

East Lothian Eggs Ltd

Howden Farm, Gifford, East Lothian, EH41 4JS

New permit application

PPC/A/5004351

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1 NON TECHNICAL SUMMARY OF DETERMINATION

This application by East Lothian Eggs Ltd is for a new PPC permit (PPC/A/5004351) due to the expansion of the free-range egg business and corresponding increase in bird numbers. There is currently an operational hen shed on the site with capacity for 32,000 free range hens completed in Spring 2020. East Lothian Eggs Ltd are proposing an additional 32,000 capacity hen shed bringing the total capacity on the farm to 64,000 places for free range hens. The site is located at Ordnance Survey national grid reference NT 4959 6716. The permit application is made under Schedule 1 Section 6.9 Part A paragraph (a) of the Pollution Prevention and Control (Scotland) Regulations 2012

East Lothian Eggs is based at Howden Farm. The owner of Howden Farm is Mr Douglas Scott who has allocated different areas of Howden Farm to each of his 3 sons and there are three separate poultry businesses at Howden Farm, (East Lothian Eggs, Scott Eggs and Howden Eggs). For the purposes of PPC, they will all be separate installations. During pre-app discussions SEPA proposed that the entirety of Howden Farm should be one Permitted Installation but were advised that the companies operated independently and as there was no technical connections East Lothian Eggs would be applying for a PPC permit individually. Planning consent has also been sought individually. The sheds are designed to minimise ammonia emissions; they are insulated 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 adjusted where necessary to achieve optimal conditions for flock welfare and to maintain a low moisture content of the litter within the sheds.

Ventilation is by means of passive inlets on the roof of the poultry housing and gable end extraction fans. Passive inlets of air flow will also be provided when pop holes along the side walls, which allow hen access to the range area, are open. The ventilation system will be fully computer monitored, automated and regularly adjusted to control the climate in the sheds.

Power will be supplied by a combination of mains electricity and renewable sources. A ground source heat pump will supply heating within the sheds, despite the reference in the AQIA, there is no biomass boiler on site. Roof mounted solar photovoltaic panels on the south facing roof elevations will generate electricity for the sheds offsetting the requirement for mains electricity. There will be a standby diesel generator for backup power supply in the event of an emergency.

No feed mixing or milling will be done on site and feed specification is prepared by a nutrition specialist and supplied by accredited mills so that only approved ingredients are used. This will ensure that the correct feed is given in regard to the weight and age of hens. Water consumption is monitored and delivered by low leak nipple drinkers.

Following delivery, chicks will be kept inside for approximately 12 weeks until they are mature enough to range. The birds will then have daily access to the range area, where they are free to roam. There is a tiered system within the sheds that allows for the hens to roost, with the eggs collected daily from the sheds. Manure is collected on belts located below the perches and is removed at least twice a week. There is no additional forced air drying applied to the manure, the manure dries on the belt only as a result of ambient temperatures within the poultry house.

The hens are in place for approximately 60 weeks. At this point, the hens will be removed from the sheds onto wagons and exported off-site. The shed will then undergo a dry clean once all hens have been removed. This will be disinfected and prepared for the next set of hens that will be brought to site.

The business operates a dry clean of the sheds. If there is a wash down ever required, there is a management plan in place for all material to be washed to a corner, with a temporary slurry tanker

brought from the wider farm to collect and remove the wash water offsite. There is no underground storage tank on site and there are no wheel wash facilities.

The installation of a Sustainable Drainage System to treat lightly contaminated surface and yard run off *via* a new swale and wetland will adhere to the guidelines in the CREW SuDS Guide, considered BAT for IA permitted installations.

Collectively, these measures are intended to reduce the production and release of ammonia, odours and dust from the sheds, to prevent surface run off having a detrimental impact on the water environment and to manage the waste produced on site. The permit application indicates that the installation will be operated in accordance with Best Available Techniques.

SEPA has assessed the baseline site condition report submitted with the permit application as satisfactory.

Determination was therefore to issue the PPC permit PPC/A/5004351 based on the application submitted.

Glossary of terms

APIS - Air Pollution Information System [HTTPS://WWW.APIS.AC.UK](https://www.apis.ac.uk)

AQIA - Air Quality Impact Assessment

BAT - Best Available Techniques

CO - Coordinating Officer

CREW Rural SuDS Guide – CREW Rural Suds Design and Build Guide' means the Duffy, A. Moir, S. Berwick, N. Shabashow, J. D'Arcy, B. Wade R. (2016). Rural Sustainable Drainage Systems: A Practical Design and Build Guide for Scotland's Farmers and Landowners, CRW2015/2.2, available online at [WWW.CREW.AC.UK/PUBLICATIONS](http://www.crew.ac.uk/publications)

ELV - Emission Limit Value

IA - Intensive Agriculture

BREF - Best Available Techniques (BAT) Reference Document for the Intensive Rearing of Poultry or Pigs. Industrial Emissions Directive 2010/75/EU (Integrated Pollution Prevention and Control) Germán Giner Santonja, Konstantinos Georgitzikis, Bianca Maria Scalet, Paolo Montobbio, Serge Roudier, Luis Delgado Sancho 2017

NVZ - Nitrate Vulnerable Zone

SAC - Special Area of Conservation

SCAIL - Simple Calculation of Atmospheric Impact Limits

SFIR - Standard Farming Installation Rules

SPA - Special Protected Area

SSSI - Site of Specific Scientific Interest

SUDS - Sustainable Urban Drainage System

UFAS - Universal Feed Assurance Scheme

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	28 February 2023	Yes
East Lothian Courier	02 March 2023	Yes

Officer checking advert: CO

No. of responses received: None

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

Is PPC Statutory Consultation Required –

Food Standards Agency: – No response received.

Health Board: –response received 24/03/2023 - “I note that this application is for an extension of an existing poultry farm facility in East Lothian. I am not aware of any complaints or alleged health effects attributed to activities at this location. No studies of the health status of the local community have been prompted by concerns regarding this Estate. Regarding vulnerable population, I identified two schools within a range of 2 to 5 kilometres from the facility.

The main issue associated with poultry farms appear to be nuisance from dust (in form of foodstuffs and dry waste materials), noise (from the chicken sheds), odours, ammonia and particulate matter associated with the sheds waste material. There are also issues about disposal of waste to minimise the risk of polluting local water courses with excess nitrogen, phosphorus, and potassium. Another potential problem could be flies which if not managed appropriately could turn out to be a big nuisance of a disease vector. These nuisances are amenable to PPC application, and the applicants need to demonstrate that they have measures in place to control them. There is also a potential risk of avian influenza but there is already existing guidance of managing it to minimise the risk to human health.

By extending to over 40,000 birds, the applicants have a reach a threshold for a full PPC application for which case they need to also demonstrate that they have undertaken a full assessment of all potential environmental emissions and propose to minimise them. I was unable to locate any assessment associated with air quality assessment. SEPA should check that the applicants have taken into account the current level of ammonia and particulate matter, in the local environment as determined by on-going air quality monitoring by East Lothian Council, to be reassured that extension will not result in exceedance of the current national standards. When this information is provided, SEPA should also check the prevailing winds are unlikely to concentrate particulates in the identified schools.

I note that the proposed facility is conveniently located well away from residential facilities. This suggested that the chances of adverse impact on human health are going to be limited. Provided the applicant plans to put in place measures to ensure that members of the public are not permitted to access the site for 'bio-security' reasons then they should not come into contact with any hazardous materials.

In conclusion the potential exposure to the facility's emission with consideration to background exposure, will not pose unacceptable risk to the residential receptors identified in the vicinity of the proposed facility provided the mitigation measures for the emissions are put in place as recommended and appropriately monitored."

Local Auth: – No response received

Scottish Natural Heritage (PPC Regs consultation): YES. Response received 03/03/2023 –

“Special Protection Areas (SPA)

We agree with SEPA's conclusion that it is unlikely that the proposal will have a significant effect on any qualifying interests of Fala Flow SPA either directly or indirectly. An appropriate assessment is therefore not required.

Sites of Special Scientific Interest (SSSIs)

We note that the cumulative contributions to ammonia concentration from this proposal and existing nearby operations breaches the screening thresholds for the critical level at Traprain Law, Papana Water and Danskin Loch SSSIs. However we agree with SEPA's conclusion that given that the breaches are marginal, the calculations used are conservative and the distance between the proposal and the designated sites, that this proposal is not likely to cause damage to the designated features of the SSSIs."

Discretionary Consultation –

Scot Gov (SGRPID) – 10/02/2023 - consulted on range area due to NVZ - No response received. Further consultation email sent on 27/03/2023 regarding updated range area. Response received by email on 30/03/2023 confirming range area is satisfactory.

Enhanced SEPA public consultation – None

'Off-site' Consultation - None

Transboundary Consultation - None

Public Participation Consultation - Yes

STATEMENT ON THE PUBLIC PARTICIPATION PROCESS

The Pollution Prevention and Control (Public participation)(Scotland) Regulations 2005 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.

Date SEPA notified applicant of draft determination

17/05/2023

Date draft determination placed on SEPA's Website

Details of any other 'appropriate means' used to advertise the draft	
Date public consultation on draft permit opened	
Date public consultation on draft permit consultation closed	
Number of representations received to the consultation	
Date final determination placed on the SEPA's Website	
Summary of responses and how they were taken into account during the determination:	

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

4 INTRODUCTION AND BACKGROUND

4.1 Historical Background to the activity

This application by East Lothian Eggs Ltd is for a new PPC permit PPC/A/5004351. There is one existing 32,000 place free range hen shed in operation at the site and the proposal is for an additional 32,000 place free range hen shed to be erected adjacent to the current building. This will take the total capacity at the site to 64,000 birds.

The applicant was required to demonstrate that the sheds were designed having regard to the following principles outlined in the BREF and the BAT conclusions published in February 2017:

- Reducing the ammonia-emitting surface;
- Removing manure frequently to an external store (e.g. with belt removal systems);

- Quickly drying the manure;
- Using surfaces which are smooth and easy to clean;
- Lowering the indoor temperature and ventilation as much as animal welfare and/or production allow.

The proposals for the new housing demonstrate that the chosen design addresses the above principles.

The new building proposed by East Lothian Eggs Ltd is on a greenfield site on former agricultural land.

4.2 Description of activity

Rearing of poultry intensively in an installation with more than 40,000 places is described in Part A of Section 6.9 (a) of Schedule 1 of the Regulations. by constructing an addition free range hen shed East Lothian Eggs Ltd will increase capacity from 32,000 places to 64,000 places.

Other Directly Associated Activities include:

- Feed delivery and storage
- Generator and fuel storage
- Biomass boiler and feedstock storage
- Water storage
- Chemical storage
- Manure handling and storage
- Dirty water storage
- Storage of fallen stock prior to disposal
- Management of lightly contaminated surface water

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

One Special Area of Conservation or Special Protection Area was found within the screening distance of the project. This is given below, with the qualifying interests for the SAC/SPA (habitats and/or species) and site condition (and date of assessment) for each interest.

Name	Distance (km)
Fala Flow SPA / Ramsar	9.7

The distances given in the table above are from the centre of the emission source points to the closest point on the boundary of the respective designated conservation site.

Fala Flow SPA/Ramsar

Qualifying interest	Latest assessed condition	Negative pressures
Pink-footed goose, non-breeding	Favourable maintained 2009	Water management

Five SSSI's were found within the screening distance of the project. These are given below with their designated features:

Name	Distance (km)	Designated feature	Latest assessed condition
Lammer Law	5.3	Blanket bog Juniper scrub	Unfavourable no change 2014 Unfavourable declining 2005

		Upland assemblage Subalpine dry heath	Favourable maintained 2005 Unfavourable declining 2005
Danskine Loch	7	Fen woodland (+ nationally rare lichen sp)	Unfavourable declining 2009
Papana Water	9.1	Upland mixed ash woodland	Favourable maintained 2008
Fala Flow	9.7	Blanket bog Pink-footed goose	Unfavourable no change 2005 Favourable maintained 2016
Traprain Law	10.6	Lichen assemblage Lowland acid grassland Lowland calcareous grassland	Favourable maintained 2017 Unfavourable recovering 2015 Unfavourable declining 2017

The distances given in the table above are from the centre of the emission source points to the closest point on the boundary of the respective designated conservation site.

The following human health receptors (residential properties) were identified assessed in the AQIA within 1km of the proposed site at East Lothian Eggs Ltd. This is greater than the 250m radius routinely used during a PPC application.

Howden Farm Lodge	End Cottage	The Store house
Howden Farmhouse	Middle Cottage	Newhall
Muirwood	Struie Cottage	The Old Dairy
Howburn House	Howden Cottage 1	Cauldsheil Farmhouse
Bankrugg House	Bankrugg Cottage	Cauldsheil Bungalow
Balfours House	Bankrugg	Cauldsheil Cottage 4
How Knowe	The Granary	Cauldsheil Cottage 2

The 2 schools identified by the Health Board in their consultation response are at distances too far away to be affected by dust from the farm. SEPA's only requires an applicant to carry out an assessment of human health impact within a distance of 250m from the installation.

5 KEY ENVIRONMENTAL ISSUES

5.1 Summary of significant environmental impacts

SEPA have identified a number of potential environmental impacts which need to be assessed. These are identified as follows:

- **Emissions to Air:** Ammonia, dust (PM10) and odour
- **Emissions to Land:** Waste, faecal material and nutrient inputs to land
- **Emissions to Water:** Surface water discharge to surface water and indirect to groundwater
- **Other Emissions:** Noise
- **Associated risks:** Fuel and chemical storage

SEPA aims to control these through the conditions contained in the permit variation and by the requirement on the operator to comply with BAT as indicated in the SFIR.

5.2 Implications of the Application on - Point Sources to Air

Ammonia (BAT 23 & 31)

Ammonia released from livestock manures and slurries and the nitrogen deposition resulting from ammonia emissions, can negatively affect biodiversity. When atmospheric ammonia is emitted from agricultural sources, it can either be deposited directly (dry deposition) or transported within the atmosphere and be later deposited through rain or snow (wet deposition). At locations close to the source the predominant is for dry while wet is predominant further away.

Certain habitats and species are particularly susceptible. Bog and peatland habitats are made up of sensitive lichens and mosses which can be damaged even at low concentrations. The direct toxic effect on vegetation can result in the loss of such sensitive species which can then cause changes in animal and insect species composition. Deposition can also lead to soil acidification and leaching of excess nitrogen into ground and surface waters causing eutrophication. The main point source ammonia emission will come from the fans on the gable end of each shed.

Ammonia from poultry housing can give rise to adverse impacts to sensitive habitats located downwind. Ammonia is emitted via ventilation outlets. The following measures relating to housing unit design will be adopted to prevent or minimise emissions to air:

- Walls and roofs are insulated, and concrete floors lined with an impermeable membrane (DPM).
- An automated system dispenses feed into feeders to minimise feed wastage through spillage.
- Non drip, low pressure nipple drinkers used to reduce wastage and maintain dry manure, thus reducing emissions of ammonia and odours
- Gable mounted exhaust fans operate via a computer controlled system to ensure the internal environment is kept stable and at optimum. Aside from flock requirements, automated control of ventilation and humidity also helps to keep manure dry.

Using the detailed modelling results presented in the air quality impact assessment, SEPA completed an assessment of likely significant effect below.

Permit (Application) Number: PPC/A/5004351

Applicant: East Lothian Eggs Ltd

OFFICIAL

SEPA Ecology habitat assessment and conclusions of AQIA submitted with application:

Record of the assessment of the conservation implications of the expansion of Howden Farm, Gifford, EH41 4JS by addition of a new 32,000 capacity free-range hen housing unit.

The following document has been prepared by the Scottish Environment Protection Agency as the Competent Authority for the above proposal. This report should be read in conjunction with the following documents:

- Air Quality Impact Assessment, version 1.2, Howden Farm, East Lothian Eggs, 8th July 2022

Project and site description					
1	<p>Brief description of the project</p> <p>East Lothian Eggs Ltd. are seeking the construction of a single 32,000 capacity free-range hen shed as an extension of the existing farming operations at Howden Farm, Gifford, EH41 4JS. The new hen shed is to be sited to the south of the existing free-range hen shed, located approximately 590m southwest of Howden Farm Steading.</p> <p>The Air Quality Impact Assessment (AQIA) was conducted using atmospheric dispersion modelling. The assessment evaluates the predicted contributions from the existing and proposed hen sheds at the site.</p> <p>Cumulative predicted emissions from the following sources in proximity to the site are included in the assessment:</p> <ul style="list-style-type: none">• Existing hen shed, its range area, and the emissions from the operation of the biomass boiler unit located east of Howden Wood (operated by Howden Eggs, Planning References: 17/00027/P and 20/00223/P); and• The operational hen shed to the northwest and its range area (operated by Scott Eggs, Reference: 20/00851/P).				
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	and conservation objectives for each of these interests	Pink-footed goose, non-breeding	Favourable maintained 2009	Water management																								
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5	Is the proposal directly connected with, or necessary to, conservation management of the SAC/SPA?	The proposal is not directly connected with, or necessary to, the conservation management of the Fala Flow SPA/Ramsar. Therefore, further consideration and an assessment of likely significant effect is needed.																										
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6	Identify the individual elements or phases of the overall project that would give rise to a likely significant effect. Clearly identify any element of the project where the scale or magnitude of effect is	<p>During the operational phase, ammonia emissions arising from animal excretions could result in elevated ammonia concentration, nutrient nitrogen deposition and acid deposition to sensitive ecological receptors downwind of the intensive farming unit.</p> <p>At this stage, the process contribution and background values for each designated nature conservation site are obtained for the point on the site boundary which is closest to the emission point.</p> <p>In this document the term benchmark is used to encompass the critical level for pollutant gas concentrations and the critical load for acid or nutrient nitrogen deposition to the habitat. Critical loads are habitat-specific. The</p>																										

not known or cannot be determined at this stage.

relevant critical load can be obtained from the Site Relevant Critical Load section of the APIS database (WWW.APIS.AC.UK); critical levels and background values are also available on the APIS website.

During screening, the critical level and the lowest of the European range for critical load of the most sensitive designated feature for each site are used in the assessment (see **APIS GUIDE TO VALUES OF NUTRIENT NITROGEN DEPOSITION CRITICAL LOAD TO USE** at screening and detailed assessment stages).

The background plus process contribution, i.e. the total amount of pollutant expected to be experienced by the receptor, is called the Predicted Environmental Contribution (PEC). Where the PEC is less than the benchmark (i.e. < 100% of the critical load or level), or where the process contribution is less than 4% of the benchmark then it is considered unlikely that there will be a significant effect on the designated site as a consequence of the proposed regulated activity.

Fala Flow SPA / Ramsar

	NH ₃ concentration (ug/m ³)	N Deposition (kg N/ha/yr)	Acid deposition (kEq H ⁺ /ha/yr)
Critical load/level	3	20	Not sensitive
Background	0.88	14.98	N 1.02 S 0.11
Scenario 1 – new house alone			
Process contribution (PC)	0.001	0.006	0.000
Total (PEC)	0.88	14.99	1.13
PC as % critical load/level	0.03	0.03	NA
Total as % critical load/level	29	75	NA
Scenario 2 - cumulative			
Process contribution (PC)	0.003	0.014	0.001
Total (PEC)	0.88	14.99	1.13
PC as % critical load/level	0.1	0.07	NA
Total as % critical load/level	29	75	NA

Summary of results for Fala Flow SPA / Ramsar – screening is passed, alone & in-combination

Scenario 1 – New Shed Alone:

The SPA and Ramsar designations are for pink-footed geese, which are not sensitive to acid deposition, therefore screening is passed for acid deposition. .

The PEC is less than the critical level for ammonia concentration and less than the critical load for nutrient nitrogen deposition. The process contributions to ammonia concentration and nutrient nitrogen deposition do

not exceed the screening threshold. Therefore, a likely significant effect to sensitive ecological receptors can be ruled out and screening is passed.

Scenario 2 – Cumulative assessment:

The SPA and Ramsar designations are for pink-footed geese, which are not sensitive to acid deposition, therefore screening is passed for acid deposition.

The PEC is less than the critical level for ammonia concentration and less than the critical load for nutrient nitrogen deposition. The process contributions to ammonia concentration and nutrient nitrogen deposition do not exceed the screening threshold. Therefore, a likely significant effect to sensitive ecological receptors can be ruled out and screening is passed.

Fala Flow SSSI

	NH ₃ concentration (ug/m ³)	N Deposition (kg N/ha/yr)	Acid deposition (kEq H ⁺ /ha/yr)
Critical load/level	1	5	CLMaxS 0.268 CLminN 0.321 CLmaxN 0.589
Background	0.88	14.98	N 1.02 S 0.11
Scenario 1 – new house			
Process contribution (PC)	0.001	0.006	0.000
Total (PEC)	0.88	15.0	1.13
PC as % critical load/level	0.12	0.12	0
Total as % critical load/level	88	300	192
Scenario 2 - cumulative			
Process contribution (PC)	0.003	0.014	0.001
Total (PEC)	0.88	15	1.13
PC as % critical load/level	0.27	0.28	0.2
Total as % critical load/level	88	300	192

Summary of result for Fala Flow SSSI – screening is passed, alone & in-combination

Scenario 1 – New Shed Alone:

The PEC is less than the critical level for ammonia concentration. The relevant PECs are greater than the critical load for nutrient nitrogen deposition and greater 100% of the critical load function for acid deposition.

The process contributions to ammonia concentration, nutrient nitrogen deposition and acid deposition do not exceed the screening threshold of 4%. Therefore, a likely significant effect to sensitive ecological receptors can be ruled out and screening is passed.

Scenario 2 – Cumulative assessment:

The PEC is less than the critical level for ammonia concentration. The relevant PEC is greater than the critical load for nutrient nitrogen deposition and greater 100% of the critical load function for acid deposition.

The process contributions to ammonia concentration, nutrient nitrogen deposition and acid deposition do not exceed the screening threshold of 4%. Therefore, a likely significant effect to sensitive ecological receptors can be ruled out and screening is passed.

Lammer Law SSSI

	NH ₃ concentration (ug/m ³)	N Deposition (kg N/ha/yr)	Acid deposition (kEq H ⁺ /ha/yr)
Critical load/level	1	5	CLMaxS 0.26 CLminN 0.321 CLmaxN 0.589
Background	0.94	14.42	N 1.15 S 0.12
Scenario 1 – new house			
Process contribution (PC)	0.0006	0.003	0.000
Total (PEC)	0.94	14.4	1.27
PC as % critical load/level	0.06	0.07	0
Total as % critical load/level	94	288	216
Scenario 2 – cumulative			
Process contribution (PC)	0.024	0.126	0.009
Total (PEC)	0.96	14.5	1.28
PC as % critical load/level	2.4	2.52	1.5
Total as % critical load/level	96	290.5	217

Summary of result for **Lammer Law SSSI – screening is passed, alone & in-combination**

Scenario 1 – New Shed Alone:

The PEC is less than the critical level for ammonia concentration. The relevant PECs is greater than 100% of the critical load for nutrient nitrogen deposition and greater than 100% of the critical load function for acid deposition.

The process contributions to ammonia concentration, nutrient nitrogen deposition and acid deposition do not exceed the screening threshold. Therefore, a likely significant effect to sensitive ecological receptors can be ruled out and screening is passed.

Scenario 2 – Cumulative assessment:

The PEC is less than the critical level for ammonia concentration. The PEC is greater than 100% of the critical load for nutrient nitrogen deposition and greater than 100% of the critical load function for acid deposition.

The process contributions to ammonia concentration, nutrient nitrogen deposition and acid deposition do not exceed the screening threshold. Therefore, a likely significant effect to sensitive ecological receptors can be ruled out and screening is passed.

Danskin Loch SSSI

	NH ₃ concentration (ug/m ³)	N Deposition (kg N/ha/yr)	Acid deposition (kEq H ⁺ /ha/yr)
Critical load/level <i>Cumulative acid table gives 1.951 as min CLmaxN</i>	1	10	CLMaxS 0.82 ClminN 0.223 ClmaxN 1.43
Background	1.16	16.1	N 0.85 S 0.11
Scenario 1 – new house			
Process contribution (PC)	0.012	0.061	0.004
Total (PEC)	1.17	16.1	0.96
PC as % critical load/level	1.18	0.61	0.3
Total as % critical load/level	117	161	67
Scenario 2 – cumulative			
Process contribution (PC)	0.049	0.255	0.018
Total (PEC)	1.21	16.1	0.98
PC as % critical load/level	4.91	2.55	1.3
Total as % critical load/level	121	161	68

Summary of result for **Danskin Loch SSSI – screening fails solely for ammonia in-combination**

Scenario 1 – New Shed Alone:

The PEC is less than 100% of the critical load function for acid deposition. The relevant PEC is greater than the critical level for ammonia concentration and the critical load for nutrient nitrogen deposition.

The process contributions to ammonia concentration, nutrient nitrogen deposition and acid deposition do not exceed the screening threshold. Therefore, a likely significant effect to sensitive ecological receptors can be ruled out and screening is passed.

Scenario 2 – Cumulative assessment:

The PEC is less than 100% of the critical load function for acid deposition. The relevant PEC is greater than the critical level for ammonia concentration and the critical load for nutrient nitrogen deposition.

The process contributions to nutrient nitrogen deposition and acid deposition do not exceed the screening threshold, however the process contribution to ammonia concentration breaches the threshold of 4%.

Therefore screening is failed for ammonia concentration.

Papana Water SSSI

	NH ₃ concentration (ug/m ³)	N Deposition (kg N/ha/yr)	Acid deposition (kEq H ⁺ /ha/yr)
Critical load/level	1	5	CLMaxS 0.953 CLminN 0.142 CLmaxN 1.951
Background	1.16	16.1	N 1.33 S 0.14
Scenario 1 – new house			
Process contribution (PC)	0.006	0.006	0.000
Total (PEC)	1.17	16.1	1.47
PC as % critical load/level	0.6	0.12	0
Total as % critical load/level	117	322	75
Scenario 2 - cumulative			
Process contribution (PC)	0.042	0.014	0.001
Total (PEC)	1.20	16.1	1.47
PC as % critical load/level	4.18	0.28	0.1
Total as % critical load/level	120	322	75

Summary of result for **Papana Water SSSI** – screening fails solely for ammonia in-combination

Scenario 1 – New Shed Alone:

The PEC is less than 100% of the critical load function for acid deposition. The relevant PEC is greater than the critical level for ammonia concentration and the critical load for nutrient nitrogen deposition.

The process contributions to ammonia concentration, nutrient nitrogen deposition and acid deposition do not exceed the screening threshold. Therefore, a likely significant effect to sensitive ecological receptors can be ruled out and screening is passed.

Scenario 2 – Cumulative assessment:

The PEC is less than 100% of the critical load function for acid deposition. The relevant PEC is greater than the critical level for ammonia concentration and the critical load for nutrient nitrogen deposition.

The process contributions to nutrient nitrogen deposition and acid deposition do not exceed the screening threshold. The process contribution to ammonia concentration breaches the screening threshold of 4%, therefore screening is failed for ammonia concentration.

Traprain Law SSSI

	NH ₃ concentration (ug/m ³)	N Deposition (kg N/ha/yr)	Acid deposition (kEq H ⁺ /ha/yr)
Critical load/level	1	8	CLMaxS 0.79 CLminN 0.438 CLmaxN 1.228
Background	1.58	15.68	N 0.69 S0.1
Scenario 1 – new shed			
Process contribution (PC)	0.01	0.031	0.002
Total (PEC)	1.59	15.7	0.79
PC as % critical load/level	1.03	0.39	0.2
Total as % critical load/level	159	196	64
Scenario 2 – cumulative			
Process contribution (PC)	0.043	0.217	0.015
Total (PEC)	1.62	15.7	0.81
PC as % critical load/level	4.34	2.72	1.2
Total as % critical load/level	162	196	66

Summary of result for Traprain Law SSSI - screening fails solely for ammonia in-combination

		<p>Scenario 1 – New Shed Alone:</p> <p>The PEC is less than 100% of the critical load function for acid deposition. The relevant PEC is greater than the critical level for ammonia concentration and the critical load for nutrient nitrogen deposition.</p> <p>The process contributions to ammonia concentration, nutrient nitrogen deposition and acid deposition do not exceed the screening threshold. Therefore, a likely significant effect to sensitive ecological receptors can be ruled out and screening is passed.</p> <p>Scenario 2 – Cumulative assessment:</p> <p>The PEC is less than 100% of the critical load function for acid deposition. The relevant PEC is greater than the critical level for ammonia concentration and the critical load for nutrient nitrogen deposition.</p> <p>The process contributions to nutrient nitrogen deposition and acid deposition do not exceed the screening threshold. The process contribution to ammonia concentration breaches the screening threshold of 4%, therefore screening is failed for ammonia concentration.</p>
7	Identify any likely direct, indirect or secondary impacts of the project, in combination with other plans or projects, on the SAC/SPA.	No likely significant effect on the pink-footed goose designated feature or site integrity of Fala Flow SPA/Ramsar.
8	Identify any likely direct, indirect or secondary impacts of the project on any relevant SSSIs.	<p>Damage to designated features of any SSSI is unlikely to occur as a consequence of the proposed additional poultry housing at East Lothian Eggs alone. Screening is passed for scenario 1 at all SSSIs with biological designated features within the 10 km screening radius.</p> <p>Screening is passed for scenario 2 at Fala Flow and Lammer Law SSSIs.</p> <p>However, the cumulative contributions to ammonia concentration from the existing and proposed poultry operations at East Lothian Eggs, Howden Eggs and Scott Eggs marginally breaches the screening threshold of 4% of the critical level at Traprain Law, Papan Water and Danskine Loch SSSIs.</p> <p>The cumulative contributions were 4.91% for Danskine Loch, 4.34 % for Traprain Law and 4.18% for Papan Water.</p>
9	Identify standard conditions within the authorisation, or other conditions agreed with the applicant, which will remove the risk of likely significant effects listed above.	<i>n/a</i>
10	List any remaining likely significant effects or identify those for which it	<i>n/a</i>

	is not possible to determine that there is no likely significant effect.	
	Conclusion of assessment of likely significant effect	
11	Is the plan/project likely to have a significant effect on the SAC/SPA, either alone or in combination, with other plans or projects?	<p>Given:</p> <ul style="list-style-type: none"> • the marginal nature of the screening breaches • that evaluation is against the lower critical level of 1 ug NH₃/m³ • the accumulated uncertainty in the in-combination assessment • that the assessment at each SSSI is for the point on the site boundary closest to the farm and • the distance between East Lothian Eggs and the three SSSIs <p>on balance it seems unlikely that damage will occur to the designated features at the three SSSIs, which are located at a distance of 7km (Danskin Loch), 9.1 km (Papana Water) and 10.6 km (Traprain Law) from East Lothian Eggs.</p>

Nature Scot were consulted on the assessment and provided the following response in relation to SEPA's conclusions:

Special Protection Areas (SPA)

We agree with SEPA's conclusion that it is unlikely that the proposal will have a significant effect on any qualifying interests of Fala Flow SPA either directly or indirectly. An appropriate assessment is therefore not required.

Sites of Special Scientific Interest (SSSIs)

We note that the cumulative contributions to ammonia concentration from this proposal and existing nearby operations breaches the screening thresholds for the critical level at Traprain Law, Papan Water and Danskin Loch SSSIs. However we agree with SEPA's conclusion that given that the breaches are marginal, the calculations used are conservative and the distance between the proposal and the designated sites, that this proposal is not likely to cause damage to the designated features of the SSSIs.

Dust (BAT 11)

PM10 and PM 2.5 dust particles are subject to statutory air quality standards. These standards have been specified to reduce health effects and environmental risks to an acceptable level. Air quality limits 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 requests the Applicant screens the emissions of particulate matter to establish whether the emission might cause any air quality standards to be breached. In the case of East Lothian Eggs Ltd, PM10 was assessed as part of the AQIA. The AQIA detailed all sensitive receptors within 1km from the installation. SEPA assessment of the AQIA and conclusions is as follows:

The Air Quality Impact Assessment modelled levels of PM10 and PM 2.5 against the following air quality objectives applicable in Scotland:

- 24-hour mean PM10 50 µg /m³ not to be exceeded more than 7 times a year (equivalent to the 98.1 percentile)
- Annual mean PM10 18 µg /m³
- Annual mean PM2.5 10 µg /m³

Background concentrations for PM10 were derived from the 2020 Scottish Government background maps. The PM10 background figure used was 10.51 µg/m³ and for short term standards twice this figure was used. Background concentrations for PM2.5 were derived from the 2020 DEFRA background maps for 2020 and the PM2.5 background figure used was 5.41 µg/m³

The emission factors used were those used in SCAIL screening tool for free range layers. The data reported relates to the worst meteorological year (2016).

The AQIA identified 21 residential receptors within 1km of the site (Table 6.2 of the AQIA). The closest of these How Knowe is around 450 metres to the southeast of the proposed installation.

PM10 Annual Mean

The greatest process contribution was at End cottage. The predicted concentration from the process was 1.22 µg/m³ which is 7% of the air quality objective (18 µg/m³). The background contribution (10.51

$\mu\text{g}/\text{m}^3$) equates to a predicted environmental concentration to $11.7 \mu\text{g}/\text{m}^3$ or 65% of the air quality objective.

PM10 Daily Average Objective

For the daily average, not to be exceeded more than 7 times per year (98.08 percentile). The greatest process contribution was at How Knowe. The predicted concentration from the process was $4.2 \mu\text{g}/\text{m}^3$ which is 8% of the air quality objective ($50 \mu\text{g}/\text{m}^3$). The background contribution ($21.02 \mu\text{g}/\text{m}^3$) which equates to a predicted environmental concentration to $25.2 \mu\text{g}/\text{m}^3$ or 50 % of the air quality objective.

PM 2.5 Annual Mean

The greatest process contribution was at How Knowe. The predicted concentration from the process was $0.91 \mu\text{g}/\text{m}^3$ which is 9% of the air quality objective ($10 \mu\text{g}/\text{m}^3$). The background contribution ($5.41 \mu\text{g}/\text{m}^3$) equates to a predicted environmental concentration to $6.3 \mu\text{g}/\text{m}^3$ or 63% of the air quality objective.

The predicted concentrations shows that the air quality objectives for PM10 and PM 2.5 are not likely to be exceeded and therefore, the impact on human health is acceptable.

Biomass Boilers

There are no proposed biomass boilers on site, despite being referred to in the AQIA, SEPA has received written confirmation that there are no Biomass boilers and no such plant will be permitted.

Diesel Generator

As it is a requirement of the animal welfare regulations that the birds have adequate heating and ventilation at all times a diesel generator is used as an emergency back-up power supply. SEPA are aware these diesel generators can give rise to dense fume especially at start up or if the generator is poorly maintained. SEPA would expect the operator to use BAT particularly with regard to servicing and maintenance and testing to minimise emissions and particulates from the exhaust.

5.3 Implications of the Application on - Point Source Emissions to Surface Water and Sewer

There are no public sewers within the vicinity of East Lothian Eggs and therefore there will be no discharges to sewer.

There will be no increase in domestic wastewater as a result of the additional building. An existing package treatment plant will continue to operate and will be regulated under The Water Environment (Controlled Activities) (Scotland) Regulations 2011. The foul effluent system is not considered part of the Permitted Installation.

Surface water run-off from the existing and new poultry shed roofs, scratch areas and lightly contaminated yards will be directed to a swale and wetland system for which the relevant capacity calculations have demonstrated adequate storage for this purpose. Drainage will be conveyed to the swales with solid pipes. The installation of a Sustainable Drainage System to treat surface and yard runoff via a new swale and wetland adhere to the guidelines in the CREW SuDS Guide, considered BAT for IA permitted installations.

SUD's have been designed in line with the CREW RURAL SUDS Practical Guide and are suitably sized to treat the relevant drainage areas. Therefore there should be no emission in relation to SUDS treatment and so the permit does not contain discharge conditions or limits.

Should SEPA become aware of an issue with the SUDS, e.g. evidence that contaminated run off being discharged to the SUDS or discoloration of a nearby watercourse, action will be taken under condition 6.1.5 *“Unless specified elsewhere in this authorisation, there must be no individual source emissions from the authorised place to the water environment, air or land.”*

5.4 Implications of the Application on - Point Source Emissions to Groundwater

There shall be no direct point source emissions to groundwater from any part of the permitted activities. The applicant has demonstrated the swale and wetland are designed in line with SEPA advice and are sufficiently sized. If maintained properly, they will provide sufficient treatment of all lightly contaminated run off so that this is not considered to be a point source discharge to groundwater.

The applicant has confirmed to SEPA that the business will operate a dry clean only. The permit will explicitly state this and should any wash down activities occur it would be a breach of permit conditions.

SEPA Water Resources Unit has assessed the baseline site condition report submitted with the permit application as satisfactory.

5.5 Implications of the Application on - Fugitive Emissions to Air (BAT 1 & 11)

There are a number of potential fugitive emissions to air. These include the release of dust and 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. 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 BAT. 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.

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 would be required at receptors within 250m should appropriate criteria for assessment be identified.

5.6 Fugitive Emissions to Water (BAT 1 & 6)

There are a number of potential sources which could lead to fugitive emissions to water, these include: poorly maintained surfaces and drainage systems, bird delivery and collection contaminating surface waters, lack of care during cleaning of the chicken sheds and diesel tank filling and associated bund emptying.

SEPA views fugitive releases as avoidable and can usually link these incidents to either operational error or negligence. SEPA seeks to reduce these occurrences by requiring the permit holder to implement BAT and provide training to relevant staff in environmental issues and exercising a high degree of environmental management and continual maintenance of the activities they undertake.

The applicant is installing SuDS to serve the new free range egg unit which shall be designed to be fit for purpose and meeting BAT.

5.7 Implications of the Application on – Emissions to Land (Bat 7 & 20)

In the case of free ranging hens, SGRPID considers that deposition on a range will be constant across the whole area. In order to ensure that an installation is BAT and that an operator is taking all appropriate prevention measures against pollution in an NVZ, the Applicant is required to demonstrate that the deposition on the ranging area is in accordance with the limit advised by SGRPID as 170 kg N/Ha under the Action Programme for Nitrate Vulnerable Zones (Scotland) Regulations 2008.

The entire ranging area will be included in the installation boundary. For 64,000 birds to meet the limit of 170 kg N/Ha the applicant must provide a range area of at least 40 hectares. The range area for this proposal totals 42 hectares.

The manure collected from the housing regularly by manure belts and will be spread to land out with the installation boundary. Manure spreading out with the installation boundary is covered by the Water Environment (Controlled Activities) (Scotland) Regulations 2011, General Binding Rule 18 (GBR 18).

5.8 Implications of the Application on – Odour (BAT 1, 12 & 13)

SEPA acknowledges that odour from intensive agriculture installations can give rise to complaints and to this end requires operators to undertake odour assessments and to formulate and implement an Odour Management Plan to reduce the impact on the local environment.

SEPA has identified that the potential odour issues from the existing shed and the proposed new shed are ammonia and general poultry smells, with secondary odours from the use of any chlorinated cleaning materials or disinfectants to clean the sheds.

BAT 1 requires the permit holder to produce an Odour Management Plan having regard to BAT 12 detailing odour techniques and reduction of odour emissions in accordance with BAT 13. The permit will require that offensive odours not be emitted beyond the site boundary.

5.9 Implications of the Application on – Management (BAT 1 & 2)

Good site management is a requirement not only of the PPC Regulations but also the Food Safety Act 1990, regulated by the Food Standards Agency, and the Animal Welfare Act 2006. Agricultural installations are subject to a whole raft of regulatory controls requiring Operators to operate installations to a high standard both to ensure welfare of animals and to prevent materials entering the food chain.

BAT 1 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
- Odour management plan
- Noise management plan

BAT 2 requires good housekeeping to prevent or reduce the environmental impact and improve overall performance. This includes training, routine maintenance and an emergency plan.

The applicant has indicated that the installation will be operated in full compliance with Section 2.1 of the SFIR's.

5.10 Implications of the Application on - Raw Materials

Annual use of raw materials will be considered in the resource efficient assessment required under the standard permit condition. The operator will be expected to assess the use of each raw material and identify any major changes, losses or areas where efficiencies can be made and report the assessment and resulting actions taken to SEPA every 4 years.

Chemicals:

Chemicals used in poultry rearing include cleaning and disinfection chemicals, pesticides, rodenticides, herbicides, insecticides and fungicides. All of these chemicals are required to be DEFRA-approved. In the application "supporting document 4. Assessment of Raw Materials and Energy Efficiency" states that all chemicals, medicines, pesticides and biocides will be stored in a secure storage unit within the hen shed buildings.

Agricultural Fuel Oil:

AFO (also known as red diesel) is stored within the bunded generator itself. The bunded generator will meet the requirements of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended). There will be no other fuel storage on site.

Water: Water is wholly from mains supply. (Scottish Water). Water is used to supply drinking water to the birds.

Feed (BAT 3 & 4):

Feed will be supplied to the site, premixed, into 4 fully enclosed silos fitted with particle containment and mitigation. Feed will be then transported into the feed systems within the units by augers. No feed mixing or milling is done at site and feed specification is prepared by a nutrition specialist and supplied by UFAS accredited mills so that only approved ingredients are used. This will ensure that the correct feed is given in regard to the weight and age of hens. A record of all feedstuffs used, including manufacturer/miller, ingredients and quantity purchased will be kept by the operator.

Litter:

The litter will be dried within the sheds and removed regularly via a waste belt, with heated air drying, to covered trailers to be transported off site immediately to farm businesses out with the site boundary. Once outside the site boundary General Binding Rule 18 of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended). Will regulate the materials storage and application.

5.11 Implications of the Application on - Raw Materials Selection

All applicants applying for PPC Part A permits are required to examine their Raw Material usage and seek ways to reduce their impact on the environment. The standard permit condition requiring the formal assessment of resource utilisation on site will allow the operator to identify where any efficiencies can be made and demonstrate continuing improvement.

5.12 Implications of the Application on - Waste Minimisation Requirements

As a commercial operation, SEPA believes it is in the interest of both the company and the environment to minimise waste on the site, as a result SEPA encourages all IA PPC sites to examine their Raw Materials usage and seek ways to reduce their impact on the environment. Standard permit conditions require the operator to minimise waste and where possible develop and implement recycling or recovery strategies. Records will be kept on site of all waste streams and the source, quantity and disposal routes taken. This data will be reviewed every 4 years in the resource efficiency report required in the permit.

5.13 Implications of the Application on - Water Use (BAT 5)

Water use within the food production sector is primarily an animal welfare issue as the operator of the installation is required under other legislation to provide an adequate supply of clean water for both the welfare of the birds and to undertake adequate cleaning of infrastructure. It is up to the operator to demonstrate the use of BAT to minimise water usage, but SEPA does directly regulate water use through permit conditions requiring the operator to minimise water consumption and explore options for minimisation.

The greatest volume of water consumed is drinking water for the birds. Fresh water will be delivered to poultry via low leak nipple drinkers with drip collection cups to prevent spillages (as outlined in the SFIR and BAT standards). Low water pressure is adopted to minimise leakage should there be an issue with a nipple drinker.

5.14 Implications of the Application on - Waste Handling

The types of wastes generated on site shall not differ from those produced in the existing Free Range Egg business prior to it falling under PPC regulation. However, the additional bird places will see a corresponding increase in both bird mortalities and generation of manure.

Manure will be collected and removed by conventional manure belts, with heated air drying, to covered trailers. It will then be transported off the permitted installation to neighbouring farms. Once outside the site boundary General Binding Rule 18 of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) will regulate the materials storage and application.

Dead stock will be removed daily to a secure, vermin proof freezer in the pack room area and transferred offsite by a licensed contractor to be disposed of in accordance with the Animal By-Products (Enforcement) (Scotland) Regulations 2013.

The business has confirmed it will operate a dry clean only and therefore there will be no wash water handling on site.

The volume of other wastes stored on the site is minimal and will be considered in the relevant section of the resource efficiency assessment required under the standard permit condition. The onus of Duty of Care shall apply to all waste management at the installation.

5.15 Implications of the Application on - Waste Recovery or Disposal

As a commercial operation, SEPA believes it is in the interest of both the company and the environment to minimise waste on the site, as a result SEPA encourages all IA PPC sites to examine their Raw Materials usage and seek ways to reduce their impact on the environment. The permit has conditions requiring the operator to minimise waste and where possible develop and implement recycling or recovery strategies. Records will be kept on site of all waste streams and the source, quantity and disposal routes taken. This data will be reviewed every 4 years in the resource efficiency report required in the permit.

5.16 Implications of the Application on – Energy (BAT 8)

Welfare of the birds largely dictates energy use, but the new shed will be built to BAT including insulation lighting and ventilation.

A computer-controlled system maintains the temperature within the housing units. The sheds will be powered by mains electricity supplemented by solar PV panels and heated by a Ground Source Heat Pump. A standby generator will be available on site and will be well maintained and routinely checked for use in an emergency only.

5.17 Implications of the Application on - Accidents and their Consequences (BAT 1)

The Pollution Prevention and Control (Scotland) Regulations 2012 specifically preclude SEPA from adding conditions to a Permit regarding the Health and Safety of staff or workers on-site; however should an accident or incident occur that is likely to pose a risk to the environment or harm to human health in the wider community then SEPA would require, under the conditions of the permit, that not only must the Operators take action to limit the immediate environmental impact but where necessary implement changes to try to ensure that the event doesn't happen again.

In general, all accidents or incidents likely to cause pollution and all complaints to the site regarding nuisance emissions are required by the Permit to be recorded and dependent on the severity, notified to SEPA. Emergency preparedness and response (incident prevention and mitigation) are required as per BAT 1 as part of the Environmental Management System for the site.

5.18 Implications of the Application on – Noise (BAT 1, 9 & 10)

The predominant source of noise from poultry units is generated from the ventilation systems. Other sources of noise related to this type of activity can include vehicle movements in and around the site and the placement and removal of birds. The latter two are considered as being unlikely to cause issues as the activities will take place for such short durations as well as being infrequent. Regular maintenance of fans will also prevent noise and the noise management plan will address any issued that should arise and will be updated as stipulated in the permit.

The PPC Permit and SFIR recognise that noise can give rise to complaints; SEPA takes noise complaints from PPC Part A installations seriously and to this end requires the operator to undertake noise assessments and produce a Noise Management Plan to prevent or minimise the impact on the local environment.

As part of the application the applicant has submitted a noise impact assessment which focusses on the operational noise of the proposal. The assessment concludes that the proposal will not give rise to significant adverse noise impacts.

Noise at the permitted installation is covered by Section 2.9 of the SFIR which is considered by SEPA to meet BAT Conclusions 9 & 10 which the operator is required to have regard to when operating an intensive agriculture site under the PPC Regulations.

5.19 Implications of the Application on – Monitoring (BAT 24, 25, 26, 27 & 29)

SEPA places a lot of emphasis on self-monitoring and record keeping as keys to the successful running of a PPC installation. The operator is required within the permit to undertake odour and noise assessments. General monitoring of the site is also covered in the Permit to assess operational conditions and environmental performance.

Various permit conditions require the operator to monitor the level of inputs and the volume of outputs and to consider how changes made benefit the environment. The 2017 BREF introduces the following additional monitoring requirements:

1. The total nitrogen and total phosphorus excreted in manure
2. Ammonia emissions to air
3. Dust emissions
4. 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 to comply with the monitoring requirements for 1-3 identified above.

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

5.20 Implications of the Application on - Closure

Standard conditions in the permit will be appropriate for this installation including the production of a Decommissioning Plan. The operator has agreed to meet Section 2.15 of the SFIR for Decommissioning.

In order to ensure that the site can be returned to its pre-PPC Permit state, SEPA have required the applicant detail any pre-application problems prior to permitting so that a site surrender report can be compared with the Site Condition and Baseline Reports. Surrender of the permit is by an application to SEPA who have to be satisfied that the requirements of Regulation 19 of the PPC Scotland Regulations 2012 (as amended) are complied with.

As per the PPC Regulations the Applicant shall need to remediate the site where required to the levels cited in the baseline report.

5.21 Implications of the Application on - Site Condition Report (and where relevant the baseline report)

As per Regulation 48 of the PPC Regulations a Site Condition and Baseline Report was submitted with the application. SEPA has assessed the report as satisfactory. The report evaluates past potential contamination and future pollution risks to both soil and groundwater.

The site was in greenfield agricultural usage before development of the existing poultry shed in 2019 and no evidence of former contamination was identified by the baseline investigation.

The conceptual site model and site condition statement was found to be generally reasonable with minor omissions:

Private Drinking Water Supplies (PWSs) have not been considered as potential receptors. Drinking Water Quality Regulator (DWQR) data indicates a PWS at How Knowe approx. 500 m SSE, likely downgradient, of sheds. Spring source specified but could be fed by field drains.

It considered unlikely any PWS at How Knowe could be impacted however the exact location and nature of the supply is unknown. It is recommended that if this PWS is in use, the location and nature of the supply be confirmed, and risk assessment undertaken as appropriate.

Only approximate locations of on-site services known. No intrusive investigation to assess potential preferential pathways undertaken due to health and safety implications.

The location of borehole BH05 is not specified. It is recommended that this be clarified.

Following the initial review for the baseline site condition report, further clarification was sought from the applicant with regards to Borehole 5 location and a nearby PWS source. SEPA Water Resources Unit received the required information and has assessed the baseline site condition report submitted with the permit application as satisfactory.

5.22 Implications of the Application for - Consideration of BAT

SEPA published its view of "indicative" BAT relating to intensive agricultural operations in its Standard Farming Rules (SFIR). SFIR's are based on the BAT Reference Document (BREF) for Intensive Agriculture Installations published by the European IPPC Bureau in 2017. These SFIR's have been

used throughout this permit to benchmark farming activities. The permit application indicates that the installation will be operated in accordance with Best Available Techniques.

6 OTHER LEGISLATION CONSIDERED

Nature Conservation (Scotland) Act 2004 & Conservation (Natural Habitats &c.) Regulations 1994

Is there any possibility that the proposal will have any impact on site designated under the above legislation? No

Justification:

SEPA Ecology reviewed and assessed the Air Quality Impact Assessment (AQIA) submitted in support of the application.

The AQIA was conducted using atmospheric dispersion modelling. The assessment evaluates the predicted contributions from the existing and proposed hen sheds at the site.

Cumulative predicted emissions from the following sources in proximity to the site are included in the assessment:

- Existing hen shed, its range area, and the emissions from the operation of the biomass boiler unit located east of Howden Wood (operated by Howden Eggs); and
- The operational hen shed to the northwest and its range area (operated by Scott Eggs)

Damage to designated features of any SSSI is unlikely to occur as a consequence of the proposed additional poultry housing at East Lothian Eggs alone. Screening is passed for scenario 1 (New Shed only) at all SSSIs with biological designated features within the 10 km screening radius.

Screening is passed for scenario 2 (cumulative) at Fala Flow and Lammer Law SSSIs.

However, the cumulative contributions to ammonia concentration from the existing and proposed poultry operations at East Lothian Eggs, Howden Eggs and Scott Eggs marginally breaches the screening threshold of 4% of the critical level at Traprain Law, Papana Water and Danskine Loch SSSIs.

The cumulative contributions were 4.91% for Danskine Loch, 4.34 % for Traprain Law and 4.18% for Papana Water.

Conclusion:

Given:

- the marginal nature of the screening breaches
- that evaluation is against the lower critical level of 1 ug NH₃/m³
- the accumulated uncertainty in the in-combination assessment
- that the assessment at each SSSI is for the point on the site boundary closest to the farm and
- the distance between East Lothian Eggs and the three SSSIs

it is SEPA's view that on balance it seems unlikely that damage will occur to the designated features at the three SSSIs, which are located at a distance of 7km (Danskine Loch), 9.1 km (Papana Water) and 10.6 km (Traprain Law) from East Lothian Eggs.

Nature Scot were consulted and provided this response via email on 03 March 2023:

“Special Protection Areas (SPA)

We agree with SEPA's conclusion that it is unlikely that the proposal will have a significant effect on any qualifying interests of Fala Flow SPA either directly or indirectly. An appropriate assessment is therefore not required.

Sites of Special Scientific Interest (SSSIs)

We note that the cumulative contributions to ammonia concentration from this proposal and existing nearby operations breaches the screening thresholds for the critical level at Traprain Law, Papaná Water and Danskin Loch SSSIs. However we agree with SEPA's conclusion that given that the breaches are marginal, the calculations used are conservative and the distance between the proposal and the designated sites, that this proposal is not likely to cause damage to the designated features of the SSSIs."

Screening distance(s) used – 10km as per nature conservation procedure NCP-P-01

Other Legislation

Action Programme for Nitrate Vulnerable Zones (Scotland) Regulations 2008:

The applicant demonstrated that the size of the ranging area is sufficient that deposition is in accordance with the limit of 170 kg N/hectare. See section 5.7

The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR):

This primarily applies to land spreading activities that will be taking place out with the site boundary and will be regulated under GBR18. See section 5.7.

Foul drainage systems will be regulated separately under CAR and will not form part of the permitted installation.

The Water Environment (Miscellaneous) (Scotland) Regulations 2017:

The requirements for the generator oil storage under these Regulations are met. See section 5.10 consideration of oil storage as BAT. There are no conflicts with ongoing CAR regulation of this process.

Animal By-Products (Enforcement) (Scotland) Regulations 2013:

Regulates carcass disposal. Carcass storage is a Directly Associated Activity (DAA) in the permit. See section 5.14

Howden Wood Local Biodiversity Site:

The final agreed range area has been designed to ensure no part of the Howden Ancient Woodland is used for hen ranging. This was part of a Local Authority planning condition. The applicant is aware that it is their responsibility if changes required during the PPC permit determination stage necessitate a further planning application or similar application and/or neighbour notification or advertising.

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

Do you propose making changes to existing text, tables or diagrams within the permit? N/A New Permit

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? No

Emission limit values – Air

Substance: Ammonia

Relevant emission benchmarks: BAT AEL's

ELV: 0.02-0.16 kg NH₃/animal place/year

Emission point: Poultry housing and ranging areas.

Rationale: BAT Associated Emission Limits (AELs) are a requirement introduced in the BREF. 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 AELs for ammonia. The emission factor used for a free-range aviary system is 0.108 kg NH₃/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.

Substance: Total Nitrogen Excreted

Relevant emission benchmarks: BAT AEL's

ELV: 0.4-0.8 kg/animal place/year

Emission point: Manure collection Belts

Rationale: BAT AELs are a requirement introduced in the BREF. There are presently no approved emission factors, but it is expected that compliance will be demonstrated via mass balance using feed information and standard manure analysis.

Substance: Total Phosphorus Excreted

Relevant emission benchmarks: BAT AEL's

ELV: 0.10-0.45 kg/animal place/year

Emission point: Manure collection Belts

Rationale: BAT AELs are a requirement introduced in the BREF. There are presently no approved emission factors, but it is expected that compliance will be demonstrated via mass balance using feed information and standard manure analysis.

10 PEER REVIEW

Has the determination and draft permit been Peer Reviewed?

Name of Peer Reviewer and comments made:

1. Additional comment regarding the extent of the installation and the decision not to treat Howden Farm as one Permitted Installation.
2. Clarification no biomass boiler on site.
3. Clarification no forced air drying of manure.
4. Clarification no wheel wash area.

11 FINAL DETERMINATION

Issue of a Permit - Based on the information available at the time

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

Guidance Notes – Identify key references, guidance (BREF, UK Technical Guidance, etc) used in determination

Standard Farming Installation Rules (SEPA's general sector guidance)

Nature Conservation Procedure NCP-P-01

The assessment of potential impacts on designated sites of atmospheric emissions of ammonia from PPC intensive agriculture installations NCP-P-02

BAT Reference Document (BREF) BAT Conclusions for the Intensive Rearing of Poultry or Pigs (2017)

Rural Sustainable Drainage Systems – A practical design and build guide for Scotland's farmers and landowners (2016)

SEPA Guidance on Consultation under PPC (IED-PG-01-04)