

## Consultation on our decision document recording our decision-making process

The Permit Number is:	<b>EPR/WP3239EK</b>
The Applicant is:	<b>JH and JM Hickton</b>
The Installation is located at:	<b>Thorngrove Poultry Farm Grimley Worcester Worcestershire WR2 6NP</b>
Application consultation commenced on:	<b>10/01/19</b>
Application consultation ended on:	<b>07/02/19</b>
Draft decision consultation commenced on:	<b>12/06/20</b>
Draft decision consultation ended on:	<b>10/07/20</b>
Draft decision consultation recommenced on:	<b>01/09/20</b>
Draft decision consultation ended on:	<b>28/09/20</b>

## Environment Agency permitting decisions

### What this document is about

This is a decision document, which accompanies a permit variation.

It explains how we have considered the Applicant's application, and why we have included the specific conditions in the varied and consolidated permit we are granting. It is our record of our decision-making process, to show how we have taken into account all relevant factors in reaching our position. Unless the document explains otherwise, we have accepted the Applicant's proposals.

We have made our final decision only after carefully taking into account any relevant matter raised in the responses we received.

## Preliminary information and use of terms

We gave the application the reference number EPR/WP3239EK/V003. We refer to the application as “the **Application**” in this document in order to be consistent.

The number we have given to the varied and consolidated permit is EPR/WP3239EK. We refer to the varied and consolidated permit as “the **Permit**” in this document.

The Application was duly made on 26 November 2018.

The Applicants are JH and JM Hickton. We refer to JH and JM Hickton as “the **Applicant**” in this document. Where we are talking about what would happen after the Permit is varied, we call JH and JM Hickton “the **Operator**”.

The facility is located at Thorngrove Poultry Farm, Grimley, Worcester, Worcestershire WR2 6NP. We refer to this as “the **Installation**” in this document.

We have decided to grant a Permit for the Installation operated by the Applicant. We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the Permit will ensure that a high level of protection for the environment and human health is provided.

## Purpose of this document

This decision document:

- explains how the Application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- summarises the engagement carried out because this is a site of high public interest
- shows how we have considered the consultation responses

Unless the decision document specifies otherwise we have accepted the Applicant’s proposals.

## Structure of this document

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5.2 Other legal requirements

Annex 1: Consultation process

Annex 2: Minded to decision consultation process

# 1. Our decision & legal framework

We have decided to grant the Permit to the Applicant. This will allow the Applicant to operate the Installation, subject to the conditions in the Permit.

We consider that, in reaching that decision, we have taken into account all relevant considerations and legal requirements and that the Permit will ensure that a high level of protection is provided for the environment and human health.

The Permit is granted under Regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 (the "Permitting Regulations"). The Permitting Regulations deliver most of the relevant legal requirements for activities falling within its scope and implement relevant EU law. In particular, the regulated facility is an Installation and an intensive poultry farm as described by the Permitting Regulations and the Industrial Emissions Directive (IED). The Permit implements the requirements of IED in respect of the Installation.

It is also subject to aspects of other relevant legislation, beyond the Permitting Regulations, which also have to be addressed.

We explain how we have addressed specific statutory requirements more fully in the rest of this document. Where not covered elsewhere we set out how we have addressed relevant legal requirements in section 5.2 of this document.

The Permit contains many conditions taken from our standard Environmental Permit template including the relevant Annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of the Permitting Regulations and other relevant legislation. This document does not therefore include an explanation for these standard conditions. Where they are included in the Permit, we have considered the Application and accepted the details are sufficient and satisfactory to make the standard condition appropriate.

## 2. How we reached our decision

### 2.1 Receipt of Application

The Application was received on 19 September 2018; however we required further information from the Applicant in order for us to consider the Application duly made. This information was requested on 03 November 2018. The Applicant submitted additional information in response to the request between 19 November 2018 and 26 November 2018 and the response was deemed sufficient to enable us to duly make the Application.

The Application was duly made on 26 November 2018. This means we considered it was in the correct form and contained sufficient information for us to begin our determination; but not that it necessarily contained all the information we would need to complete that determination.

Although we were able to consider the Application duly made, we did in fact need more information in order to determine it, therefore we issued requests for further information. A full list of all the information requested (including before the Application was duly made) is set out in table 1 below.

<b>Description</b>	<b>Date</b>	<b>Comments</b>
Not Duly Made Request for Further Information sent 03/11/18	Information received 20/11/18	Additional information received relating to emissions of odour, noise and bio aerosols, application form, installation boundary, site drainage, emission points, disposal of wash water and used litter and including receipt of the following:  Bioaerosol risk assessment Installation boundary plan, including location of sensitive receptors and monitoring points Revised application form C3.5 Revised noise risk assessment and management plan Revised non-technical summary Odour and noise monitoring procedures Revised odour risk assessment and management plan Revised proposed changes document Revised technical standards document Site layout/ drainage plan
	Information received 26/11/18	Additional information received relating to the biomass boiler and application fees and including receipt of the following:  Biomass boiler information Renewable Heat Incentive certificate Confirmation of payment

<b>Table 1 Summary of requests for further information</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
1 <sup>st</sup> Schedule 5 notice requesting further information issued 15/02/19	Information received 22/02/19	Additional information received relating to wood chipping, management of odour, wash out of proposed sheds and associated drainage, compliance with IRRP BAT Conclusions and including receipt of the following documents:  Revised dust and bioaerosol risk assessment and management plan Revised non-technical summary Revised odour and noise monitoring procedures Revised odour management plan Revised proposed changes document Revised plan showing location of sensitive receptors and monitoring points Revised technical standards document Confirmation of compliance with IRRP BAT Conclusions Revised site layout/drainage plan
Additional request for further information sent 12/03/19	Response received 17/03/19	Additional information received relating to installation boundary and odour and noise monitoring and including receipt of the following documents:  Revised site plan Revised odour and noise monitoring procedures Revised plan showing location of sensitive receptors and monitoring points
Additional request for further information sent 02/05/19	Response received 21/05/19	Additional information received:  Plans for proposed poultry houses 5-8
2 <sup>nd</sup> Schedule 5 Notice requesting further information issued 09/07/19	Response received 02/09/19	Additional information received relating to management of odour, installation boundary, ventilation, drainage, ammonia emissions and including receipt of the following documents:  Revised odour management plan Revised site drainage plan Odour abatement proposals Revised site plan Report on atmospheric pollution for Local Wildlife Site
Additional request for further information sent 11/07/19	Response received 02/09/19	Additional information received relating to the biomass boilers:  Biomass boiler information document
Additional request for further information sent 04/09/19 & 05/09/19	Response received 06/09/19	Additional information received relating to biomass boiler fuel, disposal of biomass boiler ash and installation boundary and including receipt of the following documents:  Biomass management and accident plan Biomass boiler information document Revised site plan

<b>Table 1 Summary of requests for further information</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Additional request for further information sent 10/09/19	Response received 10/09/19	Additional information received relating to installation boundary:  Revised site plan
Additional request for further information sent 11/09/19	Response received 30/09/19	Additional information received relating to management of odour and including receipt of the following documents:  Additional information regarding odour abatement Odour reduction data
Additional request for further information sent 17/09/19	Response received 24/09/19	Additional information received relating to management of odour including receipt of the following documents:  Revised odour management plan
Additional request for further information sent 18/09/19	Response received 03/10/19	Additional information received relating to emissions of ammonia and including receipt of the following documents:  Response from Worcestershire Wildlife Trust regarding Thorngrove Pool Local Wildlife Site.
Additional request for further information sent 10/10/19	Response received 12/10/19	Additional information received relating to raw materials: Raw material inventory
Additional request for further information sent 08/01/20	10/01/20	Additional information received relating to raw materials and wood chipping activity:  Revised raw material inventory Details of frequency and duration of wood chipping activity and location of chipping machine
Additional request for further information sent 14/01/20	15/01/20	Additional information received relating to wood chipping activity and noise management:  Confirmation that all chipping activity is for fuel purposes only Revised Noise Management Plan
Additional request for further information sent 15/01/20	16/01/20	Additional information received relating to noise management:  Revised Noise Management Plan
Additional request for further information sent 21/01/20	21/01/20	Additional information received relating to noise management:  Final Noise Management Plan
Additional request for further information sent 12/02/20	16/02/20	Additional information received relating to dust baffle/misting system
Additional request for further information sent 04/03/20 & 03/03/20	10/03/20	Additional information received relating to wash water spreading and odour monitoring procedures

<b>Table 1 Summary of requests for further information</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Additional request for further information sent 17/03/20	19/03/20	Additional information received relating to odour monitoring procedures
Additional request for further information sent 13/10/20	20/10/20	Additional information received relating to light minimisation measures.
Additional request for further information sent 18/11/20 and 19/11/20	22/11/20	Response to request for further information providing a revised noise management plan, site drainage plan, revised odour and noise monitoring procedure and monitoring point plan.
	24/11/20	Response to request for further information providing a revised dust management plan.

Copies of the above requests and responses have been placed on our public register.

## **2.2 Consultation on the Application**

We carried out consultation on the Application in accordance with the Permitting Regulations, our statutory Public Participation Statement (PPS) and our own Regulatory Guidance Note (RGN) 6 for Determinations involving Sites of High Public Interest. We consider that this process satisfies, and frequently goes beyond, the requirements of the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters. These requirements are directly incorporated into the IED, which applies to the Installation and the Application. We have also taken into account our obligations under the Local Democracy, Economic Development and Construction Act 2009 (particularly Section 23). This requires us, where we consider it appropriate, to take such steps as we consider appropriate to secure the involvement of representatives of interested persons in the exercise of our functions, by providing them with information, consulting them or involving them in any other way. In this case, our consultation already satisfies the Act's requirements.

We advertised the Application by a notice placed on our website from 10 January 2019 to 07 February 2019, which contained all the information required by the IED, including telling people where and when they could see a copy of the Application. We also placed an advertisement in the Berrow's Worcester Journal newspaper on 10 January 2019.

We made a copy of the Application and all other documents relevant to our determination available to view on our Public Register at the Environment Agency's office, Riversmeet House, Newtown Industrial Estate, Northway Lane, Tewkesbury, Gloucestershire GL20 8JG. Anyone wishing to see these documents could do so and arrange for copies to be made. We also published this Application on our webpages on GOV.UK and made available electronic copies of the Application on that webpage.

We sent copies of the Application to the following bodies, which includes those with whom we have "Working Together Agreements":

- Worcestershire Regulatory Service (Environmental Health)
- Malvern Hills District Council (Planning)
- Public Health England (PHE)
- Director of Public Health
- Health and Safety Executive (HSE)

We also notified the following bodies of the application:

- Hallow Parish Council
- Grimley Parish Council



These are bodies whose expertise, democratic accountability and/or local knowledge make it appropriate for us to seek their views directly.

We also notified the local Member of Parliament (MP) and a number of local residents within close proximity to the Installation, of the application.

Under our Working Together Agreement with Natural England, we only inform Natural England of the results of our assessment of the impact from the Installation on designated habitats sites. Please see section 4.1 for further details of our assessment, which discusses the potential impacts of ammonia from the Installation on designated habitats sites.

In accordance with the Environment Agency's Public Participation Statement and internal guidance involving Sites of High Public Interest, we also consulted on the draft decision and permit for the Application. Copies of all consultation responses have been placed on the Environment Agency public register.

The draft decision was advertised on our website from 12 June 2020 – 10 July 2020 and from 01 September 2020 – 28 September 2020. We also placed an advertisement in the Berrow's Worcester Journal newspaper on 11 June 2020.

We sent copies of the draft decision to the following bodies:

- Worcestershire Regulatory Service (Environmental Health)
- Malvern Hills District Council (Planning)
- Public Health England (PHE)
- Director of Public Health
- Health and Safety Executive (HSE)

We also notified the following bodies of the draft decision:

- Hallow Parish Council
- Grimley Parish Council

We also notified the local MP, the District Councillor and a number of local residents within close proximity to the Installation, of the draft decision.

Details along with a summary of consultation comments and our response to the representations we received can be found in Annex 1 and Annex 2. We have taken all relevant representations into consideration in reaching our determination.

## **3 The Installation –description and related issues**

### **3.1 The permitted activities**

The Installation is subject to the Permitting Regulations because it carries out an activity listed in Part 2 of Schedule 1 of those regulations, namely:

- Section 6.9, Part A(1)(i) – Rearing of poultry intensively in an installation with more than 40,000 places for poultry

The IED defines “poultry” by reference to Directive 90/539/EEC on animal health, which defines that term as:

“fowl, turkeys, guinea fowl, ducks, geese, quails, pigeons, pheasants and partridges reared or kept in captivity for breeding, the production of meat or eggs for consumption, or re-stocking supplies of game.”

The Applicant intends to intensively rear up to 319,990 chickens (fowl) at the Installation, so falls within the activity mentioned above.

The Installation also comprises two directly associated activities; a carcass incinerator for carcass disposal, approved by the Animal and Plant Health Agency (APHA), and operation of three biomass boilers, for site heating requirements.

### **3.2 The site location and surroundings**

Thorngrove Poultry Farm is situated approximately 1.5 kilometres south west of the village of Grimley, Worcestershire. The installation is approximately centred on National Grid Reference SO 82100 59800.

The Applicant submitted a plan showing the site of the Installation and its extent. We consider this plan is satisfactory. It is included in Schedule 7 to the Permit, and the Operator is required to carry out the permitted activities within the Installation boundary.

We have undertaken screening to identify potentially sensitive receptors in the area surrounding the Installation. This identified the following.

- there are 37 residential properties within 400 metres of the Installation boundary;
- there are four Sites of Special Scientific Interest (SSSI) within 5km of the Installation boundary; and
- there are nine other nature conservation sites within 2km of the installation boundary; six Local Wildlife Sites (LWS) and three Ancient Woodlands (AW).

As explained below, we have taken into consideration the potential environmental impact of the activity on all sensitive receptors, including residential, commercial and nature conservation sites.

### **3.3 What the Installation does and proposed site design**

The installation is operated by JH and JM Hickton and currently comprises four poultry houses, numbered 1 to 4, which provide a combined capacity for 140,000 broiler places. The current permit is for a maximum permitted bird number of 319,990 broilers, however the Operator does not have the capacity to stock this number of birds in the four existing poultry houses.

The Applicant applied to vary the permit to install an additional four poultry houses at the Installation, which along with the four existing poultry houses provide a combined capacity for 319,990 broilers. The four new poultry houses, 5-8, consist of two double tier poultry houses. Each double tier building consists

of two poultry housing areas with an upper and lower deck. The double tier houses are ventilated by means of gable fans on the western end of the houses. Exhaust air passes through a dust baffle area fitted with a misting system, to aid dust removal, prior to exiting via the gable end fans. The lower decks are accessed from the concrete yard at the eastern gable ends and access to the upper decks is by means of a ramp on the northern sides of the buildings, utilising the topography of the site which slopes downwards from north to south. The permit variation does not result in a change to the maximum permitted bird numbers.

The four existing poultry houses, 1-4, are single storey and ventilated by roof fans with side wall inlets. Ventilation for house 1 is provided by roof fans with an emission point higher than 5.5 metres above ground level and an efflux speed of 2 metres per second. Ventilation for houses 2-4 is provided by roof fans with an emission point higher than 5.5 metres above ground level and an efflux speed of 7 metres per second. Houses 1-4 also have gable end fans which are operated infrequently to maintain temperature, typically in the summer months.

Birds are housed at one day old and de-populated at approximately thirty-two to forty days of age, on an all-in, all-out basis. The break between crops for clean out and turn-around is approximately seven days, leading to seven cycles per annum. Before bird arrival houses are pre-warmed by hot water blown air heaters fed by three biomass boilers, with an aggregated thermal rated input of 1.322 MW. The biomass boilers burn clean virgin woodchip and meet the technical criteria to be eligible for the Renewable Heat Incentive. Boiler ash will be securely stored prior to removal off site as a waste. Floors are covered to a minimum depth of 2 cm of bulk wood shavings.

At the end of the cycle the houses are depopulated, washed and disinfected ready for the next cycle. Used litter is exported from the site and sold. Water from the wash out of houses is channelled to underground collection tanks close to the houses to await export off site for spreading on operator owned land. Diverter valves are used during wash down periods to prevent the contamination of surface water systems. Roof water from all the houses and water draining from the yard (excluding periods of washout when water from the yard drains to the underground tanks) drains to an unnamed ditch to the south of poultry houses 7 and 8, via French drains.

Associated food is stored on the installation in sealed food bins. Mortalities are collected daily and stored in freezers prior to incineration in the farms' on site licensed incinerator (approved by the Animal and Plant Health Agency (APHA)). Water is provided via a nipple drinking system with cups to reduce leakage and spills.

The land around the site is predominantly agricultural, consisting of rural grassland and arable farming. The ground is undulating.

There are point source emissions from the Installation to air, water and land. Details of how we have addressed these can be found in the Permit and elsewhere in this document.

The key features of the Installation are summarised in table 2 below.

<b>Operational features</b>	<b>Description</b>
Broiler rearing	319,990 broilers are brought onto the farm at approximately 1 day old and are depopulated at between 32 and 40 days of age.
Poultry house ventilation	<ul style="list-style-type: none"> <li>• House 1 - roof fans (at a height of at least 5.5 metres above ground level and an efflux velocity of at least 2 m/s).</li> <li>• Houses 2-4 - roof fans (at a height of at least 5.5 metres above ground level and an efflux velocity of at least 7 m/s).</li> <li>• Houses 1-4 also have gable end fans which are operated infrequently to maintain temperature, typically in the summer months.</li> <li>• Houses 5-8 - tunnel ventilation on the western end of the houses with the exhaust air passing through a dust baffle area fitted with a misting system to aid dust removal.</li> </ul>
Litter/manure	At depletion used litter is exported from the site and sold. Contingency

management	arrangements are in place with surrounding farms to accept the manure in case of an emergency. Litter is not stored at the installation.		
Waste water management	Drainage from poultry housing and water from the wash out of poultry houses is channelled to underground collection tanks close to the poultry houses to await export off site for spreading on Operator owned land. Diverter valves are used during wash down periods to prevent the contamination of surface water systems and to divert the wash water to the dirty water tanks. Drainage from yards contaminated by litter or wash water is directed to the collection tanks. Clean drainage systems are not contaminated.		
Poultry house heating	Poultry houses are heated by hot water blown air heaters fed by three biomass boilers, with an aggregated thermal rated input of 1.322 MW. The biomass boilers burn clean virgin woodchip.		
Carcass management	Mortalities are collected daily and stored in freezers prior to incineration in the farms' on site licensed incinerator (approved by the Animal and Plant Health Agency (APHA)).		
Site drainage	Roof water from the poultry houses and water draining from the yard (excluding periods of washout when water from the yard drains to the underground tanks) drains to an unnamed ditch to the south of poultry houses 7 and 8, via French drains.		
Storage and use of raw material	Description	Maximum amount stored	Annual throughput
	Biocides (including disinfectants)	None	1,250 litres
	Pesticides (including rodenticides/ insecticides)	None	5 litres
	Bedding (wood shavings)	15 tonnes	25 tonnes
	Red diesel	5,000 litres	2,000
	Woodchip	150 tonnes	400 tonnes
	LPG	24,000 litres	30,000 litres

The Application has been assessed in line with our guidance: EPR 6.09 Sector Guidance Note – How to comply with your environmental permit for intensive farming (EPR 6.09) (version 2) which is available via the following link:

[www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/297084/geho0110brsb-e-e.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/297084/geho0110brsb-e-e.pdf)

and the Best Available Techniques Reference Document (BREF) for the Intensive Rearing of Poultry or Pigs (IRPP), which was published on 21 February 2017. There is a separate Best Available Techniques (BAT) Conclusions document which sets out the standards that permitted farms have to meet.

The BAT Conclusions document is available via the following link:

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017D0302&from=EN>

The techniques proposed by the Applicant meet the requirements set out in this guidance and are considered to be the best available techniques for a broiler unit of this size. It is a requirement of the Permit that the poultry unit is operated in line with this guidance. Section 4.8 below provides details of the BAT Conclusions and the standards that permitted farms have to meet.

## 4. Key issues of the decision

The key issues arising during this determination were as follows:

- 4.1 The possible impact of **ammonia** on sensitive local ecological receptors
- 4.2 The possible impact of **ammonia** on human receptors
- 4.3 The possible associated loss of amenity linked to **odour** emissions arising from the Installation
- 4.4 The possible associated loss of amenity linked to **noise** emissions arising from the Installation
- 4.5 The possible impact of **dust / bioaerosols** on human receptors
- 4.6 The possible impact of **site drainage** on groundwater and surface water
- 4.7 The possible impact of **pests**
- 4.8 Changes arising as a result of the **Intensive Rearing of Poultry or Pigs BAT Conclusions**
- 4.9 Pre-operational conditions and improvement programme
- 4.10 The possible impact of **combustion gases** from biomass boilers
- 4.11 Nitrogen deposition in a **Nitrate Vulnerable Zone (NVZ)**

We therefore describe how we determined these issues in some detail in this document below.

### 4.1 Ammonia Emissions – Ecological Receptors

Given the nature of the proposed activity, there is the potential for atmospheric ammonia to be released into the environment and impact nearby sensitive habitats and species. For this reason we have carried out an assessment of the risk.

Emissions of ammonia or ammonia deposition (nutrient nitrogen or acid) from farms may lead to both direct and indirect effects on vegetation. Nitrogen deposition can lead to acidification of the ecosystem or act as a fertiliser, leading to nutrient enrichment and subsequent changes in the structure of the habitat.

The Conservation of Habitats and Species Regulations 2017 (which implements the Habitats and Birds Directives) provides protection in law for Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). Government policy is that Ramsar sites are also treated in the same way as SACs and SPAs. Before granting the Permit we must determine whether the Installation would be likely to have a significant effect on a SAC, SPA or Ramsar site. If it would, we may only grant the Permit after carrying out an appropriate assessment and ascertaining that the Installation will not adversely affect the integrity of a SAC, SPA or Ramsar site or else that an exception applies.

The Wildlife and Countryside Act 1981 provides protection in law for SSSIs. Before granting the Permit we must determine whether the Installation is likely to damage any of the flora, fauna or geological or physiographical features by reason of which a SSSI is designated. If it is, we may only grant the Permit after notifying Natural England, waiting 28 days, and taking any advice we receive from them into account.

The above legislation, as well as other legislation such as the Environment Act 1995 and the Natural Environment and Rural Communities Act 2006, provides additional protection for flora and fauna whether or not existing in specifically designated conservation sites. We set out below how we have assessed the Application in view of this legislation.

To determine whether the Installation is likely to have a significant effect on a SAC, SPA or Ramsar site, and whether it is likely to damage any of the relevant features of a SSSI, we consider the impact of the Installation in-combination with other sources of potential impacts. This is done by considering the Installation's process contribution (PC) and the background levels.

When assessing the Installation's likely impact to flora and fauna more generally (including within other sites such as National Nature Reserves (NNRs), Local Nature Reserves (LNRs), Local Wildlife Sites (LWSs) and Ancient Woodlands) we look at the impact from the Installation alone in order to determine whether it would cause significant pollution. This is a proportionate approach, in line with the levels of protection offered by the conservation legislation to protect these other sites (which are generally more numerous than SACs, SPAs, Ramsar sites or SSSIs). It also allows us to strike a balance with other legal duties we are subject to, such as 'to have regard to the desirability of promoting economic growth', by ensuring that we do not unnecessarily restrict development.

Critical levels and loads<sup>1</sup> are set to protect the most vulnerable habitat types.

Critical levels are defined as "*concentrations of pollutants in the atmosphere above which direct adverse effects on receptors, such as human beings, plants, ecosystems or materials, may occur according to present knowledge*". (Source: [https://www.icpmapping.org/Definitions\\_and\\_abbreviations](https://www.icpmapping.org/Definitions_and_abbreviations))

Critical Loads are defined as: "*a quantitative estimate of exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge*". (Source: [https://www.icpmapping.org/Definitions\\_and\\_abbreviations](https://www.icpmapping.org/Definitions_and_abbreviations))

The **critical load** relates to the quantity of pollutant **deposited** from air to the ground, whereas the **critical level** is the gaseous **concentration** of a pollutant in the air.

Thresholds change in accordance with the levels of protection afforded by the legislation. Therefore the thresholds for SAC, SPA and SSSI features are more stringent than those for other nature conservation sites. For these other sites we consider that the Installation would not cause significant pollution if the PC is less than the relevant critical level (CL<sub>e</sub>) or critical load (CL<sub>o</sub>), provided that the Applicant will be using BAT to control emissions.

The screening assessment has considered any SACs, SPAs, Ramsar sites and SSSIs within 5km of the Installation boundary and any other nature conservation sites (including NNRs, LNRs, Ancient Woodlands and LWSs), within 2km of the Installation boundary. There are four SSSIs and nine other nature conservation sites, six of which are LWSs and three of which are Ancient Woodlands, located within these screening distances.

We have used the Environment Agency's Ammonia Screening Tool, version 4.5 (AST v4.5) to assess the predicted impact of the Installation at those sites identified within the above distance criteria.

We have applied a two stage screening criteria to the ammonia screening tool results, as follows:

Stage 1 - Where the ammonia screening tool predicts that emissions of ammonia or ammonia deposition (nutrient nitrogen or acid) will be <Y% (for Y%, see Table 3 below) of the relevant CL<sub>e</sub> or CL<sub>o</sub>, the Installation does not require an ammonia assessment (it is 'screened out').

Stage 2 - Further modelling is required (the Installation is not 'screened out') where:

- emissions of ammonia or ammonia deposition (nutrient nitrogen or acid) are in excess of Z% (for Z%, see Table 3 below) of the relevant CL<sub>e</sub> (ammonia) or CL<sub>o</sub> (nutrient nitrogen or acid) at any particular designated site; or

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<sup>1</sup> Critical loads and levels have been used by the United Nations Economic Commission for Europe (UNECE) to set targets for reductions in acid rain and the effects of nitrogen on sensitive ecosystems. The system used to work out critical loads has been agreed by the UNECE and is used by individual countries to calculate appropriate standards. Critical levels for key pollutants, such as ammonia, are proposed by a UNECE working group of international experts on the effects of air pollutants on ecosystems. Critical loads and levels provide the best available scientific information on the effects of pollutants on ecosystems.

- there is the potential for an in-combination effect with existing farms at a SAC, SPA, Ramsar site and/or SSSI if emissions are >Y% of the CLe or CLo; or
- the Installation is already permitted and the original permit required an Improvement Condition to reduce ammonia emissions; or
- the Installation is within 250m of a nature conservation site.

<b>Table 3 Screening thresholds</b>		
<b>Designation</b>	<b>Y%</b>	<b>Z%</b>
SAC, SPA, Ramsar site	4	20
SSSI	20	50
NNR, LNR, LWS, Ancient Woodland	100	100

The nature conservation site assessment takes into account the United Nations Economic Commission for Europe (UNECE) CLe for ammonia, which have been applied as follows:

- sites with sensitive Lichen or Bryophyte interest and habitats for which sensitive lichens and bryophytes are an integral part:  $1\mu\text{g}/\text{m}^3$ ; and
- other vegetation:  $3\mu\text{g}/\text{m}^3$ .

The assessment also considers the deposition of ammonia resulting in nutrient enrichment (and acidification) against relevant CLo. However, where a CLe of  $1\mu\text{g}/\text{m}^3$  is assigned, we believe the CLe is protective enough for deposition impacts and so no deposition assessments are necessary in this instance. Where a CLe of  $3\mu\text{g}/\text{m}^3$  is applied, deposition is considered as part of the assessment.

A 4% trigger threshold has been designated<sup>2</sup> for assessment of SACs, SPAs and Ramsar sites such that:

- if the Process Contribution (PC) is below 4% of the relevant CLe or CLo then the Installation is not considered likely to have a significant effect on these sites and can be permitted with no further assessment; and
- if this threshold is exceeded, the Installation is considered likely to have a significant effect and an appropriate assessment (in consultation with Natural England) is required. An overlapping in-combination assessment will also be completed where existing farms are identified within 5km of the SAC, SPA or Ramsar site.

A 20% trigger threshold is applied for assessment of SSSIs such that:

- if the process contribution (PC) is below 20% of the relevant critical level (CLe) or critical load (CLo) then the Installation is not considered likely to damage any of the relevant features of a SSSI and can be permitted with no further assessment; and
- if this threshold is exceeded the Installation is considered likely to damage any of the relevant features of a SSSI and further assessment (in consultation with Natural England) is required. An in-combination assessment will also be completed to establish the combined PC for all existing farms identified within 5 km of the SSSI.

A 100% trigger threshold is applied for the assessment of LWSs such that:

<sup>2</sup> The Air Quality Technical Advisory Group (AQTAG) agreed the thresholds in 2007, this was in consultation with Natural England and, at the time, the Countryside Council for Wales (now Natural Resources Wales) as both bodies are represented on the AQTAG group. Thresholds are expressed as a percentage of the relevant critical level or load and are based on: best available evidence of impacts at the time, professional judgement, and consideration that farms were already contributing to existing background levels. All thresholds are based on the best available evidence. We will review thresholds if/when new evidence becomes available.

- if the process contribution (PC) is below 100% of the relevant critical level (CLE) or critical load (CLo) then the farm can be permitted with no further assessment.

### **Ammonia assessment – SSSI**

Screening using the ammonia screening tool version 4.5 has indicated that the PC for the SSSIs in tables 4, 5 and 6 below are predicted to be less than 20% of the critical level or critical load for ammonia emissions, nitrogen deposition or acid deposition. Therefore we conclude that the Installation is not considered likely to damage any of the relevant features of these SSSIs. The results of the ammonia screening tool version 4.5 are given in tables 4, 5 and 6 below.

<b>Table 4 – Ammonia emissions</b>			
<b>Name of SSSI</b>	<b>Ammonia Cle (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>PC (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>PC % critical level</b>
Monk Wood SSSI	3*	0.516	17.2
Northwick Marsh SSSI	3*	0.266	8.9

\* Cle values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – 14/05/19. As there are no sensitive Lichens or Bryophytes present on the site a Cle of  $3\mu\text{g}/\text{m}^3$  has been assigned.

<b>Table 5 – Nitrogen deposition</b>			
<b>Name of SSSI</b>	<b>Critical load kg N/ha/yr*</b>	<b>PC kg N/ha/yr.</b>	<b>PC % critical load</b>
Monkwood Green SSSI	10	1.776	17.8
Monk Wood SSSI	20	2.681	13.4
Northwick Marsh SSSI	20	1.381	6.9
Grimley Brick Pits SSSI	10	1.978	19.8

\* Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – 14/05/19

<b>Table 6 – Acid deposition</b>			
<b>Name of SSSI</b>	<b>Critical load keq/ha/yr*</b>	<b>PC keq/ha/yr.</b>	<b>PC % critical load</b>
Monkwood Green SSSI	2.058	0.127	6.2
Monk Wood SSSI	1.093	0.192	17.6
Northwick Marsh SSSI	1.093	0.099	9.1

\* Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – 14/05/19

Initial screening using the ammonia screening tool version 4.5 has determined that the PC for Monkwood Green SSSI from the application site is predicted to be over the 20% threshold for ammonia emissions and therefore may cause damage to features of the SSSI. The result of the ammonia screening tool version 4.5 for ammonia emissions for Monkwood Green SSSI is given in table 7 below.

<b>Table 7 – Ammonia emissions</b>			
<b>Name of SSSI</b>	<b>Ammonia Cle (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>PC (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>PC % critical level</b>
Monkwood Green SSSI	1*	0.342	34.2

\* Cle value taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – 14/05/19. A Cle of  $1\mu\text{g}/\text{m}^3$  has been assigned as there are sensitive bryophytes present on the site.

An in-combination assessment is required for SSSI's when the process contribution (PC) as a % of the Cle of ammonia is in between Y & Z%, as is the case for Monkwood Green SSSI (see table 3 above for screening thresholds). In this case, there are no other farms acting in-combination with this application within 5km of the SSSI and as a result the PC is predicted to be less than Z% of the critical level significance threshold. In accordance with Environment Agency guidelines we conclude no likely damage to the site from the installation.



Initial screening using the ammonia screening tool version 4.5 has determined that the PC for Grimley Brick Pits SSSI from the application site is predicted to be over the 20% threshold for ammonia emissions and acid deposition and therefore may cause damage to features of the SSSI. The results of the ammonia screening tool version 4.5 for Grimley Brick Pits SSSI for ammonia emissions and acid deposition are given in tables 8 and 9 below.

<b>Table 8 – Ammonia emissions</b>			
<b>Name of SSSI</b>	<b>Ammonia Cle (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>PC (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>PC % critical level</b>
Grimley Brick Pits SSSI	1*	0.381	38.1

\* Cle value taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – 14/05/19. A Cle of  $1\mu\text{g}/\text{m}^3$  has been assigned as there are sensitive lichens and bryophytes present on the site.

<b>Table 9 – Acid deposition</b>			
<b>Name of SSSI</b>	<b>Critical load keq/ha/yr*</b>	<b>PC keq/ha/yr.</b>	<b>PC % critical load</b>
Grimley Brick Pits SSSI	0.683	0.141	20.6

\* Critical load value taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – 14/05/19

An in-combination assessment is required for SSSI's when the process contribution (PC) as a % of the Cle of ammonia and Clo of acid deposition is in between Y & Z%, as is the case for Grimley Brick Pits SSSI (see table 3 above for screening thresholds). In this case, there are no other farms acting in-combination with this application within 5km of the SSSI and as a result the PC is predicted to be less than Z% of the critical level significance threshold. In accordance with Environment Agency guidelines we conclude no likely damage to the site from the installation.

No further assessment in respect of the SSSIs is required.

### **Ammonia assessment – LWS/AW**

Initial screening using ammonia screening tool version 4.5 has indicated that emissions from the Installation will only have a potential impact on other nature conservation sites (such as National Nature Reserves (NNRs), Local Nature Reserves (LNRs), Local Wildlife Sites (LWSs) or Ancient Woodlands) with a precautionary critical level of  $1\mu\text{g}/\text{m}^3$  if they are within 1,008 metres of the emission source.

Beyond 1,008 metres the PC is less than  $1\mu\text{g}/\text{m}^3$  and therefore beyond this distance the PC is insignificant. In this case the LWS/AWs in table 10 are beyond this distance and therefore screen out of any further assessment.

Where the precautionary level of  $1\mu\text{g}/\text{m}^3$  is used, and the process contribution is assessed to be less than 100% the site automatically screens out as insignificant and no further assessment of critical load is necessary. In this case the  $1\mu\text{g}/\text{m}^3$  level used has not been confirmed by Natural England, but it is precautionary. We conclude that the impact from the installation will not cause significant pollution.

<b>Table 10 – LWS/AW assessment</b>	
<b>Name of LWS/AW</b>	<b>Distance from emissions sources (m)</b>
Laughern Brook LWS	1,256
Monkwood Green LWS	1,715
Monk Wood Complex LWS	1,819
River Severn LWS	1,558
Monk Wood AW	1,500
Unnamed AW	1,968

Screening using the ammonia screening tool version 4.5 has determined that the PC for the LWS/AWs in tables 11, 12 and 13 for ammonia emissions/nitrogen deposition/acid deposition from the Installation are under the 100% significance threshold. We therefore conclude that the impact from the installation will not cause significant pollution.

<b>Table 11 – Ammonia emissions</b>			
<b>Name of LWS/AW</b>	<b>Ammonia Cle (µg/m<sup>3</sup>)</b>	<b>PC (µg/m<sup>3</sup>)</b>	<b>PC % critical level</b>
Grimley Brook LWS	3*	1.103	36.8
Tinkers Coppice AW	3*	1.830	61.0

\* Cle 3 applied as no protected lichen or bryophytes species were found when checking the Easimap layer.

<b>Table 12 – Nitrogen deposition</b>			
<b>Name of LWS/AW</b>	<b>Critical load kg N/ha/yr*</b>	<b>PC kg N/ha/yr.</b>	<b>PC % critical load</b>
Grimley Brook LWS	10	5.730	57.3
Tinkers Coppice AW	10	9.504	95.0

\* Critical load values taken from APIS website (www.apis.ac.uk) – 14/05/19

<b>Table 13 – Acid deposition</b>			
<b>Name of LWS/AW</b>	<b>Critical load keq/ha/yr*</b>	<b>PC keq/ha/yr.</b>	<b>PC % critical load</b>
Grimley Brook LWS	1.658	0.409	24.7
Tinkers Coppice AW	1.685	0.679	40.3

\* Critical load values taken from APIS website (www.apis.ac.uk) – 14/05/19

If proposals are located within 250 metres of a LWS, detailed modelling may be required to assess the impact of ammonia or ammonia deposition at the site. Thorngrove Pool (sometimes noted as Thorngrove Lake) LWS is located within 231 metres of the Installation. As a result, the Applicant instructed a consultant ecologist to ascertain whether the LWS required further consideration with regards to the effects of atmospheric ammonia and ammonia deposition from the Installation. The report states that there do not appear to be communities especially sensitive to nitrogen deposition within the LWS, and that the lichen and bryophyte assemblage is unlikely to be adversely affected by the proposed development. The report concludes that further assessment of the LWS is not required.

Worcestershire Wildlife Trust, the lead organisation for the LWS, agreed with the conclusions of the report; they do not consider that there will be significant adverse impacts on the LWS and have confirmed that no further assessment of the LWS is required. We conclude that the impact from the installation will not cause significant pollution.

No further assessment in respect of the LWS/AWs is considered necessary.

## 4.2 Ammonia Emissions – Human Receptors

The Health Protection Agency (now Public Health England) has stated (Position Statement, Intensive Farming 2006) that it is unlikely that ammonia emissions from a well-run and regulated farm would be sufficient to cause ill health.

Whilst the potential adverse effects of ammonia include respiratory irritation and may also give rise to odour complaints, levels of ammonia in ambient air will decrease rapidly with distance from a source.

The Applicant's measures to minimise emissions from the Installation, which will minimise ammonia emissions, are included in the Environmental Risk Assessment, Odour Management Plan and Dust Management Plan. We have assessed these measures and have determined they represent best available techniques for this activity. Furthermore, condition 3.2.1 of the Permit applies to substances not controlled by emissions limits, also known as fugitive emissions. The Operator will be required to manage its activities so that they do not cause pollution.

In addition, we have considered ammonia levels for human health.

There are two human health Environmental Assessment Levels (EALs) for ammonia as outlined in our website guidance at the link: <https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit#environmental-standards-for-air-emissions>. These are a long term (LT) EAL of 180µg/m<sup>3</sup> and a short term (ST) EAL of 2500µg/m<sup>3</sup>.

The Applicant did not submit a quantitative assessment of the potential impact on human health from ammonia. However, the Environment Agency has completed an assessment using conservative assumptions with regards to ammonia. The predicted impact from the installation at nearby human receptor locations can be screened out as insignificant if the long-term PC is less than 1% of the long-term EAL and the short-term PC is less than 10% of the short-term EAL. The Environment Agency assessment shows that at nearby human receptor locations the impact can be screened out as insignificant.

We have also taken advice from Public Health England (PHE), who are the authority in matters relating to public health (the consultation responses from PHE can be found within Annex 1 and Annex 2 of this document). We conclude that no further assessment is considered necessary.

## 4.3 Odour

### 4.3.1 Risk Assessment

Intensive farming is by its nature a potentially odorous activity and complaints concerning this type of site are not unknown. This is recognised in our 'How to Comply with your Environmental Permit for Intensive Farming' EPR 6.09 guidance: ([www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/297084/geho0110brsb-e-e.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/297084/geho0110brsb-e-e.pdf)), which acknowledges that there is likely to be odour outside of the installation boundary, and that the appropriate measures for this sector prevent and where that is not possible minimise these odour emissions.

The Environment Agency's overarching approach for all installations is to ensure adequate controls are in place for sites with the potential to cause odour pollution beyond the installation boundary. This is achieved via the requirement for the operator to have and comply with an approved odour management plan (OMP). Such an OMP covers both point source and potential fugitive odorous emissions from an installation and is based on the foundation of a bespoke risk assessment for each particular installation as discussed below.

Condition 3.3 of the Permit reads as follows:

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

Under section 3.3 of the guidance, an OMP must be approved as part of the permitting process if sensitive receptors (in this instance excluding properties associated with the Installation) are within 400 metres of the installation boundary. It is appropriate to require an OMP when such sensitive receptors have been identified within 400 metres of the installation to prevent, or where that is not practicable, to minimise the risk of pollution from odour emissions. In this instance there are more than 30 sensitive receptors within 400 metres of the Installation boundary, therefore an OMP has been submitted, and further details are provided in section 4.3.2 below.

The Applicant's H1 risk assessment for odour provided with the Application lists key potential risks of odour pollution beyond the Installation boundary, along with the measures taken to manage the risk. The activities, or foreseeable problems with activities, that have been identified as having the potential to generate odour are as follows:

- the selection and manufacture of feed;
- feed delivery and storage;

- problems with housing ventilation;
- poor litter management;
- carcass disposal; and
- house clean out operations.

### 4.3.2 Odour Management Plan

The Installation is located within 400 metres of more than 30 sensitive receptors. The closest sensitive receptors to the Installation boundary are listed below (please note, distances stated are only an approximation from the Installation boundary to the assumed boundary of the properties):

- The Orchard, approximately 122m to the north east
- 7, Thorngrove Mews, approximately 125m to the north east
- 6, Thorngrove Mews, approximately 127m to the north east
- 5, Thorngrove Mews, approximately 129m to the north east
- 4, Thorngrove Mews, approximately 130m to the north east
- 3, Thorngrove Mews, approximately 132m to the north east
- 2, Thorngrove Mews, approximately 134m to the north east
- 1, Thorngrove Mews, approximately 136m to the north east

The Applicant has provided a number of revised OMP's; the final version was received on 24/09/19. The OMP has been assessed against the requirements of EPR 6.09 (version 2), Appendix 4 guidance 'Odour Management at Intensive Livestock Installations' and the Poultry Industry Good Practice Checklist (August 2013). We consider that the OMP is acceptable because it complies with the above guidance and the Applicant has included measures that will ensure compliance with the relevant BAT conclusions (BAT 12 and 13). Details of odour control measures, contingency measures and complaint procedures are described below.

The Operator is required to manage activities at the Installation in accordance with condition 3.3.1 of the Permit and its OMP. The OMP includes the following odour control measures:

- Twice daily olfactory checks coinciding with stock inspections.
- No on-site milling and mixing of feed takes place.
- Sealed feed delivery systems.
- Feed is delivered into sealed vermin proof silos.
- Any spillage of feed around bins is immediately swept up.
- Use of gable extraction fans on the new houses with all exhaust air passing through a misting system within a baffled area.
- Use of nipple drinkers with drip cups to minimise spillage.
- Carcasses are placed into plastic sealed bags, and stored in sealed, locked, shaded and vermin proof freezers away from sensitive receptors.
- Carcass containers are washed and disinfected with washings directed to dirty water tanks.
- Houses are sealed immediately following destocking.
- Litter is transported off site immediately; no litter is stored on site.
- All sediment traps and drains are cleaned both before and after washing operations.
- There is no storage or production of odorous waste on site.

The OMP includes a section on monitoring. Odour levels at the Installation will be monitored daily to detect elevated levels of odour. Formal odour monitoring will be conducted weekly by persons not involved directly with the broiler production, at points marked on the sensitive receptor and monitoring points plan. The OMP also includes monitoring for offsite odour, in response to any assessment by the Operator and/or as a result of complaints. In the event that elevated levels of odour are recorded, the site staff will be alerted to implement contingency measures. Retesting at the monitoring points will be conducted following any actions implemented to ensure the effectiveness of the actions.

The OMP includes contingency measures to minimise odour pollution during abnormal operations such as disease outbreak or extreme weather conditions preventing normal actions being undertaken. A list of primary and secondary remedial measures are included in the contingency plan, including triggers for

commencing and ceasing use of these measures and time frames for putting measures in place. These include the following measures:

- Rapid bird growth or poor growth due to illness - veterinarian advice is sought immediately for bird illness with additional bedding added to prevent/minimise odour release. Potential for early bird depletion.
- Fan/ventilation system failure – a mobile generator is sourced within 4 hours.
- Wet litter - additional ventilation and heating is implemented to dry litter, completed within 4 hours.
- Delay in wash water removal - washing operations are suspended and an agreement is in place with neighbouring farms for dirty water removal.
- Pipe or feed bin failure causing leak - repair to pipe work or feed bin is undertaken with immediate effect. Additional bins can be utilised and spills are cleaned up immediately.
- Leaky drinker systems/water pipe failure - any leaks are isolated and repaired immediately. Wet areas are covered with additional bedding to minimise odour.

The OMP also provides a suitable procedure in the event that complaints are made to the Operator, and includes a complaints form template. The Operator is required to review the OMP at least every year, prior to any major changes to operations (to ensure effectiveness) and/or after the Environment Agency has notified the Operator that it has substantiated a complaint, and make any appropriate changes to the OMP identified by the review.

The Environment Agency has reviewed the OMP and considers it complies with the requirements of the guidance. The Operator's compliance with the Permit and its OMP will prevent and where that is not practicable minimise the emission of odour.

A number of odour complaints have been received by the Environment Agency in the past related to the Installation. Whilst as explained above we are satisfied with the measures that have been proposed, in order to confirm they are effective, as bird numbers increase at the Installation, a number of pre-operational conditions and improvement conditions have been included in the permit to enable the Environment Agency to closely control the expansion of the Installation, to minimise the risk of odour pollution beyond the Installation boundary (see Section 4.9 below for details). Bird numbers will be increased in a staged manner, with a review of the effectiveness of odour controls linked to the Installation and written approval from the Environment Agency at each stage. The first stage will allow two of the new poultry houses, numbers 5 and 6, to be stocked; the second stage will allow the remaining two new poultry houses, numbers 7 and 8, to be stocked. The conditions will ensure that the effectiveness of the odour control measures are reviewed and any improvements necessary, will be completed prior to stocking/restocking of poultry houses 5-8.

### **4.3.3 Odour Modelling**

Odour modelling for the intensive farming sector has high uncertainties associated with it. These uncertainties increase when considering receptors near to an Installation. This is due to a number of reasons including variability of odour concentrations being high for this sector. This, along with the uncertainties inherent in any modelling, makes predictions made by the model unreliable for making permit determination decisions.

Our current stance is that intensive farming units which are sites of high public interest (SHPI) and which are subject to complaints should be required to produce an odour management plan (OMP), which is a more robust, detailed OMP than would normally be required to provide extra controls, including, but not limited to, enhanced contingency plans, to minimise any significant odour pollution at sensitive receptors beyond the installation boundary. For this application a satisfactory OMP has been produced and odour modelling has not been requested from the Applicant.

### **4.3.4 Conclusion**

We have included our standard odour condition 3.3.1 in the Permit, which requires that emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the Operator has used appropriate

measures, including, but not limited to, those specified in any approved odour management plan (which is captured through condition 2.3 and Table S1.2 of the Permit), to prevent or where that is not practicable to minimise the odour. We have also included the additional conditions described above.

The Operator will be required to operate the Installation in line with the operating techniques set out in the Application supporting documents (as listed in permit table S1.2), and the OMP.

We are satisfied that the manner in which operations are carried out on the Installation will prevent and where that is not practicable minimise odour emissions, that there will be no significant odour pollution and that we have sufficient controls within the permit conditions to enable further measures to be implemented should these be required.

## 4.4 Noise

### 4.4.1 Risk Assessment

Intensive farming by its nature involves activities that have the potential to cause noise pollution. This is recognised in our 'How to Comply with your Environmental Permit for Intensive Farming' EPR 6.09 guidance.

Condition 3.4 of the Permit reads as follows:

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

The Applicant's H1 risk assessment for noise and vibration provided with the Application lists the following key potential noise sources and the measures taken to manage the risk from them:

- large vehicles delivering/collecting from site;
- removal of litter and waste water;
- feed transfer from lorry to storage;
- operation of ventilation systems (fans);
- alarm system and standby generator;
- chickens;
- personnel; and
- repairs and servicing.

In all cases the Applicant assessed the likelihood of noise pollution beyond the Installation boundary as unlikely and the overall risk as not significant.

Under section 3.4 our 'How to Comply with your Environmental Permit for Intensive Farming' EPR 6.09 guidance a noise management plan (NMP) must be approved as part of the permitting determination, if there are sensitive receptors within 400 metres of the Installation boundary.

There are sensitive receptors within 400 metres of the Installation boundary; the Applicant has identified more than 30 properties within 400 metres of the Installation boundary not occupied or owned by people connected with the farm. Therefore, the Applicant has provided a NMP as part of the Application supporting documentation, and further details are provided in section 4.4.2 below.

We have assessed the NMP and the H1 risk assessment for noise and conclude that the Applicant has followed the risk identification and mitigation guidance set out in EPR 6.09 Appendix 5 'Noise management at intensive livestock installations'. We are satisfied that the manner in which operations are carried out on the Installation will prevent, and where that is not practicable minimise noise emissions,

that there will be no significant noise pollution and that we have sufficient controls within the permit conditions to enable further measures to be implemented should these be required.

#### **4.4.2 Noise Management Plan**

A NMP should contain appropriate measures to prevent, or where that is not practicable to minimise noise emissions. Noise pollution from the Installation is one of the concerns for members of the public who have raised objections to this proposal.

Operations with the most potential to cause noise nuisance have been assessed and control measures put in place, as described in the revised NMP (received 22/01/19), for all the activities with greatest potential to generate noise, including:

- Delivery lorries are fitted with silencers.
- Large capacity lorries are utilised to reduce the number of deliveries.
- Feed and fuel delivery time restrictions are in place (07.00 – 19.00hrs).
- No engines are left idling on site.
- Catch teams are fully trained and advised of the need to keep noise to a minimum.
- Lorries are parked as close as possible to doors to reduce forklift travel.
- Litter removal occurs during normal working hours (07.00-19.00hrs).
- Washing operations are carried out during normal working hours (08.00 - 19.00hrs).
- Daily inspections of feed bin stocks are undertaken to prevent augers running empty.
- Noise from ventilation fans is assessed during twice daily inspections; any noisy fans are isolated and the electrician notified.
- The standby generator test run occurs during normal working hours (08.00 -12.00hrs on Mondays).
- The standby generator is housed in an acoustic building/jacket.
- Routine repairs and servicing are undertaken during normal working hours (07.00 -1900hrs).

Please note: the Applicant has only considered vehicle movements accessing the site and within the Installation boundary, as we can only regulate noise within the Installation boundary. Noise emitted from vehicles travelling on the local road network is outside our remit.

The NMP includes a section on monitoring. Noise levels at the Installation will be assessed daily. Formal noise monitoring will be conducted weekly at points marked on the sensitive receptor and monitoring points plan.

The NMP also contains a commitment to recording and investigation of any noise complaints received in direct relation to the installation. Complaints received directly from the public will be notified to the Environment Agency.

The NMP will be reviewed at least every year and/or after an Environment Agency substantiated complaint is received.

#### **4.4.3 Conclusions**

We have included our standard noise and vibration condition 3.4.1 in the Permit, which requires that emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the Installation, as perceived by an authorised officer of the Environment Agency, unless the Operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan (which is captured through condition 2.3 and Table S1.2 of the Permit), to prevent or where that is not practicable to minimise the noise and vibration.

The Operator will be required to operate the Installation in line with the operating techniques set out in the Application supporting documents and the NMP. Once the operation of the Installation commences, there is a requirement to review the NMP either following an Environment Agency substantiated complaint, or every year, whichever is sooner. The review will record whether changes to the NMP should be made and make any appropriate changes to the NMP identified by the review.

We are satisfied that, using Best Available Techniques, the specific operational and mitigation measures included in NMP incorporated into the permit as Operational Techniques, will prevent, or where that is not practicable minimise, noise and vibration and prevent pollution from noise and vibration beyond the Installation boundary.

## 4.5 Dust and Bioaerosols

The use of Best Available Techniques and good practice will ensure minimisation of emissions. There are measures included within the Permit (the 'Fugitive Emissions' conditions) to require their use. Condition 3.2.1 'Emissions of substances not controlled by an emission limit' is included in the Permit to prevent such emissions causing pollution. This is used in conjunction with condition 3.2.2 which states that in the event of fugitive emissions causing pollution following commissioning of the Installation, the Operator is required to undertake a review of site activities, provide an emissions management plan and to undertake any mitigation recommended as part of that report, once approved in writing with the Environment Agency.

In addition conditions 1.1.1 and 2.3.1 within the Permit provide additional protection. Condition 1.1.1 is a general management condition stating that 'the operator shall manage and operate the activities in accordance with a written management system that identifies and minimises risks of pollution, so far as is reasonably practicable, including those risks arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and using sufficient competent persons and resources'. Condition 2.3.1 'Operating Techniques' states that 'activities shall, subject to the conditions of the permit, be operated using the techniques and in a manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing...', and this ties the Operator specifically to the specific details submitted in support of the Application.

The sensitive receptors considered for bioaerosols include the operators' farmhouses (unlike with odour and noise assessments which relate to offsite amenity). The nearest sensitive receptors, Thorngrove, The Orchard and 1-7 Thorngrove Mews, are located between approximately 85 metres and 136 metres to the north east of the Installation boundary.

Guidance on our website concludes that applicants need to produce and submit a dust and bioaerosol management plan with their applications only if there are sensitive receptors within 100 metres of their farm. Details can be found via the link below:

[www.gov.uk/guidance/intensive-farming-risk-assessment-for-your-environmental-permit#air-emissions-dust-and-bioaerosols](http://www.gov.uk/guidance/intensive-farming-risk-assessment-for-your-environmental-permit#air-emissions-dust-and-bioaerosols).

As there are receptors within 100 metres of the Installation boundary, the Applicant was required to submit a dust and bioaerosol management plan in the designated format, referred to as the Dust Management Plan (reference 'Bioaerosol Emissions at Thorngrove Farm poultry unit', received 22/02/19).

In the guidance mentioned above it states that particulate concentrations fall off rapidly with distance from the emitting source. This fact, together with the proposed good management of the Installation such as keeping areas clean from build-up of dust, and other measures in place to reduce dust and risk of spillages (e.g. litter and feed management/delivery procedures) all reduce the potential for emissions impacting the nearest receptors. The Applicant has confirmed the following measures in their dust management plan to reduce dust, which will inherently reduce bioaerosols:

- Feed is delivered in sealed systems.
- Use of roof extraction fans and misting systems.
- Bedding consists of dust extracted shavings; bedding is applied internally and is not blown into the houses.
- Use of oil coated, pelleted feed to bind dusty ingredients.
- A closed system is used for the delivery of feed from the silo to the poultry house.
- Feed spills are dealt with promptly.
- Dust socks are fitted to silo exhaust pipes.
- Litter is removed carefully during cleanout.



- Full trailers are sheeted before leaving the installation.
- Exhaust air from poultry houses 5-8 passes through a dust baffle area fitted with a misting system to aid dust removal.

We are satisfied that the measures outlined in the dust management plan and Application will prevent, and where that is not practicable minimise, dust and bioaerosol emissions from the Installation and prevent significant pollution or harm to human health. We are also satisfied that we have sufficient controls within the permit conditions to enable further measures to be implemented should these be required.

## 4.6 Site Drainage

### 4.6.1 Description and risk assessment

An assessment of the site drainage, including the risk to groundwater and surface water from potential pollutants from the Installation, has been undertaken.

The Operator is required to comply with its management system by condition 1.1.1 of the Permit. Further, it is required to comply with measures as detailed in section 3.2, EPR 6.09 'How to comply with your environmental permit for intensive farming', version 2 and specifically the section entitled 'Appropriate measures for preventing and minimising fugitive emissions, management of drainage systems and run-off'.

Roof water from all eight poultry houses and water draining from the yard (excluding periods of washout when water from the yard drains to the underground tanks) drains to an unnamed ditch to the south of houses 7 and 8, via French drains. Poultry houses 2 - 4 are ventilated by means of high velocity roof extraction fans and roof water is considered to be clean. Poultry house 1 is ventilated by means of low velocity roof extraction fans and houses 5 - 8 by means of tunnel ventilation via gable end fans, with exhaust air passing through a dust baffle and misting system, located on each of the two-tiered poultry houses, to aid dust removal. Roof water from poultry houses with low velocity fans is considered to be lightly contaminated and requires interception prior to disposal to surface water. French drains are considered as sufficient interception and treatment for potentially lightly contaminated water.

During clean out of the poultry houses where the concreted yard may become contaminated, diverter valves are manually operated to channel water to underground dirty water collection tanks to ensure no polluted water enters the clean water drainage system. The collection tanks conform to specifications in EPR6.09 'How to comply with your environmental permit for intensive farming', and specifically to meet the requirements of The Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) Regulations 2010 (as amended 2013). All wash water inside the poultry houses is channelled to the dirty water collection tanks. The dirty water is exported off site, immediately following washing operations, for spreading on Operator owned land.

Other potential sources of fugitive emissions have been assessed, such as dust from feed silos and feed transfer, which could cause a risk to groundwater and surface water. Measures to prevent or minimise emissions are considered to be satisfactory. Potential pollutants such as fuel storage and carcass storage have sufficient measures in place for containment, as assessed against the requirements of S3.2 of EPR 6.09 (Version 2). The fuel oil storage tank for the generator is bunded. The bund meets the requirements of the Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) Regulations 2010 (SSAFO Regulations) and the requirements outlined in EPR 6.09. Footbaths are managed so that they do not overflow. Spent disinfectants from the footbaths are disposed of with the dirty water. Vehicle washing is at a designated wash point, with washings directed to dirty water tanks. Areas around buildings will be kept free from build-up of manure and spilt feed.

Permit condition 3.1.1 states that the only point source emissions to water or land should be from the sources and emissions specified in table S3.2. In addition, permit conditions 3.2.1 and 3.2.2 state the following:

3.2.1 *Emissions of substances not controlled by emission limits shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.*

3.2.2 *The operator shall:*

- (a) *if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits; and*
- (b) *implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.*

The measures in place in the Operator's management systems are considered sufficient to ensure that any contaminated water will be contained, and potentially lightly contaminated water has sufficient mitigation in place. The Permit requires that the Operator complies with its written management system at all times. Consequently, we are satisfied that no pollution of groundwater or surface water from buildings and yards should occur as a result of operations at the Installation.

## 4.6.2 Conclusion

We conclude that the information provided with the Application (detailed in section 4.6.1 above) indicates that the potential risk to ground waters and surface waters from the Installation is not significant. The only discharge to surface water is of uncontaminated roof and yard water; any contaminated yard water and wash water is diverted to dirty water tanks. We are satisfied that the site complies with best practice and that no pollution of ground waters or surface waters should occur as a result of operations at the Installation. We are satisfied that the measures in place are BAT, the manner in which operations are carried out at the Installation will result in no significant pollution and that we have sufficient controls within the permit conditions to enable further measures to be implemented should these be required. The drainage proposals are not changing and the existing arrangements have been satisfactory therefore we are satisfied they will continue to be so.

## 4.7 Pests

The Applicant's proposed measures to prevent or minimise the presence of pests on site are as follows:

- A specialist contractor is used for pest control.
- Good management of the Installation.
- Areas will be kept clean.
- Vermin proof feed silos.
- Measures are in place to reduce dust and risk of spillages, such as manure and feed.
- Feed spillages are cleared up promptly.
- Litter is removed from houses at the end of the cycle and exported from the installation; no litter is stored on site.
- Carcasses are collected daily and stored in freezers on site prior to incineration in the farms' on site licensed incinerator (approved by the Animal and Plant Health Agency (APHA)).
- Temporary field heaps are regularly checked for maggots and flies; heaps are treated with pesticide and covered if flies become an issue.

Conditions 3.6.1 and 3.6.2 of the Permit also ensures that pests are adequately dealt with at the Installation. It reads as follows:

3.6.1 *The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.*

3.6.2 *The operator shall:*

- (a) *if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution, hazard or annoyance from pests;*
- (b) *implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.*

We are not aware of pests being an issue at the Installation and have received no complaints relating to pests as a result of current operations. As we consider the presence of pests at the Installation to be a low risk the Applicant was not required to submit a pest management plan with the Application. We are satisfied that the measures outlined by the Applicant will be sufficient to prevent or minimise the presence of pests following expansion of the site and that we have sufficient controls within the permit conditions to enable further measures to be implemented should these be required.

## 4.8 Intensive Rearing of Poultry or Pigs BAT Conclusions document

The Best Available Techniques Reference Document (BREF) for the Intensive Rearing of Poultry or Pigs (IRPP) was published on 21 February 2017. There is a separate BAT Conclusions document which sets out the BAT Conclusions and the standards that permitted farms have to meet.

The BAT Conclusions document is available via the following link:

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017D0302&from=EN>

All new poultry housing ('new plant') permitted as a result of this permit variation must be compliant in full with the BAT Conclusions from the first day of operation. 'New plant' is defined as plant first permitted at the site of the farm following the publication of the BAT Conclusions. Existing poultry houses permitted before 21/02/17 will need to comply with the BAT Conclusions by 21/02/2021. The Conclusions include BAT Associated Emission Levels (AELs) for ammonia emissions, as well as BAT-AELs for nitrogen and phosphorus excretion. We are satisfied that the existing poultry houses, 1 - 4, will be able to comply with the BAT Conclusions from 21/02/2021.

### 4.8.1 New BAT Conclusions review

There are 34 BAT Conclusion measures in total within the BAT Conclusion document dated 21 February 2017.

We sent out a Schedule 5 Notice, dated 15/02/19, requiring the Applicant to confirm that the installation complies in full with all the BAT Conclusion. The Applicant confirmed their compliance with all the BAT Conclusions, for both new and existing poultry housing, in their document dated 22/02/19.

The following is a review of the measures the Applicant has applied to ensure compliance with the above key BAT Conclusions:

<b>BAT measure</b>	<b>Applicant compliance measure</b>
BAT 3 - Nutritional management - Nitrogen excretion	The Operator has confirmed they will demonstrate that the regulated facility achieves levels of Nitrogen excretion below the required BAT-AEL of 0.6 kg N/animal place/year by an estimation using manure analysis for total Nitrogen content. Conditions 3.5.1 and 4.2.3 of the permit require the Operator to undertake annual monitoring and reporting for Nitrogen excretion as specified in Tables S3.3 and S4.1.

BAT 4 - Nutritional management - Phosphorus excretion	The Operator has confirmed they will demonstrate that the regulated facility achieves levels of phosphorous excretion below the required BAT-AEL of 0.25 kg P <sub>2</sub> O <sub>5</sub> /animal place/year by an estimation using manure analysis for total Phosphorous content. Conditions 3.5.1 and 4.2.3 of the permit require the Operator to undertake annual monitoring and reporting for Phosphorus excretion as specified in Tables S3.3 and S4.1.
BAT 24 - Monitoring of emissions and process parameters - Total nitrogen and phosphorus excretion	Table S3.3 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.
BAT 25 - Monitoring of emissions and process parameters - Ammonia emissions	Table S3.3 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.
BAT 26 - Monitoring of emissions and process parameters - Odour emissions	<p>The approved odour management plan (OMP) includes the following details for on Farm Monitoring:</p> <ul style="list-style-type: none"> <li>• On a daily basis, odour at the installation will be monitored (normally 07.00-10.00hrs and 16.00-18.00hrs). If elevated levels are detected staff will be alerted to implement contingency measures.</li> <li>• Formal odour monitoring will be conducted weekly by persons not directly involved with the broiler production; this will be done at points marked on the sensitive receptor map. Location of monitoring, odour detected, severity of odour (scored 0 - 5), duration of monitoring (intermittent or continuous), ambient temperature, wind strength and wind direction, will all be recorded.</li> <li>• In the event of odour scores of 3, 4 or 5 (medium odour, high odour or very high odour) being recorded, the site staff will be alerted to implement contingency measures. Retesting at the monitoring points will be conducted following any actions implemented to ensure the effectiveness of recorded actions implemented.</li> </ul>
BAT 27 - Monitoring of emissions and process parameters - Dust emissions	<p>Table S3.3 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.</p> <p>The Operator has confirmed that they will report the dust emissions to the Environment Agency annually by multiplying the standard dust emissions factor for broilers by the number of birds on site.</p>
BAT 32 - Ammonia emissions from poultry houses - Broilers	<p>The BAT-AEL to be complied with is 0.08 kg NH<sub>3</sub>/animal place/year.</p> <p>The Operator will meet this as the emission factor for broilers is 0.034 kg NH<sub>3</sub>/animal place/year.</p> <p>The Installation does not include an air abatement treatment facility, however the standard emission factor already complies with the BAT-AEL.</p>

## 4.9 Pre-operational conditions and improvement programme

### 4.9.1 Pre-operational conditions

Pre-operational condition PO1 prevents the initial stocking of poultry houses 7 and 8 without the Environment Agency's written approval. Before they obtain this the Operator will have to review the effectiveness of odour controls linked to the Installation and submit a written report to the Environment Agency for approval, in accordance with improvement condition IC2. This will ensure that effective odour controls are in place prior to an increase to the maximum permitted bird number of 319,990.

Pre-operational condition PO2 prevents the restocking of poultry houses 5 and 6 until written approval has been received from the Environment Agency if the Operator is notified by the Environment Agency this is required because poultry houses 5 and 6 are causing odour pollution. In those circumstances, approval will not be given unless the Environment Agency is satisfied that measures have been put in place to address the issue. These may be measures put in place following completion of IC2 or they could be approved independently of that condition. Although we are satisfied with the odour controls proposed by the Operator, given previous issues and in the unlikely event that they are not adequate this will ensure that additional odour controls are in place prior to the restocking of poultry houses 5 and 6.

Pre-operational condition PO3 provides a similar provision in respect of restocking houses 7 & 8.

<b>Reference</b>	<b>Operation</b>	<b>Pre-operational measures</b>
PO1	Initial stocking of birds in poultry houses 7 and 8 as shown on the site layout plan in Schedule 7 of the permit.	No birds shall be placed in poultry houses 7 and 8 until the Operator has written approval from the Environment Agency to operate poultry houses 7 and 8.
PO2	Restocking of birds in poultry houses 5 and 6, as shown on the site layout plan in Schedule 7 of the permit, prior to completion of IC2.	Prior to restocking of poultry houses 5 and 6 written approval from the Environment Agency shall be obtained if the Environment Agency has confirmed in writing this is required.
PO3	Restocking of birds in poultry houses 7 and 8, as shown on the site layout plan in Schedule 7 of the permit, prior to completion of IC3.	Prior to restocking of poultry houses 7 and 8 written approval from the Environment Agency shall be obtained if the Environment Agency has confirmed in writing this is required.

### 4.9.2 Improvement programme

The Operator has proposed some additional odour abatement measures should they be required. Improvement condition IC1, requires the Operator to review the efficacy of these odour abatement measures and provide timescales for installation. This is to avoid delays in installing the extra measures should they prove necessary. Installation would be required as an 'appropriate measure' under the standard odour condition.

In addition, improvement condition IC2 requires the Operator to carry out a review of the effectiveness of odour controls linked to the installation and submit a written report to the Environment Agency for approval following the initial 12 month period operating two of the new poultry houses, numbers 5 and 6, or sooner if requested. This report will assess the effectiveness of the mitigation measures and assess whether any additional measures are needed; if they are required they will need to be implemented through the OMP.

Improvement Condition IC3 requires a similar review following operation of houses 7 and 8 for an initial period of 12 months.

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
IC1	<p>The Operator shall submit a written report for approval demonstrating the odour reduction efficiency (%) of the proposed odour abatement system, with evidence from manufacturer's data.</p> <p>The report should include, as a minimum, a description of the proposed odour abatement equipment, a list of the critical operating parameters and acceptable ranges of operation of these parameters to ensure effective odour abatement, monitoring of critical control parameters and type of monitoring to be employed, evidence of usage of the proposed system within intensive farming applications and trial data at set abatement conditions showing effective odour abatement at a relevant volumetric gas flow rate and for relevant animal types. It should also include an assessment of how the proposed technique satisfies BAT Conclusion 13d.</p> <p>Timescales for installation of the odour abatement system, shall be provided.</p> <p>The report shall consider the addition of the odour abatement equipment for both potential scenarios, i.e. installation of odour abatement equipment on poultry houses 5-8, in response to PO2, and installation of odour abatement equipment only on poultry houses 7&amp;8, in response to PO3.</p> <p>The improvement program shall be deemed completed following submission of the written report.</p>	3 months from permit issue
IC2	<p>Twelve months after the initial stocking of poultry houses 5 and 6, or sooner if requested in writing by the Environment Agency, the Operator shall carry out a review of the effectiveness of odour controls to minimise the risk of odour pollution beyond the installation boundary and submit a written report to the Environment Agency for approval.</p> <p>The report shall include:</p> <ul style="list-style-type: none"> <li>• A summary of action taken to optimize poultry housing conditions, including but not limited to litter management and ventilation systems, to maximise odour control.</li> <li>• A summary of any other action taken to minimise odour pollution from the installation.</li> <li>• A list of any odour complaints with a description of root causes and corrective actions to minimise odour pollution.</li> <li>• An assessment of whether any additional measures are necessary for reducing odour emissions and if so what those measures are.</li> <li>• Details of all improvements requiring infrastructure changes and timescales to complete them.</li> <li>• Any updates required to the odour management plan</li> </ul>	1 month following the 12 month period, or within 1 month of a written request from the Environment Agency.

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
	The report shall be implemented in accordance with the Environment Agency's written approval.	
IC3	<p>Twelve months after the initial stocking of poultry houses 7 and 8, or sooner if requested in writing by the Environment Agency, the Operator shall carry out a review of the effectiveness of odour controls to minimise the risk of odour pollution beyond the installation boundary and submit a written report to the Environment Agency for approval.</p> <p>The report shall include:</p> <ul style="list-style-type: none"> <li>• A summary of action taken to optimize poultry housing conditions, including but not limited to litter management and ventilation systems, to maximise odour control.</li> <li>• A summary of any other action taken to minimise odour pollution from the installation.</li> <li>• A list of any odour complaints with a description of root causes and corrective actions to minimise odour pollution.</li> <li>• An assessment of whether any additional measures are necessary for reducing odour emissions and if so what those measures are.</li> <li>• Details of all improvements requiring infrastructure changes and timescales to complete them.</li> <li>• Any updates required to the odour management plan.</li> </ul> <p>The report shall be implemented in accordance with the Environment Agency's written approval.</p>	1 month following the 12 month period, or within 1 month of a written request from the Environment Agency.

## 4.10 Biomass Boiler

The Applicant is varying their permit to include an additional biomass boiler, with a thermal rated input of 0.895 MW. This will increase the total number of biomass boilers at the Installation to three, and the aggregated thermal rated input to 1.322 MWth. The biomass boilers will not need to comply with the Medium Combustion Plant Directive (MCPD) as no individual boiler has a thermal rated input greater than 1 MW.

The Environment Agency has assessed the pollution risks and has concluded that air emissions from small biomass boilers are not likely to pose a significant risk to the environment or human health providing certain conditions are met. Therefore a quantitative assessment of air emissions will not be required for poultry sites where:

- the fuel will be derived from virgin timber, miscanthus or straw, and;
- the biomass boiler appliance and installation meets the technical criteria to be eligible for the Renewable Heat Incentive, and;
- the aggregate boiler net rated thermal input is:
  - A. less than 0.5MWth, or;

- B. less than 1MWth where the stack height is greater than 1 metre above the roof level of adjacent buildings including building housing boiler(s) if relevant (where there are no adjacent buildings, the stack height must be a minimum of 3 metres above ground), and there are:
- no Special Areas of Conservation, Special Protection Areas, Ramsar sites or Sites of Special Scientific Interest within 500 metres of the emission point(s);
  - no National Nature Reserves, Local Nature Reserves, ancient woodlands or local wildlife sites within 100 metres of the emission point(s), or;
- C. less than 2MWth where, in addition to the above criteria for less than 1MWth boilers, there are:
- no sensitive receptors within 150 metres of the emission point(s).

This is In line with the Environment Agency’s May 2013 document “Biomass boilers on EPR Intensive Farms”, an assessment has been undertaken to consider the proposed addition of the biomass boilers.

The stack heights for the two existing biomass boilers are less than 1 metre above the roof level of adjacent buildings and there are sensitive receptors within 150 metres of one of the existing biomass boilers. As a result we have been unable to screen the combined emissions as ‘not significant’ using the above qualitative screening approach and have quantitatively assessed combined emissions from the three emission sources (the existing two and the new one) using the Environment Agency’s Air Quality Modelling and Assessment Unit (AQMAU) screening tool in addition to considering the local environmental quality.

**Table 1. Point source emission parameters**

Emission Point Reference	Grid reference of stack	Stack height (m)	Stack Diameter (m)	Exit velocity (m/s)
1	SO 82087 60013	4.6	0.25	3.21
2	SO 82104 59827	4.6	0.25	3.21
3	SO 82132 59758	11	0.35	16.6

The screening tool has been run for emissions of NO<sub>x</sub>, PM<sub>10</sub> and CO for the closest residential receptor points to the Installation.

Process Contributions

The emissions were assessed in accordance with the H1 environmental risk assessment methodology. The emissions were assessed against the following Air Quality Standards (AQS):

**Table 3. Air Quality Standards (AQS)**

Pollutant	AQS µg/m <sup>3</sup> (short term)	AQS µg/m <sup>3</sup> (long term)
NO <sub>2</sub>	200	40
PM <sub>10</sub>	50	40



CO	10,000	No long term AQS
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Process contributions (PC) can be screened out as insignificant if they are less than 10% of the short-term air quality standard (AQS) and less than 1% of the long-term AQS.

The only pollutants emitted by the biomass boilers in sufficient quantity to require assessment are emissions of NO<sub>x</sub>, PM<sub>10</sub> and CO. Using the AQMAU screening tool, we can conclude that all emissions for NO<sub>x</sub>, PM<sub>10</sub> and CO from the biomass boilers are less than 10% of the short-term AQS and less than 1% of the long-term AQS and as such we are satisfied that they will not cause significant pollution of the environment or harm to human health.

## 4.11 Nitrogen deposition in a Nitrate Vulnerable Zone (NVZ)

Nitrate Vulnerable Zones (NVZs) are areas designated as being at risk from agricultural nitrate pollution.

The Nitrate Pollution Prevention Regulations 2015 (as amended) Part 3 regulation 7(1) states, in a nitrate vulnerable zone, 'The occupier of a holding must ensure that in any twelve-month period, the total amount of nitrogen in organic manure spread on any given hectare of land on the holding does not exceed' 250kg'.

Organic manure (broiler litter and wash water) applied to land owned and managed by the Operator must be spread in accordance with The Reduction and Prevention of Agricultural Diffuse Pollution (England) Regulations 2018, a manure management plan (in accordance with the Nitrate Pollution Prevention Regulations 2015 which were further amended in 2016) and Condition 2.3.5 of the Permit, which requires that all appropriate measures are used to prevent or where that is not practicable minimise pollution.

If organic manure is exported off-site for spreading written evidence of the arrangements in place must be maintained such as:

- records of the quantities and the date of transfer for example, to power station or biogas plant for recovery; waste water treatment plant for disposal; or third party for spreading to land;
- the names and addresses and land acreage available where manures and slurries are exported for spreading to land.

These records are also required as part of Nitrate Vulnerable Zone (NVZ) obligations.

Where a 'manure agent' or other third party accepts liability for removing organic manure from the installation, the operator should provide acceptable confirmation that:

- as a minimum, the third party will ensure that the organic manure is spread to land in accordance with the Code of Good Agricultural Practice; or
- that the spreading will be in accordance with a manure management plan for the receiving land.

The Applicant has proposed the following measures to comply with the above regulations:

- Litter is sold to third parties.
- Any litter that is exported from the installation has records kept of the quantities, destination and the date of transfer to separate farming businesses.
- Assurance is received from recipients that spreading is in accordance with the Code of Good Agricultural Practice.
- Contingency arrangements are in place with surrounding farms to accept the manure in case of an emergency.
- Wash water is spread on land owned by the Operator in accordance with a manure management plan and NVZ rules.

We conclude that the information provided with the Application indicates that the potential risk to the NVZ from the Installation is not significant. We are satisfied that the site complies with best practice, that no pollution of ground waters or surface waters should occur as a result of operations at the Installation and that we have sufficient controls within the permit conditions to enable further measures to be implemented should these be required.

## **5. Other considerations**

During the determination of the Application we have also taken the points below into consideration.

### **5.1 Operator competence**

We must not grant a permit to an applicant where we consider they will not operate the installation or will not do so in accordance with a permit. In determining whether this may be the case, we consider whether an applicant: can demonstrate technical competence, has suitable management systems, has any relevant convictions and is financially competent, as stated in Defra Core Guidance and our online guidance 'What a competent operator is' in section 'Legal operator and competence requirements: environmental permits' on GOV.UK.

Operation of an intensive farming installation does not require compliance with an approved scheme to demonstrate technical competence (as would be the case for example for a waste operation). Instead an operator demonstrates technical competence by way of their management system that staff training and development requirements are met, along with provision for keeping up-to-date with technical and legislative changes. Permit condition 1.1 also ensures that these management systems are followed so that the Operator remains 'competent' throughout the life of the Permit.

An applicant's compliance record includes a review of relevant convictions and can take into account any known breaches of other regulatory regimes. The provisions of the Rehabilitation of Offenders Act 1974 require convictions of individuals to be considered spent after a prescribed period and we treat corporate operators in the same way.

Financial competence is initially based on whether an applicant has any current or past insolvency and bankruptcy proceedings.

Operator competence checks were carried out in line with our guidance before the original permit was granted and we were satisfied that the Operator met the requirements. Although there have been a number of substantiated odour complaints in the past, the Operator has made appropriate changes to operations and the number of substantiated odour complaints has fallen substantially. We are satisfied that the Operator still meets the requirements for operator competence.

The Operator is required to operate the Installation in accordance with an Environmental Management System (EMS) under condition 1.1 of the Permit. The Operator commits to the operating techniques as described in the Application and as incorporated into the Permit in condition 2.3.1 and associated Table S1.2. Any deviation from either of these would be a breach of the Permit, and action would be taken in accordance with our enforcement and sanctions statement and guidance.

### **5.2 Other legal requirements**

In this section we explain how we have addressed other relevant legal requirements, to the extent that we have not addressed them elsewhere in this document.

#### **5.2.1 Schedules 1 and 7 to the Permitting Regulations – IED**

We address the requirements of the IED in the body of this document above.

One requirement not addressed above is that contained in Article 5(3) IED. This requires that "In the case of a new installation or a substantial change where Article 4 of Directive 85/337/EC (now Directive 2011/92/EU) (the EIA Directive) applies, any relevant information obtained or conclusion arrived at

pursuant to articles 5, 6 and 7 of that Directive shall be examined and used for the purposes of granting the permit.”

- Article 5 of the EIA Directive relates to the obligation on developers to supply the information set out in Annex IV of that Directive when making an application for development consent.
- Article 6(1) requires Member States to ensure that the authorities likely to be concerned by a development by reason of their specific environmental responsibilities are consulted on the Environmental Statement and the request for development consent.
- Articles 6(2)-6(6) make provision for public consultation on applications for development consent.
- Article 7 relates to projects with transboundary effects and consequential obligations to consult with affected Member States.

The grant or refusal of development consent is a matter for the relevant local planning authority. The Environment Agency’s obligation is therefore only to examine and use any relevant information obtained or conclusion arrived at by the local planning authorities pursuant to those EIA Directive Articles.

In this case the Applicant has not made an application for planning permission and therefore there is no relevant information from the planning process for the Environment Agency to consider. The Environment Agency has taken into account information provided through the Application concerning potential risks to the environment posed by the Installation. The measures imposed by the Permit ensure that those risks are mitigated such that the Installation does not risk an unacceptable level of pollution.

## **5.2.2 Schedule 22 to the Permitting Regulations – Water Framework and Groundwater Directives**

To the extent that it might lead to a discharge of pollutants to groundwater (a “groundwater activity” under the EPR 2016), the Permit is subject to the requirements of Schedule 22, which delivers the requirements of EU Directives relating to pollution of groundwater. The Permit requires the taking of all necessary measures to prevent the input of any hazardous substances to groundwater, and to limit the input of non-hazardous pollutants into groundwater so as to ensure such pollutants do not cause pollution, and satisfies the requirements of Schedule 22.

No releases to groundwater from the Installation are permitted. The Permit also requires material storage areas to be designed and maintained to a high standard to prevent accidental releases.

## **5.2.3 Directive 2003/35/EC – The Public Participation Directive**

Regulation 59 of the Permitting Regulations requires the Environment Agency to prepare and publish a statement of its policies for complying with its public participation duties. We have published our public participation statement.

This Application has been consulted upon in line with this statement. This satisfies the requirements of the Public Participation Directive. Our draft decision in this case has been reached following a programme of extended public consultation, both on this Permit Application and later, separately, on the Permit and a draft decision document.

## **5.2.4 Environment Act 1995**

### **(i) Section 4 (Pursuit of Sustainable Development)**

We are required to contribute towards achieving sustainable development, as considered appropriate by Ministers and set out in guidance issued to us. The Secretary of State for Environment, Food and Rural Affairs has issued The Environment Agency’s Objectives and Contribution to Sustainable Development: Statutory Guidance (December 2002). This document:

*provides guidance to the Agency on such matters as the formulation of approaches that the Agency should take to its work, decisions about priorities for the Agency and the allocation of resources. It is not directly applicable to individual regulatory decisions of the Agency*

In respect of regulation of industrial pollution through the Permitting Regulations, the Guidance refers in particular to the objective of setting permit conditions “in a consistent and proportionate fashion based on Best Available Techniques and taking into account all relevant matters...”. The Environment Agency considers that it has pursued the objectives set out in the Government’s guidance, where relevant, and that there are no additional conditions that should be included in this Permit to take account of the Section 4 duty.

**(ii) Section 5 (Preventing or Minimising Effects of Pollution of the Environment)**

We are satisfied that our pollution control powers have been exercised for the purpose of preventing or minimising, remedying or mitigating the effects of pollution.

**(iii) Section 6(1) (Conservation Duties with Regard to Water)**

We have a duty to the extent we consider it desirable generally to promote the conservation and enhancement of the natural beauty and amenity of inland and coastal waters and the land associated with such waters, and the conservation of flora and fauna which are dependent on an aquatic environment.

We consider that no additional or different conditions are appropriate for this Permit to fulfil these duties.

**(iv) Section 6(6) (Fisheries)**

We have a duty to maintain, improve and develop fisheries of salmon, trout, eels, lampreys, smelt and freshwater fish.

We consider that no additional or different conditions are appropriate for this Permit to fulfil these duties.

**(v) Section 7 (Pursuit of Conservation Objectives)**

This places a duty on us, when considering any proposal relating to our functions, to have regard amongst other things to any effect which the proposals would have on sites of archaeological, architectural, or historic interest; the economic and social well-being of local communities in rural areas; and to take into account any effect which the proposals would have on the natural beauty or amenity of any rural area.

We consider that no additional or different conditions are appropriate for this Permit to fulfil these duties.

**(vi) Section 39 (Costs and Benefits)**

We have a duty to take into account the likely costs and benefits of our decision (‘costs’ being defined as including costs to the environment as well as any person). This duty, however, does not affect our obligation to discharge any duties imposed upon us in other legislative provisions.

In so far as relevant we consider that the costs that the Permit may impose on the Applicant are reasonable and proportionate in terms of the benefits it provides.

**(vii) Section 81 (National Air Quality Strategy)**

We have had regard to the National Air Quality Strategy and consider that our decision complies with the Strategy, and that no additional or different conditions are appropriate for this Permit.

**(viii) Clean Air Strategy 2019**

We have had regard to the Clean Air Strategy 2019 and consider that our decision complies with the Strategy, and that no additional or different conditions are appropriate for this Permit

**(ix) National Emissions Ceiling Regulations 2018**

We have had regard to the National Air Pollution Control Programme and consider that our decision complies with the Strategy, and that no additional or different conditions are appropriate for this Permit.

### **5.2.5 Human Rights Act 1998**

We have considered potential interference with rights addressed by the European Convention on Human Rights in reaching our decision and consider that our decision is compatible with our duties under the Human Rights Act 1998. In particular, we have considered the right to life (Article 2), the right to a fair trial (Article 6), the right to respect for private and family life (Article 8) and the right to protection of property (Article 1, First Protocol). We do not believe that Convention rights are engaged in relation to this determination.

### **5.2.6 Countryside and Rights of Way Act 2000**

Section 85 of this Act imposes a duty on Environment Agency to have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty (AONB). There is no AONB which could be affected by the Installation.

### **5.2.7 Wildlife and Countryside Act 1981**

Under section 28G of the Wildlife and Countryside Act 1981 the Environment Agency has a duty to take reasonable steps to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which a site is of special scientific interest. Under section 28I the Environment Agency has a duty to consult Natural England in relation to any permit that is likely to damage SSSIs.

We assessed the Application and concluded that the Installation will not damage the special features of any SSSI. This assessment is summarised in greater detail in section 4.1 of this document.

### **5.2.8 Natural Environment and Rural Communities Act 2006**

Section 40 of this Act requires us to have regard, so far as is consistent with the proper exercise of our functions, to the purpose of conserving biodiversity. We have done so and consider that no different or additional conditions in the Permit are required.

### **5.2.9 Deregulation Act 2015**

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant the Permit.

Paragraph 1.3 of the guidance says:

*“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”*

We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider the requirements and standards we have set in the Permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This ensures that environmental impacts from the Installation will not adversely affect the growth of local businesses. It also promotes growth amongst legitimate operators because the standards applied to the Operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.

### **5.2.10 Conservation of Habitats and Species Regulations 2017**

We have assessed the Application in accordance with guidance agreed jointly with Natural England and concluded that there are no SAC, SPA or Ramsar sites which could be affected by the Installation.

# Annex 1: Consultation, web publicising and newspaper advertising responses

## **Advertising and Consultation on the Application**

The Application has been advertised and consulted upon in accordance with the Environment Agency's Public Participation Statement. The way in which this has been carried out along with the results of our consultation and how we have taken consultation responses into account in reaching our decision is summarised in this Annex. Copies of all consultation responses have been placed on the Environment Agency public register.

The Application was publicised on the GOV.UK website between 10 January 2019 and 07 February 2019 and in the Berrow's Worcester Journal on 10 January 2019. Copies of the Application were placed on our public register at the Environment Agency's offices at Riversmeet House, Newtown Industrial Estate, Northway Lane, Tewkesbury, Gloucestershire GL20 8JG. Additionally, we also published the application on Citizen Space.

The following statutory and non-statutory bodies were consulted:

- Worcestershire Regulatory Services (Environmental Health)
- Malvern Hills District Council (Planning)
- Public Health England (PHE)
- Director of Public Health
- Health and Safety Executive (HSE)

We also notified the following bodies of the application:

- Grimley Parish Council
- Hallow Parish Council

We also notified the local MP and a number of local residents within close proximity to the Installation, of the application.

### **1) Consultation responses from statutory and non-statutory bodies**

Response received from
Public Health England (PHE) (received 30/07/19)
Brief summary of issues raised
<p>The main emissions of potential public health significance are emissions to air of bio aerosols, dust including particulate matter and ammonia. The applicant has carried out short qualitative assessments that conclude the site will not pose unacceptable impacts with the proposed mitigation and management measures.</p> <p>Should it be identified by the applicant that there are sensitive receptors within 100 metres from the boundary of such units the applicant is required to carry out a bio aerosol risk assessment.</p> <p>PHE is currently updating its Intensive Farming position paper as part of wider work on the health impacts on exposure to bio aerosols from intensive farming.</p> <p>It is assumed by PHE that the installation will comply in all respects with the requirements of the permit, including the application of Best Available Techniques (BAT). This should ensure that emissions present a low risk to human health.</p> <p>More information is available on the public health impacts of intensive farms in the Public Health England Position Statement which can be found at: <a href="http://webarchive.nationalarchives.gov.uk/20140714084352/http://www.hpa.org.uk/web/HPAweb&amp;HPAwebStandard/HPAweb_C/1195733812766">http://webarchive.nationalarchives.gov.uk/20140714084352/http://www.hpa.org.uk/web/HPAweb&amp;HPAwebStandard/HPAweb_C/1195733812766</a></p>

<b>Summary of actions taken or show how this has been covered</b>
The Environment Agency has completed an assessment, using conservative assumptions, with regards to ammonia and has concluded that at nearby receptor locations the impact is unlikely to exceed long term 18 µg/m <sup>3</sup> and short term 250 µg/m <sup>3</sup> which is less than 1% and 10% of the respective values. We conclude that ammonia from the Installation is unlikely to have a significant health impact on human receptors, given the conditions imposed by the Permit.
To prevent significant emissions from the site the Applicant has proposed appropriate measures to manage emissions, in accordance with our technical guidance note for intensive farming and the BAT Conclusions document, including ammonia, bioaerosols and particulates. These measures include the use of appropriate ventilation systems, appropriate housing design and management, containment of feedstuff and management of poultry litter. We are satisfied that these measures will mitigate emissions to prevent a significant impact from the site (see sections 4.2, 4.5 and 4.10 for further details of our assessment with regards to fugitive emissions of ammonia, dust and bioaerosols).

<b>Response received from</b>
Worcestershire Regulatory Services (WRS) (Environmental Health) (received 23/07/19)
<b>Brief summary of issues raised</b>
WRS received an odour complaint in September 2014 relating to the chicken rearing activity but it was not substantiated and no further complaints have been received since then.
<b>Summary of actions taken or show how this has been covered</b>
No action required.

<b>Response received from</b>
Malvern Hills District Council (MHDC) (Planning and Housing Services) (received 05/02/19)
<b>Brief summary of issues raised</b>
There are currently 4 poultry sheds at the farm which have been in situ since at least 1999.
The two 'double decker sheds' proposed as part of the permit variation do not appear to be the subject of any planning application to date, and planning permission would need to be sought for this type of development.
The planning permissions (86/02091/FUL, 87/00426/FUL, 94/00541/FUL) for the existing sheds (attached) do not have any conditions restricting numbers or production. MHDC would be relying on the Environment Agency to control any environmental impacts that arise as a result of any permit variation.
The district council recommends that the permit application is not approved until the planning status of the proposed sheds is established.
<b>Summary of actions taken or show how this has been covered</b>
The Permitting Regulations allow us to issue an environmental permit irrespective of whether planning permission is in place. Where we have issued an environmental permit, this does not mean that the operator can carry out the activity without the relevant planning consent. The operator has to comply with both the environmental permit and the planning permission.
The status of the planning consent is not a matter within our remit and is not relevant in the determination of the Application.

The following organisations were also consulted but no response was received:

- The Director of Public Health
- The Health and Safety Executive

**2) Consultation Responses from members of the public and County / Parish / District councillors**

The consultation responses received were wide ranging and a number of the issues raised were outside the Environment Agency's remit in reaching its permitting decisions. Specifically questions were raised which fall within the jurisdiction of the planning system, both on the development of planning policy and the grant of planning permission.

Guidance on the interaction between planning and pollution control is given in the National Planning Policy Framework. It says that the planning and pollution control systems are separate but complementary. We are only able to take into account those issues which fall within the scope of our regulatory powers.

### **a) Representations from County / Parish / District Councillors**

<b>Response received from</b>
Hallow Parish Council (received 31/01/19)
<b>Brief summary of issues raised</b>
<p>At the Hallow Parish Council meeting held on 14th January, 2019 it was unanimously resolved to lodge an objection to the above application on the following grounds:</p> <ul style="list-style-type: none"> <li>i. Management of odours is currently a serious issue with offensive odours from waste perceptible by residents living almost a mile away from the facility. The Council is concerned that the proposed expansion to accommodate a huge number of additional poultry will increase odours. Any new permission should therefore require specific proposals for odour management and have restrictions imposed which are monitored by the EA;</li> <li>ii. The height of the proposed two-storey buildings will be visually intrusive. We request that the height of any new buildings does not exceed that of existing buildings. If this cannot be achieved with the 2 storey buildings proposed then we request that the building type should be restricted to the height approved as a part of the original application process;</li> <li>iii. The proposed biomass boiler should be of a type that does not release particulates, or odours into the atmosphere;</li> <li>iv. Noise arising from vehicle movements and site vehicles is already a nuisance to residents living nearby. The applicant should be required to submit proposals showing how noise from vehicles is to be reduced.</li> <li>v. Noise emanating from cooling fans which are generally utilised in the hot summer periods to reduce the temperature in the production facilities causes a nuisance to local residents. The Council is concerned that the additional buildings will result in additional noise. The applicant should be required to submit proposals to show how noise levels will be reduced.</li> </ul>
<b>Summary of actions taken or show how this has been covered</b>
<ul style="list-style-type: none"> <li>i. The Applicant submitted a revised OMP on 24/09/19 and we are satisfied that the measures outlined will minimise the potential for odour emissions from the Installation. Odour levels at the Installation will be monitored daily to detect elevated odours. Formal odour monitoring will be conducted weekly by persons not involved directly with the broiler production, as well as monitoring for offsite odour, in response to any assessment by the Operator and/or as a result of substantiated complaints. A contingency plan has been included within the OMP in the event that any of the normal operating measures fail and abnormally high odours are detected. A list of primary and secondary remedial measures are included in the contingency plan, including triggers for commencing and ceasing use of these measures and time frames for putting measures in place. Standard condition 3.3.1 concerning odour is contained within the permit. (see section 4.3 above for further detail).</li> </ul> <p>Pre-operational conditions and improvement conditions have been included in the permit which will enable the Environment Agency to closely control the expansion of the site. Bird numbers will be increased in a staged manner, with a review of the effectiveness of odour controls and written approval from the Environment Agency at each stage. The conditions ensure that any</p>



improvements agreed with the Environment Agency, to minimise odour emissions from the Installation, will be completed prior to stocking/restocking poultry houses 5-8 (see section 4.9 above for details).

- ii. Design and visual impact is a matter for consideration during the planning process. It is not a matter within our remit. However, we have taken the height of the proposed poultry houses, and associated ventilation fans, into account when assessing emissions from the Installation.
- iii. The emissions from the three biomass boilers have been assessed, although only one is the subject of this application, and we can conclude that all emissions are insignificant, in terms of impact on human health. The Applicant submitted a revised OMP on 24/09/19 and we are satisfied that the measures outlined will minimise the potential for odour emissions from the Installation including the boilers (see sections 4.3 and 4.10 above for further details).
- iv. The Applicant submitted a revised NMP, on 21/01/20, which is listed in Table S1.2 of the Permit and the Operator is required to comply with it as stipulated in Condition 2.3.1 of the Permit. We are satisfied that the measures outlined will minimise the potential for noise emissions from the Installation. Standard condition 3.4.1 concerning noise is contained within the permit (see section 4.4 above for further detail). We can only regulate the noise from vehicles on site.
- v. The Applicant submitted a revised NMP, on 21/01/20, which is listed in Table S1.2 of the Permit and the Operator is required to comply with it as stipulated in Condition 2.3.1 of the Permit. The Applicant has confirmed that noise from ventilation fans will be assessed during twice daily inspections and that any noisy fans will be isolated and the electrician notified. We are satisfied that the measures outlined will minimise the potential for noise emissions from the Installation. Standard condition 3.4.1 concerning noise is contained within the permit. (see section 4.4 above for further detail).

#### Response received from

Grimley Parish Council (received 05/02/19)

#### Brief summary of issues raised

This environmental permit application was discussed at Full Parish Council on 21st January 2019. The following objections were raised in open forum by residents and Councillors and formally supported by Councillors via council vote.

- i. Concerns were raised over the efficacy of the consultation on the application.
- ii. Previous consultation methodologies were flawed and the ongoing consequences of this are not accounted for in this latest consultation.
- iii. The question of whether existing planning permissions on site have expired will need to be double checked.
- iv. Concern over 'Summary of proposed changes' document and statement by the Applicant that 'bird place numbers will be unchanged' and that 'all management plans are current with no changes planned'.
- v. Concern over application submitted as a 'normal variation'.
- vi. Concern that an environmental risk assessment, including ammonia risk assessment and modelling, has not been submitted.
- vii. Concern that the Applicant has answered 'no' in response to the question asking if the variation will result in changes to slurry and manure management.
- viii. No Environmental Impact Assessment has been carried out.

- ix. Bio Aerosol Emissions assessment erroneously makes no mention of the hazard associated with the creation of bedding chippings on site.
- x. Bio Aerosol Emissions assessment makes no mention of the microbes and bio hazards associated with this type of farming.
- xi. Emergency procedures should take account of effects on local residents.
- xii. Length of clean out and wood chipping operation.
- xiii. Ammonia emissions document erroneously states that “no litter will be stored on site”. This is not the experience of local residents who are aware that litter is stored on site for up to three days at a time.
- xiv. The land that the farm is located on is a ‘Nitrate Sensitive Zone’ and so the consequences of increased ammonia are significant and are underestimated by this application.
- xv. Residents dispute that the current levels of flies are not significant. Local experiences indicate that flies are an unmanaged, regular and sustained menace.
- xvi. Noise from clean out and chipping operations.
- xvii. Who substantiates noise complaints?
- xviii. Odour Assessment and Odour Management Plan states that “carcasses are placed in sealed containers awaiting regular collection by a licensed renderer.” However, the experience of local residents is that carcasses are regularly burned on site, with the accompanying smell and throat irritation.
- xix. The Odour Management Plan states that “Actions and measures are listed that will prevent where possible or minimise odour emissions”. Residents would respectfully submit that the phrase ‘where possible’ is not good enough for a site in between three villages and surrounded by dwellings on all sides.

#### Summary of actions taken or show how this has been covered

- i. We carried out consultation on the Application in accordance with the Permitting Regulations, our statutory Public Participation Statement (PPS) and our own Regulatory Guidance Note (RGN) 6 for Determinations involving Sites of High Public Interest. We acknowledge that a number of residents in proximity to the application site were missed during the initial consultation. We are aware that these residents were alerted to the consultation and submitted comments which have been considered. As a result we consider that the initial consultation was effective. We are now consulting on our draft decision and addressing the previous issues. All consultation responses will be taken into account in reaching our final decision.  
  
The timescales for the consultation period were in accordance with the guidance outlined above (see section 2.2 above for further details of the advertising and consultation process). Any consultation comments received to date have been considered.  
  
The consultation letter clearly explained that more information on the Application was available on the GOV.UK website. The GOV.UK page for the Application provided a link to Citizen Space where all relevant documents were available to view electronically. The GOV.UK page also clearly stated that the Application was available for viewing on our public register at the Environment Agency office, Riversmeet House, Newtown Industrial Estate, Northway Lane, Tewkesbury, Gloucestershire GL20 8JG.
- ii. We carried out consultation on the current Application in accordance with the Permitting Regulations, our statutory Public Participation Statement (PPS) and our own Regulatory Guidance Note (RGN) 6 for Determinations involving Sites of High Public Interest. We are satisfied the consultation we have undertaken is effective; any concerns over consultation

undertaken for previous applications is not relevant to this variation. All consultation responses received in response to this Application will be taken into account in reaching our final decision.

- iii. The Permitting Regulations allow us to issue an environmental permit irrespective of whether planning permission is in place. Where we have issued an environmental permit, this does not mean that the operator can carry out the activity without the relevant planning consent. The operator has to comply with both the environmental permit and the planning permission. The status of the planning consent is not a matter within our remit and is not relevant in the determination of the Application.
- iv. The proposed changes document should consist of a summary that explains the proposed changes in non-technical language avoiding technical terms, detailed data and scientific discussion. It should include a summary of the activities at the farm, a summary of the changes and control measures arising from the risk assessment. More detailed answers on risk assessment and technical standards are provided within application supporting documents. The Applicant submitted a revised 'proposed changes' document on 22/02/19 and we consider the document to be adequate.

Permit EPR/TP3436MF, issued on 19/08/10, permitted 319,990 broiler places. The Applicant has confirmed in the proposed changes document that 'The revised installation will consist of eight poultry houses' and that permitted 'bird place numbers will be unchanged at 319,990'. This is correct although the actual number of birds on site will ultimately increase from 140,000 to 319,990 broilers. Our assessments have been based on the maximum permitted number of birds.

The statement made by the Applicant that 'all management plans are current with no changes planned' is not material to our decision as the Applicant has submitted a number of revised documents during permit determination in response to requests from the Environment Agency, including an OMP, NMP and dust management plan. We have assessed the revised plans and are satisfied that the measures outlined will minimise the potential for emissions from the Installation. These measures are listed in Table S1.2 of the Permit and the Operator is required to comply with them as stipulated in Condition 2.3.1 of the Permit (see section 2.1 above for details of all documents submitted during permit determination).

- v. We are satisfied this Application has been appropriately classified as a 'normal variation'. This has had no material impact on the determination process; enhanced consultation has been undertaken as the Installation was identified as a site of high public interest (SHPI) at the start of determination and the Application has been assessed in line with current guidance.
- vi. The Applicant has submitted revised risk assessments and management plans and we are satisfied with the measures outlined. We have carried out an ammonia assessment considering the impact from the Installation on nearby sensitive habitats and species, using the ammonia screening tool version 4.5. We can conclude that the Installation is not considered likely to damage a SSSI or cause significant pollution to a LWS within the relevant distances (see Section 4.1 above for details of our assessment). We have also assessed the impact from ammonia emissions from the Installation on human receptors and have concluded that the impact can be screened out as insignificant. As a result the Applicant was not required to submit detailed modelling of airborne ammonia emissions with the Application.
- vii. The statement made by the Applicant is not considered material to our decision as the Applicant has submitted revised documents detailing the wash water and manure management procedures at the Installation. These documents are available on the public register. We have assessed these documents and are satisfied that the Applicant has proposed appropriate measures, in accordance with our technical guidance note for intensive farming.
- viii. An Environmental Impact Assessment (EIA) is required as part of any planning application. There is currently no planning application in progress for the Installation. We are satisfied we have sufficient information to determine the application and have carried out an assessment of

the environmental impact of the installation as part of the Permit determination.

- ix. Bedding chippings are not produced on site. The only chipping that occurs is outside of the Installation boundary; this is for a limited duration for fuel for the biomass boilers and the farmhouse and will not have a significant impact.

The wood chipper is sited outside of the Installation boundary and is not regulated by the Environment Agency. Any complaints relating to the wood chipper should be directed to the Local Authority Environmental Health Authority.

- x. Public Health England (PHE) and the Director of Public Health have been consulted on the Application and they did not raise any concerns with regards to pathogens or bio hazards and their impact on human health. PHE concluded that provided that ' the installation will comply in all respects with the requirements of the permit, including the application of Best Available Techniques (BAT). This should ensure that emissions present a low risk to human health'. We are satisfied that the measures outlined in the Application and dust management plan will prevent, and where that is not practicable minimise, dust and bioaerosol emissions from the Installation which have the most significant impact and prevent significant pollution or harm to human health. We do not consider any additional assessment is necessary.
- xi. The emergency plan has been written in accordance with the sector guidance note [EPR 6.09 'How to comply with your environmental permit for intensive farming'](#). The emergency plan should identify events or failures that could damage the environment and steps to minimise both the potential causes and consequences of accidents. We consider the document to be adequate.
- xii. The Applicant has confirmed that 'Litter out carried out within 24 hours following destocking per house (72 hours total for site)'. Guidance states that clean out should start to take place within one day of destocking and that clean out over the whole site should be completed in as short a time as possible. We are satisfied that the measures outlined will minimise the potential for odour emissions from the Installation. These measures are listed in Table S1.2 of the Permit and the Operator is required to comply with them as stipulated in Condition 2.3.1 of the Permit.

The only chipping that occurs is outside of the Installation boundary. This is for a limited duration to provide fuel for the biomass boilers and the farmhouse and will not have a significant impact.

- xiii. We are not aware of any litter being stored on site. The Applicant has confirmed that no litter is stored on site and that litter is transported off site immediately following de-littering of the poultry houses. These measures are listed in Table S1.2 of the Permit and the Operator is required to comply with them as stipulated in Condition 2.3.1 of the Permit. Should the Operator not comply with the Permit conditions, it would be in breach of the Permit, and appropriate enforcement action taken, in accordance with our Enforcement and Sanctions Policy.
- xiv. We are satisfied that the risk to the nitrate vulnerable zone (NVZ) has been assessed and that the risk is low (see section 4.11 above for further details).

No used litter is spread on Operator owned land.

Only uncontaminated surface water discharges to the ditch. Wash water drains to underground storage tanks to await removal from site for spreading on Operator owned land; tanks conform to the Water Resources Control of Pollution (silage, slurry and agricultural fuel oil) Regulations 2010 (England) and as amended 2013 (SAFFO) and specifications in SGN EPR6.09. Yard areas slope towards drains preventing run off to surface or ground waters. Diverter valves are used during wash down periods to prevent the contamination of surface water systems.

Wash water applied to land owned and managed by the operator must be spread in accordance with the Reduction and Prevention of Agricultural Diffuse Pollution (England)

Regulations 2018, the Nitrate Pollution Prevention Regulations 2015 which were further amended in 2016, a manure management plan (in accordance with the NVZ rules) and Condition 2.3.5 of the Permit, which requires that all appropriate measures are used to prevent or where that is not practicable minimise pollution. The Applicant has confirmed that wash water will be spread in accordance with a manure management plan and the NVZ rules.

The Applicant has proposed appropriate measures to manage fugitive emissions (emissions not controlled by an emission limit). We are satisfied that these measures will mitigate emissions to prevent a significant impact from the site. These measures are listed in Table S1.2 of the Permit and the Operator is required to comply with them as stipulated in Condition 2.3.1 of the Permit. Standard conditions 3.2.1 and 3.2.2 concerning fugitive emissions are also included in the permit.

xv. We are not aware of pests being an issue at the Installation and have received no complaints pertaining to pests as a result of current operations. As we consider the presence of pests at the Installation to be a low risk the Applicant was not required to submit a Pest Management Plan with the Application. However, measures to prevent or minimise the presence of pests on site are outlined in Section 4.7 above. In addition, appropriate actions will be put into place to prevent and control flies should a nuisance arise. These measures are listed in Table S1.2 of the Permit and the Operator is required to comply with them as stipulated in Condition 2.3.1 of the Permit. We are satisfied that the measures outlined by the Applicant will be sufficient to prevent or minimise the presence of pests following expansion of the site and that we have sufficient controls within the permit conditions to enable further measures to be implemented should these be required.

xvi. We are satisfied that the measures outlined in the NMP will minimise the potential for noise emissions from the Installation. Standard condition 3.4.1 concerning noise is contained within the permit.

The wood chipping machine is sited outside of the Installation boundary and regulation of this activity is not the responsibility of the Environment Agency. Noise complaints relating to the chipper should be directed to the Local Authority Environmental Health department.

xvii. Noise complaints pertaining to the permitted Installation may be made directly to the Operator or to the Environment Agency. Complaints must be investigated by the Operator in accordance with the complaint procedure included in the NMP. As part of this procedure the Operator must notify the Environment Agency of any complaint they receive directly. The Environment Agency decides whether a complaint can be substantiated.

xviii. The Applicant has submitted revised documents detailing the procedures for carcass disposal at the Installation. We have assessed these documents and are satisfied that the Applicant has proposed appropriate measures to manage carcass disposal, in accordance with our technical guidance note for intensive farming. Carcasses are placed in plastic sealed bags and stored in sealed, locked, shaded and vermin proof freezers away from sensitive receptors. They are incinerated frequently (3 to 5 times per week) in a licensed incinerator located at the installation, with a capacity not exceeding 50kg/hr, approved by the Animal and Plant Health Agency (APHA). We do not consider small incinerators with a capacity of <50kg/hr to have any significant environmental risk. The Applicant has proposed appropriate measures to minimise odour emissions resulting from carcass disposal (see Section 4.3 above for details). These measures are listed in Table S1.2 of the Permit and the Operator is required to comply with them as stipulated in Condition 2.3.1 of the Permit. PHE and the Director of Public Health have been consulted on the Application and they did not raise any concerns with regards to the impact on human health from carcass incineration. PHE concluded that provided that ' the installation will comply in all respects with the requirements of the permit, including the application of Best Available Techniques (BAT). This should ensure that emissions present a low risk to human health'. As emissions from the carcass incinerator are low risk no further assessment is required.

xix. The concept of preventing, and where that is not practicable minimising, emissions from an installation was introduced under the Industrial Emissions Directive (IED); if we are not

satisfied that the proposed measures will prevent significant pollution of the environment or harm to human health we will not issue the permit. The Applicant has submitted a revised OMP and we are satisfied that the measures outlined will minimise the potential for odour emissions from the Installation (see section 4.3 above for details). These measures are listed in Table S1.2 of the Permit and the Operator is required to comply with them as stipulated in Condition 2.3.1 of the Permit. Standard condition 3.3.1 concerning odour is contained within the permit.

In addition, a number of pre-operational conditions and improvement conditions have been included in the permit to enable the Environment Agency to closely control expansion of the Installation, to minimise the risk of odour pollution beyond the Installation boundary (see Sections 4.9 above for details). Although we are satisfied with the odour controls proposed by the Operator, in the unlikely event that they are not adequate this will ensure that additional odour controls can be put in place as necessary.

**b) Representations from individual members of the public**

Seven responses were received from individual members of the public. These raised many of the same issues as previously addressed. Only those issues additional to those already considered are listed below:

Brief summary of issue raised	Summary of actions taken or show how this has been covered
<p><b><u>Location of site</u></b></p> <p>Location inappropriate for local community.</p> <p>Proposed poultry sheds closer to local housing than existing poultry sheds.</p>	<p>Decisions over land use are a matter for consideration during the planning process. The location of the Installation is a relevant consideration for Environmental Permitting in so far as it has the potential to have an adverse environmental impact on communities or sensitive environmental receptors. The environmental impact has been assessed as part of the determination process and has been reported upon in the main body of this document. We have considered the impact of the Installation on sensitive receptors and conclude that it will have no significant effect.</p>
<p><b><u>Risk to human health</u></b></p> <p>Health risks associated with particulates, bioaerosols, odour, bacteria, pathogens and ammonia.</p> <p>Impact from emissions of dust and other pollutants, on people with underlying illnesses such as asthma and heart disease.</p> <p>Commonly reported respiratory system problems (e.g. rhinitis, asthma, bronchitis) associated with emissions from poultry farms.</p>	<p>The Health Protection Agency (Public Health England (PHE)) has stated (Position Statement, Intensive Farming 2006) that intensive farms may cause pollution but provided they comply with modern regulatory requirements any pollutants to air, water and land are unlikely to cause serious or lasting ill health in local communities.</p> <p>Particulate concentrations fall off rapidly with distance from the emitting source. This fact, together with the proposed good management of the Installation, such as keeping areas clean from build-up of dust, and other measures in place to reduce dust and risk of spillages (e.g. litter and feed management/delivery procedures) all reduce the potential for emissions impacting the nearest receptors.</p> <p>We have assessed the impact of atmospheric ammonia and taken advice from PHE, who are the authority in matters relating to public health. We conclude that ammonia from the Installation is unlikely to have a significant health impact on human receptors, given the conditions imposed by the Permit</p> <p>PHE and the Director of Public Health have been consulted on the application and they did not raise any concerns with regards to the risks mentioned and impact on human health. PHE concluded that provided that 'the installation will comply in all respects with the requirements of</p>

Brief summary of issue raised	Summary of actions taken or show how this has been covered
<p>Use of antibiotics leading to antibiotic resistant pathogens.</p> <p>No modelling of bioaerosol emissions and no baseline monitoring of bioaerosols completed.</p>	<p>the permit, including the application of Best Available Techniques (BAT). This should ensure that emissions present a low risk to human health’.</p> <p>In line with our guidance, the applicant submitted a dust management plan with details of control measures to manage the risks from dust and bioaerosols from the Installation. We have assessed the measures and have determined they represent best available techniques for this activity. We are satisfied that the measures outlined in the dust management plan and Application will prevent, and where that is not practicable minimise, dust and bioaerosol emissions from the Installation and prevent significant pollution or harm to human health. These measures are listed in Table S1.2 of the Permit and the Operator is required to comply with them as stipulated in Condition 2.3.1 of the Permit. Furthermore, condition 3.2.1 of the Permit applies to substances not controlled by emission limits, also known as fugitive emissions. The Operator will be required to manage their activities so that they shall not cause pollution.</p> <p>The use of antibiotics on Intensive Farms does not fall within the remit of the Environment Agency. Furthermore, we have consulted Public Health England (PHE) and the Director of Public Health on the application. PHE has confirmed that anti-microbial resistance (AMR) is an area of on-going research and as such PHE does not consider these aspects in their responses to intensive farming.</p> <p>We are satisfied that the measures outlined in the Application and the dust management plan will prevent, and where that is not practicable minimise, dust and bioaerosol emissions from the Installation and prevent significant pollution or harm to human health. PHE and the Director of Public health were consulted on the Application and they did not raise any concerns with regards to bioaerosols and their impact on human health. PHE concluded that provided that ‘ the installation will comply in all respects with the requirements of the permit, including the application of Best Available Techniques (BAT). This should ensure that emissions present a low risk to human health’.</p> <p>As a result, it was not considered necessary for the Applicant to submit modelling or baseline monitoring of bioaerosols with the Application and no further assessment was considered to be required.</p>
<p><b><u>Odour</u></b></p> <p>Odour monitoring consisting of sniff tests is subjective and not an appropriate method of monitoring and management when more scientific methods are available.</p>	<p>Potential odorous emissions from intensive farming installations can arise from diverse sources including fixed point emissions from animal housing and fugitive emissions. It is a well-established practise in this sector to use frequent perimeter tours of the installation and sniff checks as satisfactory odour monitoring. This is typically undertaken daily or weekly and carried out by independent people who are not desensitised to the farm smell. This provides a robust approach to alert the operator to any potential odour from the installation and allows the ability to detect odours from all potential sources.</p> <p>Twice daily olfactory checks will be undertaken at the site boundary by a person not working directly with the poultry. Formal odour monitoring will be carried out weekly conducted by means of “sniff testing” at specific monitoring points, as shown on the monitoring points location map. Weekly monitoring will be carried out by a person not working at the installation to ensure they are not desensitised to the poultry smell, in</p>

Brief summary of issue raised	Summary of actions taken or show how this has been covered
Deficiencies in odour survey.	<p>accordance with guidance.</p> <p>The odour survey referred to was not submitted as part of this Application and therefore has not been taken into account during permit determination. We are satisfied that we had adequate information with regards to odour to determine the application.</p>
<p><b>Wildlife</b></p> <p>Impact on habitat and protected species.</p> <p>Impact from contaminated run-off.</p>	<p>We have carried out an assessment of the impact from this proposal on nature conservation sites from ammonia emissions. This has considered any Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites and Sites of Special Scientific Interest (SSSIs) within 5km of the Installation boundary and any other nature conservation sites (including National Nature Reserves (NNR), Local Nature Reserves (LNNs), Ancient Woodlands (AW) and Local Wildlife Sites (LWS)), within 2km of the Installation boundary. Screening using the ammonia screening tool version 4.5 has concluded that all ammonia emissions from the site are insignificant.</p> <p>Worcestershire Wildlife Trust were consulted due to the proximity of Thorngrove Pool (sometimes noted as Thorngrove Lake) LWS to the Installation. They have confirmed that no further assessment of the LWS is required (see Section 4.1 above for further details of our assessment).</p> <p>Any wash water is diverted to the dirty water tanks and any contaminated surface water is contained on the concrete area in front of the poultry houses and drains to the tanks to await removal from site for spreading on land. Yard areas slope towards drains ensuring all yard washings are directed to dirty water tanks preventing any run off. Diverter bungs are used during wash down periods to prevent the contamination of surface water systems.</p> <p>Standard condition 3.1.1 is contained within the permit, which prevents any emissions to water, air or land except those listed in schedule 3 tables S3.1 and S3.2. The only point source emission to surface water from the Installation is roof water from the poultry houses and water draining from the yard (excluding periods of washout). French drains provide further interception and treatment of the roof and yard water prior to discharge into the ditch.</p> <p>The Applicant has also submitted an emergency plan which includes measures to prevent accidental spills or leaks of fuel, chemicals, foul water or feed polluting groundwater or surface water. This is listed in Table S1.2 of the Permit and the Operator is required to comply with it as stipulated in Condition 2.3.1 of the Permit. We consider the document to be adequate.</p>
<p><b>Noise</b></p> <p>Lorry movements particularly during night time and early morning.</p> <p>Lorries travelling to site via</p>	<p>The Applicant has confirmed in the revised NMP, submitted on 21/01/20, that deliveries of feed and fuel, clean out operations and bird placement will take place during normal working hours (07:00 -19:00 hours). These measures are listed in Table S1.2 of the Permit and the Operator is required to comply with them as stipulated in Condition 2.3.1 of the Permit. We are satisfied that the measures outlined will minimise the potential for noise emissions from the Installation. Standard condition 3.4.1 concerning noise is contained within the permit.</p> <p>Consideration of traffic routes and volume is not within the remit of the</p>



Brief summary of issue raised	Summary of actions taken or show how this has been covered
<p>private drive.</p> <p>Deficiencies in noise survey.</p>	<p>Environment Agency. It is a matter for the Local Planning Authority to consider in relation to any planning application.</p> <p>The noise survey referred to was not submitted as part of this Application and therefore has not been taken into account during permit determination. We are satisfied that we had adequate information on noise to determine the application.</p>
<p><b><u>Inaccuracies and omissions in the application</u></b></p> <p>Concerns about the answer to Q2a in Permit Application form – the response to the question about pre-application discussions with the Environment Agency is 'n/a'.</p> <p>Local community has no confidence that management systems will be operated as proposed to minimise the impact on the local community.</p> <p>Applicant states in Q5c that no extra land will be included in the permit.</p> <p>Technical standards document states that 'litter is not stored on-site' but this is not the case.</p> <p>Technical standards document states that an 'Improvement Program is not applicable'.</p> <p>In relation to odour and noise, the applicant acknowledges that there are sensitive receptors within 400 metres but no mention is made of sensitive receptors at less than 200 metres.</p> <p>No mention has been made of the biomass boiler</p>	<p>The Environment Agency's permitting service offers basic pre-application advice to help customers with their permit application; the basic level of pre-application advice is free, and more in depth 'enhanced' pre-application advice is chargeable. The Applicant has chosen not to receive any pre-application advice in relation to this Application.</p> <p>All proposals in the Application are incorporated into the Permit and tie in to the conditions of the Permit. Compliance with the Permit will be monitored by the Environment Agency. Should the Operator not comply with the proposals and Permit conditions, it would be in breach of the Permit, and appropriate enforcement action taken, in accordance with our Enforcement and Sanctions Policy.</p> <p>The installation boundary remains the same as in the 2007 permit, TP3436MF. No additional land has been included in the permit.</p> <p>We are not aware of any litter being stored on site. The Applicant has confirmed that no litter is stored on site and that litter is transported off site immediately following de-littering of the poultry houses. These measures are listed in Table S1.2 of the Permit and the Operator is required to comply with them as stipulated in Condition 2.3.1 of the Permit. Compliance with the Permit will be monitored by the Environment Agency. As explained above, should the Operator not comply with the Permit conditions, it would be in breach of the Permit, and appropriate enforcement action taken, in accordance with our Enforcement and Sanctions Policy.</p> <p>This is simply the Applicants' opinion and not considered material to our decision. An Improvement Programme has been included in the permit (see section 4.9 above for details).</p> <p>The Applicant has submitted a revised OMP and NMP which list all sensitive receptors within 400 metres of the Installation boundary, in accordance with the guidance. We have checked that all relevant sensitive receptors have been identified and verified the distance from the Installation boundary.</p> <p>The Applicant submitted information relating to the proposed additional biomass boiler on 26/11/18 and 06/09/19 (see section 4.10 above for</p>

<b>Brief summary of issue raised</b>	<b>Summary of actions taken or show how this has been covered</b>
<p>in the application.</p> <p>Concern that the wood chipping activity has not been included in the Noise Management Plan.</p> <p>Concerns about the answer to Q8c in Permit Application form – the response to the question regarding updated raw materials inventory is 'n/a'.</p>	<p>further details of the assessment).</p> <p>The wood chipping machine is sited outside of the Installation boundary and regulation of the chipper is not the responsibility of the Environment Agency. As a result it does not need to be included in the NMP.</p> <p>The answer given in the Application form is not considered material to our decision as the Applicant submitted a revised raw materials inventory on 10/01/20. Chemicals on the inventory are Defra approved. There are no chemicals (pesticides, biocides) stored on site (see section 3.3 above for further details).</p>

## Annex 2: responses to consultation on our minded to decision

In accordance with the Environment Agency's Public Participation Statement and internal guidance involving Sites High Public Interest, we consulted on the draft permit and decision document that we were minded to issue for the Application. Copies of all consultation responses have been placed on the Environment Agency public register.

The draft decision was advertised on our website from 12 June 2020 – 10 July 2020 and from 01 September 2020 – 28 September 2020. We also placed an advertisement in the Berrow's Worcester Journal newspaper on 11 June 2020.

We sent copies of the draft decision to the following bodies:

- Worcestershire Regulatory Service (Environmental Health)
- Malvern Hills District Council (Planning)
- Public Health England (PHE)
- Director of Public Health
- Health and Safety Executive (HSE)

We also notified the following bodies of the draft decision:

- Hallow Parish Council
- Grimley Parish Council

We also notified the local MP, the District Councillor and a number of local residents within close proximity to the Installation, of the draft decision.

We consulted PHE again on 23 July 2020 in response to specific concerns raised during the initial consultation on the draft permit.

We received responses from Public Health England (PHE), Worcestershire Regulatory Services (WRS) (Environmental Health) and Malvern Hills District Council (MHDC) (Planning and Housing Services). In addition, we received responses from Hallow Parish Council and Grimley Parish Council plus a total of 39 responses from members of the public. All responses are considered. Please note some of the issues raised in these responses were the same or very similar to those raised during the initial public consultation stage for the Application. Where this is the case, the Environment Agency response provided in Annex 1 has not been repeated. In addition, we have only addressed points relevant to the permit determination. Reference should be made to Annex 1 in addition to the responses below:

### **Consultation responses from statutory and non-statutory bodies**

Response received from
Public Health England (PHE) (received 10/07/20)
Brief summary of issues raised
We would like to state that the Environment Agency Draft Minded to Decision document, page 47, has the following statement:  <i>"The use of antibiotics on Intensive Farms does not fall within the remit of the Environment Agency. Furthermore, we have consulted Public Health England (PHE) and the Director of Public Health on the application. PHE did not raise any concerns with regard to drug resistant bacteria in the local population as a result of operations at the Installation".</i>
We would like to identify that anti-microbial resistance (AMR) is an area of on-going research and as such PHE does not consider these aspects in our responses to intensive farming. The UK's 20-year vision and 5-year national action plan on antimicrobial resistance (AMR) were co-developed across government and its agencies, and further information is available here:  <a href="https://www.gov.uk/government/collections/antimicrobial-resistance-amr-information-and-resources">https://www.gov.uk/government/collections/antimicrobial-resistance-amr-information-and-resources</a>

We request the statement that 'PHE did not raise any concerns with regard to drug resistant bacteria in the local population as a result of operation at this installation' provided on page 47 is removed in the decision document.

It is assumed by PHE that the installation will comply in all respects with the requirements of the permit, including the application of Best Available Techniques (BAT). This should ensure that emissions present a low risk to human health.

**Summary of actions taken or show how this has been covered**

We have considered the comments raised and have removed the paragraph from the decision document as requested. However, we note that PHE still do not raise any concerns in relation to public health. We consider that we have fully addressed all relevant matters when reaching our decision and therefore do not consider that any changes to our decision are required.

We consulted PHE again on 23/07/20 with regards to a number of specific issues raised in response to the consultation on the draft decision. These issues included:

- Health risk to residents, and in particular children, living in close proximity to a poultry farm, linked to particulates, bioaerosols, odour, bacteria, pathogens and ammonia (conditions such as rhinitis, asthma, bronchitis and pneumonia);
- Increased risk of contracting Covid-19 linked to living closely to a poultry farm;
- Health risks associated with carcass incineration, and with muck-spreading (pathogens, antibiotics and growth boosters entering the water table);
- Out of date PHE guidance;
- HSE Guidance; and
- PM10 assessment.

The response from PHE is below:

<b>Response received from</b>
Public Health England (PHE) (received 01/09/20 following re-consultation)
<b>Brief summary of issues raised</b>
<p>Thank you for your email regarding a further consultation to Public Health England (PHE) on this permit variation on 23rd July 2020. It is our understanding that there have been concerns raised from members of the public in response to the potential health implications of living within close proximity to an intensive poultry farm. This response should be read in conjunction with our previous responses dated the 30th July 2019 and the 17th June 2020.</p> <p>In general, there are numerous peer-reviewed articles in the public domain that discuss bioaerosols and intensive livestock rearing, however their relevance should be evaluated as regulatory regimes in the countries studied can be very different compared to the UK. We would only tend to look at evidence outside the UK if there was insufficient data within the UK or due to novel technologies, there is a gap in knowledge/information.</p> <p>A recent review of the literature of the public health risks of bioaerosols from intensive livestock rearing, concluded that 'the majority of studies pointed towards a negative impact on health outcomes, particularly respiratory symptoms, among farmers exposed to bioaerosols. Studies investigating the health of communities living near intensive farms were more mixed. Further research is needed to measure and monitor exposure in community settings and relate this to objectively measured health outcomes'. Therefore, there is little direct evidence that exposure to bioaerosols can be linked to negative health outcomes in the community.</p> <p>Your question regarding PM10 monitoring, any specific monitoring strategies for particulate matter, including PM10, should be undertaken with caution recognising the levels detected may not all be attributable to the processes at the site under evaluation, but could include local background levels or other local sources. Additionally, the levels detected externally may not be equivalent to levels of exposure experienced indoors. The decision to monitor particulate matter short-term or long-term would also need consider weather conditions, duration and location of monitoring sites which will all have direct effects on the levels detected in the environment.</p>

<p>If such monitoring data is made available, it would be difficult to correlate PM10 exposure to specific clinical conditions such as rhinitis, asthma, bronchitis and pneumonia. There is much variability and sensitivities to dust exposure between individuals. We would advise that any individuals who have health concerns to contact their GP in the first instance.</p> <p>Based on the information contained in the application supplied to us, PHE has no significant concerns regarding the risk to the health of the local population from the proposed facility, provided the Operator takes all appropriate measures to prevent or control emissions to air of bioaerosols, dust including particulate matter and ammonia, in accordance with the relevant sector technical guidance or industry best practice, and meets the requirements as recommended by the EA, the impact to public health is minimal.</p>
<p><b>Summary of actions taken or show how this has been covered</b></p>
<p>No further action required as we are satisfied the permit will require the taking of all appropriate measures to prevent or control emissions.</p>

<p><b>Response received from</b></p>
<p>Worcestershire Regulatory Services (WRS) (Environmental Health) (received 15/06/20)</p>
<p><b>Brief summary of issues raised</b></p>
<p>We have no further adverse comments or objections to make in relation to this consultation.</p>
<p><b>Summary of actions taken or show how this has been covered</b></p>
<p>No action required.</p>

<p><b>Response received from</b></p>
<p>Malvern Hills District Council (MHDC) (Planning and Housing Services) (received 24/06/20)</p>
<p><b>Brief summary of issues raised</b></p>
<p>There are currently 4 poultry sheds at the farm which have been in place since at least 1999.</p> <p>The Local Planning Authority received an application in 2010 for two additional sheds; this was refused and subsequently granted on appeal (10/0820/FUL). The appeal decision date was 20th Sept 2012.</p> <p>A condition discharge application was submitted in 2015 (15/01325/CCO) this was returned with a split decision (Condition 7 – Construction Method Statement – was refused).</p> <p>A S73 (variation of condition) application was submitted on 15th October 2015 seeking to vary condition 1 (development must start no later than 3 years from the date of the permission) of application 10/0820/FUL granted on appeal – this was returned as invalid as the 3 year period had already passed.</p> <p>It appears to the Local Planning Authority that planning permission 10/0820/FUL expired. The two ‘double decker sheds’ proposed as part of the permit variation do not appear to be the subject of any planning application to date, and planning permission is required for this type of development.</p> <p>The district council recommends that the permit application is not approved until the planning status of the proposed sheds is established.</p>
<p><b>Summary of actions taken or show how this has been covered</b></p>
<p>The planning status of a site is not relevant to our decision making process. The Operator will need to comply with both the planning and permitting regimes and if any further planning permissions are necessary it will be their responsibility to obtain these before the variation is implemented. Provided that all matters pertaining to the permit have been addressed then we are duty bound to issue the permit.</p>

The following organisations were also consulted but no response was received:

- The Director of Public Health
- The Health and Safety Executive

## **Representations from County / Parish / District Councillors**

Response received from
Hallow Parish Council (received 30/06/20)
Brief summary of issues raised
<p>i. Very little consideration has been given to the difficulties and time required for a parish council to adequately consult with residents under the present Covid 19 government restrictions. Other consultations have taken account of the Covid 19 challenges and extended their consultation periods, we think the EA should do so now by at least 4 weeks.</p> <p>ii. We consider the restriction to 400m to be inadequate given the geographical range and spread of complaints over recent years.</p> <p>iii. The January 2019 consultation material from EA gave an erroneous reference number and that a number of residents were unable to find the material and comment. In addition, we are aware that a number of residents thought that the application had been withdrawn, based on EA web-based material. In our view this has skewed the consultation process and the process of public consultation and evidence assessment should begin again.</p> <p>iv. The original permit dated 28/09/07 is now some 13 years old and can hardly be said to have been subject to a robust assessment process.</p> <p>v. Query with regards to how the effectiveness of odour control will be reviewed and confidence in compliance going forward.</p> <p>vi. Issue raised disputing the use of “sniff tests” as adequate for the purpose.</p> <p>vii. Concerns raised with regards to the impact on human health from ammonia and the conservative assumptions used in the assessment.</p> <p>viii. Concern that odour modelling was not required.</p> <p>ix. In terms of the Improvement Programme query as to how we will ensure improvements are implemented and effective.</p>
Summary of actions taken or show how this has been covered
<p>i. In response to feedback following the initial standard 20 working days (4 weeks) consultation on the draft decision, we reopened the consultation for a further 20 working days (4 weeks) to provide time for any additional people who wished to comment to do so.</p> <p>ii. The initial consultation on our draft decision was not limited to residents within a 400 metre radius from the installation. Engagement was undertaken as follows:</p> <ul style="list-style-type: none"> <li>• Letters were sent to all properties within 400 metres of the permitted boundary of Thorngrove Poultry Farm;</li> <li>• Letters were sent to all properties where occupiers have contacted the Environment Agency since January 2016 to report a potential incident relating to Thorngrove Poultry Farm;</li> <li>• Letters were sent to all residents who expressed to Grimley Parish Council that they wished to be notified by the Environment Agency of any changes at Thorngrove Poultry Farm;</li> <li>• Hallow Parish Council, Grimley Parish Council and the Malvern Hills District Councillor (for the Parishes of Grimley and Hallow) were contacted;</li> <li>• We advertised the consultation in the Grimley, Hallow and Holt Parish magazine, published on 1 July 2020 (circulated to 650 residents as a paper copy and approximately 60 residents via email);</li> <li>• Grimley Parish Council posted details on the Grimley Facebook page, Whatsapp group (90 people) and the Hallow Round Robin (200 people);</li> <li>• A notice was placed in the Berrow’s Worcester Journal newspaper on Friday 12 June 2020; and</li> <li>• The application was publicised on GOV.UK.</li> </ul> <p>The consultation was reopened for a further 20 working days (4 weeks) following feedback received during the consultation on the draft decision; letters informing of this decision were sent to the residents listed above plus to all properties where occupiers have contacted the Environment Agency since January 2013 to report a potential incident relating to Thorngrove Poultry Farm (we went further back in our incident report records to 2013, which was the year we had the highest number of odour complaints about the site). Details were also published in the Hallow Parish Newsletter, and the councillor for the Parishes of Hallow and Grimley, the</p>

Parish Clerks at Grimley Parish Council and Hallow Parish Council and the chair of Thorngrove Action Group were also contacted by telephone.

- iii. There was some confusion caused by the reference included under the 'our ref' title of the letter sent out for the 'duly made' consultation. However, the application number quoted in the main body of the letter and the link provided to submit comments were both correct.

We apologised that not all residents who may have been interested in, or affected by, this application were contacted directly when the original 'duly made' consultation went live on 10 January 2019. Since then we had discussions with the Parish Councils and were made aware of further residents that would like to be informed going forward, who we included on our stakeholder list for the draft decision consultation in June 2020. We listened to feedback we received during the first draft decision consultation as there appeared to have been some confusion around whether the application was still live and so some people who may have wanted to comment did not do so. To address this, we re-opened the draft decision consultation from 1 September to 28 September 2020 to provide time for any additional people who wished to comment to do so. We are satisfied that the steps we have taken are appropriate and that the consultation has been effective.

- iv. This application has been assessed and determined in line with current procedures and guidance so this point is not relevant to our decision.
- v. As explained previously, a number of pre-operational and improvement conditions have been included in the permit to enable the Environment Agency to closely control the expansion of the Installation, to minimise the risk of odour pollution beyond the Installation boundary. Bird numbers will be increased in a staged manner, with a review of the effectiveness of odour controls linked to the Installation and written approval from the Environment Agency at each stage. The permit does not allow the Operator to operate at full capacity immediately.

The first stage allows operation of only two of the new poultry houses, houses 5 and 6, for a period of 12 months; the Operator is then required to submit a written report to the Environment Agency for approval, in accordance with IC2, assessing the effectiveness of the odour mitigation measures. The area officer in combination with odour specialists within the Environment Agency will carry out an independent assessment and will only approve the report in writing when fully satisfied that effective measures are in place to minimise the risk of odour pollution beyond the installation boundary. The Operator will not be permitted to restock poultry houses 5 and 6 without the Environment Agency's approval.

The second stage allows an increase to full capacity, again for an initial period of 12 months. The Operator is then required to submit a written report to the Environment Agency for approval, in accordance with IC3, assessing the effectiveness of the odour mitigation measures, as explained above.

If at any stage the Operator is informed that the proposed odour mitigation measures are not controlling odour effectively, the Environment Agency can request changes to operations, including the installation of the odour abatement equipment proposed in accordance with IC1, as appropriate.

The pre-operational and improvement conditions will ensure that the effectiveness of the odour control measures are reviewed and any improvements necessary will be completed prior to the next staged increase.

Furthermore, monitoring of the existing operations has been undertaken recently by the Environment Agency. The results did not indicate that the proposed variation would have unacceptable impacts, particularly given the stringent conditions relating to any expansion. Further odour monitoring will be undertaken as necessary to assess compliance going forward.

In addition, we will review all complaints and investigate as appropriate to substantiate whether any elevated emissions are linked to the Installation. If a complaint is substantiated, the

Operator will be required to review the OMP, in accordance with Condition 2.3.2 of the Permit, and implement the agreed changes in order to minimise any significant pollution at sensitive receptors beyond the Installation boundary.

Should the Operator not comply with the Permit conditions, it would be in breach of the Permit, and appropriate enforcement action taken, in accordance with our Enforcement and Sanctions Policy.

From our experience of regulating such sites over 20 years this is a robust approach, backed up by area inspections of the site, to minimise such pollution risks.

- vi. The Sniff test is the recognised method for monitoring odour levels at intensive farming installations in the UK and is the most effective way to indicate the presence or absence of odour, from which actions can be taken.
- vii. We completed an assessment to consider the potential for impacts to human health from ammonia emissions from poultry farms. For the study, human health impacts were considered against the long term and short term environmental standards (ES) of 180 ug/m<sup>3</sup> and 2,500 ug/m<sup>3</sup>, respectively, from poultry farms with up to 600,000 broilers. Emission rates were calculated using emission factors from the Environment Agency guidance, and assuming active ventilation of the poultry houses. A combination of modelled grid and discrete downwind receptor locations were used to identify the worst case ammonia concentrations, and modelling uncertainty was considered in deriving the process contributions (PCs). Conservative ammonia background concentrations were used to derive predicted environmental concentrations (PECs).

Our modelling showed that under all scenarios considered it is highly unlikely that there would be an exceedance of any ES at receptors which are greater than 25 metres from the poultry houses. Based on our analysis of the likely potential impacts at human receptors we would not expect an ammonia impact assessment containing detailed modelling to be completed for receptors further than 25 metres from actively ventilated poultry houses.

Given that the existing and proposed new houses for the application will be actively ventilated, the number of birds is below the maximum number of 600,000 broilers considered in the Environment Agency study, and the closest receptor is beyond the 25 metre screening distance identified, we would consider that the site is within the scope of the study, and the risk of ammonia impact at human health receptors is low.

- viii. Odour modelling for the intensive farming sector has high uncertainties associated with it. These uncertainties increase when considering receptors near to an installation. This is due to a number of reasons including variability of odour concentrations being high for this sector. This, along with the uncertainties inherent in any modelling, means that predictions made by the model are unreliable for making permit determination decisions.

The Environment Agency's overarching approach for all installations is to ensure adequate controls are in place for sites with the potential to cause odour pollution beyond the installation boundary. This is achieved via the requirement for the operator to have and comply with an approved OMP. Such an OMP covers both point source and potential fugitive odorous emissions from an installation and is based on the foundation of a bespoke risk assessment for each particular installation. The OMP is a more robust way of ensuring that all odour emissions from the installation have been identified and that adequate measures to minimise odour pollution have been included for all relevant odour emissions. Odour modelling is limited to point source emissions and therefore does not reflect the full range of emissions from a farm installation.

- ix. The improvement program includes a requirement that reports submitted in accordance with IC2 and IC3 have to be approved in writing by the Environment Agency. The area officer in combination with odour specialists within the Environment Agency will carry out an independent assessment and will only approve the report when fully satisfied that effective measures are in place to minimise the risk of odour pollution beyond the installation boundary.



If we are not fully satisfied we will require further improvements to ensure we are satisfied that the measures proposed will provide effective odour control. Once approved compliance with the reports will be required as part of our ongoing compliance work.

<b>Response received from</b>
Grimley Parish Council (received 06/07/20)
<b>Brief summary of issues raised</b>
<ul style="list-style-type: none"><li>i. The Parish Council stands by its previous submission (February 2019). In particular, concerns about increased emissions, particulates, noise (including from the chipper) (and traffic).</li><li>ii. Whilst the actual number of complaints reaching the EA may well have fallen, the Parish Council does not believe that the number of incidences and number of reasons for complaint has fallen substantially.</li><li>iii. It was requested that any issues raised via the EA phone hotline over the past two years also be included in this consultation.</li><li>iv. Concern raised with regards to the consultation process and in particular the lack of a drop in session or conference call.</li><li>v. Grimley Parish Council considered that application WP3239EK/V002 was withdrawn, and so a whole new application should have been made and assessed.</li><li>vi. It was queried whether it was acceptable to amend an old permit without full and proper consultation of the neighbouring parishes and residents.</li><li>vii. Concern raised that current measures designed to prevent impact on residents/'sensitive receptors' do not work and whether proposed future measures would work.</li><li>viii. Concern was raised that the impact of the proposals could not be assessed without baseline data.</li><li>ix. Concern raised about whether past reports of smell, noise, nuisance have been properly enforced or investigated by the EA, and whether any new restrictions would be monitored and enforced.</li><li>x. Query was raised as to the 400m boundary and whether this should be based on how far the smell, noise and particulates actually travel on a regular basis?</li><li>xi. Concern raised that the EA uses out of date national guidance, approves out of date 'best available techniques', and does not require baseline surveys (either from the applicant or via its own means).</li></ul>
<b>Summary of actions taken or show how this has been covered</b>
<ul style="list-style-type: none"><li>i. Details of the issues previously raised by Grimley Parish Council and our response can be found in Annex 1 above.</li><li>ii. We can only take into account those incidents reported to us.</li><li>iii. Complaints made by phone have been recorded and taken into account as part of our overall assessment. In addition we have provided the opportunity and time for residents to submit comments on the variation application itself and have taken all relevant representations into consideration in reaching our decision.</li><li>iv. We are satisfied that the consultation we have undertaken has been both fair and effective. Due to the fast paced nature of Covid-19 and the Government's response, we had to review our options for consulting, taking into account the Government restrictions. During the Covid-19 pandemic our priorities have been, and continue to be, to protect our staff and to protect the public by adhering to Government guidelines, such as social distancing. As such, we made the decision to delay the start of the draft decision consultation as it coincided with the beginning of 'lockdown'. We needed to review our options for consulting and understand how we would be able to run a consultation in these unique circumstances. We do sometimes consider holding face to face events, such as public drop in sessions, to consult on permit applications, where appropriate. Whilst social distancing measures are in place it is not appropriate to consult face to face, so this was not possible.</li></ul> <p>Under the Environmental Permitting (England and Wales) Regulations 2016, we have a duty to determine a duly made application and as such we took the decision to proceed with the draft decision consultation on 12 June 2020, once we were able to put appropriate arrangements in place.</p>

We appreciate that face to face events are a valuable way of sharing information and a useful opportunity for members of the public to ask us questions and express their views. However, during the Covid-19 pandemic we believe that there are other ways of publicising the consultation and helping communities understand how they can get involved. Taking all of this into account, we consider our consultation arrangements provided for what is reasonably practicable in the current situation and has provided an effective consultation.

As explained above, we re-opened the consultation on the draft permit in response to feedback, and widened the number of properties we wrote to, to provide time for any additional people who wished to comment to do so.

- v. The current application EPR/WP3239EK/V003 has not been withdrawn. As explained above there was some confusion over this and so the consultation was re-opened for a further period. The application has been assessed and determined in line with current procedures and guidance.
- vi. As explained above, our consultation on the draft decision has provided the opportunity for anyone who wishes to submit comments with regards to the application to do so. We consider there has been appropriate and effective consultation on the variation. All relevant representations have been taken into consideration in reaching our decision.
- vii. A number of complaints have been received by the Environment Agency in the past mentioning Thorngrove Poultry Farm, however the number of complaints received more recently has dropped substantially: in 2013 (January to December) we received 82 complaints, in 2016 (January to December) we received 44 complaints and in 2019 (January to December) we received 20 complaints. We are therefore satisfied that current measures to minimise the risk of pollution from the site beyond the Installation boundary are effective.

In terms of the proposed future measures, the Operator has submitted revised dust, noise and odour management plans to assess and manage the risk of dust, odour and noise pollution from the Installation. We have assessed the plans in line with the guidance and are satisfied that they will be effective in minimising the risk of pollution from the site beyond the Installation boundary.

Condition 2.3.2 of the Permit requires the Operator to further update any management plans, and implement the approved changes, if activities are giving rise to pollution. Compliance with the Permit will be monitored by the Environment Agency. As explained above, should the Operator not comply with the Permit conditions, it would be in breach of the Permit, and appropriate enforcement action taken, in accordance with our Enforcement and Sanctions Policy.

From our experience of regulating such sites over 20 years this is a robust approach, backed up by area inspections of the site, to minimise such pollution risks.

In addition, specifically with regards to odour, the pre-operational measures and improvement program included within the permit will ensure the odour measures proposed by the Operator are effective, in practice, in minimising odour risk.

Furthermore, as explained above, odour monitoring will be carried out by the Environment Agency as deemed necessary to ensure continued compliance.

We are satisfied that the proposed measures comply with the requirements of the guidance and that the manner in which operations are carried out on the Installation will prevent and where that is not practicable minimise emissions, that there will be no significant pollution and that we have sufficient controls within the permit conditions to enable further measures to be implemented should these be required.

- viii. As discussed above, it is not possible to obtain reliable baseline data due to the multiple sources of dust, odour and noise from the site; it is difficult to both ensure all such sources are measured and that the measurements are linked to the site and not from other local emissions.

Instead emissions are controlled through management plans; the Environment Agency's overarching approach for all installations is to ensure adequate controls are in place for sites with the potential to cause pollution beyond the installation boundary. This is achieved via the requirement for the operator to have and comply with approved management plans, which cover both point source and potential fugitive emissions from an installation and is based on the foundation of a bespoke risk assessment for each particular installation. All relevant sources are identified, and appropriate control measures put in place to address the risks. From our experience of regulating such sites this is a robust approach, backed up by area inspections of the site, to minimise such pollution risks.

The Operator was required to complete revised noise, odour and dust management plans to assess and manage the risks from the Installation. We have assessed the plans in line with the guidance and requested improvements to the plans as necessary to ensure that the plans are effective and will minimise the risk of pollution from the site beyond the Installation boundary. We are satisfied that we have sufficient controls within the permit conditions to enable further measures to be implemented should these be required.

PHE have been consulted with regards to baseline monitoring of particulate matter and have outlined the difficulties and uncertainties involved (see response in Annex 2 above).

We are satisfied with the information we have and do not consider baseline data would be beneficial to our assessment due to the difficulties in obtaining reliable data and the uncertainties involved.

- ix. We consider that the permit has been regulated effectively. As outlined above, the number of complaints received over the last few years has dropped significantly. We review all complaints and investigate as appropriate to substantiate whether any elevated emissions are linked to the Installation. If a complaint is substantiated the Operator is required to review the management plans and make appropriate changes identified by the review in order to minimise any significant pollution at sensitive receptors beyond the Installation boundary.

All proposals in the Application are incorporated into the Permit and tie in to the conditions of the Permit. Compliance with the Permit will be monitored by the Environment Agency. Should the Operator not comply with the proposals and Permit conditions, it would be in breach of the Permit, and appropriate enforcement action taken, in accordance with our Enforcement and Sanctions Policy.

- x. The 400 metre distance criteria for identifying sensitive receptors for odour and noise management plans is based on intensive farming guidance and our experience over twenty years of EPR intensive farming permit regulation and allows robust measures to ensure odour controls are in place. In addition, if there are odour complaints that are substantiated from the installation beyond this distance these are considered. The 400 metre distance criteria can be found on the GOV.UK website under 'Intensive farming risk assessment for your environmental permit' and section entitled 'Pre-application discussion'. In line with this guidance, the Operator has identified all sensitive receptors within 400 metres of the Installation boundary. We have checked that all relevant sensitive receptors have been identified and verified the distance from the Installation boundary.
- xi. The Application has been assessed in line with current guidance and the Best Available Techniques Reference Document (BREF) for the Intensive Rearing of Poultry or Pigs (IRPP), which was published on 21 February 2017.

The techniques proposed by the Operator meet the requirements set out in this guidance and are considered to be the best available techniques for a broiler unit of this size.

As discussed above, it is not possible to obtain reliable baseline data due to the multiple sources of dust, odour and noise from the site; it is difficult to both ensure all such sources are measured and that the measurements are linked to the site and not from other local emissions. We are satisfied with the information we have and do not think baseline data would be beneficial due to the difficulties in obtaining reliable data and the uncertainties involved.

## **Representations from or on behalf of community organisations and individual members of the public**

These raised many of the same issues as previously addressed. Only those issues additional to those already considered are listed below.

<b>Brief summary of issue raised</b>	<b>Summary of actions taken or show how this has been covered</b>
<p><u>Odour</u></p> <ol style="list-style-type: none"> <li>1. Concern over who will carry out the odour checks and whether the checks will be carried out at a representative time or for a representative time period.</li> <li>2. Query as to whether the odour sources identified in the odour risk assessment as “not significant” are based on the operator’s opinion.</li> <li>3. There is no clarity whether ALL houses will be emptied and restocked at the same time or if this restocking will be staggered.</li> <li>4. Concern that the OMP is inadequate.</li> <li>5. Concern raised that the OMP does not address the</li> </ol>	<p>In accordance with our guidance, the Operator has confirmed that the daily olfactory checks will be carried out by persons not working directly with the poultry at the site boundary and that sniff checks will be carried out weekly at each monitoring point (typically 09.00 – 10.00 hrs) by persons not involved directly with the operations at the Installation. The monitoring procedure and frequency will be reviewed annually or in the event of a substantiated complaint. These measures are included in the OMP and are listed in Table S1.2 of the Permit and the Operator is required to comply with them as stipulated in Condition 2.3.1 of the Permit.</p> <p>We are satisfied with the odour monitoring proposals, however in the event that they are not proving representative we have sufficient controls within the permit conditions to require changes.</p> <p>The odour risk assessment has been carried out by the Operator in accordance with the guidance. This type of assessment does not involve measuring or predicting odour levels - instead it relies upon a subjective assessment of the odour. The overall risk takes into account the control measures which will be used to manage the risks.</p> <p>We have reviewed the risk assessment and are satisfied that the Operator has identified all risks relevant to the activity and has proposed appropriate measures to manage the risks.</p> <p>The Operator has confirmed that destocking will be carried out on an all-in/all-out basis. This measure is listed in Table S1.2 of the Permit and the Operator is required to comply with it as stipulated in Condition 2.3.1 of the Permit.</p> <p>We consider that the OMP complies with the requirements of the guidance (see section 4.3 above). We are satisfied that the measures included in the OMP will be effective in preventing and where that is not practicable minimising the emission of odour. The Operator will be required to operate the Installation in compliance with the OMP and is required to review the OMP at least every year, prior to any major changes to operations (to ensure effectiveness) and/or after the Environment Agency has notified the Operator that operations are giving rise to odour pollution, and make any appropriate changes to the OMP identified by the review.</p> <p>The spreading of organic manure (wash water) is not part of the permitted activities; it is not undertaken within the Installation boundary and does not serve the listed activity. Therefore it is not considered</p>

Brief summary of issue raised	Summary of actions taken or show how this has been covered
<p>impact of slurry spreading.</p> <p>6. Concern raised that odour monitoring is not required at the 8 Thorngrove Mews properties or the Manor House.</p>	<p>within the OMP which regulates activities within and emissions from the Installation.</p> <p>The Operator submitted a revised plan showing the eight proposed monitoring points on 22/11/19. These consist of a number of monitoring points on the installation boundary plus a number of points near to the identified sensitive receptors. Point E is representative of the Thorngrove Mews and Manor House properties. We are satisfied with the monitoring points proposed by the Operator.</p>
<p><u>Noise</u></p> <p>1. Query as to whether the noise sources identified in the noise risk assessment as “not significant” are based on the operator’s opinion.</p> <p>2. Concern that the NMP is inadequate.</p> <p>3. Concern was raised about noise from the wood chipper and that it is a directly associated activity and should be included in the permit.</p>	<p>The noise risk assessment has been carried out by the Operator in accordance with the guidance. 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. The overall risk takes into account the control measures which will be used to manage the risks.</p> <p>We have reviewed the risk assessment and are satisfied that the Operator has identified all risks relevant to the activity and has proposed appropriate measures to manage the risks.</p> <p>We consider that the NMP complies with the requirements of the guidance (see section 4.4 above). We are satisfied that the measures included in the NMP will be effective in preventing and where that is not practicable minimising the emission of noise. The Operator will be required to operate the Installation in compliance with the NMP and is required to review the plan at least every year and/or after the Environment Agency has notified the Operator that operations are giving rise to noise pollution, and make any appropriate changes to the NMP identified by the review.</p> <p>The chipping of virgin timber for use as fuel in the biomass boilers serving the Installation has been included in the permit as a directly associated activity and will be regulated by the Environment Agency. The Operator has provided a revised NMP including measures to minimise noise emissions from the wood chipper.</p>
<p><u>Wildlife</u></p> <p>1. Concern that the stream has not been shown on the site plan and so the impact on wildlife in the stream, in particular newts, has not been considered.</p> <p>2. Query as to why the ecology report on Thorngrove</p>	<p>We have identified all relevant receptors and as discussed above do not consider that the proposed changes will cause significant pollution at any location.</p> <p>The purpose of the ‘minded to’ consultation was to consult on the draft decision and not the application itself. As a result not all documents pertaining to the application were made available as part of this</p>

Brief summary of issue raised	Summary of actions taken or show how this has been covered
<p>Pool is not available to the public on the EA's website as part of its public consultation.</p>	<p>consultation. The ecology report is available on the Environment Agency's public register and is available to view on request.</p>
<p><u>Ammonia</u></p> <p>1. Concern raised that an in-combination ammonia assessment has not been undertaken considering the effects of a number of nearby unpermitted farming operations.</p> <p>2. Concern that the ammonia assessment fails to consider ammonia emissions from slurry spreading.</p>	<p>The ammonia assessment has been carried out in line with our current process (see section 4.1 above).</p> <p>We generally consider contributions from other sources by including background concentrations in our assessments as their impacts will already be included in the background concentrations. We do assess other recently permitted farming operations and where we are aware of them other potential sources that may not be accounted for in the background concentrations.</p> <p>Emission sources are considered to be included in background concentrations where they were operational by 31 December 2017. So only emission sources arising after this date and within the relevant screening distance of a SSSI would be relevant.</p> <p>In light of information provided in consultation responses, the impact of a dairy farm on Monkwood Green SSSI has been assessed. A PC of 0.06 ug/m3 was calculated using the worst case scenario based on slurry storage in 3 new slurry stores for 750 cows. This is considered highly conservative as there were already 650 cows on the farm with associated slurry storage. The PC is below a measurable concentration. We remain satisfied that there will not be any damage to the special features of any SSSI.</p> <p>In line with our guidance, the ammonia screening assessment takes into account point source emissions from the poultry housing, and any slurry or manure storage within the installation boundary.</p> <p>Any emissions from the spreading of organic manure (wash water) are not emissions from the installation and so are not considered within the ammonia screening assessment. Furthermore, the permit does not authorise or require wash water to be spread in a particular location. A map of available land and any restrictions to be placed upon the land is a requirement of the manure management plan which is agreed with the Environment Agency before any spreading takes place; there is no requirement for the Operator to submit this information during the permit determination process.</p> <p>Even if emissions from spreading were an emission from the installation (which they are not), given the flexible nature of spreading, for example the Operator may use a multi-field system for spreading according to the need of the soil and crop on that land, it would not be possible to consider emissions from this activity within the ammonia screening assessment. However, it is considered that emissions of ammonia to air from this activity are likely to be very low, as wash water will be more dilute than slurry, and would not have a significant impact on background levels and affect the assessment.</p> <p>Even so, we have included Condition 2.3.5 in the permit which requires that all appropriate measures are used to prevent or where that is not</p>

Brief summary of issue raised	Summary of actions taken or show how this has been covered
	practicable minimise pollution.
<p><u>Risk to human health</u></p> <ol style="list-style-type: none"> <li>1. Concern that there is an increased risk of Covid-19 for residents living in proximity to the poultry farm with underlying respiratory issues.</li> <li>2. Concern that PHE guidance is out of date.</li> <li>3. Concern that PHE have not responded appropriately to the consultation or that their response has been ignored by the EA.</li> <li>4. Request for a detailed PM10 assessment before a varied permit is issued.</li> <li>5. Query as to what biosecurity</li> </ol>	<p>PHE have been consulted specifically with regards to this concern and have concluded that the impact to public health is minimal (see response in Annex 2 above). We are satisfied that there would be no significant impact on public health.</p> <p>PHE have been consulted in line with our procedures and have responded in line with their current guidance. We are not able to comment on another body's guidance and have no reason to question their advice.</p> <p>PHE were consulted on the application in 2019 in line with the guidance (see response in Annex 1 above) and again when we consulted on our draft decision in June 2020 (see response in Annex 2 above). A number of further concerns were raised by members of the public during the draft decision consultation phase and as a result we consulted PHE again and asked them whether or not this information altered their previous consultation responses (see response in Annex 2 above). It is for PHE to decide how to respond to the consultation but the responses have been taken into account in our determination. The full responses are available on the public register and can be viewed on request.</p> <p>Monitoring for particulate matter, including PM10, is difficult to complete due to the multiple sources of dust from the Installation, both point source and a wide variety of dispersed sources. It is always difficult to both ensure that all such sources are measured and that the measurements are linked to levels from the site and not from other local emissions, making it very difficult to measure with any kind of accuracy.</p> <p>Instead dust and bioaerosols are controlled through the dust management plan. This is a thorough approach as it addresses all relevant sources and appropriate control measures are put in place to address the risks. The Operator has submitted a dust management plan to ensure particulate levels are minimised (see section 4.5 above). We are satisfied that the measures outlined in the dust management plan and Application will prevent, and where that is not practicable minimise, dust and bioaerosol emissions from the Installation and prevent significant pollution or harm to human health. We are also satisfied that we have sufficient controls within the permit conditions to enable further measures to be implemented should these be required.</p> <p>PHE have been consulted with regards to this specific concern and have also stressed the difficulties and uncertainties involved with monitoring for particulate matter (see response in Annex 2 above).</p> <p>We are satisfied with the information we have and do not think a detailed PM10 assessment would be beneficial due to the difficulties in obtaining reliable data and the uncertainties involved.</p> <p>Biosecurity at intensive farms is regulated by the Department for Environment, Food and Rural Affairs (DEFRA). The permit and BAT</p>

Brief summary of issue raised	Summary of actions taken or show how this has been covered
<p>measures will be included in the permit.</p> <p>6. Issue raised with regards to HSE guidance which states that poultry farms should not be sited within 250m of a residential area.</p> <p>7. Concern with regards to the burning of chicken carcasses in the incinerator.</p>	<p>measures address biosecurity in an in-direct way, for example with regards to good housekeeping on site and the secure storage of carcasses.</p> <p>We have undertaken a site specific assessment of this application in accordance with sector specific guidance. In line with the guidance, an OMP was required as sensitive receptors are located within 400 metres of the Installation boundary and a dust management plan was required as sensitive receptors are within 100 metres of the Installation boundary. In addition we have completed an assessment to consider the potential for impacts to human health from ammonia emissions, as discussed previously.</p> <p>In line with our procedures, we consulted PHE on this application and they concluded that the risk to public health from the Installation is minimal provided that the Installation is operated in accordance with the relevant sector technical guidance or industry best practice, and meets the requirements as recommended by the Environment Agency (see response in Annex 2 above).</p> <p>We are therefore satisfied that there will be no significant pollution of the environment or harm to human health.</p> <p>Animal and Plant Health Agency (APHA) approved carcass incinerators with a capacity of less than 50 kg/hour have been assessed as having an insignificant impact. General concern over carcass incineration does not fall within the remit of the Environment Agency.</p>
<p><u>Dirty water and litter management</u></p> <p>1. Query raised whether Thorngrove Farm has a discharge consent granted by the Environment Agency for spreading dirty water on applicant owned land.</p> <p>2. Concern that used litter spread on fields could lead to pathogens, antibiotics and growth boosters affecting the water table.</p> <p>3. Concern raised that the plan included in the documentation does not show the proximity of the sheds to a nearby</p>	<p>An environmental permit is not required to spread organic manure (wash water) on land owned by the Operator but it must be spread in accordance with the Reduction and Prevention of Agricultural Diffuse Pollution (England) Regulations 2018, the Nitrate Pollution Prevention Regulations 2015 which were further amended in 2016, a manure management plan and Condition 2.3.5 of the Permit, which requires that all appropriate measures are used to prevent or where that is not practicable minimise pollution.</p> <p>PHE have been consulted with regards to this specific concern and have concluded that the risk to public health from the installation is minimal provided that the Installation is operated in accordance with the relevant sector technical guidance or industry best practice, and meets the requirements as recommended by the Environment Agency (see response in Annex 2 above).</p> <p>In this case used litter is exported from the site and sold; it is not spread on Operator owned land.</p> <p>We have identified all relevant receptors and undertaken an assessment of the site drainage, including the risk to groundwater and surface water from potential pollutants from the Installation. We are satisfied that no pollution of groundwater or surface water from buildings and yards should occur as a result of operations at the Installation.</p>



Brief summary of issue raised	Summary of actions taken or show how this has been covered
spring or a series of ponds.	
<p><u>General</u></p> <ol style="list-style-type: none"> <li>1. Concern that the biomass boilers have not been taken into account for particulates, noise, smell and pollution.</li> <li>2. Sensitive receptors identified within the OMP and NMP and distance criteria used.</li> <li>3. Issued raised with regards to light pollution.</li> <li>4. Request for an updated Environmental Impact Assessment before a varied permit is issued.</li> <li>5. Concern over animal welfare.</li> <li>6. Concern that the mitigation measures are ineffective and the best available</li> </ol>	<p>In line with our procedures, combined emissions from the three biomass boilers have been quantitatively assessed using the Environment Agency's Air Quality Modelling and Assessment Unit (AQMAU) screening tool in addition to considering the local environmental quality (see section 4.10 above for details).</p> <p>We are satisfied that in line with the guidance, all relevant sensitive receptors within 400 metres of the Installation boundary have been correctly identified on the revised odour and noise management plans.</p> <p>Light pollution is a matter for consideration during the planning process.</p> <p>However, the Operator has measures in place to minimise light pollution from the Installation. The four existing poultry houses are fitted with windows to allow the ingress of natural light to the birds and are well screened by trees and hedges. The windows on the proposed poultry houses will be fitted with automatic shutters; these will be operated by time clocks and the shutters will close during the hours of darkness. In addition, all external yard lights are fitted with motion sensors.</p> <p>As discussed in Annex 1 above, an Environmental Impact Assessment (EIA) is required for some developments as part of any planning application under the <a href="#">Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the '2017 Regulations')</a> and Council Directive 85/337/EEC of 27 June 1985.</p> <p>There has been no planning application submitted to the local planning authority for the current proposal at Thorngrove Farm and therefore the applicant did not submit an EIA as part of the Environmental Permitting Regulations application.</p> <p>We are satisfied that we have sufficient information to determine the application and have carried out an assessment of the environmental impact of the Installation as part of the Permit determination.</p> <p>Animal welfare is not within the remit of the Environment Agency and does not form part of the permit decision making process. The Environment Agency is responsible for ensuring that the activities at the Installation do not have an unacceptable impact on the environment or human health.</p> <p>The principal regulator for animal health is the Animal and Plant Health Agency (APHA), whose main purpose is to safeguard animal and plant health for the benefit of people, the environment and the economy.</p> <p>The Application has been assessed in line with our guidance: EPR 6.09 Sector Guidance Note – How to comply with your environmental permit for intensive farming (EPR 6.09) (version 2) and the Best Available Techniques Reference Document (BREF) for the Intensive Rearing of Poultry or Pigs (IRPP), which was published on 21 February 2017. The</p>

Brief summary of issue raised	Summary of actions taken or show how this has been covered
<p>techniques are not yet good enough.</p> <p>7. Query as to why two sensitive receptors have not been referred to within the application documentation.</p> <p>8. Issue raised with regards to the failure of the EA's response to, and validation of, noise and odour complaints.</p>	<p>techniques proposed by the Operator meet the requirements set out in this guidance and are considered to be the best available techniques for a broiler unit of this size. It is a requirement of the Permit that the poultry unit is operated in line with this guidance.</p> <p>We are satisfied that the measures in place are BAT, the manner in which operations are carried out at the Installation will result in no significant pollution and that we have sufficient controls within the permit conditions to enable further measures to be implemented should these be required.</p> <p>All relevant sensitive receptors have been correctly identified in the updated management plans.</p> <p>We consider that we have regulated the site appropriately and will continue to regulate the site appropriately and effectively going forward.</p>
<p><u>Application / consultation process</u></p> <p>1. Concern that the application has been submitted again after being withdrawn on the 20th February 2019.</p> <p>2. Concern that the previous application implied that Mr Hickton owned all the Mews Cottages.</p> <p>3. Concern that EA resources are geared towards assisting the Applicant but that there is no guidance and help for people and communities who want to object to the permits.</p> <p>4. Request for the EA to be more</p>	<p>This application was not withdrawn in 2019 and therefore has not been resubmitted.</p> <p>This is not considered material to our decision. All relevant sensitive receptors have been correctly identified in the updated management plans.</p> <p>Points 3&amp;4 The way the Environment Agency undertakes public consultation is described in our Public Participation Statement on the GOV.UK website (<a href="https://www.gov.uk/government/publications/environmental-permits-when-and-how-we-consult">https://www.gov.uk/government/publications/environmental-permits-when-and-how-we-consult</a>).</p> <p>We advertised the original Application by a notice placed on our website from 10 January 2019 to 07 February 2019. We also placed an advertisement in the Berrow's Worcester Journal newspaper on 10 January 2019. We made a copy of the Application and all other documents relevant to our determination available to view on our Public Register and published the Application on our webpages on GOV.UK. A letter explaining the application and how to comment on it was also produced.</p>

Brief summary of issue raised	Summary of actions taken or show how this has been covered
<p>impartial.</p> <p>5. Query as to why public consultation responses and responses from statutory bodies have not been published online and why identifying text has been redacted. In addition, query as to why submissions from the 2019 consultation are not available to view online.</p> <p>6. Query as to why this application is being treated as a variation to an existing licence rather than a new application.</p> <p>7. Query as to what are the differences in regulation and requirements for a variation as opposed to a new permit.</p>	<p>We also consulted the public on our draft decision from 12/06/2020 to 10/07/2020 and from 01/09/2020 to 28/09/2020. Details of the draft permit, decision document and supporting documents were placed on the Environment Agency’s consultation web site (Citizen Space) and on our public register. We also placed an advertisement in the Berrow’s Worcester Journal newspaper on 11 June 2020. On both occasions a letter was sent out to stakeholders and a notice was placed in the Hallow Parish Magazine providing an update on the application and details on how to comment on the draft decision.</p> <p>We are satisfied that the consultation of the Application was in accordance with our Public Participation Statement (PPS) and was adequate and effective, and that we have provided sufficient time and opportunity to enable people who wished to comment to do so.</p> <p>We are confident that our decision making process has been fair, transparent and in accordance with relevant legal duties.</p> <p>All public responses received via Citizen Space, in response to the 2019 and 2020 public consultations, are available to view via Citizen Space if consent is given. In accordance with our procedures, names and email addresses are removed from all responses published in Citizen Space. We also moderate the free text part of each response and redact any personally identifiable information.</p> <p>Statutory consultees are also given the option to respond via Citizen Space, and if they do their response will be published on Citizen Space if consent is given.</p> <p>Responses received by email or letter are not made available to view on Citizen Space whether from members of the public or statutory consultees; these responses are held on the Environment Agency’s public register and can be viewed upon request.</p> <p>All consultation responses are available in full through the public register unless the person making the representation has requested they are omitted.</p> <p>In this case there is already an existing permit and if an operator wishes to make changes to it then this is done by an application to vary the permit.</p> <p>New permit and variation applications are both determined under the Environmental Permitting Regulations. The requirements for applications for a new permit or a variation to a permit will vary and will be dependent on the applicant’s proposals. In this case given the scale and nature of the changes applied for, the variation application was subjected to as robust an assessment as a new permit application would have been. In either case we will only grant a permit if we are satisfied that there will be no unacceptable impact.</p>