APPENDIX G

Technical Guidance Note

IPPC SRG 6.02 (Farming)

Integrated Pollution Prevention and Control (IPPC)

Noise Management at Intensive Livestock Installations

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Record of changes

Version	Date	Change
Version 1, Draft 1	September 2002	Included as appendix in version 2 of Standard Farming Installtion Rules
Consultation Draft Version 1	March 2005	Guidance revised into a stand alone document for public consultation in England and Wales
Version 2	November 2005	Guidance revised following responses received from the public consultation

This guidance has been produced for England and Wales, Scotland and Northern Ireland. This document has undergone public consultation in England and Wales. It is anticipated that a public consultation on this guidance will take place in Scotland and Northern Ireland.

Contents

1 Background

1.1 What is IPPC?

Integrated Pollution Prevention and Control (IPPC) is a regulatory system that employs an integrated approach to control the environmental impacts of certain industrial activities. In England and Wales IPPC operates under the Pollution Prevention and Control (England & Wales) Regulations 2000 Similar regulations are in place in Scotland and Northern Ireland. In Scotland IPPC operates under the Pollution Prevention and Control (Scotland) Regulations 2000. In Northern Ireland, IPPC operates under the Pollution Prevention and Control Regulations (Northern Ireland) 2003 (Reference 1). These Regulations were made under the Pollution Prevention and Control (PPC) Act 1999, and implement the EC Directive 96/61 on IPPC. The Regulatory Regime applies to many industrial sectors, including the intensive farming of pigs and poultry. The threshold for such farms to be regulated under IPPC is:

- 40,000 places for poultry; or
- 2,000 places for production pigs (over 30kg); or
- 750 places for sows.

Regulation is achieved through the issue of a permit from the Environment Agency in England and Wales, the Scottish Environment Protection Agency (SEPA) in Scotland and the Environment and Heritage Service (NIEHS) in Northern Ireland. A permit covers all aspects of the operation of the farm as defined by the installation boundary. To gain a permit, Operators have to show that they have systematically developed proposals to apply the 'Best Available Techniques' (BAT) and meet other requirements for environmental protection, taking account of relevant local factors.

The Environment Agency, SEPA and NIEHS (referred to as the Agencies) have developed a simplified permitting approach for the farming sector, through the development of Standard Farming Installation Rules, the Scottish Standard Farming Installation Rules and the Standard Farming Installation Rules and Guidance (NI) respectively (Reference 2). These rules define BAT for the farming sector.

Aspects of noise management are integrated throughout the Standard Farming Installation Rules, but in some cases site-specific measures will be needed, and these must be identified in a Noise Management Plan.

The Regulations do NOT relate to occupational exposure to noise – only to noise as an environmental pollutant, i.e. beyond the installation boundary.

1.2 Who should use this guidance?

This guidance is specifically targeted at the pig and poultry sector, and includes many of the principles applied to all sectors regulated under IPPC referred to in Horizontal Guidance for noise (H3, Reference 3). The Agencies will refer to this Horizontal Guidance in determining conditions for noise at pig and poultry installations.

In England, Wales and Northern Ireland, you should use this guidance if:

- you answered 'yes' to question B2.9 on the application form, i.e. sensitive receptors are located within 400m of the installation; and/or
- the installation has a history of substantiated noise-related complaints within the last 3 years; and/or
- you are in the process of planning for a new installation, or extending an existing one – this guidance will provide information on best practice and impact assessment requirements.

In Scotland you should use this guidance for all applications.

1.3 How you should use this guidance

You should use this guidance in conjunction with the Standard Farming Installation Rules.

Section 2 provides guidance on the sources of noise, and some of the measures to minimise emissions.

Section 3 provides guidance on writing a noise management plan. This section should be used if you have sensitive receptors within 400m of the installation and/or the installation has a history of noise related complaints. You will need to consider some of the measures in section 2 in your noise management plan. In Scotland this section should be used for all applications.

Section 4 provides guidance on carrying out a noise impact assessment. This section should be used if you are in the process of planning for a new installation, or extending a new one and may be needed if you are applying for a permit for an existing installation. A noise impact assessment will often be required as part of the process of applying for planning permission. You may need to consult a noise specialist to complete the assessment, and should ask them to cover the points in this guidance.

1.4 What standards of noise control are expected?

1.4.1 What standard of control are we aiming for?

In the case of noise, pollution is considered in terms of causing environmental harm or offence to the sense of hearing, i.e. causing annoyance to people who live in the area or are there for some other reason, through exposure to noise.

The point at which 'pollution' in the form of offence to the sense of hearing is occurring, is taken to be the point at which there is 'reasonable cause for annoyance'.

The need to "prevent" noise emissions is, in certain situations, less relevant for noise than for some other pollutants. Noise does not accumulate on the installation or in the environment permanently like some pollutants. In other words, when the installation ceases operations, the original noise climate may be restored. The aim should be, wherever feasible, to ensure that proposed additions to existing plant or activities do not add to the overall ambient level. In some cases, however, this may be unreasonable or beyond BAT.

The aim of the legislation is to achieve 'no reasonable cause for annoyance' to persons beyond the boundary of the installation, i.e. sensitive receptors, as far as is possible using BAT. For many installations environmental noise will not be an issue but for others it will need to be considered and controlled.

Note: The PPC Regulations also treat vibration as a pollutant, but if there is a vibration problem specialist advice should be sought and discussions held with the Agency Officer.

1.4.2 Who are sensitive receptors?

Sensitive receptors are primarily people in houses, hospitals, schools and commercial premises, but can include people frequenting open spaces, for example, parkland. The person in control of the installation would not normally be considered to be a sensitive receptor. Persons who live in close proximity in tied housing may be sensitive receptors (consider the families of the farm workers). If such properties are rented to people who do not work on the installation, the tenants are likely to be sensitive receptors, even if they rent with the knowledge that there is a noise source nearby. Sometimes habitats, such as Special Protection Areas, may be considered as sensitive receptors, in which case detailed advice should be sought from the Agency Officer

In any particular situation however, the interpretation of the courts will be the decisive factor.

1.4.3 What is "no reasonable cause for annoyance"?

The amount of annoyance should not be assessed only by means of the number of complaints. Often, in rural areas few people are exposed to noise from intensive installations, but they are entitled to the same reasonable expectations of a satisfactory environmental noise climate as those living in a more populated area.

The legislation requires that the amount of time and money that you spend on taking measures to reduce noise should be in proportion to the annoyance caused or potential to cause annoyance. Good practice should be adhered to at all times by all installations, but if a large number of complaints are received, or the installation is close to a built up area then you may have to expend more effort to

reduce noise. BAT covers management techniques (i.e. Best Practice), site design and layout as well as specific noise control measures such as barriers and silencers to control noise.

It should be remembered that it is not only the level of noise that can cause annoyance, but sometimes the source itself or the time of day or night, as illustrated in the examples below:

- feed deliveries;
- animal noises such as pigs squealing;
- the time the noise occurs (noise is often more annoying at night or during leisure times);
- clattering or banging;
- tonal noise, with distinctive notes, hums or whines from vacuum pumps, fans, motors etc.;
- noise that is perceived as unnecessary.

1.4.4 Standards for new installations

New intensive livestock installations will have to use BAT from the outset. Indicative sector BAT may help operators understand the requirements. As part of the planning process it is likely that an applicant will be required to undertake a noise impact assessment (section 4) to predict the noise emissions.

The acceptability, or otherwise, of noise from the installation will be influenced by the existing noise climate and as the Standard Farming Installation Rules state, the requirements and conditions for noise will be site specific so it is not possible to be prescriptive on acceptable numerical values. However, a British Standard BS 4142:1997 (Reference 4) may be appropriate to offer guidance on the likelihood of complaints arising.

1.4.5 Standards for existing installations

Existing installations will be allowed an appropriate timescale to upgrade where meeting BAT will involve capital expenditure, but will be expected to adopt good management practices from the date of being granted a permit. Any required changes in operation will be identified in an improvement plan set by the Agencies. This improvement plan may require the operator to investigate alternative techniques, provide recommendations and set timescales for implementation.

1.5 Information requirements

When producing a noise management plan you must provide information on the:

- techniques employed to control noise;
- emissions of noise from the installation;
- assessment of the impact of those emissions on the environmental receptors.

The level of detail supplied in the application should reflect the level of risk. The higher the risk of causing annoyance or other environmental impact, the more detail is required and the higher the expectation of a proactive approach to noise control.

Where the activities are inherently quiet and there is no history of noise nuisance, information requirements will be minimal.

1.6 Time definitions

In this guidance, the following time definitions have been used:

Day time	0700 - 2300
Night time	2300 - 0700
Working week	Monday to Friday and Saturday morning but exclusive of public and bank holidays

1.7 Complaints

Noise complaints relating to an installation may be received directly by the Agency or via the Environmental Health department of a Local Authority. If the installation operator holds a PPC permit, the Agency will investigate the complaint and if there is found to be a breach of the permit conditions, a notice may be served, requiring the operator to address the issues or proceedings may be instituted. If the complaint relates to activities not covered by the permit, the matter will be dealt with by the Local Authority.

2 Management of noise

2.1 General aspects of noise management

2.1.1 Overview

This section gives an overview of some of the principles of good practice for noise reduction and control. Not all aspects will apply to all installations and some installations will have arrangements, which are not described here. You will need to pick out those elements, which most closely match your circumstances and add in any other sources or problems. Although this guidance note specifically addresses noise, many of the solutions to noise issues will also help control other emissions from the installation. In some circumstances noise control may compromise other issues such as animal health and welfare and in these situations a considered approach will need to be adopted. Care must also be taken to ensure that there is no conflict with guidance designed to protect health and safety, prevent water pollution or other impacts on the local environment.

Two reports prepared for MAFF (now Defra) in 1999 offer guidance on the control of noise on pig and poultry installations (References 5 and 6).

Many noise problems can be prevented by good management, consideration and ensuring a good standard of maintenance of plant and equipment. The hierarchy for control should be to:

1. ***Prevent*** generation of noise at source by good design and maintenance.
2. ***Minimise or contain noise at source*** by observing good operational techniques and management practice.
3. ***Increase the distance*** between the source and receiver.
4. ***Use physical barriers or enclosures*** to prevent transmission to sensitive receptors.
5. ***Sympathetic timing and control*** of unavoidably noisy operations.

2.1.2 Prevention and minimisation

Good design and management can prevent the generation of noise. This can include:

- selection of plant and equipment that produce less noise;
- suitable timing of noisy operations;
- appropriate siting of noisy operations and noise sources at the design stage.

It is far easier to deal with potential noise problems at the design stage of a new installation or an extension or alteration to an existing one. When new equipment is purchased it is often more effective to purchase quieter equipment, that is slightly more expensive, rather than have to modify it at a later date. Many manufacturers now provide detailed noise information on their products.

2.1.3 Increase the distance between the source and receiver

Care should be taken to site noisy activities away from noise-sensitive areas. The day to day location of equipment and vehicles on the installation and the way in which they are used can play a major part in reducing noise levels. Some noise sources are directional, such as fans or engine exhausts, and simply turning the noisy aspect away from the sensitive receptors can noticeably reduce the noise levels.

2.1.4 Acoustic barriers

The following are examples of good acoustic barriers:

- buildings on site;
- earth banks;
- heavy and solid close boarded wooden fencing, masonry walls;
- straw bales can provide good temporary noise barriers provided there is no fire risk.

All barriers should be high enough to break the line of sight and extend beyond the noise source so that the noise does not "wrap" around the ends and top of the barrier. Vegetation barriers (trees and hedges) are often thought to provide a degree of noise reduction if planted between the source and local dwellings. However in practical terms the reduction is marginal and barely noticeable, if at all, unless the planting is very thick and many tens of metres wide. The psychological effect of removing the noise source from view probably has a much greater overall effect on the perception of the noise rather than the actual noise reduction offered.

2.1.5 Complaints procedure

A procedure should be established for verifying and responding to complaints about noise. The existence of a complaints procedure can help you to:

- improve relationships with neighbours;
- identify sources of noise and prevent future problems.

Prompt action in response to complaints, including a discussion with an explanation to the complainant, is very important and may stop issues escalating and further complaints being made. It should be remembered that when people are woken at night, for example, by something that they believe to be avoidable (whether it is or not) they might be short-tempered. A quick and sympathetic response to complaints can often defuse a situation to the benefit of the complainant and the operator.

A suggested form for recording complaint details is given below.

The complaints record form should be tailored to the specific installation, location and neighbours, but most will have the following elements:

1) The form should be completed, signed and dated by a 'responsible person'.

2) The name, address and telephone number should be given by the caller.

3) Each complaint should be given a reference number.

4) The caller should be asked to give details of:
   - the time the noise was heard;
   - how long it lasted;
   - how often it occurs;
   - the nature of the noise – what sort of noise was it? What did it sound like?

5) The 'responsible person' should then, if possible, make a note of:
   - the weather conditions at the time the noise was detected – usually wind direction and a note of the conditions (light wind, no wind, strong breeze, or use the Beaufort scale in Table 2.1, clear, full cloud cover etc); and

- the activity on the installation at the time the noise was detected, particularly anything unusual.

Table 2.1 Beaufort scale

Force	Description	Observation	km/hr
0	Calm	Smoke rises vertically	0
1	Light air	Direction of wind shown by smoke drift, but not wind vane	1-5
2	Light breeze	Wind felt on face; leaves rustle, ordinary vane moved by wind	6-11
3	Gentle breeze	Leaves and small twigs in constant motion	12-19
4	Moderate breeze	Raises dust and loose paper; small branches are moved	20-29
5	Fresh breeze	Small trees in leaf begin to sway, small branches are moved	30-39
6	Strong breeze	Large branches in motion; umbrellas used with difficulty	40-50
7	Near gale	Whole trees in motion; pressure felt when walking against wind	51-61

6) The reason for the complaint should be investigated and a note of the findings added to the log – this need not be complicated but should be sufficient to identify any activity that may have led to the complaint.

7) The caller should then be contacted with an explanation. It often helps if you can show that you have taken some kind of action to minimise the noise in future.

Following complaints it may be appropriate to review the Noise Management Plan, if one exists.

The complaints record relating to activities covered by the permit, should be made available to the Agency on request.

Typical form for the recording of a noise complaint

Noise Complaint Report Form		
Installation to which complaint relates:	**Date recorded:**	**Reference number:**
Name and address of caller:		
Tel no. of caller:		
Location of caller in relation to installation:		
Time and date of complaint:		
Date, time and duration of offending noise:		
Caller's description of noise (e.g., hiss, hum, rumble, continuous, intermittent, vehicle noise, machinery):		
Has the caller any other comments about the offending noise?		
Weather conditions (e.g. dry, rain, fog, snow):		
Wind strength and direction (e.g. light, steady, strong, gusting) or use Beaufort scale (see Table 2.1):		
Any other previous complaints relating to this noise?		
Any other relevant information:		
Potential noise sources that could give rise to the complaint:		
Operating conditions at the time Offending noise occurred – e.g. deliveries, feeding, use of machinery etc:		
Follow-up Date and time caller contacted:		
Action taken:		
Amendment requirement to noise management plan:		
Form completed by:		Signed:

2.2 Noise management in intensive livestock installations

This section identifies the more common noise problems arising on installations that have the potential to affect people nearby, and offers suggestions for preventing or reducing noise in each case. Not all of the sub-sections will apply to all installations and some will have noise sources not discussed below. These aspects will be determined on a site-specific basis.

In many cases restricting noisy operations to reasonable times may be sufficient to overcome environmental noise problems. Reasonable times are generally considered to be the normal working day (see section 1.6), but it is understood that certain activities may have to be undertaken outside the normal working day, in which case additional measures may be required in order to achieve a satisfactory noise climate. The noise emitted by activities such as feed milling can be reduced considerably by enclosure within insulated buildings. It should be remembered however that the effectiveness of any form of building or enclosure as a means of reducing noise can be severely compromised by leaving doors, windows or unguarded vents open.

2.2.1 Good operational practices to reduce noise

Problem	Actions to prevent or minimise noise
Feed, fuel and other deliveries	• **Location** Feed bins should be located so that, as far as possible, delivery movements and handling on site are reduced. Their location should not be in conflict with biosecurity arrangements. Delivery and collection points for feed, fuel, other materials, livestock, slurry and other waste should be sited, as far as is practicable, to benefit from the noise screening effects of local barriers, such as the lie of the land and buildings, to achieve optimum benefit. • **Operation** Staff, contractors and visitors should be instructed not to raise voices or play radios unnecessarily at night. Pagers or mobile phones may need to be considered for on site communications. Hard materials should be lowered on to hard surfaces rather than dropped. The drop height of any bulk material should be reduced as much as possible. • **Timing of operations** Delivery and collection of feed, fuel, other materials, livestock, slurry and other wastes should take place at reasonable times, i.e. during the normal working day, as far as is practicable. Drivers should comply with any speed limits on site and avoid taking empty vehicles over rough ground wherever possible.
Ventilation fans	• **Design** Efficient design of ventilation fans will minimise the number needed per building. The use of sheet metal or other similar materials of construction, which may vibrate, should be avoided, where practicable. Use fewer, larger fans operating at lower speeds or variable speed fans that may produce less noise than smaller high speed fans. N.B Although this is an effective means of noise control, variable speed fans are less effective at odour dispersion so a balance needs to be achieved. Minimising the resistance at the inflow and outflow to avoid placing unnecessary loading on each fan. Fan outlet cowls and stacks can provide noise reduction but, if too small, can increase the pressure drop by restricting airflow.

	• **Location** Orientate noisy equipment in one direction so that noise is directed away from noise-sensitive areas. Locate fans at low level, i.e. on sidewalls, rather than at rooftop level as any noise emitted will be more readily blocked by other buildings, local topography etc. N.B. Although this is an effective means of noise control, variable speed fans are much less effective at odour dispersion so a balance needs to be achieved. Use acoustic barriers to absorb the noise. • **Operation** The use of inlet silencers may be suitable for fan pressurised ventilation systems. Increase the absorption capacity of a building by increasing the presence of rough surfaces such as straw bales inside to absorb sound. • **Timing of operations** Poultry – a small number of fans operating continuously is preferable to a larger number, switching off and on, particularly at night. However, a number of fans running continuously may not give the correct minimum ventilation required by the operator. • **Inspection and maintenance** Fans should be maintained and inspected in accordance with the manufacturers or suppliers instructions. Out of balance or worn fans can produce high noise levels with annoying frequencies or tones. • **ACNV (Automatically Controlled Natural Ventilation)** ACNV is an alternative method of ventilation but its use may be restricted by welfare or production factors and may be less effective at odour dispersion, so a balance needs to be achieved. Its effectiveness can be affected by its location, in particular being sheltered by other buildings, hedges etc. such that it is not always a viable alternative to fan-assisted ventilation.
Vehicles and machinery on site	**You should ensure that you comply with Health and Safety requirements when considering how to reduce noise from vehicles and machinery.** • **Design** Reduce the need for scraping by minimising the area of yard contaminated when removing manure and litter from buildings. Pressure washers and compressors may need to be placed inside buildings, purpose built or proprietary acoustic enclosures during use. Always consult with the manufacturer or supplier before enclosing any plant since suitable ventilation may be required to prevent overheating. • **Location** Noisy machinery and operations should be sited as far as possible from noise sensitive areas. Loading/offloading points can be screened by the use of natural barriers (buildings, fences) or temporary screens such as straw bales. Generators should be placed within an acoustic enclosure or sited behind an acoustic barrier. Suitable insulation can be provided as part of a packaged generator set or by the use of an acoustically insulated building. Consideration should be given to the frequency of use, the level of risk

	involved and the cost implication. • **Operation** Care should be taken to prevent unnecessary movements of trailers and loaders. Avoid idling of machines between work periods and revving of engines. Catching should be organised to minimise manoeuvring of forklift trucks etc. outside of buildings. Staff, contractors and visitors should be instructed not to raise voices or play radios unnecessarily at night. Pagers or mobile phones may need to be considered for on site communications. • **Timing of operations** If powered equipment is used, cleaning out and removal of manure and litter should take place at reasonable times, where practicable. • **Inspection and maintenance** Site roads/tracks should be maintained in a state of good repair to reduce any noise from the passage of vehicles. Ensure loaders and tractors etc. are well maintained especially exhaust systems and silencers. Reduce noise caused by vibrating machinery with rotating parts by proper servicing, balancing and regular maintenance. Lack of maintenance may lead to overheating, resulting in engine covers having to be left open. Reduce noise caused by friction in conveyor rollers, trolleys and other machines by proper lubrication and regular maintenance. Testing of emergency generators and alarms should be carried out during the daytime of the normal working week and preferably between 0900 and 1700. The noise level emitted by the alarms must not exceed that required to alert persons working within the site. However, to ensure the response given by call centres is 100%, alarms may also be tested at weekends. The disturbance caused by their testing can be minimised by testing at the same time and day of the week or month etc. If there are problems local residents should be consulted and timings of testing discussed with them. Testing should be in accordance with manufacturer or supplier instructions.
Feeding equipment	• **Design** Auger systems are usually the quietest and most energy efficient method of transporting feed mechanically. • **Operation** Conveyors or augers should not normally be operated when they are empty. Pipe and/or conveyor runs should be kept as short as possible. Pneumatic transfer systems can be a source of high frequency noise. It is often preferable to use a higher capacity system running at a lower speed than to use a low capacity system at high speed. • **Timing of operations** Feed mills should be operated at reasonable times. Operate hammer mills and pneumatic conveyors when background noises are highest to minimise effect.

	• **Inspection and maintenance** Maintain equipment to ensure equipment is operating to optimum standards.
Manure and slurry handling	• **Design** External runs should be constructed so that they are protected from the weather and to prevent noise generation. Pneumatic conveyor systems should be designed to minimise the length of the run and number of bends. • **Location** Conveyors for manure should be contained within a suitably constructed enclosure appropriately designed to reduce noise emissions. • **Timing of operations** Operate equipment and vehicles at reasonable times, whenever possible. • **Inspection and maintenance** Maintain equipment to ensure equipment is operating to optimum standards.
Animal noise	• **Feeding pigs** Use passive feeding techniques where appropriate, to minimise squealing in anticipation of feeding. Reduce noise produced in response to a stimulus prior to feeding by direct delivery of feed. • **Stocking and destocking between cycles** The timing and methods used in stocking and destocking of animals should be carefully considered to minimise any noise produced.

3 Writing a noise management plan

You will need to produce a noise management plan if:

- You answered 'yes' to question B2.9 on the application form, i.e. sensitive receptors are located within 400m of the installation or the installation has a history of noise-related complaints; or
- You are making your application in Scotland.

3.1 How to write a noise management plan

To produce a noise management plan you should do the following:

1. Identify the sources of noise and/or complaint on your installation

Carry out a **subjective assessment 'walk around'** to identify where noises are coming from.

This type of assessment does not involve measuring or predicting noise levels - instead it relies upon a subjective assessment of whether the noise is audible or not, how loud it sounds and if it has any noticeable characteristics. However, operators should be aware of the limitations of a subjective methodology given the subjective nature of when noise becomes annoying.

This assessment can be carried out at specific points around the perimeter of the installation or close to the sensitive receptors, during a typical day, evening and night. There are two aspects of this assessment:

1) Assess individual noisy events when they take place, such as deliveries, feeding time or manure scraping; and
2) Longer continuous noises such as fans, generators etc. that run for prolonged periods. These long term noise sources should be assessed when they are likely to be more intrusive.

Unless the distances are more than a few hundred metres the influence of the weather on noise levels is quite limited, but the weather itself can affect the sound levels in an area, by blowing in trees and hedges, and this could result in a false impression of the impact being formed. Hence the assessment should be undertaken when:

- Any busy roads nearby are dry since wet roads are noisier than dry roads;
- It should not take place in bad weather conditions such as rain, fog, snow etc.;
- There should be no temperature inversions (i.e. still conditions, often with mist forming in layers);
- The wind speed and direction should be noted, and ideally the force should be less than Force 2 of the Beaufort Scale (see Table 2.1).

You should spend at least 3 to 5 minutes at the monitoring point(s) chosen and, if the noise is audible you should consider which of the following best describes the volume of the noise when localised or intermittent noise sources are quiet (e.g. no passing cars):

- Inaudible
- Barely audible
- Clearly audible
- Loud and intrusive

You should also consider whether it is has any characteristics that may be annoying, such as whines, bangs or clatters, and animals squealing. Careful thought must be given to this aspect since the nature of the noise may be disturbing, even though the volume may be quite low.

A description of the noise should be recorded, together with its intensity and characteristics. The date and the precise monitoring location as well as the name of the person undertaking the assessment should be recorded.

2. Look at the noise sources and corrective actions discussed in Section 2

Note down those sources or activities which **do** cause a problem on your installation and the types of corrective actions that you will need to highlight in your noise management plan.

3. Transfer the relevant information into the Noise Management Plan template in Section 3.2

- Identify each noise problem/source in the 'Noise problem' column.
- Select the appropriate corrective action from Section 2 for each problem. Adapt it to your particular circumstances – what would you do on your installation to achieve the same outcome?
- Identify the corrective actions in the 'Actions' column.

Ideally, you should discuss your proposed plan with the Agency Officer before you send it in together with your Permit application. Where you already have a Permit and need a noise management plan to deal with specific problems, you should discuss it with the Agency Officer and then send a copy to the Agency.

You will be expected to follow the actions you have set out in the plan.
If there are complaints and you can show that you have complied with these actions then the Plan may need to be revised. You should start again at Point 1, above and discuss this with the Agency officer.

If you have not complied with the Plan and complaints are received, then you may be liable to enforcement action.

If you cannot control the noise by use of good practice then the Agency may require more stringent measures to be used. It is therefore in your interest to ensure that the Noise Management Plan is adhered to by all those employed at the installation as well as visitors, contractors etc.

3.2 Noise management plan example and template

This section contains a blank table (Noise Management Plan Template) on which to note down the installation-specific actions to be taken. The columns should be completed using the guidance given in Section 3.1. You should adjust this as necessary to make it relevant to the noise problems on your particular installation. Allocate number references to each problem and put these into the left-hand column.

Where specific actions are required, such as maintenance it should also be recorded in the noise management plan.

An example of the type of information used to complete the template is given in Table 3.1.

Table 3.1 Example Noise Mangement Plan Template

No ref	Noise problem	Actions you will take to prevent or minimise the noise	Completion date
1	Rattling and clanking from operation of conveyor	Regular maintenance and proper lubrication. Minimise empty conveyor running.	
2	Rearing of broiler chickens in ventilated houses	Fans maintained and inspected to manufacturers instructions. Inspect roof on House No.5 and fasten down metal sheeting. Review once completed.	
3	Early morning loading of pigs for transport	Load animals behind machinery store to act as a barrier between animals and New Village Cottages. Instruct contractors not to whistle and shout.	
4	Bird catching	All handlers trained to Assured Chicken Production standards to minimise bird stress and noise.	
5	Cleaning of animal housing	In reasonable time only. Notice of manure movements given to neighbours 1 week in advance. Litter is moved from housing direct to trailers in the doorways of the buildings and removed immediately from site, to minimise vehicle movements.	
6	Emergency generator	Test time Tuesday 11am. Timing agreed with neighbours. If emergency generation is required, Neighbours will be notified within x hours.	
7	Bird feeding	The existing conveyor system to be replaced by auger system by MM/YYYY.	
8	Delivery of feed	No deliveries outside 7pm. Feed company X has fitted silencers to all vehicles for transfer to feed bins.	
9	Delivery of fuel	No deliveries outside 6pm.	
10	Other (specify) Advice for staff, contractors and visitors	Advice notices in the site office covering the points above. Instruction not to shout unnecessarily. Instruction to turn off engines while not in use.	

Noise Management Plan Template

No ref	Noise problem	Actions you will take to prevent or minimise the noise	Completion date

4 Full noise impact assessment

4.1 Overview

This section describes the options for carrying out a full noise impact assessment. It also describes the information that should be contained in the impact assessment report. You may need to consult a noise expert in order to carry out a noise impact assessment.

You may need to carry out a full noise impact assessment if:

- you are applying for a Permit for an existing unit and have answered yes to any part of Question B2.9 of the PPC permit application form; and
- a subjective "walk round" assessment suggests that a noise problem exists or is likely to occur.

You will need to carry out a full noise impact assessment if:

- you are applying for a Permit for a new unit or you are applying for a variation of a Permit for an extension to an existing unit and there are sensitive receptors which may be affected; or
- you have failed to control noise sufficiently using housekeeping measures and consequently other steps are needed to reduce the noise emissions.

The closer the sensitive receptors the greater is the likelihood that a full noise impact assessment will be needed. Additionally, in the case of extensions to existing installations, the complaint case histories may influence the need for an impact assessment.

It should be noted that an impact assessment which has been carried out for planning purposes may not contain sufficient information for an IPPC application. You should check with the Agency Officer.

In all cases you will be expected to regularly (e.g. monthly, quarterly – depending on the risk of an off site impact) walk around the installation perimeter and at, or near, the sensitive receptors to listen if the noise from the installation can be heard. This is a 'subjective assessment' as described in Section 3.1. People who are generating the noise through their own operations often become tolerant to it so it is often helpful to get someone who does not spend all their time at the installation to do this.

There are two main methods in carrying out a noise impact assessment:

- measuring emissions;
- predicting emissions.

The method chosen depends on whether it is an existing installation, an extension to an existing installation or a proposal for a new installation.

A full assessment will almost certainly have to be carried out by a noise expert who is suitably qualified and/or experienced in undertaking and reporting environmental noise assessments.

In the case of an existing installation the noise levels would normally be measured at the most affected sensitive receptors and the measured levels compared to the background levels and recognised standards such as BS 4142:1997. However, in some cases the noise levels may be measured closer to the installation and then the levels at the affected receptors calculated.

In the case of a new installation, or an extension to an existing one then it is more likely that the levels will have to be predicted. The predictions can be based on the noise from the existing installation, manufacturers data or data from a similar installation or a combination of all, or any, of these.

4.1.1 Acoustic terms

dB (decibel)

A decibel is the unit of measurement of sound level. As sound can vary in intensity within the range of human hearing, a logarithmic loudness scale (similar to the Richter scale for earthquake magnitude) is used to keep sound intensity numbers at a manageable level.

Adding together two equal sound sources will increase sound intensity by approximately 3 dB. For example, two feed delivery lorries of a sound intensity level of 92 dB would increase the sound intensity to about 95 dB.

The threshold of hearing is 0dB and 140 dB is the threshold of pain. A change of 10 dB corresponds approximately to halving or doubling the loudness of sound.

dBA

Since the human ear is not equally sensitive to all sound frequencies, noise level measurements are adjusted and given an A-weighting, expressed as the unit dBA. This is used for evaluating continuous or average noise levels.

Typical Noise Levels for Common Sounds (Reference 7)

Noise Level dBA	Common Sounds
0 - 5	Faintest audible sound
18 - 25	TV and sound studio
20 - 30	Quiet library
40 - 45	Quiet office
55 - 60	Conversation
65 - 75	Loud radio
75 - 85	Busy street
90 - 100	Heavy lorry (7m away)
110 - 115	Punch presses
115 - 120	Riveting, boiler shop
140	Jet aircraft taking off 25 m away

Background Noise Level $L_{A90,T}$

Background noise consists of noises present in the environment such as in the table above. The measurement of the overall background noise level, adjusted with an A-weighting in decibels exceeded for 90 per cent of a given time, is expressed as the $L_{A90,T}$. In rural areas, daytime background levels may be between 38 - 42 dB but can fall to below 30 dB during the night.

Equivalent Continuous Noise Level $L_{Aeq,T}$

Some noises vary in their intensity and how long they last. The equivalent continuous noise level, measured in $L_{Aeq,T}$, is a measure of the average amount of noise measured within a specified time period. It can be measured directly with an integrating sound level meter over time ranges from one second to 24 hours.

4.2 Measuring emissions

Noise measurement and prediction is a complex matter and further guidance can be found in IPPC H3 (Reference 3) but invariably will have to be undertaken by a suitable qualified and experienced noise expert. All measurements and assessment should be carried out in accordance with BS 4142:1997 Method for rating industrial noise affecting mixed residential and industrial areas (Reference 4).

Section 10 of the standard details the information that shall be reported for a full assessment. This includes:

- the source(s) under investigation;
- subjective impressions;
- measurement locations;
- sound level measuring instruments used;
- field calibration details;
- weather conditions;
- date(s) and time(s);

- specific noise level(s);
- measurement time intervals;
- reference time intervals;
- rating level;
- background noise level;
- excess of rating level over background.

The standard requires that daytime assessments are based on the $L_{Aeq,T}$ from the noise source over a period of 1 hour, while at night-time an assessment period of 5 minutes is specified.

4.3 Predicting emissions

When it is not possible to measure emissions, perhaps because the impact assessment relates to a proposed installation, it is possible to predict emissions by using:

- measurements taken at a similar unit (similarity must be justified);
- manufacturer's data; or
- typical noise levels for example References 5 and 6 reproduced below:

Example Noise Levels on Pig Units (Reference 5)

Noise Source	Sound Pressure Level dBA	Equivalent Continuous Noise L_{eq} dBA
*Pig fattening house: *inside building*	93	87
*Sow accommodation: *hand feeding (inside building)*	99	91
*Normal pig building environment: *inside building*	67	
*Mill Mix Unit: *inside building*	90	85
outside building	63	
*Pig building ventilation fans (*outside building)*	43	
Feed delivery lorry (5 metres from side)	92	
Power washer (5 metres from side of pump)	88	
Propane gas delivery lorry (5 metres from side)	82	

* The time period used and the distance the source is measured from follow the requirements of BS 4142:1997.
Reference to 'Pig fattening house' is now more commonly known as 'Pig finishing accommodation'.
N.B. These data were collected in 1999 and may not be representative of current noise levels

Example Noise Levels on Poultry Units (Reference 6)

Noise Source	Sound Pressure Level dBA	Equivalent Continuous Noise L_{eq}dBA
*Catching and handling broilers		57-60
*Mill Mix Unit: *Inside building*	90	85
Outside building	63	
Stock Ventilation Fans	43	
Feed delivery lorry (5 metres from side)	92	
Power washer (5 metres from side of pump)	88	

* The time period used and the distance the source is measured from follow the requirements of BS 4142:1997.
N.B. These data were collected in 1999 and may not be representative of current noise levels

4.4 Interpretation of noise–level difference

The likelihood of complaints can be assessed by subtracting the measured background level from the noise source level to give a 'difference' rating. The greater the difference, the greater the likelihood of complaints:

- a difference of around + 10 dB or more indicates that complaints are likely;
- a difference of around + 5 dB is of marginal significance;
- a difference of below - 10 dB is a positive indication that complaints are unlikely.

4.5 Noise impact assessment reporting

A report, where required, should be completed once the full noise impact assessment has been completed.

4.5.1 Overview

The following is a summary of good practice in terms of reporting protocol and should allow confirmation that the scope and conduct of the work has been competently handled and reflects the variability in noise emissions.

4.5.2 What should a report cover?

Each assessment will be different and installation-specific but there are a number of common features, which should be covered in a well-planned and executed survey. Detailed information is available in IPPC H3 (Reference 3).

Unless the assessment is deliberately targeted at specific events only, it is usual to consider both 'normal' operation and also 'worst case'. When carrying out an assessment to predict the impact of a new installation or an extension to an existing one it is important to make sure that these particularly noisy operations are included.

The report may also make recommendations as to the possible measures that could be taken to achieve BAT, both in terms of housekeeping and other management practices, and options for noise reduction by the addition of end-of-line abatement equipment.

The aspects which should be addressed during the survey, and reflected in the final report, can be broadly categorised as:

- summary of findings;
- a description of the process, its throughput and location;
- a statement of the objectives of the survey;

- a description of the methodology used for sampling and analysis;
- a description of the installation-based work actually undertaken;
- monitoring results;
- interpretation of the results and conclusions drawn;
- recommendations and discussion.

For each aspect, the following would be expected:

i) Summary of findings

A summary of the report.

ii) Process description and 'scene-setting'

The following should be included, as appropriate:

- The location of the installation in relation to the nearest sensitive sites (usually dwellings).
- A diagram of the layout and/or map showing the relative positions of the animal housing and the nearest residential houses.
- A description of the process - including the number of animals, and the techniques used to minimise noise. A description of the nature of the buildings, the ventilation system or other operation such as milling should be given, if appropriate.
- A description of the nature of the noise problem and the typical rate of occurrence.
- Complaint history - numbers, quantity, duration, frequency, any pattern or trends.
- The location and nature of any other potential noise sources in the locality, which may affect measurements, such as a busy nearby road.
- A description of any work previously undertaken with respect to the noise issue - perhaps previous survey work or actions taken to mitigate noise and the success or failure of such measures.

iii) A statement of the objectives of the survey

iv) A description of the methodology used for sampling and analysis

A description of the main features of any standards or other methodologies used. Where sound level measurement is undertaken, the guidance given in the BS 4142:1997 (Reference 4), should be followed and all departures from the procedures described should be justified and recorded.

- a description of the equipment used for sampling and analysis;
- an estimate of error associated with both sampling and analysis.

v) A description of the activities going on when the samples were taken

It is usual to consider 'worst case' and normal operation when carrying out a noise impact assessment. This will entail taking samples at an appropriate time relative to the work being undertaken to account to any variation in emissions in order to avoid 'averaging' the peaks.

The report should detail:

- sampling locations;
- sampling times;
- an explanation of why the particular sampling points and sampling times were chosen;
- process activities whilst the work was being undertaken;
- weather conditions on the day of the survey and wind direction, and strength.

vi) Monitoring results

- raw data should be given - lack of raw data prevents checking or validation of the scope of the assumptions made;
- time elapsed between sampling and assessment;
- any deviations from standard analytical/assessment methods.

vii) Interpretation of the results and conclusions drawn

- A description of the data that was input into the model to account for topography and buildings, meteorology etc. State the origin of the meteorological data obtained and which area it relates to and why it is applicable to the particular assessment. (Wind directions given by met stations would generally relate to open land). Care is needed in applying the frequencies directly to mixed terrain, hills, valleys etc.
- Any features of the local topography which are likely to have an effect on the noise levels.
- A statement of any assumptions that have been made with respect to predictions used in place of sampling.
- Maps, figures and contour plots used to illustrate the extent of noise impact, including identification of specific sensitive receptors.

viii) Recommendations and discussion

This will obviously be strongly influenced by the nature and purpose of the survey and may cover:

- an estimate of the likely impact of current or predicted emissions on sensitive receptors;
- an estimate of the amount by which emissions will need to be reduced to avoid causing annoyance;
- suggested changes to activities or buildings;
- relevant control technology and costs if available;
- measures to be employed to monitor the effectiveness of any changes made.

The above is not exhaustive but should be provided as a minimum (where relevant to the purpose of the survey) by a competent expert or survey team.

The completed Noise Impact Assessment report should be submitted to the Environment Agency as part of the supporting documentation to the permit application.

References

1. The Pollution Prevention and Control (England and Wales) Regulations 2000. The Stationery Office ISBN 0 11 099621 6.

   The Pollution Prevention and Control (Scotland) Regulations 2000. The Stationery Office ISBN 0 11 059467 3.

   The Pollution Prevention and Control Regulations (Northern Ireland) 2003. The Stationery Office ISBN 0 337 94832 1.

2. IPPC Standard Farming Installation Rules and Guidance, Version 4, June 2005, Environment Agency.

   Standard Farming Installation Rules for Pig and Poultry PPC Installations. Version 1.1, February 2001, Scottish Environment Protection Agency.

   Standard Farming Installation Rules and Guidance, Version 1, April 2003, Northern Ireland Environment and Heritage Service.

3. IPPC Horizontal Guidance for Noise (IPPC H3) Part 1 — Regulation and permitting, Environment Agency, September 2002, ISBN 0 11 310123 6. Part 2 — Noise assessment and control, Environment Agency, September 2002, ISBN 011 310187 2.

4. BS 4142:1997 Method for rating industrial noise affecting mixed residential and industrial areas, BSI ISBN 0 580 28300 3.

5. Metcalfe J. P. 1999. Guidance on the control of noise on pig units. (Guidance produced by ADAS for Defra).

6. Metcalfe J. P. 1999. Guidance on the control of noise on poultry units. (Guidance produced by ADAS for Defra).

7. Noise at Work – Advice for employers. Health and Safety Executive INDG 362.

APPENDIX H
Control Room
HEAT EXCHANGERS
5096
21440 O/A WALLS
109796 O/A BIRD AREA
HIGH VELOCITY EXHAUST FANS
WINDOWS
SIDES: BOX PROFILE POLYESTER COATED STEEL SHEETING.
(COLOUR : TO LOCAL AUTHORITY APPROVAL)
FIBREGLASS INSULATION WITH WHITE STEEL LINER SHEETING.
ROOF: BOX PROFILE POLYESTER COATED STEEL SHEETING.
(COLOUR : TO LOCAL AUTHORITY APPROVAL)
FIBREGLASS INSULATION WITH WHITE STEEL LINER SHEETING.
FEED BINS
109796
GABLE ENDS: BOX PROFILE POLYESTER COATED STEEL SHEETING.
(COLOUR : TO LOCAL AUTHORITY APPROVAL)
FIBREGLASS INSULATION WITH WHITE STEEL LINER SHEETING.
7113
5912
3040
21440
5096
REAR ELEVATION
UNIT-B
FRONT ELEVATION
RECEIVED
04/06/2015
Morspan

APPENDIX B

Warwickshire County Council

Bird Broiler Unit Impact Assessment

An analysis of the potential health impacts, both beneficial and adverse, that the proposed 40,001 bird broiler unit in North Warwickshire Borough might have on local residents

Gemma McKinnon
10/30/2015

1. Context

1.1 Site description and policy framework

1.1.1 The following assessment has been prepared to explore the potential health impacts (both beneficial and adverse) of a Bird Broiler Unit installation may have on local residents within North Warwickshire Borough.

1.1.2 The proposed location of the installation is at Crown Stables, Nuneaton Road, Mancetter, as shown in figure 1.

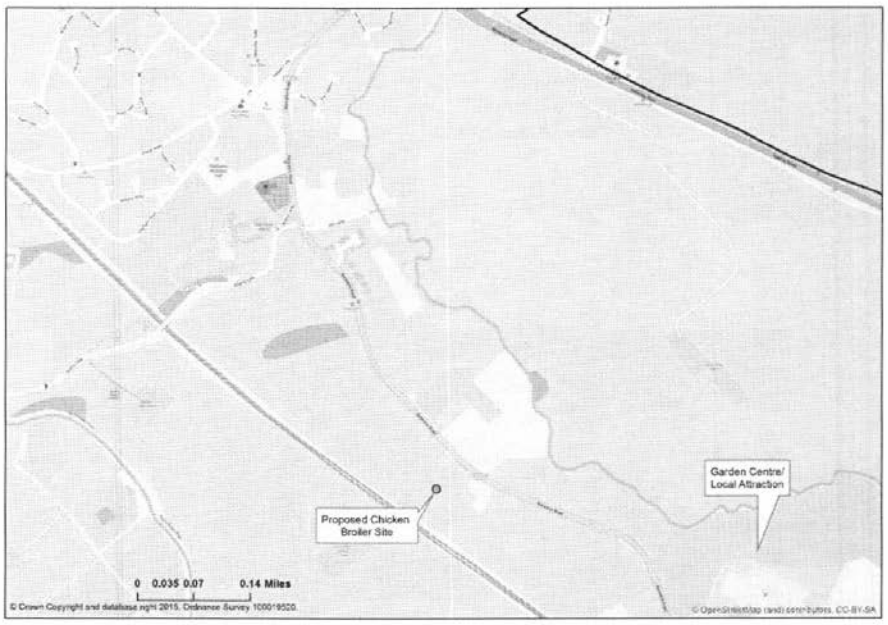

Figure 1: Proposed 40,000 Bird Broiler Unit site

1.1.3 The site area is situated in a predominantly rural area characterised by arable and grassland agriculture. Topography in the area is very gently undulating, with large flat areas on flood plains to the east, with the land rising more steeply to the west. Drainage in the area is provided by the River Anker which flows to the east, and the Coventry Canal which passes west of the site.[i]

1.1.4 The nearest urban areas are Mancetter (1km), Witherly (1.5km) and Atherstone (2km) to the north and Hartshill (1km) and Nuneaton (5km) to the south-east.[ii]

National Policy

1.1.5 The National Planning Policy Framework (NPPF) set out the Government's planning policies for England and how these are expected to be applied. As highlighted in paragraph 171 It places a duty on the County Council and the Director of Public Health to provide advice and guidance on health and wellbeing matters:

"local planning authorities should work with public health leads and health organisations to understand and take account of the health status and needs of the local population (such as for sports, recreation and places of worship), including expected future changes, and any information about relevant barriers to improving health and wellbeing."

1.1.6 The NPPF calls on the planning system to prevent both new and existing development from contributing to, or being put at unacceptable risk from being adversely affected by unacceptable levels of soil, air, water, or noise pollution or land instability.

1.1.7 Action to manage and improve air quality is driven largely by EU policy. The 2008 Ambient Air Quality Directive sets legally binding limits for concentrations in outdoor air of major air pollutants that impacts public health such as particulate matter (PM_{10} and $PM_{2.5}$) and nitrogen oxide (NO_2).

1.1.8 The Marmot review[iii] recommends 3 main policy actions to try to ensure that the built environment promotes health and reduces inequalities for all local populations.

1. Prioritise policies and interventions that both reduce health inequalities and mitigate climate change by:
   - Improving active travel;
   - Improving good quality open and green spaces;
   - Improving the quality of food in local areas; and
   - Improving the energy efficiency of housing
2. Fully integrate the planning, transport, housing, environmental and health systems to address the social determinants of health in each locality
3. Support locally developed and evidence-based community regeneration programmes that:
   - Remove barriers to community participation and action; and
   - Reduce social isolation

Local Policy

1.1.9 Warwickshire County Council is in the process of drafting an Air Quality Position Statement to inform local decision making. This will align with National Policy on air quality, as stated in section 1.1.7.

1.1.10 Warwickshire's Health and Wellbeing Board has prioritised the following areas in order to ensure that health and social care outcomes for Warwickshire residents are improved:

1. Promoting independence;
2. Community resilience; and
3. Integration and working together.

The latter priority is integral to success and the Health and Wellbeing Board in Warwickshire is committed to enhanced integration and effective joint working across Health, Social Care, Public Health and Community sectors, but also across other key organisations such as Environmental Health, Housing, Planning and Transport

1.2 Project description

1.2.1 The following project description has been taken from the Environment Agency's draft application determination document.[iv] The installation consists of a single broiler unit providing capacity for 40,001 broiler places (boilers are chickens bred specifically for meat production).

1.2.2 Day old chicks are brought into the unit and fed and watered until they reach around 37 days of age, at which point they are removed from the site and taken to a meat processing facility. There is a 7 day cleaning period plus the stocking and destocking time resulting in an average cycle length of 48 days.

1.2.3 The chicks are bedded on wood shavings to a minimum depth of 2cm; fresh bedding is added throughout the cycle. Non-leaking drinking systems will be used so that the litter does not get too wet, reducing the likelihood of run off to the underground reception pit.

1.2.4 The clean out process takes place generally within 24 hours of destocking (maximum 48 hours), and comprises removing the manure / bedding from the building, steam cleaning and washing down the internal surfaces and applying disinfectant. Once the unit is fully dry, new bedding will be added and the building restocked with chicks.

1.2.5 Building ventilation will be reduced to a minimum during the clean out process to contain dust and particulate within the confines of the building.

1.2.6 All manure is exported from the installation on covered trucks for use in an energy recovery facility. No manure will be stored on site.

1.2.7 Water from the wash out of poultry houses, and condensate from heat exchanger, will drain to an underground reception pit (covered) close to the broiler unit to await collection and export off site by a road tanker.

1.2.8 There will be no emissions to sewer.

1.2.9 The broiler unit is ventilated by 18 high speed roof fans with emission point 7 meters above ground level and an efflux speed greater than 7 meters per second. In addition to the fans, windows on the sides of the building allow for natural ventilation.

1.2.10 Other associated infrastructure includes two feed silos, a heat exchanger to regulate the temperature in the building, the underground reception pit located within a concrete yard and an attenuation pond for collection of uncontaminated rainwater from the yard within the installation boundary.

1.2.11 Roof water and yard rain water is directed via the surface water drainage system into an attenuation pond before being released under controlled conditions to an adjacent watercourse which is a ditch that runs towards the River Anker. All water released from the pond will be uncontaminated, if there is a likelihood of contaminated water getting into the pond, the outlet from the pond to the ditch can be closed by means of a hydraulic brake. The pond will then be emptied with the contents being tinkered away for appropriate disposal. The capacity of the pond is $145m^3$.

1.2.12 The dirty water drainage system collects wash down water from the broiler unit, directing it to the underground reception pit. The storage capacity of the pits is $15.2m^3$. The pit will be emptied at the end of each cleaning operation. Water levels within the pit will be monitored at all other times, and it will be emptied more frequently than necessary.

1.2.13 The broiler feed is stored in sealed feed bins, filled via a closed delivery system from a truck. Feed will be delivered weekly, during daylight hours. The feed will be supplied by a UKASTA accredited feed mill. UKASTA is the UK Agricultural Trade Association (now operating as Agricultural Industries Confederation (AIC)).

1.2.14 Carcasses are collected once a week and stored in a secure container on site prior to removal by a licensed waste disposal contractor.

1.2.15 The Environment Agency states that the site plan provided is satisfactory.

1.2.16 The Environmental Permit application for the installation is being considered in tandem with a planning application which is currently pending decision from North Warwickshire Borough Council.

1.3 Public health profile

1.3.1 For the purpose of this assessment, the residential areas which the scheme is expected to directly impact have been looked at. The proposed development is situated in the ward of Atherstone South and Mancetter, and is of a similar distance from the residential areas of Mancetter and Hartshill. For that reason, health profiles for both wards (Atherstone South and Mancetter, and Hartshill) are outlined below. Health profile data has been adapted from Public Health England's Local Health tool.

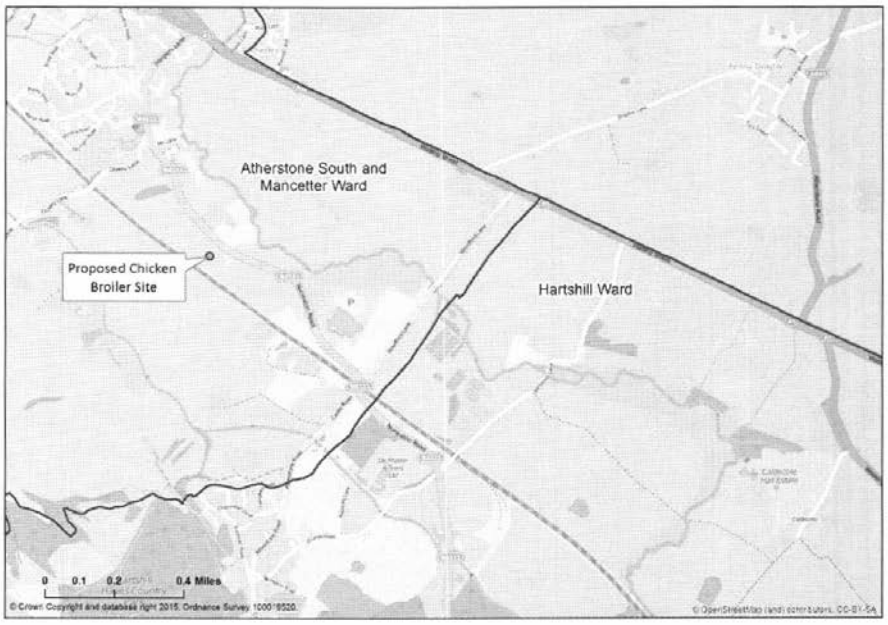

Figure 2: The ward boundaries of Atherstone South and Mancetter ward and; Hartshill ward

Atherstone South & Mancetter ward

- The population of the ward is 3,269.
- Life expectancy at birth for males is 79.2 years and 85.4 years for females. This is higher than the averages for both the Borough and the County.
- The level of income deprivation, child poverty and older people in deprivation is higher than the averages for the Borough and the County.

- The level of GCSE achievement is significantly worse than both the Borough and County averages, and the level of child development at age 5 is worse than the Borough and County averages.
- The level of unemployment, measured by Job Seekers Allowance (JSA) claimants is worse than the averages for the Borough and the County.
- The percentage of residents living in very bad health is significantly higher than the Borough and County averages.
- The level of obese children at reception age is higher than the Borough and County averages. However the percentage of children with excess weight in year 6 is lower than both the Borough and the County averages.
- The percentage of obese adults is higher than the Borough and County averages.
- The number of emergency hospital admission for chronic obstructive pulmonary disease (COPD) is worse than the average for the Borough and the County.
- There incidence rate of lung cancer within the ward, when compared with the Borough and County is higher.

Hartshill Ward

- The population of the ward is 3,748.
- Life expectancy at birth for males is 77 years and 78.1 years for females. This is higher than the averages for both the Borough and the County, and significantly worse than the national average for females.
- The level of income deprivation, child poverty and older people in deprivation is higher than the averages for the Borough and the County.
- The level of GCSE achievement is better than the Borough average but worse than the average for the County, and the level of child development at age 5 is worse than both the Borough and County averages.
- The level of unemployment, measured by Job Seekers Allowance (JSA) claimants is worse than the averages for the Borough and the County.
- The percentage of residents living in very bad health is the same as the Borough average and higher than the average for the County.
- The level of obese children at reception age is higher than the Borough and County averages. However the percentage of children with excess weight in year 6 is lower than both the Borough and the County averages.
- The percentage of obese adults is lower than the Borough average, but higher than the average for the County.
- The number of emergency hospital admission for chronic obstructive pulmonary disease (COPD) is worse than the average for the Borough and the County.
- There incidence rate of lung cancer within the ward, when compared with the Borough and County is higher.

2 Assessment

2.1 Description of health effects

2.1.1 The Environment Agency's Permit Applications for Poultry Units FAQs states that as part of the permit determination process, Public Health England is consulted to ensure that there will be no harm to human health as a result of the installation. Public Health Warwickshire is not aware that Public Health England has been consulted on the proposed installation.

2.1.2 Public Health England's (previously the Health Protection Agency (HPA)) guidance on Intensive Farming is in the process of being updated. The HPA's 2006 Position Statement states that although installations are likely to be of low public health impact, they have the potential to affect the environment, and therefore public health, through a number of ways. These are outlined below (and used as headings within this assessment):

- Air pollution
- Discharges to water
- Manure management
- Nuisance issues

Air Pollution

2.1.3 Poultry installations release a number of pollutants into the air. Those which have the potential to harm human health are particulate matter, ammonia, and bioaerosols.

2.1.4 The major components of particulate matter are sulphate, nitrates, ammonia, sodium chloride, black carbon, mineral dust and water. The most health damaging particles are those with a diameter of 10 microns or less, (PM_{10} and $PM_{2.5}$), which can penetrate and lodge deep inside the lungs. Chronic exposure to particles contributes to the risk of developing cardiovascular and respiratory diseases, as well as lung cancer. Particulate matter affects more people than any other pollutant, and poultry installations are responsible for five percent of UK emissions of PM_{10}.

2.1.5 There is a clear association between long-term exposure to particulate air pollution (PM 2.5 and sulphate dioxide) and a reduction in life expectancy caused by cardiovascular disease.[v] As well as this, greater air pollution has been linked to deprived neighbourhoods, with mortality rates from air pollution related causes highest amongst groups with lower socioeconomic status.[vi] This indicates that the proposed installation has the potential to negatively impact on deprivation. Levels of deprivation are already higher than the averages for both the Borough and County within the wards of South

Atherstone and Mancetter, and Hartshill, suggesting that the installation has the potential to exacerbate health inequalities.

2.1.6 As well as this, both Atherstone South and Mancetter ward and Hartshill ward have worse health outcomes for COPD and lung cancer than the average for the Borough and County. If residents with pre-existing respiratory and lung conditions live within close proximity to the installation, the emissions could potentially worsen conditions, and exacerbate health inequalities.

2.1.7 To minimise the amount of particulate matter emitted, the applicant will use Best Available Techniques (BAT). The use of BAT is also recommended by PHE as a mitigation measure. The applicants state that during the clean out process, ventilation within the buildings will be reduced to a minimum. This will reduce the potential for dust and particulate to entire the outdoor air and affect neighbouring communities.

2.1.8 As previously stated, ammonia is a component of particulate matter, and it may be emitted from livestock and from manure, litter or slurry. Low levels of ammonia have the potential to cause headaches, nausea and respiratory problems such as coughs, wheezing and asthma. The applicant states that no manure will be left on site, and that it will be transported off site in covered trucks. This may help to reduce the amount of ammonia released into ambient (outdoor) air, and should be part of measures to minimise emissions. It is unlikely that ammonia emissions from a well-run and regulated farm will be sufficient to cause ill health[vii].

2.1.9 Bioaerosols are airborne particles that contain living organisms, fragments, toxins, and waste products. Similar to the effects of ammonia, emissions of bioaerosols can cause respiratory problems and lung function impairment. As well as this, bioaerosols can also transmit infectious diseases. For example, in the case of swine farm installations, multi-drug resistant organisms have been found 150m downwind of the source.[vii]

2.1.10 Sites which produce considerable quantities of bioaerosols should not be within a 250m distance of local communities. This limit is based on evidence from studies which indicate that bioaerosols are generally reduced to background levels within 250m of a facility. However, dispersal depends on environmental conditions and it is widely accepted that in stable atmospheric conditions, bioaerosol emissions may not be reduced to background levels within 250m.[vii] There are a number of residences which lie within (and slightly outside of) this parameter. These include:

1. Residences and equestrian centre approximately 40m to the north of the installation boundary at the top of the entrance road; approximately 100m from the broiler house.

2. A residence / farm approximately 110m west of the installation boundary.
3. Residences on the outskirts of Mancetter village, approximately 280m north-west of the installation boundary

2.1.11 A local business is also located within close proximity (approximately 100m) of the site. Dobbies garden centre includes a food store, a butchers and restaurant and attracts visitors from a wide area. Employees / customers of the garden centre should be considered as vulnerable to the potential negative health impacts of bioaerosols.

2.1.12 An Odour Management Plan (OMP) has been produced to prevent and/or minimise ammonia emissions from the farm, and it is a requirement of the permit that the site is operated in accordance with the OMP. Despite measures to mitigate the amount of air pollution which is emitted, it should be noted that there is no threshold which has been identified below which no damage to health is observed, and small particulate pollution has health impacts even at very low concentrations.[viii]

2.1.13 Once operational it is expected that the proposed installation would employ one worker full time, with a six person catching / cleaning crew used for 2-3 days at the end of each cycle. Being in good employment protects health, and the installation may create agricultural jobs within the local area. However, acute and chronic work related symptoms are very common in poultry workers, and include: cough, phlegm, eye irritation, chest tightness, wheezing, sneezing, headache, throat irritation and fever. These symptoms are said to improve during periods away from work. In order to minimise potential impacts, it is recommend that health surveillance should be undertaken on employees including a pre-employment screening and questionnaire as well as lung function testing to assess respiratory health. [ix]

Discharges to water

2.1.14 The potential to impact on water should be low since emissions to ground surface water should fully comply with regulations and limits set out in Groundwater Regulations 1998 and the European Groundwater Directive (80/68/EEC).[vii]

2.1.15 The applicant states that all water released from the attenuation pond will be uncontaminated but if there is the potential that the water may be contaminated, the outlet from the pond can be closed. To ensure that the risk of contamination is minimised, liquid feeds, fuel oil, pesticides and veterinary medicines should be stored correctly in secured and bunded areas to reduce the potential for spillages and pollution of water courses.

2.1.16 The installation site is not within a Source Protection Zone, and there will be no emissions to sewers therefore it is unlikely that there will be any significant pollution of ground or surface water, or impact on human health.

Manure management

2.1.17 As part of the permit a manure management plan should be developed, maintained and reviewed in order to reduce the potential for nuisance or disease transmission. This may occur because manure can contain a range of zoonotic pathogens and incorrect storage can encourage the development of large fly populations. As previously discussed, the applicant states that no manure will be left on site, and that it will be transported off site in covered trucks. As well as this, all feed will be stored in sealed feed bins and carcasses will be stored in secure containers and collected once a week.

Nuisance issues

2.1.18 Nuisance issues include odour, noise, vermin and insect infestation. It should be ensured that there is "no reasonable cause for annoyance" beyond the boundary of the site. This is because environmental problems can lead to sleep disturbance, cardiovascular disease and impaired mental health.

2.1.19 When poorly managed, the odour associated with intensive livestock units can reduce the quality of life for nearby residents. There is the potential for operation at the installation site to adversely affect the amenity of nearby dwellings which are located within 400m of the site boundary. As discussed in section 2.1.12, an Odour Management Plan (OMP) has been produced by the applicant, and will require close monitoring and reviewing to minimise the potential impacts to local residents.

2.1.20 As well as odour, noise from fans associated with climate control within poultry buildings can also cause disturbance. One of the conditions of the permit is that a Noise Management Plan is in place. A noise assessment produced by the applicant found that the proposal is unlikely to adversely impact nearby properties, but that close monitoring should be undertaken.

3 Conclusion

3.1.1 The assessment has highlighted that there will be specific residences and businesses which may be impacted by the proposed installation. The main impact that will need to be minimised will be in relation to an increase in air pollution.

3.1.2 The scheme has the potential to contribute towards exacerbating health conditions and health inequalities for the local community if poorly managed, or mitigated, or if all relevant public health bodies haven't been consulted.

3.2 Recommendations

- We recommend that to ensure potential health impacts are minimised, the proposed installation complies with any conditions set by the Environment Agency.
- We recommend that in order to minimise potential health impacts to poultry workers, health assessments are undertaken and regularly reviewed.

[ii] Reading Agricultural Consultants (2014) *Supporting Statement / Policy Appraisal*

[iii] Marmot M, Allen J, Goldblatt P et al (2010) *Fair Society, Healthy Lives: Strategic review of Health Inequalities in England post 2010 (The Marmot Review)*. London, England.

[iv] Environment Agency (2015) Determination of an Application for an Environmental Permit under the Environmental Permitting (England & Wales) Regulations 2010

[vi] Ben Cave Associates Ltd (2014), *Health Impact Assessment – Nuneaton and Bedworth Borough Plan*. Leeds, England

[vii] Public Health England (then Health Protection Agency) (2006) *Position Statement: Intensive Farming*

[viii] WHO (2014) *Ambient (outdoor) air quality and health* [online] Accessed 26.10.2015

[ix] Health and Safety Executive (2009) *Statement of evidence: Respiratory hazards of poultry dust*. HSE: Suffolk, England

APPEAL C

PAP/2015/0348

A

A

Outline of building

Proposed

Existing

Site cross-section - 1:200 (vertical exaggeration X 2)

Existing Site Plan

RECEIVED
04/08/2015

EXISTING AND PROPOSED
SITE PLANS AND
CROSS-SECTIONS

CROWN STABLES
MANCETTER ROAD
MANCETTER
NORTH WARWICKSHIRE
CV9 1RF

Keating Agricultural Consultants Ltd

RAC/600/42

B

Site access

Infiltration trench

Extent of proposed landscaping area

Extent of proposed landscaping area

HGV turning area

1.5m retaining wall

Rear emergency access stairway

Proposed site plan

Appendix P

The Planning Inspectorate

Appeal Decision

Inquiry opened on 17 December 2013
Site visit made on 20 December 2013

by Martin Whitehead LLB BSc(Hons) CEng MICE

an Inspector appointed by the Secretary of State for Communities and Local Government

Decision date: 15 January 2014

Appeal Ref: APP/K3415/A/13/2199283
Cleat Hill Farm, Syerscote Lane, Haunton, Tamworth, Staffordshire B79 9HB

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant planning permission.
- The appeal is made by Mr J Davison against the decision of Lichfield District Council.
- The application Ref 11/01074/FULMEI, dated 23 September 2011, was refused by notice dated 13 March 2013.
- The development proposed is the formation of a new poultry unit and associated works.

Decision

1. The appeal is allowed and planning permission is granted for the formation of a new poultry unit and associated works at Cleat Hill Farm, Syerscote Lane, Haunton, Tamworth, Staffordshire B79 9HB in accordance with the terms of the application, Ref 11/01074/FULMEI, dated 23 September 2011, subject to the conditions in the attached schedule.

Procedural Matters

2. At the inquiry an application for costs was made by the appellant against the Council. This application is the subject of a separate decision.

3. The inquiry opened on 17 December 2013 and sat for 4 consecutive days, closing on 20 December 2013. After the close of the inquiry, I made an accompanied visit to the site on 20 December and visited some of the surrounding villages and roads unaccompanied.

Main Issue

4. The main issue is the effect of the proposal on the health and living conditions of local residents, with particular regard to matters of flies, odours, noise and disturbance.

Reasons

Background

5. The proposal would include the construction of 6 poultry sheds to house a maximum of 221,000 chickens. The chickens in each pair of these sheds would be fed from 3 feed bins, giving a total of 9 new feed bins. The proposal would operate on the basis that chicks would be brought on to the site as day olds and then removed at the end of a 7 week flock cycle. A new track giving

access onto Main Road about 40 metres to the east of the access to Newhouse Farm would be constructed to the north of the proposed chicken sheds across arable fields and following the line of the existing field boundary.

6. The appeal site is located to the east of Cleat Hill Farmhouse and to the south of a large irrigation pond. It comprises two uncultivated fields, presently used for grazing. The Council and appellant have agreed that the village of Haunton lies about 475 metres to the north west and Clifton Campville lies about 925 metres to the north east. They also have agreed that the nearest residential property to the site, known as Barnslade House, is about 380 metres to the north and there are other residential properties within 500 metres of the site. A brook to the south of the site feeds into the River Mease, which is designated as a Site of Special Scientific Interest (SSSI) and a Special Area of Conservation (SAC), and is situated about 0.8 km to the north.

Flies and Odours

7. The Council accepted at the inquiry that its main concerns with regard to health were related to flies and that they would be able to be adequately controlled by way of a planning condition. The appellant's expert witness indicated that, by appropriate management of the operation to ensure that the moisture content in the sheds would be below 50%, there would not be any significant risk of fly infestation, which is more associated with egg laying chicken sheds. I am satisfied that the evidence provided has demonstrated that measures for the control of flies in an Odour and Waste Management Plan (OWMP), secured by a condition, would be sufficient to ensure that the proposal would not cause any unacceptable fly infestation or harm the health of local residents.

8. With regard to odours, its determination is standardised by a British Standard and concentrations are expressed as European odour units per cubic metre (ou_E/m^3). The Environment Agency (EA) has published guidance for the objective assessment of odour impacts: *How to Comply with Your Permit- H4 Odour Management*. It recommends the use of 98th percentile of hourly average odour concentrations modelled over a year. Appendix 3 provides a benchmark of 3.0 ou_E/m^3 for moderately offensive odours, which include those associated with intensive livestock rearing. The use of this threshold is supported by Inspectors in previous planning appeal decisions.

9. The appellant has relied upon the evidence of a principal odour consultant at ADAS who has a wide range of experience in the field. ADAS has carried out odour dispersion modelling which has demonstrated that no sensitive residential receptor would experience odour levels in excess of 2.2 ou_E/m^3. The appellant's expert has claimed that the modelling has been based on a conservative assumption that all emissions would be released to the atmosphere at low level; whereas the majority of emissions would be through wall mounted fans which discharge vertically at high air speed to provide better initial dispersion.

10. An application for an Environmental Permit (EP) to operate at the site has been made to the EA and a Permit has been issued. This includes safeguards and enforcement action that would be available on failure to comply with any of the conditions of the EP. An assessment of the odour impact was undertaken as part of the Environmental Impact Assessment and other additional information relating to odour was submitted as part of the Addendum to the Environmental Statement, dated March 2012. The Council has not requested any further

information in this respect. An OWMP and a Manure Management Plan (MMP) have been submitted with the application and I have not been made aware of any criticisms of them by the EA or the Council's Environmental Health Officers.

11. The Council has questioned the modelled odour calculation on the basis of the input figure that has been used for the emission rate of a bird per second (ou_E/s/bird). It has also referred to a research document[1] from Ireland which uses emission rates taken from a research reported by Hayes et al (2005) and models the worst case scenario to give maximum odour emission rates reported for a broiler of 1.22 ou_E/s/bird. Using this figure, the document suggests that the distinct odour concentration calculated for poultry production units is 9.7 ou_E/m^3 and that the odour impact criterion recommended by the Irish EPA is a maximum of 6.0 ou_E/m^3.

12. The appellant has indicated at the inquiry that on the basis of the figure used in the research, the odour emission for the proposal would be 5.5 ou_E/m^3, but this would be over a limited period. Also, this is not the method recommended in the EA document *H4 Odour Management*. Therefore, the evidence provided indicates to me that the figure used by the appellant of 0.48 ou_E/s/bird would be a suitable average for the type of operation proposed, based on a threshold value of 3.0 ou_E/m^3.

13. With regard to the use of the poultry litter on the nearby agricultural land, the use of manure is already a lawful activity and the land needs to be fertilised if it is to be used for arable farming. The Council has not contested the appellant's expert's claims that the amount of manure that would be produced would be relatively small compared to that which would be used from dairy farming and that the smell would not be any worse. The proposed MMP indicates locations for manure piles, which I find would be sufficient distances from residential properties to ensure that they would not cause any additional odour issues. Therefore, the evidence indicates to me that a suitable MMP secured by a planning condition would ensure that such use of the manure would not result in significantly more odour issues than could already arise from the current lawful use of the land.

14. The Council's main concern with regard to odours appears to me to be when the sheds would be cleaned at the end of the 7 week cycle. During this operation, the doors would be opened and the volume of litter would be at its greatest. The Council's expert witness has asserted that this peak odour event would have a detrimental impact on residential amenity, based on her experience of being involved in odour complaints pertaining to poultry rearing. Both the Council's and the appellant's experts have accepted that there are no recognised methods for modelling the effect of peak odours. However, the standards that are generally applied to odour effects include the peak within the average rather than being based solely on peak values.

15. The appellant's expert has indicated that the alleged peak at the time of cleaning out of the poultry units would be from one shed at a time when they would not have chickens in them. At this time the other sheds would be closed and would not require the use of fans to ventilate them. As such, he has suggested that, by adequately managing the process, this peak odour would not have a significantly worse impact on the living conditions of the nearby

[1] Research Repository UCD: A dispersion modelling approach to determine the odour impact of intensive poultry production units in Ireland

residents than when the sheds would be all stocked and have ventilation fans operating. He has concluded that this would not be a significant impact even with the wind blowing towards the residential properties, due to their separation distance from the site. Based on this, I am not convinced that the odours that would result from the cleaning out of the sheds would be significantly worse than the general average odour that has been calculated.

16. The Council's expert has questioned the effectiveness of the EA and the Council's monitoring and enforcement procedures should there be a breach of a condition of the EP or planning permission. However, there has to be a presumption that the enforcement system is effective. Otherwise, it would call into question the use of standard conditions that have been widely used in the past to control pollution from development.

17. Whilst I accept that the monitoring and enforcement would largely rely upon the investigation of complaints, the evidence provided indicates that appropriate action has been taken to enforce against development that has resulted in unacceptable odours, including suspending an EP which has resulted in the cessation of the activity that caused the offending odour. Furthermore, the appeal proposal would consist of new purpose built units in which the operations would be much easier to control than in the case of older sites that have been issued EPs after the start of their operation, which the appellant's expert has indicated have been the main offenders.

18. In support of its decision, the Council has referred to an appeal decision[2] regarding the erection of 5 poultry sheds at Little Ness. However, based on the information provided, that appeal involves significantly different circumstances from those of the current appeal, particularly with regard to the level of odour evidence referred to by the Inspector and the cumulative effect of other poultry units in the area. Furthermore, that Inspector suggested that the potential for odour nuisance was not a determining issue in the appeal. Whilst I have noted the points raised, no direct comparisons can be made and I have determined the current appeal on the basis of its own individual planning merits in the light of prevailing policies and guidance.

19. In terms of the concerns expressed by local residents about odours, at my site inspection, I observed the relative location of the nearest residential properties to the site and also visited Coneyberry Millennium Green where a country fair is held. Based on the expert evidence provided and the distance of the properties and the Green from the site of the proposed poultry sheds, I am satisfied that there would be no significant adverse impact on their use due to the proposed development.

20. For the above reasons, I find that the use of appropriate planning conditions would ensure that the proposal would not have a significant harmful effect on the health of local residents or cause any odours that would have an unacceptable effect on their living conditions.

Noise and Disturbance

21. The Council has acknowledged that its reason for refusal on the grounds of noise and disturbance is based on the noise from the Heavy Goods Vehicles (HGVs) that would be generated by the proposed development. I am satisfied

[2] Appeal Decision Ref APP/L3245/A/10/2136255

that noise from any other activities associated with the proposal, including from the operation of the ventilation fans, would be insufficient to have any significant harmful effect on the living conditions of local residents.

22. The daily HGV movements associated with the operation of each cycle are given in Appendix D to the Transport Assessment and Appendix A of the Site Management Plan (SMP). These figures have not been contested by the Council. They show that the main impact above that which would be expected from the current agricultural use of the land would be experienced for 6 days out of each 49 day cycle. This would be when the birds would be transported from the site to the factory. The figures show that the maximum two way movement per day would be 18 HGVs as a result of this activity.

23. The appellant has produced a Lorry Routing Plan (LRP) in its SMP which shows that the HGVs would exit onto Main Road from the new access road and travel along this road through Clifton Campville to meet the B5493 at a give way junction at No Mans Heath. The B5493 would provide access to a junction with the M42 motorway. Although the route shown is based on the HGVs going to Ashbourne, where Moy Park is based, I am satisfied that this route would be likely to be the same wherever the birds would be transported, due to weight restrictions on other roads and the access to the junction. The main concerns of the Council are regarding the effect of the noise from HGVs on the residents of Clifton Campville.

24. The appellant has undertaken surveys of existing traffic and background monitoring of noise levels at Newhouse Farm, which is not on the proposed route but is near to the location of the proposed access from Main Road. The calculated noise increase as a result of the forecast highest HGV movements is less than $1dB_{LAeq}$. The appellant's expert has claimed that this would not be significantly affected if it was expressed as a dB_{LA10} figure and his claim has not been contested by the Council.

25. The Council has suggested that the assessment is not an accurate reflection of the worst case days as it is based on 16 HGV movements and Newhouse Farm is not on the lorry route. However, the Council has not provided any alternative calculations to demonstrate what effect, if any, the additional HGV movements and another location for the assessment would have on the results. Therefore, based on the evidence provided by the appellant, I am satisfied that these matters are insufficient to make any material difference to the assessment results.

26. In terms of the method used for calculating the effect of traffic noise and vibration, both parties have referred to DMRB Volume 11[3]. This uses a standard period of 16 hours as the averaging period for the noise; whereas the appellant has used a 12 hour period. As such, the appellant's figure builds in a degree of caution. Table 3.1 in DMRB Volume 11 gives the short term magnitude of impact of below $1dB_{LA1018hr}$ as negligible and the long term classification given in Table 3.2 gives between 0.1 and $2.9dB_{LA1018hr}$ as negligible. This indicates to me that the resulting noise impact would be negligible.

27. The Council has suggested that DMRB Volume 11 Table 3.1 should not be relied upon, as the document refers to its use in relation to new construction,

[3] Design Manual for Roads and Bridges Volume 11: Environmental Assessment

improvements, operation and maintenance of roads. However, the Council has not referred to suitable alternative guidance and the appellant's noise expert has expressed his view that it is the appropriate standard by which to assess the noise impact. I am satisfied that this document provides a useful guide as to what levels of noise would be acceptable as a result of new development.

28. The HGVs would be 15 tonne and 27 tonne vehicles which would form distinct noise events. Paragraph A5.4 of Annex 5 to DMRB Volume 11 indicates that people are more sensitive to abrupt changes in traffic noise than a steady state and that they may report positive or negative benefits when the actual noise changes are as small as 1dB(A). However, even if the 1dB(A) would be noticeable, it would not mean that it would cause unacceptable harm to living conditions.

29. The results from the noise survey carried out in December 2010 have been verified by a survey undertaken on 13 November 2013. This indicates that 2 vehicles of a comparable size to those proposed were recorded. The movements of the HGVs would be controlled by an SMP that would restrict the times of deliveries and/or collections received at, or dispatched from, the site. I am satisfied that this would be sufficient to ensure that HGVs would not travel through Clifton Campville at unsocial hours and times when children are likely to be travelling to and from school. Furthermore, I observed that most of the residential properties along the route are set back from the carriageway behind front gardens, footways or verges. As such, I find that there is insufficient evidence to show that the resulting HGVs would be frequent enough to cause any unacceptable additional noise and disturbance to local residents than could occur from the use of the highway by existing traffic.

30. Based on the above information, I find the following regarding the noise that would result from the proposal. The proposed route for the HGVs through Clifton Campville is already used by farm vehicles, HGVs and buses during the proposed times. There are no restrictions on the size of vehicles that are lawfully entitled to use that road. There is insufficient evidence to show that the HGVs would be likely to use the route at significantly different times from the delivery and dispatch times that would be controlled by condition. There would be unlikely to be a significant increase in the number of HGVs on any days other than the 6 days within the 49 day cycle and even then the average noise would be at a level that would be classed as negligible in the guidance given in DMRB Volume 11. Therefore, I am satisfied that, with a suitable SMP in place, the HGVs that would be generated by the proposal would not cause any unacceptable increase in noise and disturbance to residents in the area.

Policy

31. I am satisfied that the Lichfield District Local Plan 1998 (LDLP) saved policies are consistent with the policies and objectives of the National Planning Policy Framework (Framework). LDLP Policy DC.1 seeks, amongst other things, to ensure that new development will not result in any loss of amenity to the neighbourhood through noise, dust, fumes or other disturbance. I find that this is a relevant policy and that together with LDLP Policy E.6, which is concerning rural development, provide a basis for the determination of this appeal.

32. Although the Council has referred to emerging policies in the draft Lichfield District Local Plan, these carry reduced weight because of the stage that the

Plan has reached in its progress towards adoption. Emerging Policy BE1 seeks, amongst other things, to avoid new development which causes disturbance through unreasonable traffic generation, noise, light, dust, fumes or other disturbance. Emerging Core Policy 3 establishes key issues that new development should address to achieve sustainable development. These include protecting the amenity of residents. I find that these policies do not significantly add to the relevant development plan policies.

33. At the heart of the Framework is a presumption in favour of sustainable development. The 3 dimensions to sustainable development and the roles that the planning system needs to perform, given in paragraph 7, provide a basis for determining whether the development would be sustainable. These roles are mutually dependent and to achieve sustainable development economic, social and environmental gains should be sought jointly and simultaneously. In this respect, the environmental role includes the requirement to minimise waste and pollution.

34. The appellant has suggested a number of benefits that would arise from the appeal development. In this regard, the proposal would represent an appropriate agricultural development in a rural setting that would contribute to the diversification of an existing agricultural business, which is supported in the Framework.

35. Although the proposal would be unlikely to directly provide local employment, due to the limited number of employees that would be required, it would potentially provide benefits to the local economy by way of ancillary activities, including the production of feed. It would also encourage sustainability by producing more food within this country, which could result in a reduction in the need to import food, and using the litter as manure locally, which would reduce the need to transport manure from other areas. Therefore, I am satisfied that the proposal would fulfil the economic and social roles whilst minimising, through the use of planning conditions, its environmental impact due to noise and odour pollution. As such, it would represent sustainable development in accordance with the Framework.

Other Matters

36. I have considered the concerns expressed in the large number of letters of objection received. I am satisfied that these objections, including those regarding protected species and possible botulism from contaminated litter, would be adequately addressed by way of planning conditions. Whilst the application indicates that a contract has been signed with Moy Park in Ashbourne, I have been given insufficient evidence to show that the absence of such a contract would have any material effect on the acceptability of the proposal, as the units would be unlikely to be operated without a contract and the route of the HGVs to the junction with the M42 given on the LRP would be the same regardless of where they would need to travel.

37. With regard to highway safety, although the proposed route through Clifton Campville has some sections where the road narrows and where there are parked vehicles, these are relatively short sections and HGVs have managed to negotiate these roads safely. Otherwise, the width of the road is sufficient for HGVs to safely pass, as indicated by the white lines down the middle. The HGVs would be controlled to ensure that they would be unlikely to pass through the village when children are going to or leaving school.

38. The recorded accidents do not show that there are any significant safety problems due to HGVs using the route. Also, there have been no objections from any of the Highway Authorities affected by the development, subject to planning conditions that include the securing of improvements at the Clifton Road (C2) and Ashby Road (B5493) junction. A stage 1 safety audit has been carried out on the proposed access arrangement and junction improvements.

39. I do not accept that HGVs would use any other routes that are not suitable as these are either well signed with weight restrictions or are clearly unsuitable in width and type and the proposed route would be the obvious route for HGVs to take from the proposed access, even with the use of GPS. Therefore, based on the evidence provided, I find no valid reasons why the proposal would cause any unacceptable harm to highway safety.

40. In terms of the effect of the proposed HGVs on the conservation areas and listed buildings, those most likely to be affected are along the route in Clifton Campville. I accept that some of the listed buildings are close to the road but there is little evidence to show that they would be likely to be damaged by HGVs due to vibration or collisions, taking account of the existing traffic that uses the route. Therefore, I agree with the Council that the proposal would not result in any significant additional risk to these structures.

41. I have also considered the environmental impact on the River Mease SSSI and SAC. In this respect, Natural England has not objected subject to the proposal being carried out in strict accordance with the details of the application and a suitable planning condition dealing with drainage/flood risk as detailed in the EA response. It has expressed its view that either alone or in combination with other plans or projects, the proposal would not be likely to have a significant effect on the important interest features of the River Mease SAC or any of the special scientific interest features of the River Mease SSSI. The proposed drainage measures would ensure that any flood water in the vicinity of the poultry units would be intercepted before it would be able to enter the brook that runs into the River Mease. As such, I find that there is limited evidence to show that the proposal would have any significant harmful effect on the nature conservation interests of the important River Mease SAC and SSSI.

Overall Conclusions

42. For the reasons given, I find that the proposal would not have a significant harmful effect on the health and living conditions of local residents. As such, it would accord with LDLP policies DC.1 and E.6 and the relevant policies in the Framework. It would also represent sustainable development in accordance with the Framework. Therefore, having regard to all matters raised including any interference with an individual's rights under the Human Rights Act, I conclude that the appeal should succeed.

Conditions

43. I have considered the 24 conditions suggested by the Council should the appeal be allowed, including the standard time for commencement of development. A condition to ensure compliance with the plans is necessary for the avoidance of doubt and in the interests of proper planning. Conditions regarding materials, landscaping, external illumination and the protection of trees are necessary to protect the character and appearance of the surrounding area.

44. Conditions requiring adherence to a construction traffic management plan and a Site Management Plan, including controls over hours of deliveries and dispatches, are necessary to protect highway safety and the living conditions of local residents. A condition to control the surfacing and design of the hard paved areas is necessary in the interest of highway safety, the character of the area and sustainability. A condition regarding the servicing and energy supply to the development is necessary in order to promote sustainability. A condition to control the floor levels is necessary to prevent harm to the character of the area and reduce the risks from flooding.

45. A condition regarding drainage and water treatment and storage is necessary to prevent an increased risk of flooding, protect water quality and natural habitats and promote sustainability. Conditions requiring adherence to a scheme for species protection, mitigation and habitat enhancement, a method statement to protect amphibians during construction and the treatment of nesting birds during construction are necessary in the interests of ecology and protected species, given the survey results. A condition to control the field application of manure is necessary to safeguard ecological interests, water quality and the living conditions of local residents.

46. A condition regarding the treatment of the existing access is necessary to protect highway safety and the character and appearance of the area. Conditions regarding the provision of a new access, the control of gates at that access and the existing field access and the provision of improvements to the junction of Clifton Road and Ashby Road are necessary in the interests of highway safety.

47. A condition requiring adherence to an Odour and Waste Management Plan, including measures for the control of flies, is necessary to safeguard the health and living conditions of local residents. I am satisfied that all these conditions are reasonable and necessary. I have combined some of the suggested conditions and worded them to reflect the advice in Circular 11/95: *The Use of Conditions in Planning Permissions*.

M J Whitehead

INSPECTOR

APPEARANCES

FOR THE LOCAL PLANNING AUTHORITY:

Freddie Humphreys	Of Counsel, instructed by the Solicitor, Lichfield District Council
He called	
Nichola Gannon BSc(Hons) DipAc CIEH IOA	Environmental Consultant, Capita
Jemima Dean MSc MRTPI	Senior Planner, Capita

FOR THE APPELLANT:

Richard Kimblin	Of Counsel, instructed by Christopher Timothy, CT Planning
He called	
David Tucker MSc CEng MICE MIHT	Director, David Tucker Associates
Jeremy Butt CEng MPhil MIOA	Associate, Hoare Lea Acoustics
Stephen Peirson BSc(Hons) CEng CEnv MIAgrE	Principal Odour Consultant, ADAS UK Ltd
Christopher Timothy BSc(Hons) DipTP MRTPI	Town Planning Consultant, CT Planning

INTERESTED PERSONS:

Sue Wadham	Local resident and representative of Chickscape
Tony Bryan	Local resident and representative of Clifton Campville with Thorpe Constantine Parish Council
Nigel Wadham	Local resident
Sue Arnold	Local Councillor
David Lodge	Local resident
Nigel Tongue	Local resident and architectural consultant

DOCUMENTS SUBMITTED AT THE INQUIRY

1 Appellant's opening statement and annexes, submitted by the appellant on 17 December
2 High Court decision in Hampton Bishop Parish Council and Herefordshire Council, submitted by the appellant on 17 December
3 Copy of Volume 11 of the Design Manual for Road and Bridge Works, submitted by the appellant on 17 December
4 Statement read and submitted at the inquiry by Sue Wadham on 17 December
5 Statement read and submitted at the inquiry by Tony Bryan on 17 December
6 Statement read and submitted at the inquiry by Nigel Wadham on 17 December
7 Statement read and submitted at the inquiry by David Lodge on 18 December
8 Statement read and submitted at the inquiry by Sue Arnold on 18 December
9 Copies of some of the letters of objection, submitted by the Council on 18 December
10 Summary of numbers of letters of objection, submitted by Sue Wadham on 18 December
11 Copy of Statement of Common Ground giving Council's amendments, submitted by the appellant on 18 December
12 Copy of Appeal Decision Letter Ref APP/U1050/A/09/2100184, submitted by the appellant on 18 December
13 Details of 2 accidents in the last 6 months, submitted by Nigel Wadham on 18 December
14 Lichfield District Council Planning Enforcement Plan, submitted by the Council on 18 December
15 Copy of a Research Repository UCD: A dispersion modelling approach to determine the odour impact of intensive poultry production units in Ireland, submitted by the Council on 19 December
16 Copy of Appeal Decision Letter Ref APP/L3245/A/10/2136255, submitted by the Council on 19 December
17 Up-date of accident data, submitted by the appellant on 19 December
18 Appendices to the Statement of Common Ground, submitted by the appellant on 19 December
19 Closing submissions on behalf of the Council, submitted by the Council on 20 December
20 The Appellant's Closing submissions, submitted by the appellant on 20 December
21 Costs application on behalf of the appellant and appendices, submitted by the appellant on 20 December

PLANS SUBMITTED AT THE INQUIRY

A Plan 1 of suggested route for the Inspector, submitted by Nigel Tongue on 18 December
B Plan 2 of suggested route for the Inspector, submitted by Nigel Tongue on 18 December

Schedule of Conditions

1) The development hereby permitted shall begin not later than three years from the date of this decision.

2) The development hereby permitted shall be carried out in accordance with the following approved plans: Drawing Nos 3620.99A, 2162-01A, 2162-02B, 2162-03C, 2162-04E, 2162-05C, 2162-06E, 2162-07B, 11/008/02, 11/008/03a, 11/008/03b, 11/008/03c, 11/008/03d, 11/008/03e and 12149-14.

3) No development shall take place until details of all external materials to be used in the construction of poultry sheds, feed silos and ancillary structures, including their colour and finish have been submitted to and approved in writing by the local planning authority. Development shall be carried out in accordance with the approved details.

4) No development shall take place until a construction traffic management plan, to include phasing traffic management measures, routing and wheel washing facilities, has been submitted to and approved in writing by the local planning authority. Development shall be carried out in accordance with the approved traffic management plan.

5) No development shall take place until a landscape and planting scheme, including plant specifications, species, densities, methods of protection and maintenance, has been submitted to and approved in writing by the local planning authority. The scheme shall include the translocation of the existing hedgerow within the site and details of new boundary treatment pursuant to condition 18. The approved landscape and planting scheme shall thereafter be implemented within 8 months of the completion of the development. If any tree, hedge or shrub planted as part of the approved landscaping scheme (or replacement tree/hedge) on the site dies or is lost through any cause during a period of 5 years from the date of planting, it shall be replaced in the next planting season with others of similar size and species, unless otherwise agreed in writing by the local planning authority.

6) No development shall take place until details of all surfacing materials to be used in the construction of the access drive and passing bays, footpaths, parking, servicing and turning areas have been submitted to and approved in writing by the local planning authority. The details shall show the access drive from the public highway (Main Road) surfaced in a bound and porous material for a minimum distance of 10 metres back from the site boundary. The access drive and passing bays, footpaths, parking, servicing and turning areas shall be completed in accordance with the approved details prior to the development being brought into use and maintained for the life of the development.

7) No development shall take place until a statement of intent in relation to sustainable servicing and energy initiatives for the development has been submitted to and approved in writing by the local planning authority. The details to be submitted shall set out the incorporation of renewable energy technologies within the development. Development shall thereafter be implemented in accordance with the approved details.

8) No development shall take place until full details of the finished floor levels of the buildings hereby permitted, including their relationship to the levels of the highway, existing development and existing ground levels, have been submitted to and approved in writing by the local planning authority. Development shall be carried out in accordance with the approved details.

9) No development shall take place until details of all external illumination have been submitted to and approved in writing by the local planning authority. External illumination shall be implemented only in accordance with the approved details.

10) No development shall take place until full details of the proposed surface water drainage (incorporating sustainable drainage principles and an assessment of the hydrological and hydrogeological context of the development), foul water drainage, water storage tanks and dirty water tanks for the development have been submitted to and approved in writing by the local planning authority. The drainage details shall include the following measures:

    i) Limiting the rate of surface water run-off generated by the site to discharge at a rate of not more than the greenfield rate as calculated in the ADAS Flood Risk Assessment, Revised 8 April 2011 and Addendum to Flood Risk Assessment, Revised 15 December 2011 (the FRA).

    ii) Provision of attenuation storage volume on the site, using sustainable drainage systems, to retain the 100-year + 20% flow event volume assuming the discharge rate given above as detailed in the FRA.

    iii) Infiltration tests to determine the suitability of surface water infiltration to ground as proposed in the FRA.

    iv) Details of how the entire surface water scheme shall be maintained and managed after completion.

    v) An assessment of the performance of the surface water system for the 30-year and 100-year + 20% flow cases to include drainage calculations to demonstrate this (e.g. MicroDrainage or similar package calculations), including the necessary attenuation volume, pipeline schedules, network information and results summaries; and, if above ground flooding is to occur, details of where this will go to demonstrate that the development or adjacent property will not be flooded as a result.

    vi) Provision of an interceptor ditch as detailed in the FRA.

    No trade effluent, waste or other pollutants, including contaminated surface water from the site, shall be discharged into any ditch, watercourse or to underground strata. The development shall thereafter be implemented in accordance with the approved details and the approved drainage system shall be provided before the first use of the development.

11) Notwithstanding the detail contained within the submitted Site Management Plan and prior to the development hereby permitted being brought into use, a revised Site Management Plan shall be submitted to and approved in writing by the local planning authority. The revised Site Management Plan shall include a 'Lorry Routing Plan' and shall ensure that there shall be no vehicle movements associated with deliveries and/or collections received at or

dispatched from the site outside the hours of 0700 and 1800 on Mondays to Fridays and 0800 and 1300 on Saturdays and there shall be none at all on Sundays or Bank and Public Holidays. The Plan shall demonstrate that within the permitted hours, there shall be no deliveries and/or collections received at or dispatched from the site between 0830 hours and 0930 hours and 1500 hours and 1600 hours. The development shall operate in strict accordance with the approved revised Site Management Plan.

12) Notwithstanding the detail contained within the Environmental Statement and prior to the development hereby permitted being commenced, a detailed scheme for species protection, mitigation and habitat enhancement shall be submitted to and approved in writing by the local planning authority. The scheme for habitat enhancement shall include brook enhancement measures within and adjacent to the watercourse to the south of the poultry units hereby permitted. The details shall include a timetable for implementation and ongoing management/maintenance of the scheme and shall include a baseline water quality assessment. The measures shall also include habitat enhancements for species including otter, water vole, bullhead and spined loach, and fresh water white clawed crayfish. Development shall be carried out in strict accordance with the scheme and timetable.

13) Notwithstanding the details submitted, the development hereby permitted shall not commence until such time that a revised Scheme for the Field Application of Manure has been submitted to and approved in writing by the local planning authority. In addition to the detail contained within the submitted Scheme for the Field Application of Manure, the revised Scheme shall also include details of any buffers between manure storage heaps locations and field drains/ditches; full details of field heap coverings; details of all land to which manure will be spread; and details of any improvements/upgrading to existing field access tracks required for the transportation of spent litter. The development shall be implemented in accordance with the approved revised Scheme.

14) No development shall take place until a method statement to protect amphibians during the construction of the development hereby permitted has been submitted to and approved in writing by the local planning authority. Development shall be carried out in accordance with the approved statement.

15) Prior to the development hereby permitted being brought into use, the existing site access to the residential units around Newhouse Farm shall be reduced in width and new boundary treatment provided in accordance with details to be first submitted to and approved in writing by the local planning authority and shall thereafter be maintained as such.

16) No construction or groundworks shall commence in relation to the poultry units and ancillary buildings/silos hereby permitted until the new access within the limits of the public highway has been completed in accordance with the details on Drawing No 2162-06E and the visibility splays on Drawing No. 12149-14 have been provided. The visibility splays shall thereafter be kept free of all obstructions to visibility over a height of 600mm above the adjacent carriageway level.

17) No gate shall be erected at the access to the site from Main Road unless details have first been submitted to and approved in writing by the local

planning authority. The gates shall thereafter be erected in accordance with the approved details.

18) The development hereby permitted shall not be brought into use until the existing field access/gates to the east of the proposed site access is made redundant as a consequence of the development hereby permitted and the existing gates reinstated with new boundary treatment in accordance with details that have been submitted to and approved in writing by the local planning authority pursuant to condition 5.

19) Notwithstanding the details submitted, the development hereby permitted shall not be brought into use until such time that a revised Odour and Waste Management Plan has been submitted to and approved in writing by the local planning authority. The Odour and Waste Management Plan shall include measures for the control of flies. The development shall operate in strict accordance with the approved revised Odour and Waste Management Plan.

20) Prior to undertaking any works between 1st March and 31st August in any year, a detailed survey shall be carried out to check for nesting birds. Where nests are found in any structure, hedgerow, tree or scrub to be removed a 4 metre exclusion zone shall be left around the nest until nesting is complete. Completion of nesting shall be confirmed in writing to the local planning authority by a suitably qualified person and a report shall be submitted to the local planning authority.

21) No development hereby permitted shall be brought into use until improvements to the junction of Clifton Road (C2) and Ashby Road (B5493) at No Mans Heath have been carried out in accordance with details to be first submitted to and approved in writing by the local planning authority.