so that the risk of collision damage is minimised	Unlikely	Contamination of local water course	Not significant
Below ground dirty water tank overflows.	Dirty water flows into a local watercourse	The surface water drainage system	Clean-out procedures will be monitored carefully to prevent this. If tanks are full, cleaning operations will be stopped, if on-going. Any spillage will be contained using absorbent materials e.g. new litter, block off ditch if appropriate. If necessary contact the Environment Agency.	Unlikely	Contamination of local water course	Not significant