

# Aviagen Ltd

## Garpit Poultry Farm, Tayport, Fife.

### Permit Application

### PPC/A/1157119

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## 1 NON TECHNICAL SUMMARY OF DETERMINATION

Garpit Poultry Farm, Tayport, Fife consists of three poultry sheds, each of which will house 16,140 birds – a total of 48,420 broiler chickens in three separate flocks. The site is located at grid reference NO 4597 2702.

The buildings are of steel construction clad with profiled steel insulated roof panels and insulated wall panels. Ventilation is by means of 16 high efflux velocity roof-mounted fans on each shed which draw air into the sheds via openings in the side walls and then emit the exhaust air out above the roof ridge. The sheds are heated during the early part of the production cycle using LPG fuelled heaters. Maximum and minimum temperatures and relative humidity are monitored and recorded daily and adjustments made as necessary to ensure that birds are in the optimum environment for their age and weight. Target levels for relative humidity are 50%-70%. Nipple drinkers are used to reduce wastage of water and to maintain dry litter. Water consumption is monitored and recorded daily.

At the start of the cycle wood shavings are spread on the floor to a depth of around 2 cm and the sheds are pre-warmed to 31°C using LPG heaters. As birds grow, temperature is reduced and ventilation is increased. Feed from a UFAS accredited mill is delivered and stored on-site in sealed bins. A range of diets are fed over the growing cycle with the protein content being reduced as the birds age. Some de-stocking may occur throughout the production cycle. The farm is operated on an all-in/ all-out basis. Once all the birds have been cleared soiled poultry litter is removed in covered trailers for land spreading. The buildings are then washed down and disinfected ready for the next flock. On average there are 4.5 crops per annum with a turnaround of 21 days between crops. Mortalities are collected and incinerated on site in approved incinerators.

A Sustainable Drainage System (SUDS) will treat lightly contaminated runoff from roof and yard surfaces.

SCAIL Agriculture modelling of airborne ammonia emissions from the proposed site was carried out as part of the application process. Though Garpit passed the initial screening run for ammonia, it failed for nitrogen deposition at Morton Lochs SSSI. The applicant was asked to provide further detailed modelling to determine the extent of potential damage to features at Morton Lochs SSSI. Detailed modelling was subsequently carried out which demonstrated that the proposed emissions would be below screening threshold for ammonia and nitrogen and were therefore acceptable. SNH were then consulted on this and concluded that overall, the figures looked to be low risk and unlikely to have a significant impact on Morton Lochs, sand dunes or three adjacent small shallow lochs.

Determination was therefore to issue a PPC Permit based on the application submitted.

### ***Glossary of terms***

AEL – Association Emission Limit  
BAT - Best Available Technique  
BREF – BAT Reference Document  
CO - Coordinating Officer  
ELV - Emission Limit Value  
SCAIL - Simple Calculation of Ammonia Impacts Limits  
SNH - Scottish Natural Heritage  
SFIR - Standard Farming Installation Rules  
SSSI - Site of Special Scientific Interest  
SAC - Special Area of Conservation  
SPA - Special Protection Area  
PPC - Pollution Prevention and Control

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PC - process contribution  
 PEC - predicted environmental concentrations  
 Cle - critical level  
 CL- critical load  
 PM<sub>10</sub> - particulate matter with a mean aerodynamic diameter of 10µm  
 APIS - Air Pollution Information System  
 BOD – Biochemical oxygen demand

## 2 EXTERNAL CONSULTATION AND SEPA'S RESPONSE

### *Is Public Consultation Required - Yes*

<i>Advertisements Check:</i>	<i>Date</i>	<i>Compliance with advertising requirements</i>
Edinburgh Gazette	12/06/17	Yes
Fife Herald	09/06/17	Yes

*Officer checking advert:* CO

*No. of responses received:* None

*Summary of responses and how they were taken into account during the determination:* None

### *Is PPC Statutory Consultation Required – Yes*

*Food Standards Agency:* Letter sent out on 31/05/17. No response received.

*Fife Health Board:* Letter sent out on 31/05/17. No response received

*Fife Local Auth:* Letter sent out on 31/05/17. Response received, with no objections.

*Scottish Water:* N/A

*Health and Safety Executive:* N/A

*Scottish Natural Heritage (PPC Regs consultation):* Yes

*Discretionary Consultation - No*

*Enhanced SEPA public consultation - No*

*'Off-site' Consultation - No*

*Transboundary Consultation - No*

*Public Participation Consultation - Yes*

**STATEMENT ON THE PUBLIC PARTICIPATION PROCESS**  
 The Pollution Prevention and Control (Scotland) Regulations 2012 (schedule 4, para 22) requires that SEPA's draft determination of this application be placed on SEPA's website and public register and be subject to 28 days' public consultation. The dates between which this consultation took place, the number of representations received and SEPA's response to these are outlined below.

Permit (Application) Number: PPC/A/1157119
Applicant: Aviagen Ltd

<b>Date SEPA notified applicant of draft determination</b>	21 November 2017
<b>Date draft determination placed on SEPA's Website</b>	21 November 2017
<b>Details of any other 'appropriate means' used to advertise the draft</b>	N/A
<b>Date public consultation on draft permit opened</b>	21 November 2017
<b>Date public consultation on draft permit consultation closed</b>	1 December 2017
<b>Number of representations received to the consultation</b>	None
<b>Date final determination placed on the SEPA's Website</b>	TBC
<b>Summary of responses and how they were taken into account during the determination:</b> No responses received.	
<b>Summary of responses withheld from the public register on request and how they were taken into account during the determination:</b> N/A	
<b>Officer:</b> CO	

<b>3 ADMINISTRATIVE DETERMINATIONS</b>
<b>Determination of the Schedule 1 activity</b>
As detailed in the application
<b>Determination of the stationary technical unit to be permitted:</b>
As detailed in the application
<b>Determination of directly associated activities:</b>
As detailed in the application
<b>Determination of 'site boundary'</b>
As detailed in the application
<b>Officer:</b> CO

## 4 INTRODUCTION AND BACKGROUND

### 4.1 Historical Background to the activity and application

The application is for a PPC Part A Permit required by the expansion of a poultry production unit originally built in 1992 250m south west of Garpit Farmhouse. Application was originally made on 11/04/17 with a claim for Commercial Confidentiality attached. After discussions with the applicant, the claim for Commercial Confidentiality was withdrawn on 22/05/17 when a new, modified application was received.

## 4.2 Description of activity

Rearing poultry intensively in an installation with more than 40000 places for poultry.

## 4.3 Guidance/directions issued to SEPA by the Scottish Ministers under Reg.60 or 61.

None

## 4.4 Identification of important and sensitive receptors

Special Areas of Conservation or Special Protection Areas within the screening distance of the project:

Name	Distance(km)	Designation	Easting	Northing
Firth of Tay and Eden Estuary	1.14	SPA	346754	727861
Firth of Tay and Eden Estuary	1.14	SAC	346754	727861
Barry Links	7.286	SAC	351000	732306

Qualifying interests for the SAC/SPA (habitats and/or species) and conservation objectives for each of these interests:

Name	Designation	Qualifying interest
Firth of Tay and Eden Estuary	SPA	18 bird species, non-breeding; 2 bird species, breeding; waterfowl assemblage
Firth of Tay and Eden Estuary	SAC	Estuaries, harbour seal, intertidal mudflats and sandflats, subtidal sandbanks
Barry Links	SAC	Coastal dune heathland, dune grassland, humid dune slacks, shifting dunes, shifting dunes with marram.

SSSIs and their designated features within the screening distance of the project:

Name	Designated feature
Morton Lochs	Sand dunes, loch trophic range, teal (non-breeding)
Tayport - Tentsmuir Coast	Sand dunes, mudflats, vascular plant assemblage, , harbour seal, beetle assemblage, 7 bird species (non-breeding)
Pickettillem Marsh	Basin fen
St Michaels Wood Marshes	Valley fen
Monifieth Bay	Sanderling, non-breeding
Earlshall Muir	Sand dunes, wet woodland, beetles, breeding birds assemblage, grayling
Eden Estuary	Sand dunes, saltmarsh, mudflats, scrub, 13 bird species (non-breeding)
Balmerino - Wormit Shore	Geological only
Barry Links	Bryophyte assemblage, sand dunes, invertebrate assemblage
Inner Tay Estuary	Transition saltmarsh, saltmarsh, 4 bird species (non-breeding), 3 bird species (breeding) & breeding bird assemblage,
Gagie Marsh	Flood plain fen

There are four residential properties identified in the report.

Location	Description	Co-ordinates	Approx. distance to proposed poultry shed (m)
1	Law Cottages	345322 726652	735
2	B945*	345497 727400	570
3	Garpit Farm*	346182 727372	305
4	Garpit Farm* (Financially Involved)	345973 727201	105

## 5 KEY ENVIRONMENTAL ISSUES

### 5.1 Summary of significant environmental impacts

The most significant environmental impacts from the site will be:

- Point source and fugitive releases and subsequent deposition of ammonia on the surrounding area and at Designated Sites within a 10km radius.
- Odour and Noise emissions.
- Shed washings and yard runoff enriched with organic matter leading to nutrient enrichment of the local water environment if allowed to escape uncontrolled.
- Fugitive and point source emission of particulate matter.
- Storage and use of chemicals.
- Point source emissions from carcass incinerator.
- Point source emissions from diesel generators.

### 5.2 Point Sources to Air

#### Ammonia

As the proposed installation is not directly connected with, or necessary to the conservation management of Firth of Tay and Eden Estuary SPA/SAC or Barry Links SAC, further consideration and an assessment of likely significant impacts was required to establish the effects of the proposals on these receptors.

Ammonia arising from poultry manure and soiled litter during each cycle is emitted from roof-mounted housing exhaust fans, and has the potential to give rise to adverse impacts to sensitive habitats located downwind. The magnitude of impact was estimated using the results of the AERMOD dispersion modelling to inform screening. The applicant provided an air quality impact assessment report presenting results of dispersion modelling using AERMOD. The predicted process contributions to ammonia concentration is provided for designated nature conservation sites within 7.5km screening radius of Garpit Farm.

Where the background plus process contribution (PEC) is less than the benchmark, or where the process contribution (PC) is less than 1% of the benchmark (critical level for ammonia concentration; critical load for acid deposition and for nitrogen deposition) then it is considered unlikely that there will be a significant effect on the designated site as a consequence of the proposed regulated activity.

The process contribution and background values for each designated nature conservation site at the point on its boundary which is closest to the poultry unit were provided in the Air Quality Impact Assessment for Garpit Poultry Farm (9 February 2016).

During screening, for each site the minimum of the European range for critical load and the critical level of the most sensitive designated feature were used in the assessment.

Any likely impacts of the proposed Installation, in combination with other plans or projects, on the Designated Sites given above can be identified using SCAIL screening.

One site, Morton Lochs SSSI, exceeded screening threshold for both ammonia concentration and for nitrogen deposition. All other sites passed screening for both ammonia concentration and nitrogen deposition, having process contributions less than 1% of the critical load or level. Morton Lochs SSSI is in close proximity to Garpit Farm, being only 80m from the nearest shed at its closest point.

Two other intensive agriculture PPC sites exist within 10km of Morton Lochs: Aviemore poultry farm, Barry and Peacehill Farm. There have been no changes to the emissions from these sites since 2014 therefore they are considered to be background emissions. As such only the new site has been screened via SCAIL as any other emissions would have been captured in the 2015 revision of background deposition and concentration.

Initial screening failed for Morton Lochs SSSI due to the predicted environmental concentration exceeding the relevant critical load or level and the process contribution for both nitrogen deposition and ammonia concentration being greater than 1% of the critical load and critical level respectively. The 1% threshold was applied in this case to reflect the increased accuracy of the AERMOD dispersion model results, compared to the coarse screening tool SCAIL.

A further detailed assessment was therefore required to establish potential implications for Morton Lochs SSSI from this development. This needed to be an assessment of likely damage to the designated natural features of the site.

SNH were consulted on the initial results and the applicant was asked to carry out further detailed modelling to determine the extent of potential damage to notified features at Morton Lochs SSSI.

Detailed modelling was subsequently carried out and SNH were consulted and concluded that overall, the figures looked to be low risk and unlikely to have a significant impact on Morton Lochs, sand dunes or three adjacent small shallow lochs. At that point the application was considered to have passed ammonia and nitrogen screening with no further modelling required.

#### Dust (PM<sub>10</sub>)

PM<sub>10</sub> in (poultry dust) is subject to statutory air quality standards. These standards have been specified to reduce health effects to an acceptable level. Air quality limit values and averaging periods are set out in the Air Quality Standards (Scotland) Regulations 2010. In addition to the air quality standards, Scotland has air quality objectives which are set out in the Air Quality (Scotland) Regulations 2000 (as amended).

The applicant contracted a consultant to carry out detailed modelling and an assessment of PM10 dust emissions from Garpit Farm. The assessment concludes that the predicted environmental concentrations for particulate matter at the receptors are below the applicable Scottish objectives and therefore no further action is necessary.

The applicant has stated in section 33 of the application form that they intend to comply with section 2.7 of the SFIRs that addresses diffuse emissions from the installation.

#### Generator

Emissions from the diesel generator for emergency power supply will be regulated by Condition 3.3.1 and 3.3.2 of the Permit. The exhaust point for the generator is listed in Table 3.2 and shown on the site

layout plan. No emission limit has been set for this discharge to air, although visible monitoring (i.e. Ringlemann 1 at start up and no visible smoke during operation) is required.

#### Incinerator

Carcases are incinerated on site in an APHA approved incinerator as shown on the site layout plan. The incinerator stack, is included as an emission point in Table 3.2. No emission limit has been set for this discharge to air, although visible monitoring (i.e. Ringlemann 1 at start up and no visible smoke during operation) is required

#### LPG

LPG use as a fuel is not included in the permit as there are no visible emissions on start-up. It is also not discussed in the decision document under resource utilisation as the use of the fuel is driven by animal welfare considerations. Storage is not permitted or considered under emissions to groundwater as the physical properties of LPG mean that it is unlikely to be an environmental hazard.

#### Bioaerosols

SEPA does not have any specific policies in relation to bioaerosols from IA processes, there are currently no health criteria values available for interpreting the results of bioaerosol monitoring. Routine monitoring will be required at receptors within 250m should appropriate criteria for assessment be identified.

The applicant has stated in section 31 of the application form that they intend to comply fully with section 2.6 of the SFIRs that addresses the issue of point source emissions from the installation to air.

### **5.3 Point Source Emissions to Surface Water and Sewer**

There will be no point source emissions to surface water or sewer. The applicant has stated in section 31 of the application form that they intend to comply fully with section 2.6 of the SFIRs that addresses the issue of point source emissions from the installation to water.

Washwater from sheds will be contained in wastewater tanks.

Working areas at the ends of each shed will be concreted and maintained in a clean condition. Lightly contaminated runoff from roofs and hard-standing areas will be conveyed to the SUD system. If the surface runoff becomes more heavily contaminated (e.g. due to vehicle movements during washout), it will be diverted and subsequently conveyed to the wastewater tanks and dealt with as wastewater. This will then be emptied by a SEPA-licenced carrier and spread to land, in compliance with the PEPFFA Code. This emission will be regulated by conditions 3.3.3 to 3.3.4 and Table 3.3 in the Permit to ensure compliance.

### **5.4 Point Source Emissions to Groundwater**

The applicant has stated in section 31 of the application form that they intend to comply with section 2.6 of the SFIRs that addresses the issue of point source emissions from the installation to water or land.

Lightly contaminated run-off from roofs and hard standing areas will be treated by a Sustainable Drainage System (SUDS). All surface water from the new extensions, concrete aprons and the existing concrete aprons will be treated using swales and filter strips designed in accordance with CIRIA C697 and subsequently discharged to new soakaways designed in accordance with BRE Digest 365.

There will be no direct or indirect disposal or discharge of List I or II substances to groundwater. The SUDS will be comprised of a suitably designed and sized system that complies with SFIRs guidance and accepted BAT, to avoid source releases to groundwater.



All waste washwater will be collected in on-site, underground tanks. These will be subject to regular visual inspection for failure of pipework and failure of containment leading to contamination of land or groundwater.

The above ground diesel storage tank will be suitably contained to meet equivalent technical standards to those set out in Regulation 6 of the Water Environment (Oil Storage) (Scotland) Regulations 2006.

## 5.5 Fugitive Emissions to Air

There are a number of potential fugitive emissions to air. These include the release of ammonia during cleaning or opening of the poultry sheds for fallen stock removal and also from the birds themselves. Whilst SEPA accepts that some fugitive releases are unavoidable e.g. odour from unplanned releases due to an unforeseen incident; others such as poor cleaning out practices can be controlled through the relevant management techniques. SEPA views fugitive releases to air from these activities as an indication of process or maintenance issues and would require any defects to be reported and rectified as soon as possible.

Although not specifically covered by conditions within the permit maintenance issues are covered by the PPC Regulations under Regulation 22 which requires the use of "Best Available Techniques" (see definition of "techniques" within the explanatory notes attached to the draft permit). SEPA seeks to reduce these occurrences by requiring operators to record maintenance issues and demonstrate a high degree of environmental management over the activities they undertake. SEPA for its part has a number of regulatory instruments it can use to gain compliance should the operator fail to comply.

SEPA has assessed that there is a slight possibility of emissions from feed or dust from cleaning however providing good housekeeping techniques are employed these should pose no risk to the environment.

## 5.6 Fugitive Emissions to Water

The applicant has stated in section 27 of the application form that they intend to comply with section 2.4 of the SFIRs that addresses fugitive emissions to the water environment from Livestock Manure (Slurry and manure storage) at the installation.

No fugitive emissions to surface or ground water are expected as all potential releases to these will be controlled and contained. All surface and roof run-off will be conveyed through the SUDS. During the washing-out of sheds, the washwater will be collected in the waste washwater tank. Washwater which is contaminated with bedding and faecal matter is defined as slurry and BAT for the management of slurry is to follow the requirements of The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) (Scotland) Regulations 2003 as amended (SSAFO). This includes notifying SEPA at least 28 days before the tank is brought into use so that SEPA can inspect to establish that the facility can adequately collect and store the volume of slurry to be produced.

When washwater does not contain list 1 or 2 substances it can be exported from site to be spread to land as an agricultural fertiliser in accordance with the Water Environment (Controlled Activities) (Scotland) (Regulations) 2011 (CAR) (as amended) General Binding Rule 18.

Washwater from the poultry units which contains List 1 or List 2 substances for example in biocides and disinfectants must be collected and exported from site and disposed of at a suitably licenced facility.

The regulation and control of fugitive emissions to water will be carried out through Conditions 2.7.2 and 3.4 of the Permit 'Diffuse source emissions of substances excluding odour and noise.'

## 5.7 Odour

The applicant has stated in section 35 of the application form that they intend to comply with section 2.8 of the SFIRs that addresses the issue of odour emissions from the installation

The applicant has addressed the issue of odour as part of the Supporting Documentation. In it they have identified key sources of odour and nearest potential receptors; listed a series of 'good practices' that will be adopted during operation to minimise, eliminate or control odour releases

The applicant has stated that odours will be controlled by ensuring that:

- Dry bedding material is maintained by ensuring optimum temperature and humidity conditions in the sheds and that there are no leaks from drinking systems.
- A high standard of cleanliness is maintained around the site with any dust deposits being regularly cleaned up.
- All feed storage bins are sealed.
- Mortalities are regularly collected and incinerated in an approved incinerator that is correctly operated.
- Trailers removing soiled poultry litter from the sheds will be loaded close to shed doors and all loads will be covered.

The applicant will be required to develop and submit an Odour Management Plan for the proposed Installation that complies with BAT and SFIR, within two months of the Permit being issued. This Plan will formalise the procedures that will be followed to minimise odours at Garpit Farm. An 'example' Odour Management Plan was submitted with the application.

An 'Odour Complaint Report Form' has been written up and submitted with the application form, showing how odour complaints will be recorded, investigated and resolved.

Odour from the poultry unit will be regulated through Condition 2.8 of the Permit, requiring the Operator to implement and maintain the Odour Management Plan mentioned above. The Operator will be required to review this Plan every four years, to the satisfaction of SEPA.

Condition 2.8.1 of the Permit requires that all emissions to air from the Permitted Installation shall be free from offensive odour outside the Site Boundary, as perceived by an Authorised Person (a SEPA member of staff).

## 5.8 Management

Permit condition 2.1.5 requires that the permitted activity is operated in accordance with an environmental management system (EMS). The BREF requires that in order to improve the overall environmental performance, the EMS should incorporate the following key features:

- Management commitment
- Environmental policy
- Financial planning and investment
- Relevant procedures (training, record keeping, maintenance, emergency procedures)
- Checking performance (monitoring, preventative action, auditing)
- Review
- Continual improvement
- Benchmarking
- Noise Management Plan
- Odour management Plan

## 5.9 Raw Materials

In section 20 of the application form, the applicant has listed the types and quantities of raw materials to be used in the Permitted Installation as biocides, pesticides, fuels and oils. Chemical detergents, feedstuffs, bedding and water. In section 21 of the application form the applicant has stated his intention to comply with section 2.2 of the SFIRs that addresses the issue of raw materials at the installation. The applicant has stated in section 39 of the application form that they intend to comply with section 2.10 of the SFIRs that addresses the issue of livestock diet.

Raw material inputs are listed in the application under a Raw Materials Inventory Record. This lists all approved materials for use on the site and includes those listed above. The applicant has also stated that they do not intend to spread to land any washwater from the poultry units that may contain List 1 or List 2 substances, as given in The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended).

Raw material outputs will be live birds, dead birds, litter and washwater. Live birds will be transported to a suitably licenced processing plant for slaughter, at which point they become the responsibility of the processing plant. Dead birds will be removed immediately from the sheds and disposed of in small (<50kg per hour) approved incinerators. Soiled poultry litter and washwater will be utilised as organic fertiliser spread to land.

Condition 2.2 of the Permit, 'Efficient Use of Raw Materials', requires the Operator to maintain an inventory detailing typical quantities and associated pollution hazards of raw materials used in the Permitted Installation, and to make this inventory available to SEPA.

### **5.10 Raw Materials Selection**

Raw Materials as described in the Permit application all appear to be standard for the industry and are therefore considered BAT. For example, the selection, manufacture, storage and delivery system relating to foodstuffs supplied to the birds have all been chosen to minimise the production of odour, particulate matter and ammonia.

### **5.11 Waste Minimisation Requirements**

The applicant has stated in section 29 of the application form that they intend to comply with section 2.5 of the SFIRs that addresses the issue of Waste Management at the installation. Implicit in this is that measures to minimise waste production will be adopted.

Condition 2.5 of the Permit requires the Operator to comply with a Waste Management condition for the avoidance, recovery and disposal of wastes produced at the Permitted Installation.

Section 28 of the application form has been used to list and quantify waste types produced at the Installation, such as bird carcasses, plastic packaging and paper. This can be used as a baseline to set future waste minimisation targets.

### **5.12 Water Use**

The applicant has stated in section 41 of the application form that they intend to comply with section 2.11 of the SFIRs that addresses housing design and water usage. 'Water usage' refers to that used for both cleaning the units and providing the birds with drinking water. Condition 2.11 of the Permit requires the Operator to install drinkers that have been designed and will be operated to prevent leakage. Nipple drinkers will be used to reduce wastage of water and to maintain dry litter, which is also considered BAT for reducing ammonia emissions. Water consumption will be monitored and recorded daily. Mains water will be used.

### **5.13 Waste Handling**

The applicant has stated in section 29 of the application form that they intend to comply with section 2.5 of the SFIRs that addresses Waste Management at the installation.

Condition 2.5.2 of the Permit requires the Operator to carry out a systematic assessment and review of the management of all wastes generated within the Permitted Installation within 12 months of the date of the Permit and at least every 4 years thereafter. The purpose of this assessment is to identify methods of preventing waste generation, and where waste is produced, to ensure that it is re-used, recycled, recovered or, where that is technically or economically impracticable, disposed of, while avoiding or reducing the impact on the environment of the handling and disposal of wastes generated thereof.

#### 5.14 Waste Recovery or Disposal

Condition 3.2 of the Permit will regulate the avoidance, recovery and disposal of all wastes produced at the Permitted Installation.

Empty containers (e.g. disinfectant, cleaning products etc.) will where possible be returned to the supplier. If that is not possible they will be thoroughly rinsed and flattened prior to collection and disposal by a licensed contractor. Waste water from rinsing which may contain list 1 or 2 substances must be exported from site and disposed of at a suitably licenced facility.

A record of the location and quantities of waste generated will be maintained and an assessment of the management of waste prepared with the emphasis on minimising waste generation followed by re-use, recycling with disposal as a last resort.

Soiled litter will be manually gathered at the end of each cycle of birds and stored in compliance with SFIRs. During litter removal, trailers will be loaded close to shed doors and all loads will be covered and hard-standing areas swept clean after loading.

Washwater will be collected and stored in underground tanks serving the sheds. Where wash water may include disinfectants containing list 1 or 2 substances it must be exported from site and disposed of at a suitably licenced facility.

Soiled litter and washwater not containing list 1 or 2 substances can be exported from site to be spread to land as fertiliser. Land spreading is not covered by the permit conditions.

#### 5.15 Energy

The applicant has stated in section 24 of the application form that they intend to comply with section 2.3 of the SFIRs that addresses Energy Efficiency at the installation.

The applicant has also listed the proposed energy use for the Permitted Installation in section 22 of the application form. This gives proposed annual consumption figures for electricity, LPG, gas and diesel.

The site will be subject to a Climate Change Levy Agreement which is considered to be BAT for energy use at PPC Part A installations.

#### 5.16 Accidents and their Consequences

The applicant has stated in section 42 of the application form that they intend to comply with section 2.13 of the SFIRs that deals with incident prevention and reporting at the installation. The applicant will be required to prepare an Incident Prevention and Mitigation Plan within six months of the Permit issue date, as required by Condition 2.12 of the Permit.

In the event of an incident which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator will be required, under the terms of

the Permit, to suspend operation of the permitted installation or relevant part thereof until such time as it can be operated in compliance with the permit and to inform SEPA of the incident.

### 5.17 Noise

The applicant has stated in section 37 of the application form that they intend to comply with section 2.9 of the SFIRs that deals with noise and vibration emissions from the Installation. Noise will be kept to a minimum by shed design and modern ventilation systems which are BAT.

The applicant has submitted a Noise Management Plan with the application. This Plan identifies noise sources from the poultry units (vehicles, feed conveyor system, machinery, fans, auxilliary generators and birds during emptying of sheds), sets out actions and procedures to be followed on the site in order to minimise or prevent noise, and formalises the procedures for dealing with any noise complaints.

Sheds walls and roofs are of high quality insulated construction. This provides an adequate barrier for poultry and machine noise from within the shed. Staff will monitor noise and vibration from fans, augers, heat exchangers and other machinery on a daily basis to ensure correct operation.

Bird noise can increase during catching for depopulation. To reduce this, catchers will try to minimise disturbance and crates into which birds are placed for transport are fitted with side shields to quieten them during travel. Lorries are scheduled for consecutive loading to ensure that the operation is conducted as quickly as possible.

During manure removal, trailers will be filled in as close proximity to doors as possible in order to reduce machinery noise and are filled to capacity to reduce the volume of traffic leaving the site.

Implementation of a Noise Management Plan for the site is a requirement of condition 2.9 of the Permit and will be enforced from the date of Permit issue. It will then be assessed and reviewed at least every four years thereafter. This will be used to control, minimise or prevent noise from all aspects of the Permitted Installation, as listed above, including ancillary equipment.

### 5.18 Monitoring

SEPA places a lot of emphasis on self-monitoring and record keeping as keys to the successful running of a PPC installation. As a result the operator is required within the permit to undertake odour and noise assessments. General monitoring of the site is also covered in the Permit as a specific requirement, SEPA expects the company to use monitoring to correct deficiencies within the activity and to alleviate any nuisance.

Monitoring is required to assess operational conditions and environmental performance. Various permit conditions require the operator to monitor the level of inputs and the volume of outputs, to consider how changes made benefit the environment. The new BREF introduces the following additional monitoring requirements

- The total nitrogen and total phosphorus excreted in manure
- Ammonia emission to air
- Dust emissions
- Process parameters

The European Commission during deliberations around the revised BREF, accepted the proposal from the UK technical Working Group to estimate emissions by using DEFRA approved emission factors.

Process parameters include water consumption, energy consumption, fuel consumption, the number of incoming and outgoing animals, feed consumption and manure generation. This is already well documented and will be formally required via the resource utilisation permit condition.

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Monitoring requirements held within the permit also include those relating to the generator and incinerator exhausts. It is stated that the standard Ringelmann 1 will be used at start up and during operation

### 5.19 Closure

The applicant has stated in section 44 of the application form that they intend to comply with section 2.14 of the SFIRs that deals with closure aftercare and decommissioning of the site. The applicant will be required to prepare a Decommissioning Plan in compliance with Condition 2.15.1 of the Permit. This will be reviewed at least every four years whilst the site is operational.

### 5.20 Site Condition Report (and where relevant the baseline report)

The initial site condition report submitted with the application clearly identifies in Table 4 potential contaminants and associated pollutants and identification of relevant hazardous substances and details of the specific pollutant risk.

The water environment has been identified as a potential receptor and a conceptual model presented identifying pollutant linkages and environmental risk.

A baseline report has been provided. The location of several exploratory boreholes have been detailed and details of soils encountered.

14 soil samples were analysed and one sample of groundwater was retrieved from BH06 the suite of analysis included As, B, Cd, Ca, Cr(total), Pb, Ni, Se, Cu, Hg, Zn, CN (total) sulphate, pH, DOC, TPH(CWG), alkalinity, phenol. Ammonia, chlorine, phosphorous and COD.

The presence of analytical results for soil and groundwater samples satisfies the requirement for baseline reporting.

To assess the impact of the Installation on the site, Permit condition 2.13 will require regular soil and groundwater monitoring to be undertaken, at a duration of 10 years for soil monitoring and 5 years for groundwater monitoring. Condition 2.13.7 of the Permit requires a detailed methodology to be submitted to SEPA 6 months prior to monitoring taking place, for which the operator will be required to discuss with SEPA the location of sample points and the parameters to be analysed which will be informed by the baseline report submitted as part of this application.

### 5.21 Consideration of BAT

In answer to all questions in the PPC Intensive Agriculture application form, the applicant has stated that the Installation will be built, operated and decommissioned in full compliance with the SFIRs and that BAT will therefore be fully adopted and applied.

<b>6 OTHER LEGISLATION CONSIDERED</b>
<b><i>Nature Conservation (Scotland) Act 2004 &amp; Conservation (Natural Habitats &amp;c.) Regulations 1994</i></b>
<b>Is there any possibility that the proposal will have any impact on site designated under the above legislation? Yes</b>

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**Screening distance(s) used** – 10km

**Are there any SSSIs within the area screened?** Yes

**Has SNH been consulted under section 15(5) of the 2004 Act?** Yes

**Date consultation letter sent** - 19th July 2017

**Summary of response received including date** -

**Actions taken including justification** – On 30<sup>th</sup> August 2017 see response below

**Has SEPA reached agreement with SNH on protection of the SSSI?** – Yes

**Are there any SPA or SAC designated areas within the area screened?** Yes

**Have you carried out an appropriate assessment?** Yes

**Date appropriate assessment consultation letter sent** – 19<sup>th</sup> July 2017

**Summary of responses received from SNH including date** – On 30<sup>th</sup> August 2017 SNH replied:

**Morton Lochs SSSI**  
Morton Lochs SSSI is around 80m from the poultry unit. The SSSI is designated for its freshwater, sand dunes and wintering teal features. Overall, the figures look to be low risk and unlikely to have a significant impact. Morton Lochs is the only site screened in for N deposition.

**Sand dune feature**  
Having considered the information in AERMOD report, we feel that the PC is a relatively small contribution to existing deposition and low risk, particularly as there is currently no apparent effect from nitrogen on dune vegetation.

**Standing water feature**  
The three small shallow lochs have a history of water level and nutrient enrichment problems. Site Condition Monitoring (SCM) in 2009 found the standing water feature to be in unfavourable condition partly due to nutrient levels and loss of characteristic species. Given the relatively small PC of 0.28, and that the overriding issue at the site seems to be phosphorus inputs from ground sources, we suggest that the N contribution from the new unit is unlikely to have a significant impact.

***Other legislation***

The Water Environment (Controlled Activities) (Scotland) Regulations 2011  
The Water Environment (Oil Storage) (Scotland) Regulations 2006  
The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) (Scotland) Regulations 2003

**Officer:** CO

**7 ENVIRONMENTAL IMPACT ASSESSMENT AND COMAH**

**How has any relevant information obtained or conclusion arrived at pursuant to Articles 5, 6 and**

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**7 of Council Directive 85/337/EEC on the assessment of the effects certain public and private projects on the environment been taken into account? N/A**

**How has any information contained within a safety report within the meaning of Regulation 7 (safety report) of the Control of Major Accident Hazards Regulations 1999 been taken into account? N/A**

**Officer: CO**

**8 DETAILS OF PERMIT**

**Do you propose placing any non standard conditions in the Permit. No**

**9 EMISSION LIMIT VALUES OR EQUIVALENT TECHNICAL PARAMETERS/ MEASURES**

**Are you are dealing with either a permit application, or a permit variation which would involve a review of existing ELVs or equivalent technical parameters? Yes - BAT Associated Emission Limits (AELs') for ammonia and total nitrogen and total phosphorus excreted have been inserted at Table 3.4 of the permit. As part of the BREF review and 2017 publication of the BREF it was accepted by the Commission that operators could use emission factors to demonstrate compliance with the BAT Annual Emission Limits for ammonia. The AEL range for broilers with a final weight of up to 2.5kg is 0.01-0.08 kgNH3/animal place/year. The emission factor used for broiler, house in fan ventilated, fully littered floors with non - leaking drinkers is 0.034 kgNH3/animal place/year, which is comfortably within the required range. The operator will be required to confirm on an annual basis that the DEFRA emission factor still applies and that no changes have been made.**

The AEL range for total nitrogen excreted from broilers is 0.2-0.6 and total phosphorus is 0.05-0.45. There are presently no approved emission factors but it is expected that data indicating compliance will be submitted by industry representatives on behalf of the sector as a whole and this is being encouraged by the UK technical working group.

**10 PEER REVIEW**

**Has the determination and draft permit been Peer Reviewed? Yes**

**Name of Peer Reviewer and comments made: Alison Long, PPC Intensive Agriculture Spec II**

DD-02 - 16 ridge fans on each shed, added detail about PM10 assessment and residential receptors. Included detail about emissions from Incinerator plant and about bunding on diesel storage tank. Added detail about baseline report. Rewording in some sections and detail about LPG in resource utilisation added.

Permit – added SUDS detail to schedule 1, added AEL table, amended S&GW monitoring parameters and typos. Amended site layout to include emission points from Table 3.2



## 11 FINAL DETERMINATION

**Issue a Permit** – Based on the information available at the time of the determination SEPA is satisfied that

- The applicant will be the person who will have control over the operation of the installation/mobile plant,
- The applicant will ensure that the installation/mobile plant is operated so as to comply with the conditions of the Permit,
- The applicant is a fit and proper person (specified waste management activities only),
- Planning permission for the activity is in force (specified waste management activities only),
- That the operator is in a position to use all appropriate preventative measures against pollution, in particular through the application of best available techniques.
- That no significant pollution should be caused.

**Officer: Ian Marr**

## 12 REFERENCES AND GUIDANCE

Pollution Prevention and Control (Scotland) Regulations 2012  
Sector Guidance Note IPPC S611b Guidance for the Poultry Processing Sector October 2003  
Standard Farming Installation Rules April 2013  
SCAIL website