

Solway Free Range Eggs Ltd.

Congeith Poultry Farm, Glaisters, Kirkgunzeon,
Dumfries and Galloway, DG2 8JT

Permit Application

Application number PPC/A/1158104

CONTENTS

1	NON TECHNICAL SUMMARY OF DETERMINATION.....	2
2	EXTERNAL CONSULTATION AND SEPA'S RESPONSE	3
3	ADMINISTRATIVE DETERMINATIONS.....	4
4	INTRODUCTION AND BACKGROUND.....	5
4.1	Historical Background to the activity and application	5
4.2	Description of activity.....	5
4.3	Guidance/directions issued to SEPA by the Scottish Ministers under Reg.60 or 61.	5
4.4	Identification of important and sensitive receptors.....	5
5	KEY ENVIRONMENTAL ISSUES.....	6
5.1	Summary of significant environmental impacts	6
5.2	Point Sources to Air.....	7
5.3	Point Source Emissions to Surface Water and Sewer.....	9
5.4	Point Source Emissions to Groundwater	9
5.5	Fugitive Emissions to Air	10
5.6	Fugitive Emissions to Water	10
5.7	Odour.....	11
5.8	Management.....	11
5.9	Raw Materials.....	12
5.10	Raw Materials Selection	12
5.11	Waste Minimisation Requirements	13
5.12	Water Use	13
5.13	Waste Handling	13
5.14	Waste Recovery or Disposal	13
5.15	Energy.....	14
5.16	Accidents and their Consequences.....	14
5.17	Noise.....	15
5.18	Monitoring	15
5.19	Closure	15
5.20	Site Condition Report (and where relevant the baseline report).....	16
5.21	Consideration of BAT	16
6	OTHER LEGISLATION CONSIDERED.....	16
7	ENVIRONMENTAL IMPACT ASSESSMENT AND COMAH	17
8	DETAILS OF PERMIT	17
9	EMISSION LIMIT VALUES OR EQUIVALENT TECHNICAL PARAMETERS/ MEASURES	17
10	PEER REVIEW	18
11	FINAL DETERMINATION.....	18
12	REFERENCES AND GUIDANCE	18

1 NON TECHNICAL SUMMARY OF DETERMINATION

Determination is to issue a Permit to Solway Free Range Eggs Ltd. for a PPC Part A Intensive Agriculture installation at Congeith Poultry Farm, Glaisters, Kirkgunzeon, Dumfries and Galloway, DG2 8JT. The site will consist of four poultry sheds housing a total of 64,000 egg-laying free range hens, based on an aviary housing system. The site is located at Ordnance Survey grid reference NX 8774 6511. Hens will be kept in four sheds, each of which will house 16,000 birds. Housing units one and two are existing and have historically held 32,000 birds. Housing units three and four are new and will also hold 32,000 birds, bringing the on-site total to 64,000 hence the requirement for a PPC Permit.

The housing units are insulated to industry standard to retain heat; concrete floored with a damp proof membrane; and with walls and roofs insulated to reduce the risk of condensation. Temperature and humidity are monitored continuously and data collected used to achieve optimal conditions for flock welfare and to maintain low moisture content in the litter. Litter will be monitored continuously to ensure that it is 'friable and loose'. Ventilation is by means of 4 roof fans and 3 gable fans and multiple passive inlets on the sides. Fan capacities differ depending on location and will be operated to ensure consistency of climate within each shed. Dispersion around and beyond the site will be assessed using a mathematical model into which data will be entered to control rate of ventilation. The sheds are heated during the early part of the production cycle using ground source heating which will be a blend of heat derived from boreholes and surface water, licenced under Water Environment (Controlled Activities) legislation by SEPA. Maximum and minimum temperatures and relative humidity in the units are monitored and recorded daily and adjustments made as necessary to ensure that birds are in the optimum environment for their age and weight. Nipple drinkers are used to reduce wastage of water and to maintain dry litter. Water consumption is monitored and recorded daily.

Birds will be on site for an average of 13 months during which time soiled litter is collected and replaced regularly throughout the week from under perches and nest boxes and all floor space within the sheds are cleared by a scrapers required. Solid manure is removed daily via a belt system to a covered trailer outside the house from where it is taken by covered trailer to be stored outwith the installation prior to being spread to land. At the end of each 13 month cycle, the housing units will be de-stocked of birds and all soiled litter and manure are removed manually into covered trailers for land spreading. The buildings are then washed, sterilised and recommissioned ready for the next flock. The washwater is collected in two sealed tanks prior to being spread on the land. No food mixing occurs on site. The premixed feed is adjusted throughout the cycle to provided optimal nutrient uptake to minimise loss via manure. All internal drainage is directed to sealed tanks.

Collectively, these measures are intended to reduce the production and release of ammonia, odours and dust from the sheds, to prevent liquid washings escaping to the environment, and to manage the waste produced on-site. All aspects of building design and operation will be supported by management systems that aim to minimise the impact of the Permitted activities on emissions to air, water and land.

The application submitted complies with both PPC requirements and the Standard Farming Installation Rules, for example: the installation of a Sustainable Drainage System to treat surface and yard runoff; the adoption of BAT in building design and construction; and the introduction of procedures and systems for the control of odour and noise as required by the legislation.

SCAIL Agriculture modelling of airborne ammonia emissions from the proposed site was carried out as part of the application process. The application passed all SCAIL screening requirements.

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

Glossary of terms

BAT	- Best Available Techniques
CO	- Coordinating Officer
ELV	- Emission Limit Value
SCAIL	- Simple Calculation of Ammonia Impacts Limits
SNH	- Scottish Natural Heritage
SFIR	- Standard Farming Installation Rules
PEPFAA	- Prevention of Environmental Pollution from Agricultural Activity
SSSI	- Site of Special Scientific Interest
SAC	- Special Area of Conservation
SPA	- Special Protection Area
PPC	- Pollution Prevention and Control
PC	- Process contribution
PEC	- Predicted environmental concentrations
Cl	- Critical level
CL	- Critical load
PM ₁₀	- Particulate matter with a mean aerodynamic diameter of 10µm
APIS	- Air Pollution Information System
BOD	- Biochemical oxygen demand
WFD	- Water Framework Directive

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	10/07/17	Yes
Dumfries and Galloway Standard	10/07/17	Yes

Officer checking advert: Ian Marr

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 20th June 2017. No reply received.

Dumfries and Galloway Health Board: Letter sent out on 20th June 2017. No reply received.

Dumfries and Galloway Local Authority: Letter sent out on 20th June 2017. No reply received.

Scottish Water: N/A

Health and Safety Executive: N/A

Scottish Natural Heritage (PPC Regs consultation): N/A as application passed all SCAIL screening requirements.

Harbour Authority: N/A	
Discretionary Consultation - No	
Enhanced SEPA public consultation - No	
'Off-site' Consultation - No	
Transboundary Consultation - No	
Public Participation Consultation - Yes	
<p>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.</p>	
Date SEPA notified applicant of draft determination	05/12/2017
Date draft determination placed on SEPA's Website	05/12/2017
Details of any other 'appropriate means' used to advertise the draft	N/A
Date public consultation on draft permit opened	05/12/2017
Date public consultation on draft permit consultation closed	03/01/2018
Number of representations received to the consultation	None
Date final determination placed on the SEPA's Website	TBC
Summary of responses and how they were taken into account during the determination: N/A	
Summary of responses withheld from the public register on request and how they were taken into account during the determination: N/A	
Officer: CO	

3 ADMINISTRATIVE DETERMINATIONS
Determination of the Schedule 1 activity
As detailed in the application
Determination of the stationary technical unit to be permitted:
As detailed in the application
Determination of directly associated activities:

As detailed in the application
Determination of 'site boundary'
As detailed in the application
Officer: CO

TECHNICAL DETERMINATION

4 INTRODUCTION AND BACKGROUND

4.1 Historical Background to the activity and application

Application is made by Solway Free Range Eggs Ltd. for a PPC Part A Intensive Agriculture Permit for Congeith Poultry Farm, Kirkgunzeon, Dumfries and Galloway to house free range egg-laying hens over four housing units with 64,000 places for poultry. The application was received on 17 May 2017 and was made in compliance with the Standard Farming Installation Rules. Prior to application, there were two housing units ('Sheds 1 and 2', joined together and situated end to end) built in 2010 with 16,000 places each to give a total of 32,000 places for poultry at the site. The site is now seeking to expand by installing two new housing units ('Sheds 3 & 4', freestanding and parallel to each other) with 16,000 places each to give another 32,000 places, bringing the total to 64,000, which is above the PPC Permit threshold of 40,000.

4.2 Description of activity

Rearing poultry intensively in an installation with more than 40,000 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 were identified as:

Name	Distance(km)	Designation	Easting	Northing
Solway Firth	9.38	SAC	292291.1	556908.6
Upper Solway Flats and Marshes	9.38	SPA	292291.1	556908.6
Solway Mosses North	9.86	SAC	296169	570226.8

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

Name	Qualifying interests
Solway Firth	Dune grassland, Atlantic salt meadows, coastal shingle vegetation, glasswort and other annual colonising mud and sand, reefs, estuaries, intertidal mudflats and sandflats, subtidal sandbanks, river lamprey, sea lamprey

Upper Solway Flats and Marshes	21 bird species and waterfowl assemblage
Solway Mosses North	Active raised bog, degraded raised bog

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

Name	Distance(km)	Designation	Easting	Northing	Designated features
Milton Loch	6.805	SSSI	284312.9	570989.1	Beetle assemblae, eutrophic loch (no CL)
Upper Solway Flats and Marshes	9.38	SSSI	292291.1	556908.6	Sand dunes, saltmarsh, shingle, mudflats, natterjack toads, 16 bird species
Torrs Moss	9.852	SSSI	278308.7	562261.6	Basin fen
Kirkconnell Flow	9.86	SSSI	296169	570226.8	Estuarine raised bog

In terms of human receptors and nearby housing, the nearest houses to the development are as follows:

- Plascow Cottage 402 metres south
- Glaisters Cottage 449 metres north
- Glaisters Farmhouse 575 metres north east

SEPA uses a radius of 250m around intensive agriculture installations to identify human receptors with regard to air quality management objectives for PM₁₀. As there are no human health receptors within 250m of the site, no assessment was required.

5 KEY ENVIRONMENTAL ISSUES

5.1 Summary of significant environmental impacts

The most significant environmental impacts from the site will be:

- *Releases and subsequent deposition of ammonia on sensitive receptors in 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.*
- *Airborne particulate matter from roof vents being washed into the local water environment.*
- *Storage and use of chemicals.*
- *Disposal of carcasses.*
- *Point source emissions from diesel generator.*

5.2 Point Sources to Air

Ammonia

As the proposals are not directly connected with, or necessary to the conservation management of the Solway Firth SAC, Upper Solway Flats and Marshes SPA or Solway Mosses North SAC further consideration and an assessment of likely significant effect is needed.

Ammonia from poultry manure and soiled litter, which is emitted from housing extract fans could give rise to adverse impact to sensitive habitats located downwind. The magnitude of impact was estimated using the SCAIL Agriculture model to inform screening. Where the background plus process contribution (PEC) is less than the benchmark, or where the process contribution (PC) is less than 4% 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 are provided by SCAIL for each designated nature conservation site at the point on its boundary which is closest to the poultry unit.

For an existing source SCAIL deducts an appropriate proportion of the ammonia concentration and nitrogen deposition from the background to account for the contribution of the existing sources' emissions to the modelled background.

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

Results of SCAIL screening:

Site	Most sensitive feature	Critical load (kg N/ha/yr)	Critical level (ug NH3 /m3)	PEC exceeds critical load or critical level?
Milton Loch	Not sensitive to N	NA	NA	NA
Solway Firth	Dune grassland	8	1	Y
Upper Solway Flats and Marshes	European golden plover	20	3	Y
Upper Solway Flats and Marshes	Sand dunes	8	1	Y
Torr's Moss	Basin fen	10	1	Y
Kirkconnell Flow	Estuarine raised bog	5	1	Y
Solway Mosses North	Active raised bogs	5	1	Y

Nitrogen deposition:

Site	Most sensitive feature	PC (kg N/ha/yr)	PC (% of critical load)
Milton Loch	Not sensitive to N	-	-
Solway Firth	Dune grassland	0.21	2.625
Upper Solway Flats and Marshes	European golden plover	0.21	1.05
Upper Solway Flats and Marshes	Sand dunes	0.21	2.625
Torrs Moss	Basin fen	0.21	2.1
Kirkconnell Flow	Estuarine raised bog	0.21	4.2
Solway Mosses North	Active raised bogs	0.21	4.2

Ammonia concentration:

Site	Most sensitive feature	PC ($\mu\text{g NH}_3/\text{m}^3$)	PC (% of critical level)
Milton Loch	Not sensitive to N		-
Solway Firth	Dune grassland	0.04	4
Upper Solway Flats and Marshes	European golden plover	0.04	1.3
Upper Solway Flats and Marshes	Sand dunes	0.04	4
Torrs Moss	Basin fen	0.04	4
Kirkconnell Flow	Estuarine raised bog	0.04	4
Solway Mosses North	Active raised bogs	0.04	4

Initial screening is passed for all sites except Kirkconnell Flow and Solway Mosses North due to the process contribution for both nitrogen deposition and ammonia concentration being less than or equal to 4% of the critical load and critical level respectively.

Screening fails for Kirkconnell Flow and Solway Mosses North due to process contribution to nitrogen deposition being 4.2% of the critical load. The critical load used is 5 kg N/ha/yr, which is the minimum of the European range. At detailed assessment, the critical load for bogs is between 8 and 10, as a function of annual rainfall. Therefore, as a percentage of the minimum of this shorter range (i.e. 8), the percentage of critical load for both sites is 2.65% , and screens out.

There are no existing intensive agriculture PPC permitted sites within 10km of the protected sites therefore, no in-combination effects of this proposal with other projects.

Therefore, screening is passed for all designated conservation sites. SEPA concluded that the proposal will not have a likely significant effect on the Solway Firth SAC, Upper Solway Flats and Marshes SPA or Solway Mosses North SAC. No further assessment is required.

Further point-source releases to air will be:

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.

Particulate Matter

Dust particles less than 10 microns in diameter (PM₁₀) are subject to statutory control. 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). Where sensitive receptors are located within 250m of a poultry unit, SEPA needs to assess the emission of particulate matter to establish whether it will cause any air quality standards to be breached. As there are no human health receptors within 250m of Congeith Farm, no assessment was required.

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

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.

Condition 3.3 of the Permit will regulate and control individual source emissions to air, water and land.

Washwater from sheds will be contained in wastewater tanks.

There is no public sewerage network in the vicinity of Congeith Farm and therefore there will be no discharge to sewer.

All surface water within the Permitted area will be collected and treated using SUDS designed in accordance with CIRIA C697 and 'Rural Sustainable Drainage systems, A Practical Design and Build Guide for Scotland's Farmers and Landowners'. 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 Sustainable Drainage System which will consist of a series of swales, totally four in number. The swales will also drain the area around the immediate vicinity of the units, designated as a 'free range' area to which the birds have access. Each housing unit (existing and newly-built) will have its own independent swale (to give a total of four swales) for surface water treatment, split into two sets of two. Each set will work on a first flush system, whereby no overflow will be provided for the first swale. When flows exceed the natural soakaway capacity of the first swale, then an overflow mechanism will deliver drainage to the second swale at the inlet end, to allow lightly contaminated water to be retained for further treatment. An overflow will be installed on the second of the swales in each set which during times of high flow will discharge to the Glaisters Burn. The watercourse will be monitored on a regular basis and any impact on it will be regulated through Conditions 3.3.3, 3.3.4 and 3.3.5 of the Permit.

5.4 Point Source Emissions to Groundwater

There will be no emissions to groundwater from any part of the Permitted Activities.

There will be no direct 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 point source releases to groundwater.

All waste washwater produced at the end of each campaign of birds will be collected in underground tanks situated at the gable end of each housing unit. These will be subject to regular visual inspection for failure

of pipework and failure of containment leading to contamination of land or groundwater. Waste washwater will be collected in the underground tanks and spread to land as part of the farm nutrient budgeting plan, in compliance with the farm waste management plan and GBR 18.

5.5 Fugitive Emissions to Air

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

Potential sources of fugitive emissions to air are from:

1. Dust from litter and feed (especially when housing units are being destocked, emptied of litter, washed, sterilised and dried at the end of each cycle of birds);
2. the release of ammonia during cleaning or opening of the poultry sheds ; and
3. Bioaerosols.

Mitigation and control techniques for these will be:

1. Use of appropriate litter material that produces minimal particulates.
2. Litter to be maintained in dry, friable condition.
3. Use of pelleted feed delivered in enclosed feed systems.
4. Soiled litter removed will be transferred to trailers with minimal height drop and all trailers and conveyors used to transport that litter will be covered at all times.
5. Dust present on yard areas will be manually washed down and directed to SUDS for treatment, or washwater tanks from areas of heavier loading.
6. SEPA's policy with respect to bioaerosols for composting activities is that an assessment must be undertaken where there are sensitive receptors within 250m from the site boundary. As there are no human health receptors within 250m of the site, no assessment was required. SEPA does not however 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.

5.6 Fugitive Emissions to Water

The applicant has stated in section 27 of the application form that the site will 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.

Potential sources of fugitive emissions to water are from:

1. Surface water runoff into nearby watercourses and groundwater
2. Spillage from pesticides and chemical handling
3. Escape of fuel oil
4. Feed spillage
5. Underground washwater tank

Mitigation and control techniques for these will be:

1. Washwater from cleaning the sheds will be directed to underground washwater tanks with adequate capacity, sealed and with no overflow. This material will not contain any List I or II substances and will be applied to land as fertiliser in accordance with GBR18 and the farm waste management plan.
2. Lightly contaminated surface water will be conveyed to SUDS.
3. Routine inspection of concreted areas for cracks and requirement for repair programme.

4. All pesticides mixed in secure area.
5. Oil stored in bunded area, compliant with Oil Storage Regulations.
6. All spilled feed immediately swept up and removed. Feed bins regularly inspected for damage and leaks. Barriers in place to prevent vehicle collision.
7. Surface areas and drains can be blocked off with sand bags.
8. Inlet to swales have manholes and a stop tap to allow isolation in the event of a spill and removal of any contaminated water.
9. The regulation and control of fugitive emissions to water will be carried out through Condition 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 the site will comply with section 2.8 of the SFIRs that addresses the issue of odour emissions from the installation.

The applicant has submitted three documents relating to odour. These are:

1. 'Offensive Odours', in which the Applicant details:
 - the physical layout of the site, including prevailing wind direction;
 - the proximity of the nearest human receptors;
 - a history of no odour complaints having been received from any of these.
2. 'Odour Management Plan', in which the Applicant details:
 - The necessity of an OMP;
 - Ten odour sources;
 - Actions taken to minimise or prevent odour.
3. 'Environmental Risk Assessment', in which the Applicant details:
 - Odour risk;
 - Assessment thereof; and
 - Management thereof.

The applicant will be required to develop and submit an Odour Management Plan for the proposed Installation, which 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 from the Permitted Installation. An example Odour Management Plan was submitted with the application.

A 'Complaints Procedure' pro forma has been developed 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

The applicant has stated in section 19 of the application form that they intend to comply with section 2.1 of the SFIRs that addresses Management Techniques at the installation.

Conditions 2.1.1 to 2.1.6 of the Permit relate to General Management. These require the Operator to have an Appropriate Person and Deputy in place and identified to SEPA within four weeks of receipt of the

Permit; make a copy of the Permit available to all staff on site; make all staff familiar with all relevant conditions of the Permit; operate and manage the Permitted activities in such a way that identifies and minimises the risk of pollution or environmental harm; and keep and make available to SEPA records to demonstrate compliance with these management conditions. These conditions are included in the Permit to ensure that a high standard of general management is practiced at all times, as part of the basic operation and regulation of the site.

Supporting information in the application suggests that SFIRs, PEPFAA and good management practice will be employed across the Installation, for example in relation to bird welfare and diet; noise and odour management; livestock housing design and operation; waste management; particulate emissions; and manure/ litter disposal or utilisation.

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 their 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 and Auxillary Materials inventory record. This lists all approved materials for use on the site, which are: birds, water, bedding, feedstuffs, chemicals, medicines, pesticides, biocides and fuel oil. The applicant has also stated that they do not intend to spread to land List 1 or List 2 substances, as given in The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended).

Raw material outputs will be eggs, dead birds, litter and washwater. Eggs will be transported for sale; dead birds will be held in lidded leak and vermin proof bins inside each unit within a secure area restricted for staff access only. Fallen stock will be removed immediately from the sheds and disposed of by a licenced contractor; soiled 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.

The applicant has stated in the supporting documentation to the application that all raw material selection complies with section 2.2 of the SFIRs.

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.

The applicant has submitted a 'Waste Prevention and Management' document with the application that lists waste types, current arrangements in place for these, and proposed environmental management systems for these.

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 containers and packaging, general waste and paper. This will 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. The process is not expected to produce a lot of waste. Other than carcasses most waste is likely to be packaging waste.

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 from shed cleaning will be collected and stored in underground tanks serving the sheds.

Waste litter and washwater will both be spread to land as fertiliser, which is accepted practice. When doing so, weather conditions and the location of sensitive receptors will be considered. The requirements of the Farm Waste Management Plan and GBR 18. Provided they are applied to land for utilisation as a fertiliser, litter and wash water are not classed as wastes.

There is no vehicle washing facility at the installation, as part of the sites biosecurity procedures, no vehicles are allowed to enter the site.

5.15 Energy

The primary energy source used to power lights, feed augers, fans, motors, computers, alarms etc. will be from supplied from third party wind turbines. When the turbines are not generating electricity, mains supply will be used, expected to be 413,733kWh/yr. A standby generator will be also available on site and will be maintained and routinely checked for emergency use only. The new shed will utilise a ground source heat pump to provide heat, particularly the area of the manure belts to aid manure drying and prevent ammonia from manure. This feature will also be retrofit into the existing shed.

Ground source heat pumps use buried pipes to extract heat from the ground. This heat can then be used to warm air heating systems. Fluid in the pipes passes through a compressor and heat exchanger and into the heat pump. The ground stays a constant temperature and so can be used all year round. This is considered to be BAT as it replaces electric/LPG heating, therefore lowers carbon emissions and fuel deliveries and requires minimal maintenance.

The sheds will be lit using low energy lighting sources such as LED's and high frequency fluorescent lighting which besides having a longer life-expectancy can improve energy efficiency by up to 10% and maintains peak light output for longer than a standard fluorescent tube.

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, gas and diesel.

The site will not be subject to a Climate Change Levy Agreement.

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 addresses 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 three relevant documents with the application: a Noise and Vibration Risk document; a Noise and Vibration Avoidance document; and a draft Noise Management Plan. This Plan identifies noise sources from the poultry units, 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.

The poultry unit is in a very isolated location, in a landscape of open grazing land, moorland, peat bog and forestry plantations, with only four dwellings in the surrounding landscape, all of which are several hundred metres distant from the sheds. It is not anticipated that any noise from the Permitted Installation will be heard at any of these locations.

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.

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

The Intensive Rearing of Pigs and Poultry BAT Reference Document; BAT Conclusions were published on 21st February 2017. The revised BREF introduces the requirement for operators to meet emission limits (in the form of BAT AEL's) for ammonia. The BREF stipulates an AEL range for each different rearing system; the range for broilers with a final weight of up to 2.5kg is 0.01-0.08 kgNH₃/animal place/year. The European Commission during deliberations around the revised BREF, accepted the proposal from the UK technical Working Group to demonstrate compliance with this range by using DEFRA approved emission factors. 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 permit contains the relevant ranges in table 3.4 and 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 Permit also requires the operator to carry out self-monitoring and regular maintenance checks to identify any non-compliances with all permit conditions.

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 applicant has identified in the site condition report the relevant hazardous substances to be used, produced or released. The baseline report contained no sample analysis, stating that ground conditions in the area made deep boreholes impractical.

There is no below ground pipework and oil storage will be compliant with the SSAFO Regulations therefore the risk of soil and groundwater contamination from fuel storage is expected to be minimal. The underground tanks for the containment of washwater will also be compliant with the Regulations and due to its use only for short periods i.e. every 15 months at the end of each cycle when it is collected and spread to land, it is also agreed that the risk from these tanks will be minimal. The use of the swale to treat lightly contaminated run off is worthy of further consideration and as the swale has only recently been constructed and not yet mature enough to provide effective treatment, SEPA agree that the discharge from the swale to Glaisters burn should be sampled within 1 year of the permit being issued to establish a representative baseline of potential emissions to groundwater and soil samples taken in the vicinity of the oil storage area.

The applicant has submitted a comprehensive ground and surface water monitoring schedule to establish proper surveillance of the surrounding aquatic environment and to support the 5 yearly groundwater monitoring requirement.

Routine soil and groundwater monitoring will be required throughout the life of the 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 site condition 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.

6 OTHER LEGISLATION CONSIDERED
<i>Nature Conservation (Scotland) Act 2004 & Conservation (Natural Habitats &c.) Regulations 1994</i>
Is there any possibility that the proposal will have any impact on site designated under the above legislation? Yes
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? No, as all SCAIL screening requirements were passed for all Designated Sites.

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

Have you carried out an appropriate assessment? Yes. All SCAIL screening requirements were passed for all Designated Sites.

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 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

Substance: Nitrogen, phosphorus and ammonia

Relevant emission benchmarks: Table 2.1 of BAT Conclusions for the Intensive Rearing of Poultry or Pigs (2017)

ELV: As stated within Table 2.1 of BAT Conclusions and its associated notes.

Emission point: Diffuse from whole installation.

Rationale: Application submitted after publication of review of the relevant BREF and new BAT must be included in the permit.

10 PEER REVIEW

Has the determination and draft permit been Peer Reviewed?

Added detail around monitoring, baseline and clarified absence of wheel wash and covered manure store. Formatted to bring in line with other IA documents. Permit amended to reflect 1st baseline monitoring at 1 year and requested amended site plans to indicate fallen stock storage and changed schedule 1 to include swale and fallen stock. Made site plans bigger.

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

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: CO

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