Glenrath Farms Limited
Arranview and Jameston Moss Poultry Farm

Substantial Variation VAR02

PPC/A/1016746

Contents

1 Non-Technical Summary of Determination

Provide a non-technical summary of the process and determination

Glenrath Farms Limited are seeking a permit variation to PPC/A/1016746 to increase the current poultry operations at Arranview and Jameston Moss Poultry Farm, Dalry, KA24 4HB, to include an additional poultry house with 65,000 bird places for barn laying hens. The land associated with the Arranview and Jameston Moss site is owned and operated by Glenrath Farms Limited, the Responsible Person.

The permit variation application is made under Part A of Section 6.9 (a) of Schedule 1 of the Pollution Prevention and Control (Scotland) Regulations 2012.

The site is located at Ordnance Survey national gird reference NS 32944 46876.

The site is currently permitted for 64,000 barn laying hens in two poultry houses at Arranview, and 68,000 pullets on a littered floor in four poultry houses at Jameston Moss, with a total permitted number of 132,000 bird places.

With the addition of a further 65,000 places for barn laying hens in a proposed third poultry house at Arranview, the total permitted number of bird places will increase to 197,000. The proposed house and changes to drainage system will be located within the existing permitted installation boundary. No changes are proposed to the Jameston Moss site.

The proposed poultry house at Arranview will be located at Ordnance Survey national gird reference NS 32945 46993. The proposed house has been sited at the location of a previous poultry house, and in between the two existing houses. Using this location avoids the need to use greenfield land and reduces the need for additional transportation of birds, eggs and materials. The location between the existing houses will further shelter the building from the prevailing wind.

The proposed poultry house will be larger than the two existing houses at Arranview, however it will be operated in the same way as the existing houses. The proposed house will comprise of a multi-tiered aviary system with manure belts on two levels. Birds will be introduced at 18 weeks of age and will lay eggs until they reach approximately 85 weeks of age. Birds will be houses on a littered floor of wood shavings which will be topped up throughout the cycle if required.

The proposed house has been designed to minimise ammonia emissions. It will be well insulated and use low energy lighting. All walls and the roof will be insulted to retain heat and minimise condensation. The concrete floor will be protected from water ingress by an impermeable damp-course membrane. Litter will be monitored to ensure that it is friable and loose.

The ventilation system will be automatically controlled with temperature and humidity monitored continuously by sensors located within the housing unit. The climatic conditions will be recorded and adjusted accordingly to achieve optimal conditions for flock welfare and to maintain low moisture content in the litter. Fresh air will be drawn in via 36 air inlet fans along each side of the building (on each of the two levels). Air will be exhausted via two high velocity roof chimneys located at the southern end of the poultry house. During warmer months, additional tunnel ventilation will be provided with fresh air pulled in at the northern end of the building and exhausted via gable end fans (southern end of the building). The gable end fans will be fitted with louvres to ensure that particulate matter is deposited on the concrete surface below the fans.

Manure collection in the proposed house will be via manure belts that will collect manure from underneath perches, nesting boxes and drinking and feeding stations. Manure will be dried on the manure belts using forced ventilation and removed from the poultry house twice per week to a covered trailer and then removed off-site by a contractor. Manure will be spread to land out with the installation boundary.

At the end of each cycle, the proposed house will be destocked of birds and all litter and manure completely removed. The house will then be dry washed and disinfected before the introduction of the next flock. Water is only used to wash down the manure belt area and the wash water will be collected in the existing storage tank prior to being spread to land out with the installation boundary.

Feed will be stored outside the poultry house in feed silos and augered into the poultry house from the silos. There will be four 16 tonne feed silos serving the proposed poultry house. Dust cyclones will be installed on the feed silos to minimise dust emissions during feed delivery. Feed will be distributed through the poultry house by track feeders. Feed composition is adjusted throughout the flock cycle to provide optimal nutrient uptake and minimise loss via manure.

Water is supplied to the site via mains water supply. Nipple drinkers are used to water the birds and supplemented with collection cups. These reduce wastage of water and maintain dry litter. There is no water storage onsite.

Lightly contaminated roof and surface water at Arranview will be directed to a swale for treatment. Clean rainwater from roofs as well as lightly contaminated run-off from the concreted areas beneath gable fans to collect dust and drainage from all other yard areas will be treated via a RSuDS,

Eggs are conveyed to a central services area where they are packed for processing off site.

Bird mortalities will be collected daily and stored in a sealed and secure container in the locked generator shed.

Chemicals used for cleaning and disinfection are stored in a locked storage cupboard within the service area of Arranview. Procedures are in place to absorb any spillage and ensure appropriate disposal.

Disinfectant foot baths are provided at the entrance to the poultry sheds and are changed twice per week to ensure a high biosecurity standard. Spent disinfectant is disposed of with the poultry manure.

The site is powered by mains electricity with an existing back-up diesel generator in use. The generator has sufficient capacity to power the new poultry house.

There is a small existing tree belt at the southern end of the poultry houses at Arranview which will be retained and should help to contain particulate emissions further. In addition, dust will be minimised through the use of crumbed food and dust-extracted coarse litter.

Collectively, these measures are intended to reduce the production and release of ammonia, odours, and dust from the poultry housing unit, prevent liquid washings escaping to the environment, and 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.

There are duties placed on SEPA for the protection of designated sites under The Conservation (Natural Habitats, &c.) Regulations 1994 and the Nature Conservation (Scotland) Act 2004. Arranview and Jameston Moss Poultry Farm lies within 10 kilometres of several designated sites (please see Section 4.5 of this Decision Document). SEPA has assessed the impact of ammonia emissions and nitrogen and acid deposition on the designated sites as acceptable (see Section 5.2 of this Decision Document).

The application submitted complies with both the requirements of PPC and the Standard Farming Installation Rules (SFIR).

Determination was therefore to issue the Permit PPC/A/1016746 VAR02 based on the application submitted.

Glossary of Terms

BAT - Best Available Techniques
BREF – Best Available Techniques Reference Document
BAT-C – Best Available Technique Conclusions
ELV – Emission Limit Value
CO – Coordinating Officer
PC – Process Contribution
PEC - Predicted Environmental Concentration

2 External Consultation and SEPA's response

Is Public Consultation Required? (if no delete rows below)	**Yes**

Advertisement Check:	**Date**	**Compliance with advertising requirements**
The Edinburgh Gazette	**10/12/2024**	**Yes**
Ardrossan Saltcoats Herald	**11/12/2024**	**Yes**

Officer Checking advert: CO	
No of responses received	No responses received.

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?	**Yes**

Food Standards Agency	Consulted on 27/11/2024.
Health Board	Consulted on 04/12/2024. Response received on 19/12/2024 from NHS Ayrshire & Arran. The consultee supported the application but raised concerns, several of which are not within SEPA's regulatory remit. These concerns are addressed below and communicated to the consultee on 20/02/2025. **<u>Employee Health & Safety</u>** The consultee raises concerns regarding public health and the health and safety of employees. The PPC Regulations specifically preclude SEPA from adding conditions to a Permit regarding the health and safety of staff or workers on-site. Permit conditions require that in the event of any incident or accident likely to pose a risk to the environment or harm to human health in the wider community the operator is required to take action to limit the impact and where necessary implement changes to ensure that the event does not happen again. SEPA are therefore unable to comment further on possible public health concerns related to biosecurity and occupational health measures (vaccination, PPE etc). **<u>Anti-microbial Stewardship</u>**

	The consultee states that no detail is provided in the application regarding anti-microbial stewardship. Anti-microbial resistance (AMR) risks associated with organic material spreading to land are currently not regulated in Scotland, because AMR levels in soil are not routinely measured and key thresholds for these risks are unquantified. Consequently, there is no current scientific basis to support regulation. **Organic Material to Land** The consultee raises a concern regarding the environmental risks of manure spreading and states that no details are provided in the application of where the manure will be spread. The land on which litter and manure will be spread does not form part of the permitted installation and is therefore not controlled under the PPC Permit. The spreading of poultry litter and manure is regulated under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended), General Binding Rule 18, which stipulates rules for the storage and application of organic fertiliser. **PM_{10} (Dust)** The consultee raised a concern with regards to particulate matter. In Scotland, air quality objectives are set out in the Air Quality (Scotland) Regulations 2000 (as amended). In determining the application SEPA must consider whether any air quality standards (AQS) might be breached. The AQS for PM_{10} measured as a 24 hour mean is 50µg m^{-3} not to be exceeded more than 7 times per year and measured as an annual mean, 18µg m^{-3}. Where sensitive receptors are located within 250 metres of a poultry unit, SEPA requests that the applicant screens the emission of particulate matter to establish whether the emission will cause any air quality objectives to be breached. As the applicant did not undertake the required screening, SEPA has subsequently done this. The screening indicates that both the annual and daily PM_{10} average will be breached at residential receptors within 250 metres of the installation. SEPA have therefore requested that the applicant undertake detailed PM_{10} modelling and await the results. **Biosecurity** The consultee expresses concern that no details to cover biosecurity were included in the application with regards to avian influenza, employee vaccination and visitors' disinfection. The PPC permit will impose conditions limiting the environmental impact from wheel washes and disinfectant footbaths, however SEPA have no remit in terms of other biosecurity requirements such as employee vaccination and visitors' disinfection. **Poultry vaccines and medicines** It is not clear what information the consultee requires regarding vaccines and medicines, however the PPC Permit requires vaccines and medicines to be stored securely and in a manner which contains any spillages and prevents discharge to the water environment.

	<u>Resource Efficiency</u> The consultee commented on the lack of sustainability information. In determining an application, SEPA must give consideration to: • Consumption and nature of raw materials • Energy efficiency • Waste generation • Accident prevention The above details have been provided in the Supplementary Information submitted with the application.
Local Authority	North Ayrshire Council consulted on 27/11/2024. Consultation requested information required for an in-combination assessment. Response received on 05/12/2024 from the North Ayrshire Council Environmental Health section. The consultee advised that they have no objections to the proposal.
NatureScot	Consulted on 27/11/2024. On 13/12/2024 NatureScot requested additional information regarding PM_{10} emissions and if they have potential to impact on nearby designated sites. SEPA advised that as part of the PPC permit variation determination SEPA assesses dust (PM_{10}) emissions in relation to human health within a radius of 250m from the installation. 250m is used as it is generally accepted that PM_{10} particles would drop out beyond this distance. It was therefore advised that it would be unlikely that PM_{10} particles would reach designated sites, the closest being 1km from the installation. Response received on 20/12/2024. The consultee confirmed that the natural heritage interests of international and national importance close to the installation will not be adversely affected by the proposal. Consulted on 15/01/2024 on Habitats Risk Assessment under The Conservation (Natural Habitats, & c.) Regulations 1994 as amended and the Nature Conservation (Scotland) Act 2004. Response received on 17/01/2025. Consultee confirmed that they agree with the Habitats Risk Assessment and have no objections.
Scottish Government	Consulted on 27/11/2024. Consultation requested information required for in-combination assessment.

Discretionary Consultation required? (if yes provide justification and details below, otherwise delete row)	**No**
Enhanced SEPA Consultation required? (if yes provide justification and details below, otherwise delete row)	**No**
"Off site" consultation required (if yes provide justification and details below, otherwise delete row)	**No**
Transboundary Consultation required? (if yes provide justification and details below, otherwise delete row)	**No**
Is Public Participation Consultation Required? (if yes provide justification and details below, otherwise delete rows below)	**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	
Date draft determination placed on SEPA's Website	
Details of any other 'appropriate means' used to advertise the draft. Seek advice from the communication department	
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:	
Summary of responses withheld from the public register on request and how they were taken into account during the determination: **REMOVE THIS BOX FROM ANY VERSION OF THIS DOCUMENT TO BE PLACED ON THE WEBSITE OR PUBLIC REGISTER. RETAIN IN THE VERSION FOR THE WORKING FILE.**	
Officer:	CO

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 and variation
Glenrath Farms Limited are seeking a permit variation to PPC/A/1016746 to increase the current poultry operations at Arranview and Jameston Moss Poultry Farm, Dalry, KA24 4HB, to include an additional poultry house with 65,000 bird places for barn laying hens. The land associated with the Arranview and Jameston Moss site is owned and operated by Glenrath Farms Limited, the Responsible Person.

The permit was first issued in 2007 and has been varied three times.

The site is located at Ordnance Survey national gird reference NS 32944 46876.

The site is currently permitted for 64,000 barn laying hens in two poultry houses at Arranview, and 68,000 pullets on a littered floor in four poultry houses at Jameston Moss, with a total permitted number of 132,000 bird places.

With the addition of a further 65,000 places for barn laying hens in a third poultry house at Arranview, the total permitted number of bird places will increase to 197,000. The proposed house and changes to drainage system will be located within the existing permitted installation boundary. No changes are proposed to the Jameston Moss site.

The applicant is required to demonstrate that the proposed housing unit will be designed having regard to the principles outlined in the BREF and the BAT Conclusions such as:

• reducing the ammonia-emitting surface;
• removing the manure frequently (e.g., with belt removal systems);
• quickly drying the manure;
• using surfaces which are smooth and easy to clean;

The proposals for the proposed poultry house demonstrate that the chosen design addresses the above principles.

4.2 Description of activity

The activity proposed is rearing poultry intensively in an installation with more than 40,000 places as described in Part A of Section 6.9 (a) of Schedule 1 of the Regulations.

At Arranview and Jameston Moss Poultry Farm, Glenrath Farms Limited are rearing pullets and barn laying hens for egg production.

Directly Associated Activities include:
• Feed delivery & storage
• Generator & fuel storage
• Chemical storage
• Manure handling
• Dirty water storage
• Storage of fallen stock
• Management of lightly contaminated surface water
• Auxiliary power generation

4.3 Outline details of the Variation applied for

The proposal will increase the permitted number of bird places to 68,000 places for pullets in four poultry houses and 129,000 places for barn laying hens in three poultry houses. The site is currently permitted for 68,000 places for pullets in four poultry houses and 64,000 places for barn laying hens in two poultry houses.

Other changes to the permit include the drying of manure on belts via forced ventilation in the proposed poultry house and the addition of a swale to treat lightly contaminated surface water.

See Section 8 of this Decision Document for further details on the changes proposed to the permit.

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

None.

4.5 Identification of important and sensitive receptors

Arranview and Jameston Moss is within 10 kilometres of the following NatureScot designated sites.

Table 1 SAC/SPA within 10km

Name	Distance (km)	Qualifying interest	Latest assessed condition	Negative pressures
Dykeneuk Moss SAC	0.99	Active raised bog	Favourable maintained 2013	Water management
Cockinhead Moss SAC	2.7	Active raised bog Degraded raised bog	Unfavourable recovering 2015 Unfavourable declining 2002 (Management measures are in place that should, in time, improve the feature to Favourable condition (Unfavourable recovering due to management)	Invasive species Invasive species Other Water management
Bankhead Moss, Beith SAC	3.7	Active raised bog	Favourable maintained 2009	Invasive species No proactive management

Table 2 SSSI within 10km

Name	Distance (km)	Designated feature	Latest assessed condition
Dykeneuk Moss SSSI	0.99	Raised bog	Favourable maintained 2013
Cockinhead Moss SSSI	2.7	Raised bog	Unfavourable recovering 2015
Bankhead Moss SSSI	3.7	Raised bog	Favourable maintained 2009
Lynn Spout SSSI	4.9	Lower carboniferous (Stratigraphy)	Favourable maintained 2017
Ashgrove Loch SSSI	5.8	Mesotrophic Loch Open water transition fen	Favourable maintained 2004 Favourable maintained 2023
Bogside Flats SSSI	6.5	Mudflats Saltmarsh	Favourable maintained 2012 Favourable maintained 2011
Trearne Quarry SSSI	7.1	Lower carboniferous (Stratigraphy)	Favourable maintained 2000
Dundonald Burn SSSI	9.6	Quaternary geology & geomorphology	Favourable maintained 2001
Castle Semple & Barr Lochs SSSI	9.8	Breeding bird assemblage Eutrophic loch	Favourable maintained 2013 Unfavourable declining 2004

Refer to Sections 5.2 and 6 for an assessment of the impact of the proposal on the identified designated sites.

The site is located in a rural area with outspread residences and other nearby agricultural operations. There are a number of human health receptors within 250 metres of the installation.

Table 3 Human Health Receptors within 250m

Address	Distance (metres)
1 Lissens Cottages, Dalry, KA24 4EZ	249
2 Lissens Cottages, Dalry, KA24 4EZ	266
Jameston Moss Bungalow, Dalry, KA24 4HB	130
1 Jameston Moss Villas, Dalry, KA24 4HB	173
2 Jameston Moss Villas, Dalry, KA24 4HB	162
Meadowbarn (as per Supplementary Information)	113

Refer to Section 5.2 for an assessment of the impact of the proposal on human health receptors

Officer:	CO

5 Key Environmental Issues

5.1 Summary of significant environmental impacts

SEPA aims to control environmental impacts arising from intensive agriculture activities through permit conditions and by the requirement for the operator to comply with BAT as indicated in the SFIR.

Potential environmental impacts from intensive agriculture activities include:

- Ammonia emissions
- Manure and slurry storage
- Surface water drainage
- Protection of soil and groundwater
- Odour
- Noise
- Chemical use
- Fuel containment
- Energy efficiency
- Waste minimisation, storage and disposal
- Resource utilisation
- Environmental management systems

The potential impacts from the proposed activity and how they will be managed are addressed in the sections below.

5.2 Emissions to Air

Point Source emission to air:

The main point source of emissions to air from Arranview and Jameston Moss Poultry Farm will be from the housing units, ventilation systems and the generators in the form of ammonia, dust and fuel fumes.

Ammonia (BAT 23 & 31)

Ammonia can be carried on the air and deposited in lochs and ponds causing eutrophication. It is assessed that the main point source of ammonia from the installation will be from the housing and ventilation. To quantify the amount of ammonia which will be emitted, SEPA use DEFRA-approved emission factors. The emission factors are specific to each housing system. Some housing systems are more efficient than others and will result in a lower emission factor. The housing systems at Arranview and Jameston Moss meet the description in BAT Conclusion 31 (b) (4) ‘manure belts (in case of aviary)’

and BAT Conclusion 31 (b) (5) 'forced drying of litter using indoor air (in case of solid floor with deep litter).

There are duties placed on SEPA for the protection of designated sites under The Conservation (Natural Habitats, &c.) Regulations 1994 and the Nature Conservation (Scotland) Act 2004. Arranview and Jameston Moss Poultry Farm lies within 10 kilometres of several designated sites, please see Section 4.5 of this Decision Document.

SEPA uses the Simple Calculation of Atmospheric Impact Limits (SCAIL) screening tool to assess the impact of ammonia emissions and nitrogen and acid deposition on designated sites.

The process contribution (PC) 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. The critical level for pollutant gas concentrations (ammonia) and the critical load for acid or nutrient nitrogen deposition to the habitat are obtained from the Site Relevant Critical Load section of the Air Pollution Information System (APIS) database (www.apis.ac.uk). 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.

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 and screening passes.

SCAIL Screening
SEPA have screened the proposal using the SCAIL screening tool based on the following emissions factors:

For barn laying hens the standard ammonia emission factor of 0.08 kg NH_3/animal place/year is used for the two existing barn houses at Arranview.

Drying of the manure on the manure belts using forced air is proposed for the proposed barn poultry house. This attracts a 60% reduction to the emission factor. Therefore, a revised ammonia emission factor of 0.032 kg NH_3/animal place/year is used for the proposed barn laying house at Arranview. The drying of manure on belts is considered BAT.

The standard pullet emission factor of 0.06 kg NH_3/animal place/year is based on an average bird weight of 1 kg and 365 days occupancy. At Jameston Moss the average bird weight is 667 grams the houses are occupied 80% of the time. Therefore, a revised pullet ammonia emission factor of 0.032 kg NH_3/animal place/year has been used for this assessment.

SCAIL Screening Results
The results from the SCAIL screening tool run on 10/01/2025 are presented in the table below. SCAIL was run in conservative mode for the proposed installation using the emission factors outlined above.

Table 4: SCAIL Results from Proposed Installation

Receptors	PEC NH3 as %EAL	PC NH3 as %EAL	PEC N Dep as %EAL	PC N Dep as %EAL	PEC Acid Dep %EAL	PC Acid Dep %EAL
Dykeneuk Moss SSSI / SAC	168	75%	281	78%	181	40%
Cockinhead Moss SSSI / SAC	114	17%	229	18%	153	9%
Bankhead Moss | Beith SSSI/SAC	107	11%	223	11%	142	5%
Ashgrove Loch SSSI	95	6%	58	2%	N/A	N/A
Bogside Flats SSSI	90	5%	85	2%	N/A	N/A
Castle Semple and Barr Lochs SSSI	32	1%	74	1%	N/A	N/A

Table 4 shows that the process contribution (PC) and predicted environmental contribution (PEC) for ammonia concentration and nutrient nitrogen and acid deposition exceed the screening thresholds at the following designated sites:

- Dykeneuk Moss SSSI/SAC
- Cockinhead Moss SSSI/SAC
- Bankhead Moss, Beith SSSI/SAC

Therefore, a likely significant effect to sensitive ecological receptors cannot be ruled out and further assessment is required for these three sites.

The following SSSIs are designated for geological features and thus, are screened out:

- Lynn Spout
- Trearne Quarry
- Dundonald Burn

For the remaining sites, the screening thresholds are not exceeded and therefore a likely significant effect to the sensitive ecological receptors can be ruled out. SCAIL screening is passed, and no further assessment is required.

Detailed Assessment

A detailed assessment has been undertaken to assess the likely significant effects of the proposal on the following designated sites:

- Dykeneuk Moss SSSI/SAC
- Cockinhead Moss SSSI/SAC
- Bankhead Moss, Beith SSSI/SAC

The existing background levels for ammonia concentration, nitrogen and acid deposition already exceed the site relevant critical loads and levels for all three of the aforementioned SSSIs/SACs (see APIS). Therefore, the applicant has used the SCAIL screening tool to compare the existing process contributions with the proposed process contributions from the installation to determine the additional load from the proposed process contribution on the designated sites.

The proposed process contribution SCAIL run used the same emission factors described above to account for the average weight of pullets and reduced house occupancy; and to account for the 60% reduction for drying of manure on the manure belts with forced air at the proposed barn house.

The existing process contribution SCAIL run used the standard emission factors for barn layers and pullets, as per the existing installation.

The results are shown in Table 2 below.

Table 5: Existing versus Proposed Process Contributions from the Installation

Receptors	Existing PC NH3 (ug m3)	Proposed PC NH3 (ug m3)	Difference	Existing PC N Dep (kg/ha/yr)	Proposed PC N Dep (kg/ha/yr)	Difference	Existing PC Acid Dep (kEqH+/ha/yr)	Proposed PC Acid Dep (kEqH+/ha/yr)	Difference
Dykeneuk Moss SSSI/SAC	0.79	0.75	0.04	4.1	3.9	0.2	0.29	0.28	0.01
Cockinhead Moss SSSI/SAC	0.17	0.17	0.00	0.91	0.91	0	0.065	0.065	0
Bankhead Moss | Beith SSSI/SAC	0.11	0.11	0.00	0.55	0.56	-0.01	0.039	0.040	-0.001

Table 5 shows that the differences in the existing versus proposed process contributions are negligible. It is clear from the assessment that the use of manure drying equipment, and a reduced pullet emission factor allow the process contribution from the installation to remain relatively unchanged.

Therefore, while critical loads and levels remain exceeded, the comparison of existing and proposed process contributions demonstrates that there will be no additional increase in ammonia emissions and nitrogen and acid deposition from the installation. It can therefore be concluded that the proposal to increase the capacity of the installation by 65,000 laying birds will not result in increased ammonia concentration or nitrogen and acid deposition at the designated sites.

As part of the application the Operator was asked to consider additional mitigations in order to drive down emissions even further. It has been proposed that the use of lower crude protein diets will achieve further reductions. This is explained further below and demonstrated with a mass balance proposal.

Crude Protein

Further reductions in ammonia emissions can be achieved with the use of low protein content diets. A crude protein content of 16% or less is accepted as BAT for nutritional management. For every 1% reduction in crude protein content below 16% in the diet, the ammonia emission factor can be reduced by 8% *(Ricardo Report, SC160021, Unpublished, Ammonia and particulate emission factors from housed production of pigs and poultry)*.

The barn laying hens at Arranview are fed a multi-stage diet and the crude protein content of each ration is provided in the supplementary information provided with the application. The diet fed between 60-85 weeks has a crude protein content of 15.5%. This equates to a 4% reduction in the emission factor 38% of the time. Similarly, the pullets at Jameston Moss are also fed a multi-stage diet and the crude protein content of each ration is provided in the supplementary information provided with the application. The diet fed to the pullets for 44 days out of 126 days has a crude protein content of 15%, equating to an 8% reduction in the emission factor 7% of the time.

It is not possible to incorporate dietary crude protein reductions into the SCAIL screening, however the reduction can be used in a mass balance calculation, see below.

Mass Balance Proposal

A mass balance of ammonia emissions has been undertaken to establish if the proposal will result in an increase in emissions. The mass balance compares the ammonia emissions of the existing installation versus those from the proposed installation.

The proposed mass balance calculation has applied the following reductions in the ammonia emission factor:

- Pullet factor adjusted to account for the average weight of the pullets and reduced house occupancy.
- A 60% reduction to the indoor laying factor for the proposed barn house to account for drying of manure on the manure belts with forced air.
- Crude protein reductions to the pullet and laying factors as discussed above.

The results of the mass balance are shown in tables 6 and 7 below.

Table 6: Existing Ammonia Emissions in Kilograms

House Name	Housing Type	Bird Numbers	NH_3 EF	NH_3 Emission
AV1	Barn	32,000	0.08	2,560
AV3	Barn	32,000	0.08	2,560
JM8	Pullets	14,840	0.06	890
JM9	Pullets	11,900	0.06	714
JM10	Pullets	20,600	0.06	1,236
JM11	Pullets	20,600	0.06	1,236
				9,196

Table 7: Proposed Ammonia Emissions in Kilograms

House Name	Housing Type	Bird Numbers	NH_3 EF	Average Weight & Occupancy Reduction EF	Belt Drying Reduction	Crude Protein Reduction	EF with Mitigation	NH_3 Emission
AV1	Barn	32,000	0.08			0.0012	0.0788	2,521
AV2	Barn - Belt Drying	65,000	0.08		0.048	0.0012	0.0308	2,001
AV3	Barn	32,000	0.08			0.0012	0.0788	2,521
JM8	Pullets	14,840	0.06	0.032		0.00126	0.03074	456
JM9	Pullets	11,900	0.06	0.032		0.00126	0.03074	366
JM10	Pullets	20,600	0.06	0.032		0.00126	0.03074	633
JM11	Pullets	20,600	0.06	0.032		0.00126	0.03074	633
								9,132

The mass balance calculation demonstrates a 64-kilogram reduction in ammonia emissions from the installation (9,196 kg NH_3 existing versus 9,132 kg NH_3 proposed).

<u>In-combination assessment</u>

As part of the determination SEPA must take into consideration emissions from more recent developments and proposals still at the planning stage which are not currently in the published background data. Background data currently covers 2020 - 2022 and only developments operational before December 2021 will be included in the background. Operational or proposed developments since December 2021 will need to be considered in an in-combination assessment as part of this application. SEPA has consulted with both the Scottish Government and the Local Authority in this regard and have not received any additional information in this respect. There are no existing PPC installations within 10 kilometres of Arranview and Jameston Moss Poultry Farm. Therefore in-combination assessment is not required.

Conclusion

It is SEPA's view that the proposed variation to increase the permitted number of bird places to 197,000 places for barn laying hens and pullets, with the addition of a barn poultry house at Arranview and Jameston Moss Poultry Farm, will not adversely affect the integrity of, or have a likely significant impact on designated sites (SAC/SSSI) within 10 kilometres of the proposal.

This conclusion has been reached on the following basis:

- SCAIL screening resulted in all designated sites being screened out for likely significant effect, with the exception of the bog features at Dykeneuk Moss SSSI / SAC, Cockinhead Moss SSSI / SAC or Bankhead Moss, Beith SSSI/SAC.
- An assessment of the existing process contributions against the proposed process contributions (with mitigation) using SCAIL concluded that the differences in process contributions are negligible and remain relatively unchanged at the designated sites.
- The proposal achieves a 64-kilogram reduction in ammonia mass emissions from the existing installation, with the use of manure drying mitigation, a lower pullet emission factor due to average pullet weight and housing occupancy, and lower crude protein diets.

Dust (PM10) (BAT 11)

Dust from poultry houses mainly originates from feathers, skin particles and used litter and to a lesser extent from feed and bedding.

PM_{10} dust particles (particulate matter 10 micrometres of less in diameter) are subject to statutory air quality standards. In Scotland, air quality objectives are set out in the Air Quality (Scotland) Regulations 2000 (as amended).

Where sensitive receptors are located within 250 metres of a poultry unit, SEPA requests that the applicant screens the emission of particulate matter to establish whether the emission will cause any air quality objectives to be breached.

Sensitive receptors within 250 meters of the site are listed in Section 4.5 of this Decision Document.

Table 8 Relevant Air Quality Objectives

Pollutant	**Air Quality Objective**	
	Concentration (ug/m^3)	**Averaging Period**
PM_{10}	18	Annual mean
	50	24 hour mean, not to be exceeded more than 7 times per annum

As the applicant did not undertake the required screening, SEPA has subsequently done this. Both SCAIL and H1 screening indicate that the annual and daily PM_{10} average will be breached at all residential receptors within 250 metres of the installation (see 20250110 – Arranview PM_{10} Screening

Results). SEPA therefore issued a Further Information Notice requesting that the applicant undertake detailed PM_{10} modelling.

PM_{10} Modelling Results

Table 9 Predicted Annual Mean PM10 Concentration – PC's

Receptor		Predicted Annual Mean PM_{10} PC ($\mu g/m^3$)				
		2019	2020	2021	2022	2023
R1	1 Lissens Cottages, Dalry	1.79	1.07	1.93	1.93	2.10
R2	2 Lissens Cottages, Dalry	1.57	0.95	1.74	1.73	1.85
R3	Jameston Moss Bungalow	0.72	0.61	0.96	0.77	0.84
R4	1 Jameston Moss Villas	1.78	1.86	1.58	1.15	1.71
R5	2 Jameston Moss Villas	2.28	2.35	2.13	1.65	2.40
R6	Meadowbarn	2.49	2.28	2.49	2.05	2.86

Table 10 Predicted 24 hour Mean PM10 Concentration – PC's

Receptor		Predicted 98.1st %ile 24-hour Mean PM_{10} PC ($\mu g/m^3$)				
		2019	2020	2021	2022	2023
R1	1 Lissens Cottages, Dalry	9.21	7.02	8.80	10.10	9.46
R2	2 Lissens Cottages, Dalry	7.92	6.32	7.74	8.67	8.34
R3	Jameston Moss Bungalow	6.21	4.91	6.77	6.73	6.07
R4	1 Jameston Moss Villas	15.85	13.45	12.69	11.01	12.79
R5	2 Jameston Moss Villas	16.05	17.12	14.42	14.16	14.85
R6	Meadowbarn	16.85	17.81	16.06	16.31	16.70

Table 11 Predicted Annual Mean PM10 Concentration – PEC's

Receptor		Predicted Annual Mean PM_{10} PEC (µg/m³)				
		2019	2020	2021	2022	2023
R1	1 Lissens Cottages, Dalry	7.50	6.78	7.64	7.64	7.81
R2	2 Lissens Cottages, Dalry	7.28	6.66	7.45	7.44	7.56
R3	Jameston Moss Bungalow	6.43	6.32	6.67	6.48	6.55
R4	1 Jameston Moss Villas	7.49	7.57	7.29	6.86	7.42
R5	2 Jameston Moss Villas	7.99	8.06	7.84	7.36	8.11
R6	Meadowbarn	8.20	7.99	8.20	7.76	8.57

Table 12 Predicted Annual Mean PM10 Concentration – PEC's

Receptor		Predicted 98.1st %ile 24-hour Mean PM_{10} PEC (µg/m³)				
		2019	2020	2021	2022	2023
R1	1 Lissens Cottages, Dalry	20.63	18.44	20.22	21.52	20.88
R2	2 Lissens Cottages, Dalry	19.34	17.74	19.16	20.09	19.76
R3	Jameston Moss Bungalow	17.63	16.33	18.19	18.15	17.49
R4	1 Jameston Moss Villas	27.27	24.87	24.11	22.43	24.21
R5	2 Jameston Moss Villas	27.47	28.54	25.84	25.58	26.27
R6	Meadowbarn	28.27	29.23	27.48	27.73	28.12

Long-term (annual) results are low risk as Process Contributions are relatively small compared to background. Uncertainties around modelling short-term (daily) concentrations are greater and the overall risk is higher but all modelling results meet significance criteria.

In addition, the applicant has implemented the following mitigation measures to reduce PM_{10}:
• Coarse litter used, this is dust-extracted
• Litter is applied by hand
• Feeding is ad lib
• Crumb feed system used
• Feed bins will have cyclones which will collect and contain dust during filling process
• Ventilation systems within housing operates at low air speed to avoid wind chill.

SEPA has therefore assessed the risk to human health from PM_{10} as acceptable.

Diesel Generators
It is a requirement of the animal welfare regulations that the birds have adequate heating and ventilation at all times.

SEPA are aware that 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 to minimise visible emissions and particulates from the exhaust. The generator will be tested for a short period once per week.

The existing diesel generator is located in a locked shed. Diesel is stored internally and the generator is bunded to meet with the requirements of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended).

Fugitive emissions to air (BAT 1 & BAT 11):

There are a few potential fugitive emissions to air. These include the release of dust and ammonia during cleaning or opening of the housing units for fallen stock removal, and from the birds themselves. SEPA accepts that some fugitive releases are unavoidable, for example, unplanned releases due to an unforeseen incident; others such as poor cleaning 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.

Feed silos are fitted with cyclone particle containment and mitigation to contain dust emissions as per the requirement in BAT 11.

Additional measures in place to reduce emissions of dust include:
• Coarse litter used, this is dust-extracted
• Litter is applied by hand
• Feeding is ad lib
• Crumb feed system used
• Ventilation systems within housing operates at low air speed to avoid wind chill.

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 has a number of regulatory instruments it can use to gain compliance should the operator fail to comply.

SEPA does not have any specific policies in relation to bioaerosols from Intensive Agriculture. There are currently no health criteria values available for interpreting the results of bioaerosol monitoring. Routine monitoring would be required at receptors within 250 metres should appropriate criteria for assessment be identified.

Odour (BAT 1, 12 & 13):

SEPA has identified potential odour issues from intensive poultry farms. These include ammonia and odours from chlorinated cleaning materials or disinfectants to clean the housing units.

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

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 sites Odour Management Plan has been updated to include the proposed poultry house. It is not expected that there will be an odour nuisance at sensitive receptors, however in the event of a substantiated odour complaint, the plan will be reviewed and appropriate action taken.

5.3 Emissions to Water

Point Source Emissions to Surface Water and Sewer:

Surface Water Drainage

SEPA considers the CREW Rural SuDS Guide (Rural Sustainable Drainage Systems: A Practical Design and Build Guide for Scotland's Farmers and Landowners) (CREW) as BAT for intensive agriculture installations.

Lightly contaminated roof and surface water at Arranview will be directed to a swale for treatment. Clean rainwater from roofs as well as lightly contaminated run-off from the concreted areas beneath gable fans to collect dust and drainage from all other yard areas will be treated via a RSuDS,

The system has been designed in accordance with CREW and comprises a sediment trap, swale and small pond. The pond outlet will be located at approximately NS 3287 4696 and discharges to the tributary of the Rough Burn.

Wash water is collected in an existing below ground tank.

Point Source Emissions to Groundwater:

The site is not located in a Nitrate Vulnerable Zone (NVZ). There shall be no direct point source emissions to groundwater as a consequence of this variation to the permit.

Fugitive Emissions to Water (BAT 1 & 6):

There are several potential sources which could lead to fugitive emissions to water. These include, poorly maintained surfaces and drainage systems, bird delivery and collection, and lack of care during cleaning of the housing units, all of which can lead to contamination of surface waters.

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 to provide training to relevant staff in environmental issues, exercising a high degree of environmental management, and continual maintenance of the activities they undertake.

The installation has been operating under PPC for many years and is generally well run. There are no proposed changes to management practices.

5.4 Emissions to Land (BAT 7 & 20)

Wash water is collected in a below ground tank prior to being spread on land out with the installation boundary.

Manure is spread to land as organic fertiliser out with the installation boundary. No changes are proposed to existing manure handling practices.

The spreading to land of manure and wash water out with the installation boundary is covered by GBR 18.

5.5 Noise (BAT 9 & 10)

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.

The predominant source of noise from poultry housing 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 the birds. The latter two are considered unlikely to cause issues as these activities will take place for such short durations as well as being infrequent. Routine maintenance of fans will also prevent noise and the Noise Management Plan will address any issues that should arise.

The Permit and SFIR recognise that noise can give rise to complaints. The operator is required to undertake noise assessments and produce a Noise Management Plan to prevent or minimise the impact on the local environment. In the event of a substantiated noise complaint, the plan will be reviewed and appropriate action taken.

The permit requires that emissions from the Permitted Installation are free from noise and vibration levels likely to cause pollution.

No changes are proposed to the existing noise management practices or Noise Management Plan. The existing Noise Management Plan for the site has been updated to include the proposed poultry house.

5.6 Resource Utilisation

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 vehicles.

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, and to report consumption in the resource efficiency report.

The greatest volume of water consumed is drinking water for the birds. Fresh mains water will be delivered to poultry via nipple line drinkers with drip collection cups to prevent spillages (as outlined in the SFIR and BAT standards) thereby reducing wastage and ensuring dry litter.

Water is also used to wash down the manure belt area at the end of the cycle.

Water is provided to the site via the mains water supply. There is no water storage within the proposed poultry house.

Drinking water equipment is monitored as required for hygiene and animal welfare purposes. Water leakages are repaired as required.

Water consumption is recorded and reported to SEPA as required in line with existing permit conditions (Resource Utilisation reporting).

Energy use and generation (BAT 8)

A computer-controlled system maintains the temperature within the housing units. This is directly linked to the ventilation system to prevent over-heating and lack of free ventilation. SEPA recognises that

energy usage is dependent on several factors out with the control of the operator who has to maintain the welfare of the birds in extremes of weather.

A permit condition requiring the formal systematic assessment of energy consumption on site requires the operator to identify where efficiencies can be made.

The site is powered by mains electricity with a back-up diesel generator in use in the event of a power failure. Low energy LED lights will be used in the proposed poultry house and high efficiency fans and motors are in use throughout the poultry houses.

Energy consumption is monitored as required.

Raw Materials Selection and Use

All applicants applying to vary a PPC Part A permit are required to examine their raw materials usage and seek ways to reduce their impact on the environment. The standard permit condition requiring the formal assessment of resource utilisation on site requires the operator to identify where any efficiencies can be made and demonstrate continuing improvement.

The raw materials to be used within the proposed poultry house (listed below) are the same as those used in the existing houses. Usage is expected to increase by 50% at Arranview with the addition of the proposed poultry house.

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. Once on-site chemicals will be kept in a locked chemical storage cupboard in the service area of Arranview. Chemical use is recorded and kept on site.

Biocides (including disinfectant)
Biocides include DEFRA-approved soaps and disinfectants. Variable quantities are used depending on the substance in use.

Pesticides
Rodenticides are used as needed in bait boxes. There is no storage on site.

Insecticides and Herbicides are used as needed with no storage on site.

Veterinary Medicines
Medicines are not stored at the installation and are brought onto the site and used as required.

Fuel Oil
Agricultural fuel oil is stored within the existing bunded generator. The fuel storage is compliant with the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended).

Water
Water is supplied to the site via mains water supply. Water is used to supply drinking water to the birds and for washing down the manure belt area at depletion. Water consumption is monitored.

Feed (Bat 3 & 4)
Feed bins are fitted with cyclone particle containment. Feed is distributed through the poultry houses by a chain conveyor. No changes are proposed to nutritional management and the feeding regime will be in line with that already in place for the installation.
Four different diets are provided so that crude protein in diet is reduced from 17% to 15.5% as the barn laying birds age. Feed consumption is monitored and recorded. An addition 64 tonnes of feed (4 x 16 tonne silos) will be required for the proposed poultry house. SEPA is satisfied that this meets the requirements of SFIR and BAT.

Wood Shavings
Shavings are used as litter for the hens and are laid into the poultry houses before they are stocked. There is no storage of shavings on site.

5.7 Waste Management and Handling

Waste Minimisation

Standard permit conditions require the operator to minimise waste and where possible develop and implement recycling or recovery strategies. Records are required to 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 by the permit.

Plastic packaging is in a loop system. Damaged egg trays are used in the bird environment for enrichment and at the end of use these are recycled. All outgoing packaging is plastic is recycled.

Clinical waste (medicines and glass vials) are returned to the vet for disposal.

Broken eggs are collected and transported to Glenrath's Whim site where they are stored with an additive and used in the production of pet food.

It is accepted that a small amount of eggs will end up in the litter within the poultry house and be spread to land with the manure.

No change to other waste management practices is expected. General waste, including paper towels and personal waste are disposed of with general farm waste.

Waste Handling

Disinfectant footbaths are changed twice per week and the spent disinfectant is disposed of with the poultry manure.

Wash water is spread to land out with the installation in accordance with GBR18.

The volume of other wastes stored on the site is minimal and all 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.

Waste Recovery or Disposal

Bird mortalities will be collected daily and stored in a sealed and secure container in the locked generator shed and collected by a registered waste carrier and animal by-product collection centre.

5.8 Management of the site

Environmental Management System (BAT 1 & 2)

Good site management is a requirement not only of the PPC Regulations & BREF but also the Food Safety Act 1990, regulated by the Food Standards Agency, and the Animal Welfare Act 2006. Agricultural installations are subject to regulatory controls requiring operators to operate installations to a high standard both to ensure welfare of animals and to protect products 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
• Noise Management Plan
• Odour 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 installation has been operating under PPC for many years and is generally well run. The additional poultry house will be operated in line with the requirements of SEPA's Standard Farming Installation Rules (SFIR). Management techniques will remain the same across the permitted operations and there are no proposed changes to management practices or existing maintenance schedules.

An EMS is already in place for the site and will be expanded to include the proposed poultry house. Additional staff training will be completed as required. Regular checking and maintenance of equipment is carried out and this will be extended to include the proposed poultry house. No significant changes are expected to the EMS.

Accidents and their Consequences (BAT 1)

The PPC Regulations 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 operator take action to limit the immediate environmental impact but where necessary implement changes to try to ensure that the event does not 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.

The sites Incident Prevention and Mitigation Plan will be updated to include the proposed poultry house.

Closure

In order to ensure that the site can be returned to its pre-PPC Permit state, SEPA require the applicant to 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 (please see Section 5.9 below for more information)

5.9 Site Condition report

As no additional land will be include in the site and there will be no change in the substances used on the site, a Site Condition report was not required to be submitted with this variation. A Site Condition and Baseline report was undertaken for the site in 2019 and reflects the current state of the site.

The permit requires groundwater monitoring to be carried out every 5 years and soil monitoring every 10 years. No changes are proposed to the monitoring frequencies with this variation.

Management practices will ensure all substances with pollution potential are stored and used in accordance with BAT and any accidents/incidents which cause release of any substance into the environment will be reported to SEPA.

5.10 Monitoring (BAT 24, 25, 26, 27 & 29)

Air

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 introduced 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.

The operator already submits data on all the above to SEPA on an annual basis.

Water

N/A

Soil and Groundwater

Groundwater monitoring is required by the permit every 5 years, and soil monitoring is required every 10 years. No changes are proposed to the monitoring frequency. See Section 5.9 of this Decision Document for more information.

Waste

N/A

5.11 Consideration of BAT and compliance with BAT-Cs if appropriate

SEPA published its view of indicative BAT relating to intensive agriculture operation in its Standard Farming Rules (SFIRs). SFIRs are based on the BAT Reference Document (BREF) for Intensive Agriculture Installations published by the European IPPC Bureau in 2017. The SFIRs have been used throughout this permit variation application to benchmark faming activities. The application indicates that the installation will be operated in accordance with Best Available Techniques (BAT).

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?	**Yes**

See Section 5.2

Screening distance(s) used	10 Kilometres as per the SEPA Nature Conservation Procedure Guidance (NCP-P-01).

Is there any other legislation that was considered during determination of the permit (for example installations that may be impacted by the requirements of legislation involving Animal By Products, Food Standards, Waste, WEEE regulations etc).	**Yes**

The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (As amended) (CAR) and Nitrates Directive:

This primarily applies to land-spreading activities that will be taking place out with the installation boundary. These will need to comply with GBR 18. See Section 5.4.

Foul drainage systems such as a septic tank to soakaway will be regulated separately under CAR and this will not form part of the permitted installation.

The SUDS systems to treat surface water drainage has potential to impact groundwater and therefore SuDS design must be in accordance with the CREW Rural SuDS Guide. See Section 5.3.

The requirements for generator oil storage under these Regulations are met. See Section 5.2 for consideration of oil storage as BAT.

Animal By-Products (Enforcement)(Scotland) Regulations 2013:
Regulates carcass disposal. Carcass storage is a Directly Associated Activity (DAA) in the permit. See Section 5.7.

Medium Combustion Plant Directive (MCPD):
For all proposed plant >1MW regulated as DAA on Intensive Agriculture installations, BAT will apply and SEPA should complete Local Air Quality Management and Nature Conservation Habitat screening. If required, SEPA will impose monitoring of emissions within 4 months and then every 3 years with ELVs from Process Guidance Note 1/3 or the MCPD. There is no proposed plant >1MW on site at the time of the permit variation.

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, not a COMAH site.

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, not a COMAH site.

Officer:	CO

8 Details of the 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?	**Yes**

Outline the changes required and provide justification below:		
Proposed Condition Number:	**Proposed Change:**	**Justification:**
1.1.4.1	a) 129,000 places for poultry in an aviary housing system; b) 68,000 places for pullets.	Update paragraph to take account of increase in bird places.
1.1.5.4	b) Air drying of manure on conveyor belts in Arranview 2. d) Litter on a solid floor removed at the end of each cycle.	Revised paragraph to include air drying of manure at the proposed poultry house, and also to amend the litter on a solid floor clause to include all poultry houses, not just the pullet houses.
1.1.5.6	Lightly contaminated run off collection, drainage and treatment more particularly described below: a) Sediment trap, swale and pond at Arranview located as indicated on the site plan. b) Gravel bed filter trench at Jameston Moss as indicated on the site plan.	Paragraph amended to include the proposed SuDS system at Arranview and add in the existing SuDS system at Jameston Moss.
1.2.1 Detailed Layout Plan - Arranview	New detailed layout plan of Arranview.	Replaced existing plan to account for the proposed poultry house and SuDS system at Arranview.
Officer:	CO	

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**
Outline the changes required and provide justification below:	
N/A, standard ELV's apply.	
Officer:	CO

10 Peer Review	
Has the determination and draft permit been Peer Reviewed?	**Yes**
Comments made:	
Clarification on SUDS provision for clean roof water.	
Officer:	Peer Reviewer

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,
- The applicant will ensure that the installation is operated so as to comply with the conditions of the Permit,
- 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.