



## NOISE AND VIBRATION

**DEVELOPMENT:** IPPC PERMIT APPLICATION FOR THE HOUSING OF 260,000 BROILERS

**LOCATION:** Dunnimere Farm  
Portway Lane  
Harlaston  
Near Tamworth  
Staffordshire  
B79 9LA

**CLIENT:** Dunnimere Poultry Ltd

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The purpose of this Noise Management Plan (NMP) is to detail the methods by which the site operator, systematically assesses, reduce and prevents noise emissions from the poultry facility in accordance with the Environmental Permitting Regulations.

Guidance entitled How to Comply with Your Environmental Permit for Intensive Farming is provided by the Environment Agency (EA). This guidance document states:

“Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.”

This NMP will:

- identify and employ ‘all appropriate measures’ to minimise the generation and noise and subsequent exposure / impact;
- limit exposure of people outside the site to levels of noise which would result in complaints; and
- minimise the risk of unplanned ‘noisy’ events which have the potential to result in off- site noise complaints.

## **Objectives**

NMP’s are developed and employed to principally:

- identify and employ ‘all appropriate measures’ to minimise the generation and noise and subsequent exposure / impact;
- prevent exposure of people outside the site to levels of noise which would result in complaints; and
- minimise the risk of unplanned ‘noisy’ events which have the potential to result in offsite noise complaints.

This NMP serves to aid the decision-making process on the choice of controls, general site design, and operational practice in line with current industry best practice. The NMP is a working document with the specific aims of ensuring:

- noise impact is considered as part of routine operations;
- the minimisation of the risk of unplanned ‘noisy’ events that could result in offsite complaints;
- noise is primarily controlled at source by good operational practices, the correct use and maintenance of plant, and operator training; and
- ‘all appropriate measures’ are taken to prevent or, where that is not reasonably practicable, to minimise noise emanating from the installation.

A total of twenty locations where people may be present were identified within a 500 metre radius of the site. The locations are detailed below. A 400 metre zone around intensive livestock developments is the generally accepted threshold for nuisance complaints relating to airborne emissions, the Health Protection Agency position statement relating to Intensive Farming states that the intensive livestock farming extensions subject to regulation under the Pollution Prevention Control Regulation (now amended by the Environmental Permitting Regulations) may need to produce an odour management and also noise management plan if there are local communities within 400 metres of the site boundary. This suggests that beyond this zone nuisance from noise and odour is not an issue. To prevent the worst case scenario the sensitive receptors within 500 metres of the Dunnimere Farm Broiler Unit are listed below;

<b>NAME</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>Distance from unit to residential curtilage (m)</b>
Dunnimere Farm Cottage 1	421207	309799	275.80
Dunnimere Farm Cottage 2	421207	309799	355.11
Portway Farm	421200	309318	448.03
Portway House	421265	309353	369.93
Ponderosa	421150	309301	499.80
The Farmhouse	421861	309425	452.92
Council Property 1	421365	310150	440.67
Council Property 2	421364	310144	430.91
Council Property 3	421312	310016	331.59
Council Property 4	421308	310010	328.14
Council Property 5	421304	310000	321.13
Council Property 6	421303	309994	317.48
The Corn Barn	421898	309391	461.62
The Swallows	421916	309426	475.19
The Dutch Barn	421926	309412	470.72
The Forge	421930	309390	498.87

Hazard	Receptor	Pathway	Risk Management	Exposure	Consequence	Overall Risk
<p>Noise Issues from large vehicles travelling to and from farm</p> <p>Mobile source</p>	Neighbouring dwelling houses within 400m of installation	Air	<p>Measures as described in SGN EPR6.09 (Farming) Noise Management at Intensive Livestock Installations. All vehicles are required to be driven onto and offsite with due consideration for neighbours. Timed delivery restrictions can be implemented (07.00 and 20.00hrs) to minimise disturbance. Bird catching frequently occurring during night time (reduced bird stress) All vehicles regularly maintained to minimise engine noise. Roadways are free from potholes and maintained in good order. Route selection made with due consideration to nearby neighbours.</p>	Unlikely	Noise annoyance	Not significant if managed carefully.
Large vehicles delivering/collecting from site, litter removal, removal of dirty water	Neighbouring dwelling houses within 400m of installation	Air	<p>Measures as described in SGN EPR6.09 Vehicles well maintained and driven slowly on site. Engines not left idling. Audible reversing warnings mostly during daylight hours, excepting during night catching. Dirty water and litter removal during daylight hours.</p>	Unlikely	Noise annoyance	Not significant
<p>Small vehicle movements</p> <p>Mobile Source</p>	Neighbouring dwelling houses within 400m of installation	Air	<p>Measures as described in SGN EPR6.09 Vehicles driven slowly on site for night catching. Low risk for other small vehicle</p>	Unlikely	Noise annoyance	Not significant

			movements during daylight hours.			
Feed transfer from lorry to bins Fixed Source	Neighbouring dwelling houses within 400m of installation	Air	Vehicles well maintained and designed to minimise noise during transfer.	Unlikely	Noise annoyance	Not significant
Ventilation Fans Fixed Source	Neighbouring dwelling houses within 400m of installation	Air	Efficient extraction fans matched to size and population within house. Regularly maintained.	Unlikely	Noise annoyance	Not significant
Alarm System/Standby Generator Fixed Source	Neighbouring dwelling houses within 400m of installation	Air	System tested weekly (Mondays mid-morning to reduce disturbance) Specialist maintenance contract in operation. Frequent electrical servicing.	Unlikely	Noise annoyance	Not significant
Chickens Mobile Source	Neighbouring dwelling houses within 400m of installation	Air	Low risk. Noise during catching minimised by careful bird handling by trained catchers. Prompt departure of loaded lorries.	Unlikely	Noise annoyance	Not significant
Personnel Mobile Source	Neighbouring dwelling houses within 400m of installation	Air	Staff and contractors required to carry out their respective duties without creating excessive noise.	Unlikely	Noise annoyance	Not significant
Repairs and Servicing	Neighbouring dwelling houses within 400m of installation	Air	Repairs required are carried out with due regard for possible noise nuisance and unless exceptional are carried out during normal working hours along with routine servicing.	Unlikely	Noise annoyance	Not significant

In addition to the above table all staff and contractors are instructed not to raise voices or play radios etc. unnecessarily at night.

The three highest source contributors to the specific noise level are:

- the ridge fans and the gable end fans;
- broiler noise emanating from each shed; and
- the intermittent HGV movements.

Management of noise from these sources is key to this NMP, and techniques to minimise noise from these three components are discussed further.

### **Ventilation**

The ventilation requirements of the birds within the sheds varies depending on the age of the brood, internal environmental factors (temperature, air quality, relative humidity etc.) and external environmental factors (external ambient air temperature etc.).

The ventilation system fans will be inspected every crop turnaround, damaged fans will be with-drawn from use and noted for repair by an engineer. Broken or damaged machinery can generate excess noise resulting in greater stress for the birds as well as increased noise emissions. A full maintenance inspection will be undertaken by qualified engineers annually on the ventilation system.

The fans however are very quiet running, with the majority of the noise produced from the air movement being akin to a light breeze.

If a complaint of noise from the ventilation fans is received in the first instance the fans must be inspected to identify if maintenance is required.

After this inspection careful consideration of the on-time of the fan/s closest, or in line of sight, to the sensitive receptor must be made. It may be possible to reduce the fan on-time, and offset this decrease by an increase in the on-time of the fan/s furthest, or out of site, from the sensitive receptor. Noise levels may subsequently be mitigated.

### **Broilers**

The broilers are housed in state of the art poultry units.

In the calculation of the specific noise it was assumed that additional broiler noise would be constant during both the daytime period and the night-time period, a scenario that may be considered unlikely. At times it is likely that the broilers will be much quieter.

If broiler noise does lead to complaints, management techniques may be introduced to quieten the birds; such measures may include:

- increasing the temperature as broilers are noisy when cold;
- reducing draughts as draughts may cause broilers to cluster and elevate noise in a localised area; and
- reduce lighting as broilers are quieter when lighting is dimmed.

### **HGV Movements**

Whilst HGV movements will be infrequent, when they do occur, management of noise is required as they are a high contributor to the specific noise level.

Due to animal welfare considerations and factory opening times, this operation usually occurs over-night in order to minimise the bird's time in transit. The predominant noise source during this operation is from the lorries engines and also the sliding drawers on which the birds are held during transit.

As part of mitigation nearby residents will be informed of thinning and harvesting dates so that they are aware that HGV movements would be occurring at night.

The following management techniques will be used as part of the extension to the site;;

- scheduling traffic during bird catching to minimise duration
- instructing drivers to use low revs and drive at low speed;
- 15mph speed restriction is in place for any HGV's coming to or leaving the site, with a 10mph restriction once on the site. Speed restrictions are observed at all times.
- instructing drivers to turn engines off when stationary;
- maintaining the access road in good repair to avoid rattles and/or body slap; and
- restricting HGV arrival and departures to times when background noise levels are typically higher.
- the collection vehicles fitted with a plastic drawer system to reduce noise.
- Machine operators are to work inside the buildings.
- There will be no scraping of external concrete aprons – these areas are to be mechanically brushed only.

## **Noise Surveillance**

The purpose of noise surveillance is to demonstrate to the EA that the permitted development is being operated in such a manner as to minimise the noise impact at nearby noise-sensitive receptors. In the event that complaints are received noise monitoring would prompt remedial actions to ensure ongoing future compliance.

In the first instance a responsible person shall undertake regular noise patrols at the nearby noise-sensitive receptors. Audibility or otherwise of the site should be logged in a register.

The noise patrols will be undertaken on a daily basis in the first instance from receipt of a complaint and then move to fortnightly for monitoring should there be no further noise issues noted. Full investigation will be undertaken by the site operator until the noise problem is identified.

## **Complaint Procedure**

If a complaint is received from a local resident, an investigation shall be instigated within one working day to identify the cause of the non-compliance/complaint and the Noise Complaint Form will be filled in and appropriate action will be taken to remedy the problem should the complaint be validated.

A complaint investigation may involve the identification and cessation of the activity or activities considered to be the cause of the non-compliance/complaint and/or the investigation of mitigation measures to reduce the noise emission levels from the activity or activities, for example the replacement of noisy plant with quieter alternatives and/or the use of temporary screening mounds.

Any deviation from agreed working practices shall be identified immediately and conformance to the working practice reinstated.

If it is not possible to identify the source of the complaint it may be necessary to undertake a noise survey. If this is needed a suitably qualified person should be employed to undertake the required survey work. The date and results of the noise survey should be logged and reported in accordance with the relevant British Standard.



**NOISE COMPLAINT FORM DUNNIMERE FARM**

**REFERENCE NUMBER**

**DATE RECEIVED**

<b>Name and address of the caller</b>	
<b>Telephone number</b>	
<b>Location of caller to installation</b>	
<b>Time and date of complaint of offending noise</b>	

<b>Has the caller any other comments about the noise?</b>	
<b>Other comments from caller</b>	
<b>Weather conditions</b>	
<b>Wind direction/speed</b>	
<b>Any previous complaints relating to this noise?</b>	
<b>Any other comments</b>	

<b>Other information</b>	
<b>Potential source of noise that could give rise to the complaint</b>	
<b>Operations being carried out at time of complaint</b>	
<b>Follow up date and time caller contacted</b>	
<b>Action Taken</b>	
<b>Amendments required to the plan</b>	

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**Completed By**

**Dated**

**Signed**