

This Report has been cleared for submission to the Director by Programme Manager, David Flynn

Signed:  **Date: 05/12/2018**



OFFICE OF ENVIRONMENTAL SUSTAINABILITY

INSPECTOR'S REPORT ON AN INDUSTRIAL EMISSIONS LICENCE APPLICATION, LICENCE REGISTER NUMBER P1042-01

TO: DIRECTOR

FROM: Éimer Godsil

DATE: 5TH DECEMBER 2018

Applicant: Mr. Michael Noel O'Connor
 Location/address: Rathcahill West, Templeglantine, Newcastlewest, Co Limerick.
 Application date: 05 July 2016

Class of activity (under EPA Act 1992 as amended): 6.1(a): The rearing of poultry in installations where the capacity exceeds 40,000 places

Category of activity under IED (2010/75/EU): 6.6(a): Intensive rearing of poultry with more than 40,000 places for poultry.

European Directives/Regulations relevant to this assessment are listed in the appendix of this report.

Main CID: CID (EU) 2017/302 (15 February 2017). Establishing (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the intensive rearing of poultry or pigs.

Other relevant BREF documents/CID(s) & national BAT notes are listed in the appendix of this report.

Activity description/background: Proposed activity for the rearing of poultry (broilers) in an installation with capacity for 74,000 birds.

Notices under Regulation 10(2)(b)(ii) issued: 26 August 2016
 13 March 2017
 31 August 2017
 24 October 2017
 30 January 2018

Notices under Regulation 10(2)(b)(ii) received: 19 June 2017
 23 June 2017
 04 December 2017
 07 February 2018
 02 May 2018

Submissions received: 1. HSE: 10 August 2016
 2. Dept. of Arts, Heritage, Regional and Gaeltacht Affairs: 17 August 2016
 3. Mr. Peter Sweetman (Wild Ireland): 10 October 2017
 4. Mr. Peter Sweetman: 17 July 2018

EIS submitted: Yes: 05 July 2016	NIS submitted: Yes: 04 December 2017
Site visit: 07 February 2018	Site notice check: 14 July 2016

1. Activity description/background

Mr. Michael Noel O'Connor owns and operates a poultry (broiler) rearing farm at Rathcahill West, Templeglantine, Newcastlewest, Co. Limerick. The installation is adjacent to the village of Templeglantine, County Limerick. The installation is currently operating above threshold and accommodates approximately 74,000 broilers within three poultry houses. The present enterprise provides part-time employment for the applicant.

On 20 September 2012, Limerick County Council granted planning permission (Ref: 12/283) for the construction of one new poultry house to accommodate 34,000 birds, giving an overall capacity on the farm of 74,000 places. This expansion work has been completed and the additional house stocked. Poultry farming has been carried out on this site by this operator since 1992.

The site is stocked and is operating. However, this is the first licence application received from this installation. The Commission Implementing Decision (CID) 2017/302/EU for Best Available Techniques in the Intensive Rearing of Poultry or Pigs was published in February 2017. This activity is classed as a "New Activity" and all the applicable BAT requirements apply immediately.

The main activities at this installation occur during normal working hours between 06:00 and 18:00. Stock inspections are carried out every day, including weekends and bank holidays and additional essential activities may be undertaken outside of core working hours. The installation currently operates in accordance with the requirements of the Department of Agriculture, Food and the Marine (DAFM) and the Bórd Bia Poultry Products Quality Assurance Scheme (PPQAS).

The process involves the rearing of stock specifically bred for lean poultry meat production, from day olds delivered from the hatchery, until they are removed from the site to the processing installation (approximately 6-8 weeks). At the end of each rearing cycle the houses are destocked and the birds are sold for processing. Following a period of two weeks to allow for removal of the poultry litter (organic fertiliser¹) and complete drying after the cleaning process, the houses are restocked.

The type of broiler house used for this activity is a simple closed building of block and timber/wood construction on an impervious concrete base. The houses are thermally insulated with a forced computer controlled ventilation system and artificial lighting. Automatic feeding and ventilation systems operate on a 24-hour basis. The solid flooring of each broiler house is bedded with chopped straw over its entire area immediately prior to housing each new batch bought from the hatchery.

The principal inputs to the operation are feed, water, veterinary medicines and energy (electricity and gas for heating). The main by-product of poultry rearing is poultry litter (organic fertiliser). These are discussed in further detail below.

¹ Any fertiliser other than that manufactured by industrial process and includes livestock manure, dungstead manure, farmyard manure, slurry, soiled water, silage effluent, non-farm organic substances such as sewage sludge, industrial by-products and residues from fish farms.

2. Consideration of Best Available Techniques (BAT) and BAT Conclusions.

Section 86A(3) of the EPA Act 1992 as amended, requires that the Agency shall apply BAT conclusions as a reference for attaching one or more conditions to an Industrial Emissions Directive (IED) licence. Therefore, BAT for the installation was assessed against the BAT conclusions contained in the relevant CID/BREF documents specified below. The table below sets out a summary of how the BAT conclusions published in the CID have been taken into account in the licence.

- Commission Implementing Decision 2017/302/EU for the Intensive Rearing of Poultry or Pigs (published in the Official Journal on the 15th February 2017).
- BREF Document on Best Available Techniques for Energy Efficiency (February 2009).
- BREF document on Best Available Techniques on Emissions from Storage (July 2006).

The licensee submitted a review of the installation activities against the relevant BAT conclusion requirements contained in the above documents. There are 34 BATs in the CID 2017/302/EU. The applicant has demonstrated that the installation will comply with the BAT conclusion requirements specified in the CID 2017/302/EU establishing best available (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council on the intensive rearing of poultry or pigs and will comply with all the applicable BAT conclusions requirements contained in additional BREF documents.

BAT conclusion requirements, including BAT associated emission levels (AELs) specified in the BAT conclusions for the intensive rearing of poultry or pigs have been included in the Recommended Determination (RD) where necessary (see Table 1 below). As this activity is classed as a new activity BAT conclusion requirements must be met by the installation before commencement of operations above 40,000 places for broilers.

I consider that the applicable BAT conclusion requirements are addressed through: (i) the technologies and techniques as described in the application; (ii) the standard conditions specified in the RD; and (iii) where applicable, the inclusion of additional specific conditions (see Table 1 below).

Table 1: Specific Conditions in RD to address BAT conclusion requirements

Main applicable BAT conclusions for the activity: BAT conclusions for the Intensive Rearing of Poultry or Pigs	
Additional Requirements	Condition/Schedule
The management of the installation requirements have been updated to include an Environmental Management System (EMS) and schedule of objectives and targets in line with the requirements in the BAT conclusions. (BAT 1).	Condition 2.2
Good housekeeping in order to prevent or reduce the environmental impact and improve overall performance of the installation. (BAT 2).	Condition 3.2
Ammonia and phosphorus control and ammonia management programme. (BAT 3 and BAT 4).	Condition 5.8

Prevention/reduction of noise emissions. (BAT 10).	Condition 6.17
Odour emissions. (BAT 13).	Condition 6.18
Resource Use and Energy Efficiency. (BAT 5, BAT 6, BAT 7 and BAT 8).	Conditions 7.3, 7.5 & 7.6
Dust control. (BAT 11).	Condition 6.16
Solid manure storage. (BAT 14 & BAT 15).	Condition 6.21
Process monitoring (Ammonia and dust). (BAT 24, BAT 25 and BAT 27).	Condition 6.1, Schedule B & Schedule C
Ammonia emissions from poultry houses. (BAT 25 and BAT 32).	Condition 6.23 & Schedule C
A report setting out the selected technique(s) used for each BAT referenced in the conditions of this licence.	Condition 11.1
Monitoring total nitrogen and total phosphorus in Organic fertiliser. (BAT 24).	Schedule C
Reporting on reduction of ammonia emissions. (BAT 23).	Condition 5.9 & Schedule D
BREF document on Energy Efficiency	
Inclusion of energy audit and use efficiency.	Condition 7.1 & Schedule D
BREF document on Storage	
Inclusion of requirement for leak detection and repair programme.	Conditions 3.11, 6.6, 6.7, 6.8 & 6.9

3. Planning Permission, Environmental Impact Statement (EIS) and Environmental Impact Assessment (EIA) Requirements

3.1 EIA Screening

In accordance with Section 83(2A) of the EPA Act 1992 as amended, the Agency must ensure that before a licence or revised licence is granted, that the application is made subject to an EIA, where the activity meets the criteria outlined in Section 83(2A)(b) and 83(2A)(c). In accordance with the EIA Screening Determination, the Agency has determined that the activity is likely to have a significant effect on the environment, and accordingly is carrying out an assessment for the purposes of EIA. An EIS was submitted with the licence application before 16 May 2017, therefore the EIA was carried out in line with the 2011 EIA Directive requirements.

3.2 Planning Status

A number of planning applications have been made by the applicant for the area within the installation boundary. Details of these planning applications and permissions have been provided in the application form. The applicant has submitted the EIS associated with planning permission Ref 12/283 which was granted by Limerick County Council on 20 September 2012. A subsequent planning application was lodged by the applicant for the site (Ref 13/366), the application was for an amendment to planning Ref 12/283 to include installation of a low-pressure ventilation system and was granted on 19 September 2013.

3.3 Content of EIS and licence application

I have considered and examined the content of the licence application, the EIS, other relevant material submitted with it, including the further information requested and received from the applicant. All the documentation received was examined and I consider that the EIS complies with the requirements of the EPA (Industrial Emissions) (Licensing) Regulations 2013, when considered in conjunction with the additional material submitted with the application, and when supplemented by my assessment as contained in this report.

3.4 Environmental Impact Assessment Directive

Having specific regard to EIA, this Inspector's report (IR) as a whole is intended to identify, describe and assess for the Agency the likely significant direct and indirect effects of the proposed activity on the environment, as respects the matters that come within the functions of the Agency, for each of the following environmental factors: human beings, flora, fauna, soil, water, air, climate, the landscape, material assets and cultural heritage.

This IR addresses the interaction between those effects and the related development forming part of the wider project. The cumulative impacts, with other developments in the vicinity of the activity have also been considered, as regards the combined impacts of emissions. The main mitigation measures proposed to address the range of predicted significant impacts arising from the activity have been outlined. This IR proposes conclusions to the Agency in relation to such effects.

In preparing this IR I have considered and examined:

- the application, Register Number: P1042-01 and the supporting documentation received from the applicant;
- the EIS;
- the submissions received; and
- the documents associated with the assessments carried out by Limerick County Council and the issues that interact with the matters that were considered by that authority and which relate to the activity.

While the environmental factors have been considered throughout my entire assessment, the following table identifies, for ease of reference, the sections of this report where each environmental factor has been predominantly discussed.

Table 2: Table of Environmental Factors

Environmental Factor	Addressed in the following Sections:
Human Beings	Emissions to Air, Discharges to Water and Ground, Noise, Waste, Other matters relating to EIA
Flora and Fauna	Emissions to Air, Water and Ground, Noise, Waste, Other matters relating to EIA
Soil	Discharges to Water and Ground, Other matters relating to EIA
Water	Discharges to Water and Ground, Other matters relating to EIA
Air	Emissions to Air, Other matters relating to EIA
Climate	Emissions to Air, Other matters relating to EIA
Landscape	Other matters relating to EIA
Material Assets	Use of Resources, Other matters relating to EIA
Cultural Heritage	Other matters relating to EIA

3.5 Consultation with Competent Authorities

Consultation was carried out between Limerick County Council and the Agency under the relevant Section of the EPA Act as follows:

Consultation	Date
Notice under Section 87(1E)(a) request for observations issued:	12 July 2016
Response to Section 87(1E)(a) Notice received:	15 September 2017

Limerick County Council confirmed the following in relation to the licence application and EIS:

- That planning permission reference 12/283 was the applicable grant of permission relating to this development. The capacity permitted by the planning authority is 100,000 birds.
- That an EIS was submitted as part of this planning application.

4. Submissions

There were four submissions made on this application.

While the main points raised in the submissions are briefly summarised in the table below, the original submissions should be referred to at all times for greater detail and expansion of particular points.

Submission No. 1

Mr. Andrew Curtin, Environmental Health Service HSE West.
Received 10 August 2016.

The submission included a report from Mr. Thomas Boland, Environmental Health Officer, HSE. The report is based on a site visit and documents submitted to the HSE, these include the Agency licence application and EIS. The report provides a summary of the findings of the HSE consultation.

The report makes observations in relation to eleven areas of the licence application and recommendations in relation to six of those areas. Observations are made in the submission in relation to waste management, chemical storage, odour, noise and cumulative impacts. In addition, recommendations are made on water supply, surface water, soiled water, sensitive receptors, public consultation and pest control. The HSE also confirmed in their submission that they have not received any complaints relating to odour or noise from the installation to date. The submission refers only to those areas within the remit of the HSE.

Specific Issues raised:

Water supply

The HSE recommend that the well head be protected, the well supply be tested regularly, with test results kept onsite and that a groundwater protection plan is implemented for any wells used for human consumption.

Response:

Section 9 of this report refers to the water supply.

The protection and monitoring of any onsite wells is addressed in Conditions 3 and 11 of the RD.

Surface water and storm water

The HSE states that there is no surface water quality monitoring scheme in place and recommend a condition in the licence to address this. They also state that the location of the surface and storm water discharge point is not identified in the EIS or onsite and that all discharge points, at the installation, should be clearly labelled.

They further recommend that the applicant establish baseline conditions of the groundwater in the area of the site and that of any landspreading areas, including the provision of groundwater test wells and that water quality monitoring is established with records being maintained for such monitoring.

Response:

The subject of surface / storm water is addressed in Section 6 of this report.

The RD includes conditions regarding the provision of a storm water collection and monitoring system, including clearly identifiable storm water discharge points.

The labelling of sampling and monitoring points is addressed in Condition 3 of the RD. Section 12 of this report addresses the organic fertiliser that will be produced by the proposed activity. The monitoring of groundwater is addressed in Schedule C.6 of the RD. Landspreading of organic fertiliser occurs outside of the licensed boundary and will be carried out in accordance with the Nitrates Regulations and Animal By-Product Regulations. This is monitored and controlled by the DAFM and Local Authorities.

Soiled water

The submission recommends that precautions are taken to prevent the soiled water collection tanks overflowing, the provision of high liquid level indicators, maintenance of a NMP (Nutrient Management Plan) and advice regarding landspreading.

Response:

These recommendations are addressed in Section 12 of this report and Condition 3 of the RD. Landspreading of organic fertiliser will occur outside the licensed boundary and will be carried out in accordance with the Nitrates Regulations and Animal By-Product Regulations. This is monitored and controlled by DAFM and Local Authorities. Condition 6 of the RD addresses wash water handling and storage onsite.

Sensitive receptors

The submission highlights that there are residences within a radius distance of 400m of the installation and recommends that there be adequate odour and noise mitigation at the installation.

Response:

The recommendations on the management of odour onsite are addressed in Section 5 of this report and Condition 6 of the RD.

The recommendations on the management of noise onsite are addressed in Section 7 of this report and Conditions 4 and 6 of the RD.

Pest control

The submission states that pest control is not mentioned in the EIS.

Response:

The recommendations on pest control onsite are addressed in Section 8 of this report and Condition 3 of the RD.

Public consultation

The HSE state that given the close proximity of residences to the installation that public consultation is imperative and that no public consultation has been carried out.

Response:

Public consultation has been carried out in that all documents pertaining to the application for a licence are available on the website of the Agency. Notice of the application is published in a local newspaper and at the site.

Submission No. 2

Mr. Simon Dolan, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, Newtown Road, Wexford.

Received 17 August 2016.

The submission states that the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs recommends that an Appropriate Assessment Screening be carried out for the site, including an assessment of the potential effect of the spreadlands on any European Sites and also provide a map of the proposed spreadlands.

Response:

Appropriate Assessment screening for the activity has been carried out as detailed in Section 15 below. The issue of Appropriate Assessment and the spreading of organic fertiliser is discussed therein. Organic fertiliser generated by the activity will be sent offsite for use in mushroom compost production facilities in accordance with the Nitrates Regulations and the European Animal By-Product Regulations (EC Regulation No 1069/2009 and Commission Regulation 142/2011), (Animal By-Product Regulations). The IE licence relates to the site of the activity for which the licence application is made and does not extend to the lands or

facilities on which organic fertiliser may be used as fertiliser. The use of organic fertiliser as fertiliser will be carried out in accordance with the Nitrates Regulations and Animal By-Product Regulations and will be monitored and controlled by the DAFM and Local Authorities. As outlined in Section 15 below, I consider that the use of organic fertiliser as fertiliser in accordance with the Nitrates Regulations will not cause environmental pollution and I am satisfied beyond reasonable scientific doubt that the use of organic fertiliser from the activity as fertiliser will not have a significant effect on any European sites.

Submission No. 3

Mr. Peter Sweetman & Associates, on behalf of Wild Ireland.

Received 10 October 2017

In the submission Mr. Sweetman indicated that adequate information was not provided to enable the EPA to complete an environmental impact assessment of this likely significant indirect effect on the environment in relation to the proposal to spread the manure generated by the proposed development on lands that are remote from the site.

He also stated that no information has been provided on the potential for significant effects on European sites arising from such spreading, and in the absence of an appropriate assessment that deals with this matter, being an indirect effect of the proposed development.

Response:

I am satisfied that I have sufficient information available to complete an assessment, in an appropriate manner, regarding the effects of the project and to make a recommended determination (as accompanies this report). I have considered the information in the environmental impact statement and the application documentation, the further information provided and the information received as part of consultations both externally and internally across the EPA.

Section 12 of the IR outlines the options for the management of litter manure from the installation. In the application form the applicant has identified the transfer of litter manure to mushroom composters. There is also the option of landspreading the organic fertiliser. The organic fertiliser must be managed in accordance with appropriate National and European legislation. The RD requires the licensee to calculate/record the quantities of organic fertiliser generated and moved offsite to provide for the appropriate handling of the material and the protection of the environment.

The IE licence relates to the site of the activity for which the licence application is made and does not extend to the lands on which organic fertiliser may be used as fertiliser. There will be no adverse significant effects on the environment from landspreading, which is subject to the controls of the Nitrates Regulations or from the handling onsite of organic fertiliser (poultry litter/wash water) from the activity or from its use in compost production. If the activity is carried on in accordance with the RD and the conditions attached, the operation of the activity will not cause environmental pollution

I have addressed the potential for significant effects of the project arising from landspreading of organic fertiliser on European Sites in Section 15 Appropriate Assessment of this report, Appendix 1 lists the European Sites assessed, their associated qualifying interests and conservation objectives.

I have considered all of the documents submitted with the licence application and all submissions and observations made on the licence application, and having considered the processes and emissions associated with the activity (as now outlined throughout this Inspector's report), a screening for Appropriate Assessment was undertaken. The assessment

determined that the poultry activity is not directly connected with or necessary to the management of any European Site and the Agency considered, for the reasons set out in Section 15 of the IR, that it can be excluded, on the basis of objective information, that the activity, individually or in combination with other plans or projects, will have a significant effect on any European Site and accordingly determined that an Appropriate Assessment of the activity was not required.

Submission No. 4

Mr. Peter Sweetman & Associates.

Received 17 July 2018.

The submission provides a copy of judgement of the 12 April 2018 by the CJEU, in relation to Case C-323/17 and quotes the ruling from that judgement that:

"Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site."

Response:

In Section 15, Appropriate Assessment, I have addressed the potential for significant effects of the project on European Sites and have detailed the results of an Appropriate Assessment screening and a full Appropriate Assessment conducted as part of the licence application.

There are 4 no. European Sites within 20 km of the installation. Any European Sites more than 20 km distance from the installation fall well outside of the potential zone of influence of the activity, so it was not necessary to consider them further. Qualifying interests and conservation objectives of each individual site were detailed as part of that Appropriate Assessment.

5. Emissions to Air

This Section addresses the following:

- Odour
- Ammonia
- Fugitive Dust
- Climate impact

The applicant states that potential emissions to air from the activity should be limited to emissions associated with the general operation of the activity such as emissions of warm air from the ventilation system, as well as the loading, storage and removal of organic fertiliser. Increased emissions may at times be associated with loading of birds and/or loading of organic fertiliser.

5.1 Odour

For the purposes of EIA, the environmental factors potentially affected by odour from the activity include: Human beings and air.

Assessment and Mitigation:

The land in the immediate vicinity of the proposed installation is farmland and residential. The nearest third party residential dwelling to the site is approximately 100m west of the unit, there are also numerous residences 300m to the south west of the unit, in the village of Templeglantine and a further agglomeration of houses approximately 300m to 800m to the north east of the site.

The potential impact from loading organic fertiliser is deemed to be a minor issue because it is removed only once in every 6-8-week cycle and only takes 4-5-hours to completely remove the organic fertiliser from the houses. All organic fertiliser from the houses is removed offsite by a registered contractor. The EPA has not received any complaints relating to odour in relation to the site. The HSE confirmed in their submission (detailed in Section 4 above) that they have not received any odour complaints in relation to the installation to date. However, it is considered that the activity may have the potential to cause odour nuisance beyond the boundary of the site, given the proximity of dwelling houses. Therefore, Condition 6 of the RD requires the applicant use a combination of BAT techniques to prevent, or where that is not practicable, to reduce odour emissions and/or odour impact.

The following combination of techniques, regulatory requirements and mitigation measures will reduce the likelihood of odour emissions from the installation:

- Management of activities onsite to occur at times when the effects (including odours) within/outside of the site will be minimal;
- Minimisation and timing of organic fertiliser / bird movements where possible to reduce odour effects on people;
- Proper management of temperature and humidity controls within the houses;
- Appropriate maintenance of water, feed and ventilation systems;
- Maintaining stock density at design level;
- Use of low protein diets. Using feed with optimum crude protein content to minimise nitrogen excretion. This will keep ammonia emissions from ventilation systems and from organic fertiliser transportation to a minimum;
- The provision of adequate organic fertiliser storage capacity;
- The adequate cleaning, disinfecting & resting of houses between restocking;
- The cleaning of houses as quickly as possible with organic fertiliser removal off site in suitably designated and covered trucks;
- The regular cleaning of yard areas;
- The minimisation of carcasses by good flock management and regular removal of carcasses from the houses;
- The storage of carcasses in covered containers and their transportation to a rendering facility in covered, leak proof containers at least fortnightly;
- The minimisation of the litter content of wash water by the physical cleaning of houses prior to washing; and
- The proper storage of wastes on-site, with regular removal of wastes.

Condition 5 of the RD requires that amenities, the environment and any legitimate uses of the environment beyond the installation boundary shall not be impaired or interfered with by emissions, including odour, arising from the activity. The RD requires that odour does not cause a nuisance beyond the site boundary, and requires the applicant to use low protein feeds onsite.

Condition 6 of the RD requires the use of BAT to reduce emissions to air from storage of manure.

It is noted that there are no other intensive activities (pig or poultry rearing) within 5km of the installation that may potentially generate a continuous significant odour. Therefore, it is considered that there will be no significant cumulative effects from the activity and other odour generating activities in the area. It is also considered that no secondary or indirect effects are likely as a result of odour from the activity.

Conclusion:

Based on the above assessment, I consider that the odour emissions from the activity are not likely to have a significant effect on the environment when the activity is operating in accordance with the conditions of the RD.

5.2 Ammonia

For the purposes of EIA, the environmental factors potentially affected by ammonia emissions from the activity include: Human beings, flora and fauna, and air.

Assessment and Mitigation:

Ammonia emissions from this activity could have the potential to impact sensitive receptors (e.g. lichens, bryophytes etc.) in the vicinity of the installation.

The Agency screened the impact of ammonia emissions using a screen model (SCAIL Agriculture) which indicated potential elevated ammonia emissions. The model results indicate the potential for the poultry rearing process to notably contribute to ammonia in the Stacks to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA. Process emissions from the site will contribute insignificantly to ammonia and nitrogen deposition levels at the remaining designated sites. The SCAIL Agriculture model is conservative. The licensee re-ran the model, as part of completion of a Natura Impact Statement (NIS) with more refined details such as house design, fan diameter and ventilation flow rate, the screen model indicated a significant reduced contribution from the installation (see Section 12 below) and showed that there will be no exceedance of the $3\mu\text{gNH}_3/\text{m}^3$ critical level for ammonia at the European Sites.

Qualifying interests in European sites will not be affected by ammonia emissions from the installation, due to the distance between the installation and the designated sites, the type and physical characteristics of designated sites, and therefore the associated dispersion available.

The activity will employ the following combination of techniques, regulatory requirements and mitigation measures, which should reduce ammonia emissions from the installation:

- Using feed with optimum crude protein content to minimise nitrogen excretion. This will keep ammonia emissions from ventilation systems and from organic fertiliser transportation to a minimum;
- Activities onsite to be managed so as to occur at times when the effects (including odours) within / outside of the site will be minimal;
- The adequate cleaning, disinfecting & resting of houses between restocking;
- Proper management of temperature and humidity within the houses;
- Appropriate maintenance of water, feed and ventilation systems;
- Provision of adequate organic fertiliser storage capacity;
- The transportation of organic fertiliser in suitably contained, leak proof vehicles;
- The proper storage of wastes onsite, with regular removal of wastes;
- The minimisation of carcasses by good herd management;
- Regular stock inspections and removal of carcasses; and
- The storage of carcasses in covered containers and their transportation to a rendering facility in covered, leak proof containers, at least fortnightly.

Condition 5.9 of the RD requires the maintenance of an Ammonia Management Programme by 01 December 2019, outlining ammonia reduction measures, including timeframe for implementation, appropriate to the site. The RD requires the applicant to use low protein feeds onsite and the minimisation of ammonia emissions to air from the site. The ammonia management programme shall be updated and reviewed annually.

Conclusion:

Based on the above assessment, I am satisfied that there is not likely to be significant effects from the activity's ammonia emissions on air quality or on lichens and bryophytes, or indirectly on those species which depend on them, or on the environment when the activity is operating in accordance with the conditions of the RD.

5.3 Fugitive Dust

Dust may arise as fugitive emissions from the expelling of warm air from ventilation systems onsite, vehicle movements, removal of organic fertiliser, filling of meal storage bins and the loading and unloading of birds during periods of dry weather.

For the purposes of EIA, the environmental factors potentially affected by dust emissions from the activity include: Human beings, flora and fauna, and air.

Assessment and Mitigation:

Dust arising from the activity could have the potential to deposit beyond the site boundary, causing nuisance for those living nearby and potentially affect habitats located close to the site boundary.

The organic fertiliser produced onsite is not dusty and minimising dust formation is mainly a function of good housekeeping at the installation and keeping the concrete surface in a clean condition. No complaints were received in relation to dust for this site by the Agency or by the applicant. All delivery vehicles entering or leaving the site will be covered.

The nearest third party residential dwelling is 100m west of the installation. While minimal, dust impact may occur locally within the installation boundary during organic fertiliser loading operations, dust is not expected to be a significant issue beyond the installation boundary. No complaints were received in relation to dust for this site by the Agency or by the applicant. The organic fertiliser produced onsite is not dusty and minimising dust formation is mainly a function of good housekeeping at the installation and keeping the concrete surfaces in a clean condition. Good housekeeping practices will minimise the occurrence of dust.

The following combination of techniques, regulatory requirements and mitigation measures will reduce the likelihood of an impact from dust arising onsite:

- Regular and thorough cleaning of houses between batches;
- The provision of an appropriate ventilation system;
- Regular cleaning of yard areas; and
- The containment of all organic fertiliser and wastes leaving the installation in appropriately designed and covered trailers.

The use of BAT to reduce dust from poultry houses is conditioned in the RD (Condition 6).

The installation is unlikely to release significant quantities of dust on any area beyond the installation boundary. It is considered that there will be no significant cumulative dust impact from the activity and other dust generating activities in the area. It is also considered that no secondary or indirect effects are likely as a result of dust from the activity.

Conclusion:

Based on the above assessment, I consider that dust emissions are not likely to have a significant effect on the environment when the activity is operating in accordance with the conditions of the RD.

5.4 Climate Impact

Climate change is a significant global issue which affects weather and environmental conditions (air, water and soil) which consequently affects human beings and amenities (material assets and cultural heritage) as well as biodiversity and habitats (flora and fauna). Climate change is caused by warming of the climate system by enhanced levels of atmospheric greenhouse gases (GHG) due to human activities. The sources of GHG emissions from the activity is set out in Table 3 below:

Electricity is used to power all processes onsite. The electricity supply is backed-up by the onsite generator. Heating for the poultry houses is primarily provided by gas. All buildings are insulated to reduce the requirement for gas for heating. An electricity generator is used onsite in the event of a power cut.

Table 3

Greenhouse gas emissions	
Sources of GHG emissions from the activity	Combustion of fuels, poultry litter storage
Relevant GHG gases	Carbon Dioxide, Nitrous Oxide, Methane

For the purposes of EIA, the environmental factors potentially affected by greenhouse gases from the activity include: Human beings, climate and air.

Assessment and Mitigation:

With regard to reducing the climate impact of the installation under IED, the RD requires an energy efficiency audit and an assessment of resource use efficiency to be undertaken in accordance with Condition 7, and to be addressed as part of the Resource Use and Energy Programme.

Poultry litter is a dry, solid material and will remain in the poultry houses until the end of the batch. The manure will be completely removed from the proposed installation at the end of each batch (every 6-8 weeks). With appropriate management and bedding during a batch, methane emissions from the poultry litter will be minimal.

Heating for the poultry houses at this installation will be provided by a gas heating system and a diesel oil boiler will be used as a back-up heat source only in emergency situations. Emissions associated with the boiler/generator are considered to be minor. Electricity will be used to power the equipment onsite. The applicant states that they will operate the installation in order to maximise resource efficiency.

Energy recovery is not proposed by the applicant through the use of Anaerobic Digestion (AD) or other technology.

The impact of traffic movements associated with the development is dealt with in the decision of the planning authority to grant planning permission for the poultry unit and are not controlled by the Agency. The planning authority has considered the impacts to be acceptable.

The installation is close to a residential area, the village of Templeglantine, Co. Limerick is located approximately 300m south west of the site. Most of the developments in the vicinity of the installation are dwelling houses, all of which would use modest amounts of energy and will not be significant contributors of climate altering substances. Also, all farms in the area will produce a quantity of organic fertiliser which they are individually obliged to manage and use as fertiliser in accordance with the Nitrates Regulations. Therefore, significant cumulative effects on the environment from the use of energy by this installation and other developments are not likely.

Where the activity is carried out in accordance with the conditions of the RD, the operation of the activity will not cause environmental pollution. The conditions of the RD and the mitigation measures proposed will significantly reduce the likelihood of accidental emissions occurring and limit the environmental consequences of an accidental emission should one occur.

Conclusion:

Given the small quantity of climate altering substances that could be released from the activity, in a national context, I consider that the impact of any emissions from the installation on climate should be minimal.

I am satisfied that there will not be significant effects on climate, air quality, human beings, flora and fauna or any other aspect of the environment from air emissions arising from the operation of the activity.

5.5 Overall Conclusions in relation to effects of air emissions from the activity on the environment

I am satisfied that there will not be significant effects on climate, air quality, human beings, flora and fauna or any other aspect of the environment from air emissions arising from the operation of the activity.

6. Discharges to Water

This Section addresses the following:

- Emissions to ground/groundwater
- Storm water discharges to waters

6.1 Direct Discharges to Waters

6.1.1 Discharges to ground/groundwater

There are no emissions to ground/groundwater from this activity.

6.2 Direct Discharges to Waters

6.2.1 Storm water discharges to waters

Storm water arises on-site from storm water collected from clean yards and the roofs of buildings.

For the purposes of EIA, the environmental factors potentially affected by storm water discharges to waters include: Water, soil, flora and fauna, and human beings.

Assessment and Mitigation:

All clean storm water is diverted away from soiled areas of the site and is collected in a storm water collection system of gutters and downpipes around each house and is diverted by gravity for discharge via a single discharge point (SW1) into a field drain on the south-western boundary of the site. The drain discharges into the Ballymurragh-East Stream, which flows 500m west to the Doonakenna River. The Doonakenna river flows 5.3km south-westerly to join the Allaghaun River (in the Lower River Shannon SAC), which flows 7.5km west to join the River Feale. The River Feale continues to flow for approximately 37km into the Mouth of the Shannon. The Ballymurragh-East Stream, the Doonakenna River, the Allaghaun River and the River Feale all have Good WFD status. There are no identified drinking water abstraction points on the Ballymurragh-East Stream, the Doonakenna River, or the Allaghaun River.

The storm water discharged through SW1 should be uncontaminated and, therefore, should have no qualitative impact on receiving surface waters. The only period during which there is potential for contamination of surface waters is during removal of organic fertiliser from the poultry houses, i.e. once every 6-8-week rearing cycle and when the houses are washed out. Storm water from the installation should therefore be uncontaminated and have no impact on surface water quality offsite. All soiled water is diverted to the underground organic fertiliser storage tanks.

No significant amounts of polluting chemicals are used on the site. Should any accidental emission occur, the quantities would be small. e.g. a chemical spill as a result of bund failure, Spills discharged through SW1 could have the potential to affect surface quality downstream, as well as aquatic habitats within that surface water. Should any accidental emission discharge to ground as a result of a breach of the wash water tanks, this could potentially affect the quality of soil and groundwater directly, which could affect those using the groundwater body as a source of drinking water and could potentially indirectly affect surface quality downstream.

The following combination of techniques, regulatory requirements and mitigation measures will reduce the likelihood of an impact on water quality from organic fertiliser and from accidental spillages arising onsite:

- The provision of more than 26-weeks organic fertiliser storage capacity; is this needed
- The prevention of landspreading at the site; landspreading by customer farmers must be carried out in accordance with Nitrates Regulations (S.I. 31 of 2014) and DAFM guidelines;
- The construction of a new organic fertiliser storage tank to DAFM standards
- The diversion of all soiled water to organic fertiliser storage tanks; and
- The provision of a leak detection system under all new structures.

Condition 5.5 of the RD requires that there shall be no unauthorised discharge of polluting matter to water. In accordance with Condition 6.11 and Schedule C.2.3 Monitoring of Storm Water Emissions of the RD the applicant is required to monitor storm water discharges at SW1 for BOD and COD as required by the Agency and to carry out a weekly visual inspection of the storm water monitoring points. Condition 6.11 of the RD requires the applicant to provide and maintain a storm water/rainwater collection and drainage system for all poultry houses onsite, to provide and maintain an inspection chamber by 01 December 2019 and to assess the need to install silt traps/swales on the drainage system. The RD also requires the storage of all liquid fuels, chemicals, etc., in bunded areas to avoid spillage and discharge to surface water.

These measures, will aid in maintaining good water quality in the Ballymurragh-East Stream, the Doonakenna River, the Allaghaun River and the River Feale.

The village of Templeglantine, Co. Limerick is located approximately 300m south west of the site. Most of the developments in the village are residential dwellings, with a small number of businesses. There are no other intensive agricultural activities in the area. Therefore, it is considered that there will be no significant cumulative impact from storm water emissions from SW1 and other water emissions from other activities/developments in the area to the receiving surface waters. It is also considered that no indirect effects are likely as a result of these storm water emissions from the activity.

Conclusion:

I am satisfied that based on the above assessment, the nature of the activity, the mitigation measures in place, and the conditions in the RD that the likelihood of a significant effect on the environment occurring as a result of storm water emissions from the activity is negligible.

7. Noise

The main sources of noise at the installation include the operation of equipment, vehicle deliveries / collections, and birds. For the purposes of EIA, the environmental factors potentially affected by noise emissions from the activity include: Human beings and flora and fauna

Noise generated in the proposed development in the site will not exceed legal limits at the site boundary. The applicant submitted as an attachment, noise survey data relating to a number of other intensive agricultural sites, for comparison purposes only and noise is not expected to cause a nuisance at this site.

Assessment and Mitigation:

Given the nature of the operations onsite and the activity, noise is not expected to be an issue at or beyond the installation boundary. There has been no history of noise complaints at the installation, and none have been received by the Agency or the HSE.

Noise emissions will be minimised by implementing the good management practices - most important of these are; use of automated feeding and ventilation systems, ensuring houses and associated feeding and ventilation systems are well maintained, ensuring houses are stocked at the correct rate & that deliveries (inward & outward) are confined to the normal daily work routine.

Standard noise conditions and emission limit values, which apply at noise sensitive locations, have been included in the RD. The RD requires the applicant to carry out a noise survey, as required by the Agency. Condition 6 of the RD requires that amenities, the environment and any legitimate uses of the environment beyond the installation boundary shall not be impaired or interfered with by emissions, including noise, arising from the activity

Conclusion:

I am satisfied that based on the above assessment, the nature of the activity, the mitigation measures in place, and the conditions in the RD that the likelihood of a significant effect on the environment occurring as a result of the effects of noise is negligible.

8. Waste Generation

The activity does not produce significant quantities of waste. There are no waste disposal or recovery activities undertaken onsite. Waste arising onsite includes fluorescent tubes, fallen stock (animal carcasses), veterinary/chemical waste containers and general waste.

For the purposes of EIA, the environmental factors potentially affected by waste generated by the activity include: Material assets and flora and fauna.

Assessment and Mitigation:

The applicant states that waste is minimised by employing best technologies combined with good management practices and the maintenance of a high health status on the farm. It is policy to minimise waste accumulation and to recycle as much as possible. Promotion of waste minimisation is also done through source reduction and staff awareness.

The installation will be operated in an efficient manner to minimise energy usage and overall waste generation. This is done by specialist feeding devices to minimise feed waste. The regular maintenance of feeding, water supply, organic fertiliser removal and ventilation systems, maximises efficiency and helps conserve resources.

Carcasses, are stored temporarily onsite in covered skips, before being transported to an appropriately licensed installation where the material will be rendered in accordance with the *Animal By-Product Regulations (Regulation (EC) No. 1069/2009)*.

The storage of uncovered wastes at the installation could attract pests and rodents. Where infestation by pests occurs, this has negative secondary effects for humans in terms of amenity and the potential spread of disease. Predation and the spread of disease could also be an issue for flora and fauna beyond the installation boundary.

In relation to pests and rodents, the following combination of techniques, regulatory requirements and mitigation measures will further reduce the likelihood of a negative impact on the environment:

- Appropriate storage and regular removal of wastes (including carcasses) which could attract pests;
- Good housekeeping around the installation to avoid an impact on the amenities outside the installation boundary;
- Maintenance of feed systems to minimise spills which could attract pests;
- Weed control around the site to remove any potential cover for vermin, and
- Maintenance of a vermin/pest control system with vermin control carried out in accordance with Bórd Bia and DAFM requirements.

The RD requires the implementation of a pest control programme and includes conditions for waste management on the installation. The RD requires that bird carcasses are stored in covered, leak-proof containers before being transported to an appropriately licensed installation where the material will be rendered in accordance with the *Animal By-Product Regulations (Regulation (EC) No. 1069/2009)*, and are removed at least fortnightly to an approved installation. All other wastes must be appropriately segregated, stored, labelled and removed from site which will significantly reduce the likelihood of pests being attracted to the installation. This will prevent the occurrence of possible primary, secondary, direct and indirect negative effects.

The RD requires that waste is appropriately segregated and stored while onsite and that all waste sent offsite is transported and recovered/disposed in accordance with National and European Legislation and requires maintenance of records on matters relating to the waste management operations and practices at this installation.

If dealt with in accordance with the conditions of the RD, the management of waste generated at the facility will be in accordance with the requirements of Article 11(e) of the Industrial Emissions Directive.

Conclusion:

Based on the above assessment and the mitigation measures in place, I am satisfied that there will not be significant effects on the environment from the generation of wastes from the operation of the activity or from pests or vermin.

9. Use of Resources

The operation of the installation involves the consumption of water, oil and electricity. The estimated quantities are given below.

Resource	Quantity per annum for 74,000 birds
Electricity	33,135 kWh
Water	1,750 m ³
Liquified Petroleum Gas	54,000 m ³
Feed	1,341 tonnes
Diesel	Only used when electricity supply is interrupted.

For the purposes of EIA, the environmental factors potentially affected by resource use include: Material assets.

Assessment and Mitigation:

- Energy

Electricity is used to power all processes onsite. The electricity supply is backed-up by the onsite generator. Heating for the poultry houses is primarily provided by gas. All buildings are insulated to reduce the requirement for gas for heating. A back-up oil generator is used to provide electricity onsite in the event of a power cut.

- Water

The primary source of water for the activity is an onsite well located within the installation boundary. The installation is located on the Abbeyfeale groundwater body (IE_SH_G_001), a poorly productive bedrock, which has a WFD status of good. It is considered that given the limited quantities abstracted, potential impacts on the environment are considered neither likely nor significant.

The poultry houses will be physically cleaned of organic fertiliser and brushed/blown down in order to minimise washing and water consumption. The RD requires the licensee to install and maintain a water meter on all water supplies serving the installation from 01 December 2019 and to maintain records of water usage onsite.

- Feed

Feed formulation is adjusted in relation to protein, energy, mineral and vitamins to match the bird's varying requirements throughout its lifecycle. This practice minimises excretion and maximises meat quality. Feed is supplied by specialist suppliers and stored in storage bins/silos.

- Medication and Disinfectant

Medication and disinfectant will be stored in designated areas on the farm.

The use of natural resources by the activity will not be significant. Annex III of the IED specifies criteria for the determination of BAT, including the consumption and nature of raw materials (including water) used in the process and energy efficiency. The RD includes conditions dealing with water, energy and raw material use, reduction and efficiency onsite.

Accordingly, and in the application of BAT, Condition 7 of the licence provides for the efficient use of resources and energy in all site operations. It requires a Resource Use and Energy Programme to be established and an energy audit to be carried out and repeated at intervals as required by the Agency. The BREF on Energy Efficiency should be referred to in the context of the Resource Use and Energy Programme.

As there are no other intensive agriculture activities within 5km, significant cumulative effects on the environment from the use of resources by this installation and other developments are not likely.

Conclusion:

I am satisfied that there will not be significant effects on the environment from the use of natural resources from the operation of the activity, when the activity is operating in accordance with the conditions of the RD.

Overall Conclusions in relation to effects of the use of resources by the activity on the environment

I am satisfied that there will not be significant effects on the environment from the use of natural resources from the operation of the activity.

10. Prevention of Accidents

Measures to be taken to prevent accidents and limit consequences

The following is a range of measures that will help to prevent accidents at the installation and limit their environmental consequences. These include:

- The provision and maintenance of adequate wash water storage facilities;
- The assessment and maintenance of the integrity of tanks;
- The provision of more than 26-weeks organic fertiliser storage capacity (on-site / off-site);
- The provision of emergency response and corrective action procedures which will be put in place/which are in place;
- Protection of gas tanks from accidental damage;
- Separation of wash water and clean storm water;
- The assessment and maintenance of the integrity of the wash water network as required;
- The regular visual monitoring and inspection of the storm water discharge points;
- The provision of concrete aprons around wash water areas; and
- No storage of organic fertiliser from poultry litter on-site, other than what is under the birds during the cycle at the installation.

Condition 9 of the RD requires that procedures are put in place to prevent accidents with a possible impact on the environment and to respond to emergencies so as to minimise the

impact on the environment. It also requires that the accident prevention procedure is updated in light of experience. In addition, the RD specifies the minimum organic fertiliser storage capacity to be maintained, assessment of organic fertiliser storage tanks, control and management of organic fertiliser onsite, storm water monitoring etc.

The RD includes a requirement to ensure that a documented Accident Prevention Procedure is in place that addresses the hazards onsite, particularly in relation to the prevention of accidents with a possible impact on the environment. The RD requires that should any accident occur; the procedure will be updated to prevent any reoccurrence of that accident or incident.

The risk of accidents and their consequences, and the preventative and mitigation measures listed above, have been considered in full in the assessments carried out throughout this report.

Conclusion:

It is considered that the conditions of the RD and the mitigation measures proposed will significantly reduce the likelihood of accidental emissions occurring and limit the environmental consequences of such an event.

11. Cessation of Activity

The application details a range of measures to be employed upon cessation of the activity.

- Operations on site will cease;
- Saleable stock will be sold to the usual outlet;
- Wastes will be removed as per normal procedure;
- Feed & medicines will be returned to suppliers;
- The buildings, once empty of stock, would be washed clean and all wash water would be removed as per normal procedure; and
- If Class A disease incident occurs, any non-saleable stock would be humanely put down and consigned either for rendering or for incineration. The actions undertaken would be under the supervision of Veterinary Division of DAFM.

Condition 10 of the RD specifies decommissioning and residuals management requirements. Condition 12 of the RD requires that an annual statement is provided in the AER as to the measures taken or adopted at the site, in relation to the prevention of environmental damage, for remedial actions following closure/decommissioning or accidents/incidents, as may be associated with the carrying on of the activity. The applicant must have regard to the Environmental Protection Agency's Guidance on Assessing and Costing Environmental Liabilities (2014) and, as appropriate, Guidance on Financial Provision for Environmental Liabilities (2015) when doing so.

Baseline Report

Article 22(2) of the IED requires that where the activity involves the use, production or release of relevant hazardous substances and having regard to the possibility of soil and groundwater contamination at the site of the installation, the operator shall prepare and submit to the competent authority a baseline report before starting operation of an installation. A baseline report in accordance with Section 86B of the EPA Act 1992 as amended was not provided with the licence application. However, a baseline screening assessment was undertaken by the applicant in accordance with Stages 1 to 3 of the European Commission Guidance concerning baseline reports under Article 22(2) of Directive 2010/75/EU on industrial emissions.

The applicant states that the activity does involve the use of small amounts of hazardous substances including medicines, disinfectants and fluorescent tubes. However, they state that

limited quantities will be stored onsite at any one time and materials will be stored in designated areas with minimal if any risk of soil/groundwater contamination. Taking into account the small quantities of substances used, the location of these substances on the site, the soil and groundwater characteristics, and the measures to be taken to prevent accidents and incidents, the possibility of soil and groundwater contamination at the site of the installation is considered to be low. Having regard to the possibility of soil and groundwater contamination and to the European Commission Guidance concerning baseline reports under Article 22(2) of Directive 2010/75/EU I am satisfied that a baseline report is not required. The RD does not require that relevant hazardous substances are monitored in soil or groundwater, due to the reasons set out above.

Conclusion:

I am satisfied that there will not be significant effects on the environment from the measures that will be taken upon cessation of the activity.

12. Organic Fertiliser

12.1 Poultry Litter (Organic Fertiliser)

The installation will necessarily generate organic fertiliser (poultry manure and soiled water). The operation of the poultry unit at current bird capacity (74,000 broilers) results in the production of approximately 775m³ of organic fertiliser per annum.

For the purposes of EIA, the environmental factors identified as potentially being directly and indirectly affected by landspreading of fertiliser materials from the activity include: human beings, flora and fauna, air, land, soil and water.

Poultry litter is an organic fertiliser/soil improver and is a valuable source of nutrients for farmers, it can be disposed of by spreading on land. However, it is subject to strict conditions to prevent adverse effects through nuisance, nutrient enrichment of natural waters and/or the spread of disease. The other main disposal routes for this material is in composting and biogas plants or as a fuel for combustion.

The collection, transport, handling, treatment, transformation, processing, storage, placing on the market, distribution, and use and disposal of all animal products (ABP) including poultry litter is governed by the EU Animal By-product Regulation (EC) No. 1069 of 2009 and Regulation (EU) No. 142 of 2011 which are given legal effect by The European Communities (Animal By-Product) Regulations 2014 (SI No. 187/2014). Poultry litter is categorised as a category 2 Animal By-Product and the options for its disposal are set out in Article 13 of Regulation 1069/2009. Poultry litter must be transported by a haulier registered with the DAFM.

Poultry litter poses a direct and indirect risk of transmitting botulism to cattle. Outbreaks of botulism may occur, not just on the holding where the poultry litter is being spread, but also on neighbouring holdings. The DAFM provides detailed Codes of Practice for the handling and use of poultry litter.

Assessment and Mitigation:

The applicant proposes that the organic fertiliser will be sent offsite to mushroom compost production facilities in accordance with the European Union (Good Agricultural Practice for the Protection of Waters) Regulations 2014, (Nitrates Regulations) and the European Animal By-Product Regulations (EC Regulation No 1069/2009 and Commission Regulation 142/2011), (Animal By-Product Regulations).

The poultry litter produced by the activity may be used for landspreading, in accordance with the Nitrates Regulations.

The application includes a letter from MJ Kehoe Transport Limited, confirming they will take poultry litter from the installation to mushroom compost production facilities. MJ Kehoe Transport Limited are a registered contractor with the DAFM for the transport of animal by-products (poultry litter), DAFM Reference No. MJK. All poultry litter will be transported in covered trailers.

The licensee (poultry farmer) is required under the licence to submit to DAFM by the 31st December annually details in relation to the quantity of organic fertiliser (poultry litter and wash water) exported (Record 3 form). These details can be taken from the commercial documents returned to the consignor (poultry farmer) from the consignee (recipient farmer/composter). DAFM may use the record of export of organic fertiliser to identify the recipient of the organic fertiliser, including farmers who are recipients of organic fertiliser and the quantity received. The record shall also be maintained at the installation for inspection by the Agency, Local Authority or DAFM.

The Nitrates Regulations requires that at least 26-weeks' storage capacity for organic fertiliser is provided. Organic fertiliser generated onsite will be removed offsite by a registered contractor to mushroom compost production facilities. Therefore, the licensee is exempt from the requirement to provide a minimum 26-weeks onsite storage for organic fertiliser, as would otherwise be required under Article 10(1) of the Nitrates Regulations, subject to the licensee having a contract for access to a treatment facility for livestock manure (organic fertiliser) or for the transfer of organic fertiliser to a person registered under and in accordance with the European Communities (Transmissible Spongiform Encephalopathies and Animal By-Products) Regulations 2008 (SI 252 of 2008) to undertake the transport of organic fertiliser. Such exemption is provided in accordance with Article 14(1) of the Nitrates Regulations.

Condition 3.6 of the RD requires that such a contract is in place as required under Article 14(1) of the Nitrates Regulations.

As outlined above, poultry litter will be sent for use in the mushroom compost production industry and may also be sent for landspreading. It is important to note that the IE licence relates to the site of the activity for which the licence application is made and does not extend to the lands on which organic fertiliser may be used as fertiliser. The Nitrates Regulations specifies when organic fertiliser can be applied to land, the application rates etc. and are enforced by the DAFM and Local Authorities.

The quantity of nitrogen and phosphorus generated by the activity is 18,000kg/N and 6,750kg/P based on figures available in the Nitrates Regulations (Annual nutrient excretion rates for livestock). Aside from potential pollution and nuisance, which are negative in nature, the application of organic fertiliser to land as fertiliser is a positive effect of the development.

The RD provides that organic fertiliser may be sent offsite for use as fertiliser by farmers in accordance with the Nitrates Regulations.

The RD requires that records of organic fertiliser that is sent offsite for use on land are maintained in accordance with the requirements of the Nitrates Regulations. Records of organic fertiliser that is sent for compost production must also be maintained.

The Animal By-Product Regulations impose legal requirements on the licensee, the 'commercial haulier' (registered by DAFM) that is used to transport the organic fertiliser and the user of the organic fertiliser. These requirements include use of a 'commercial document' to record the consignor (licensee/poultry farmer), the consignee (customer farmer/mushroom compost facility operator receiving the organic fertiliser), the carrier (haulier), means of transport, the quantity and the date of dispatch. The consignor is required to receive a

completed copy of the 'commercial document' from the consignee confirming its final destination.

There is no landspreading of organic fertiliser conducted and/or permitted within the installation boundary so nuisance from landspreading or direct impacts, on soil, water and groundwater quality and habitats in the immediate vicinity of the installation and consequential indirect effects on flora and fauna and their habitats will not occur. Therefore, while impacts could occur on or near the spreadlands (nuisance, pollution of water/groundwater/soil, impacts on flora and fauna) these would be indirect effects of the activity only. I consider that the transport and use of organic fertiliser as fertiliser in accordance with the Nitrates Regulations and Animal By-Product Regulations will not cause environmental pollution. I am satisfied that there will be no adverse significant effects on the environment from landspreading which is subject to the controls of the Nitrates Regulations or from the handling onsite of organic fertiliser (poultry litter) from the activity or from its use in compost production.

Indirect Effects

From a cumulative impacts perspective, the installation is in an area where the predominant farming activities involve the rearing of livestock. All farms with livestock in the area will produce a quantity of organic fertiliser which they are individually obliged to manage and may use as fertiliser in accordance with the Nitrates Regulations.

The National River Basin Management Plan (2018-2021) was published in April 2018. Over the period of the next river basin planning cycle, there will be initiatives such as significant investments in nutrient storage and low-emission spreading equipment (€395 million allocated under the Targeted Agricultural Modernisation Scheme (TAMS), 6,000 inspections by LA/DAFM personnel, the deployment of 43 local authority investigative assessment personnel and 30 Sustainability Advisors promoting agricultural best practice in 190 Areas for Action nationally.

Decisions on Priority Areas for Action were made through the local-authority-led regional structures, supported by the EPA's scientific analysis and evidence-base. The TAMS scheme will promote targeted uptake in these areas, an initiative that will be supported by the EPA through Water Policy Advisory Committee (WPAC) and associated committees. The EPA (OEE) will continue our enforcement of EPA licences on a risk based approach and the Catchment Unit will continue to assess environmental outcomes.

Targeted monitoring as envisaged under the National River Basin Management Plan allied with multi-party enforcement (OEE/LA/DAFM) will provide an early warning of potential problems/improvements and of the possible need to adapt the Plan to ensure protection of our waters.

Conclusion:

If the activity is carried on in accordance with the RD and the conditions attached, the operation of the activity will not cause environmental pollution. The conditions of the RD and the mitigation measures proposed will significantly reduce the likelihood of accidental emissions occurring and limit the environmental consequences of an accidental emission should one occur.

I am satisfied that there will be no adverse significant effects, including cumulative and indirect effects, on the environment from the use of organic fertiliser produced by this activity in mushroom compost production, from landspreading or from the handling onsite of organic fertiliser (poultry litter) from the activity or from its use in compost production. No significant cumulative impact has been identified.

12.2 Wash water

Wash water will be generated by the activity every 6-8 weeks, after the poultry litter has been removed from the poultry houses. The applicant states that 90.9m³ of wash water is generated by the activity per annum. Prior to washing the houses the floors are brushed to reduce the quantity of poultry litter remaining in the houses. The houses are then washed down with water and disinfectant applied. The wash water is directed to wash water storage tanks where it is contained until sent offsite for use as fertiliser. The wash water consists of water contaminated with poultry litter and small quantities of disinfectant. The wash water is considered suitable for use on land as fertiliser and such use is provided for by the Nitrates Regulation and Animal By-Product Regulations.

Wash water from the activity will be collected in two wash water collection tanks with an estimated capacity of 37.6m³ (net of freeboard). The wash water storage tanks provide in excess of the 26-weeks' storage capacity requirement in the Nitrates Regulations.

The applicant has identified that the wash water will be used on approximately 20ha of farmland, in the vicinity of the activity outside the boundary to which this licence relates.

Mitigation Measures:

The following combination of techniques, regulatory requirements and mitigation measures will further reduce the likelihood of an impact on water and soil quality from organic fertiliser (including wash water) and from accidental spillages arising onsite:

- The licensable activity takes place on an impermeable concrete base;
- The poultry litter is dry;
- All houses are thoroughly brushed out and all organic fertiliser is removed from the installation before washing commences, reducing the nutrient content of the resulting wash water;
- No organic fertiliser is stored onsite (other than wash water);
- The provision of more than 26-weeks' organic fertiliser (wash water) storage capacity;
- The provision of storm and wash water collection facilities; and
- The diversion of all wash water to wash water storage tanks.

The RD requires the movement of the wash water to the land be recorded and the submission of a record of the export (Record 3) to DAFM in accordance with the Nitrates Regulations, as outlined above for poultry litter. The transport and use of wash water as fertiliser in accordance with the Nitrates Regulations and Animal By-Product Regulations will not cause environmental pollution.

The RD requires that records are kept of all organic fertiliser movements offsite and that such records shall be available onsite and sent to the DAFM annually.

The RD requires that a freeboard of at least 200 mm from the top of each covered organic fertiliser storage tank and 300 mm from the top of uncovered organic fertiliser storage tanks is maintained, as a minimum, at all times. The required freeboard shall be clearly indicated in the tank. It also requires that the integrity of all underground effluent storage tanks is assessed within twelve months of date of grant of this licence, and at least once every five years thereafter. Each of these measures significantly reduces the likelihood of spillages from the wash water storage tanks themselves.

The RD requires that the wash water storage tanks shall be fitted with high liquid level indicators within twelve months of the date of grant of this licence. It also requires that all underground effluent storage tanks are assessed within twelve months of date of grant of this licence, and at least once every five years thereafter.

The RD also requires that the storm water discharge point is visually inspected weekly and monitored for BOD or COD as required by the Agency, in accordance with Schedule C.2.3 Monitoring of Storm Water Emissions.

The inspector observed at the installation site visit on 07 February 2018 that there are cracks in the concrete at the entrances to the poultry houses. Condition 6.9 of the RD requires the licensee to repair any damaged concrete yard areas over which wash water of poultry manure may be moved.

The RD includes conditions in relation to materials handling. The RD requires appropriate storage of materials and wastes, that loading and unloading of materials shall be carried out in designated areas protected against spillage and leachate run-off, and that bunding be provided for all tank and drum storage areas.

The RD also requires that accident and emergency response procedures are put in place and that there is an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the installation.

There are no other installations or activities in the vicinity where there could be a significant risk of release of wash water or other substances to ground that could lead to likely or significant cumulative effects on groundwater, soil, surface water or habitats when considered in tandem with the activities at this installation.

Conclusion:

Based on the above assessments and the mitigation measures proposed, I am satisfied that there will not be significant effects on the environment from the storage and management of organic fertiliser (including wash water) or from accidental spillage of materials to water, groundwater or soil at the installation.

Accordingly, if the activity is carried on in accordance with the RD and the conditions attached, the operation of the activity will not cause environmental pollution. The conditions of the RD and the mitigation measures proposed will significantly reduce the likelihood of accidental emissions occurring and limit the environmental consequences of an accidental emission should one occur.

13. Other Matters relating to EIA

13.1 Effects on landscape, material assets and cultural heritage

(a) Disturbance of archaeology and architecture from the operation of the activity

Any loss of archaeological or architectural heritage could impact negatively on human beings. These matters are dealt with in the decision of the planning authority to grant planning permission for the developments onsite and are not controlled by the Agency. The planning authority has considered the impacts to be acceptable.

There are no buildings or features of architectural significance and no known archaeological features at the site of the installation. There are ringforts located 1km north-east and 2.6km west of the site and two holy wells, located 500m north-west and 300m west of the site. It is very difficult to envisage any pathway by which emissions from the operation of the activity could impact any feature which may be present.

(b) Landscape, visual and cultural impact

Any disturbance of the landscape or the cultural heritage of an area has the potential to impact on human beings and their enjoyment of the surrounding area. These matters are dealt with in the decision of the planning authority to grant planning permission for the developments

onsite and are not controlled by the Agency. The planning authority has considered the impacts to be acceptable.

Emissions from the operation of the activity will not impact on the landscape and culture of the area.

No mitigation measures have been proposed in relation to (a) and (b) above.

Overall Conclusions in relation to effects on landscape, material assets and cultural heritage from the activity

I am satisfied that there will not be significant effects on landscape, material assets and cultural heritage from the operation of the activity.

Accordingly, if the activity is carried out in accordance with the RD and the conditions attached, the operation of the activity will not cause environmental pollution.

13.2 Interaction of effects

I have considered the interaction between human beings, flora and fauna, soil, water, air, climate, landscape, material assets, cultural heritage and the interaction of the likely effects identified throughout this report.

The interaction between factors as a result of the operation of the installation are summarised below:

Interaction of effects

Positive effects on human beings from the activity will include provision of food supply and employment associated with the installation. These are outside the Agency's remit.

The most significant interactions, as addressed in the earlier parts of this report, are as follows:

Water, soil and flora and fauna

Accidental discharges of wash water or other substances to ground may directly and indirectly impact on soil, ground water quality, surface water quality downstream, aquatic habitats and aquatic flora and fauna. Indirect effects on soil, ground water quality, surface water quality, habitats and flora and fauna may arise from landspreading wash water which arises from the activity. As demonstrated in Section 12 above, such impacts are considered not to be likely or significant.

Human beings, air and flora and fauna

Potential impacts from emissions to air may impact on human beings, air quality and flora and fauna as demonstrated in Section 5 above. Such impacts are not considered to be significant. Based on the assessment carried out throughout this report, and the mitigation measures proposed (including the relevant conditions in the licence), I do not consider that the interactions identified are likely to cause or exacerbate any potentially significant environmental effects of the activity.

14. Reasoned Conclusion on Environmental Impact Assessment

Having regard to the impacts (and interactions) identified, described and assessed throughout this report, I consider that the mitigation measures proposed will enable the activity to operate without causing environmental pollution. I also consider that the potential impacts on the

environment identified above, even if they occur, are unlikely to damage the environment, and the risk of them occurring is not unacceptable.

Accordingly, if the activity is carried out in accordance with the RD and the conditions attached, the operation of the activity will not cause environmental pollution. The conditions of the RD and the mitigation measures proposed will significantly reduce the likelihood of accidental emissions occurring and limit the environmental consequences of an accidental emission should one occur.

15. Appropriate Assessment

Appendix 3 lists the European Sites assessed, their associated qualifying interests and conservation objectives along with the assessment of the effects of the activity on the European Sites.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activity, individually or in combination with other plans or projects is likely to have a significant effect on any European Site. In this context, particular attention was paid to the European Sites at Lower River Shannon SAC, Blackwater River (Cork/Waterford) SAC, Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA and Moanveanlagh Bog SAC.

Air emissions were modelled by the Agency using a screen model (SCAIL Agriculture, <http://www.scail.ceh.ac.uk>). The model results indicated that the potential for significant adverse impact of ammonia emissions and their consequential potential impact on sensitive receptors cannot be ruled out due to the proximity of the installation to the European Site at Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA. The activity is not directly connected with or necessary to the management of any European Site and the Agency considered, for the reasons set out below, that it cannot be excluded, on the basis of objective information, that the activity, individually or in combination with other plans or projects, will have a significant effect on any European Site and accordingly determined that an Appropriate Assessment of the activity was required, and for this reason determined to require the applicant to submit a Natura Impact Statement (NIS). The licensee re-ran the SCAIL model, as part of completion of a NIS with more refined details, the model indicated a significant reduced contribution from the installation and showed that there will be no exceedance of the $3\mu\text{gNH}_3/\text{m}^3$ critical level for ammonia at the European Sites.

An Inspector's Appropriate Assessment has been completed and has determined, based on best scientific knowledge in the field and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 as amended, pursuant to Article 6(3) of the Habitats Directive, that the activity, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site, in particular Lower River Shannon SAC, Blackwater River (Cork/Waterford) SAC, Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA and Moanveanlagh Bog SAC having regard to their conservation objectives and will not affect the preservation of these sites at favourable conservation status if carried out in accordance with this RD and the conditions attached hereto for the following reasons:

- The installation is not located within a European site.
- The only surface water pathway connecting the installation to European sites arises where the clean storm water from the site discharges to a drain through SW1 which discharges into the Ballymurragh-East Stream, this then flows 500m west to the Doonakenna River. The Doonakenna River flows 5.3km southwesterly to join the

Allaghaun River (Lower River Shannon SAC), which flows 7.5km west to join the River Feale. The River Feale continues for approximately 37km into the Mouth of the Shannon.

- The risk of surface water or groundwater contamination as a result of accidental emissions during washing activities, or from spillage from the wash water tanks, is minimal. The provision of bunding and the protection of surface water and ground water are sufficient to ensure that accidental emissions from the activity will not impact on the qualifying interests of the European sites identified above.
- The litter generated at the installation has high dry matter content and remains within the concrete-floored, covered broiler houses until all broilers are removed at the end of the batch. Therefore, there is no pathway between the litter and surface water/groundwater while the houses are stocked. When the houses are destocked the litter is removed from the sheds and loaded onto lorries for transport offsite for composting and the houses are brushed and washed down. Considering the controls in place in relation to the management of organic fertiliser onsite I am satisfied beyond reasonable scientific doubt that this method of handling the organic fertiliser (poultry litter) from the activity within the installation boundary will not have a significant effect on any European site.
- Wash water is used as a fertiliser on lands that are not within the installation boundary, in accordance with the Nitrates Regulations. Poultry litter is transported by a contractor to composting facilities or may be used as an organic fertiliser on land in accordance with the Nitrates Regulations.
- The licence, if granted, relates to the site of the activity for which the licence application is made, i.e. the rearing of poultry within the installation boundary, and does not extend to the lands on which organic fertiliser may be used as fertiliser. There are regulatory controls in place in relation to the transport and use of organic fertiliser as fertiliser on land beyond the installation boundary. The Nitrates Regulations make it possible for DAFM to know and take account of the additional input of nitrogen and phosphorous from the activity, with a view to ensuring there is no downstream environmental pollution. It is considered that the regulatory systems in place will ensure that cumulative impacts as a result of the use of organic fertiliser on land from this activity will not have a significant effect on any European sites.
- In addition, the Agency notes that the activities which can take place within European sites are restricted by legislation. All persons must obtain the written consent from the relevant Minister before performing particular operations on, or affecting, particular habitats where they occur on lands / waters within the Special Area of Conservation. Hence, further regulatory controls exist for the spreading of fertilisers within European sites. Therefore, the Agency considers that the use of poultry litter and wash water as fertiliser in accordance with the Nitrates Regulations will not cause environmental pollution and I am satisfied beyond reasonable scientific doubt that use of wash water and poultry litter as fertiliser from the activity will not have a significant effect on any European sites. I am also satisfied that the use of the applicant's poultry litter for mushroom composting will not cause environmental pollution and I am satisfied beyond reasonable scientific doubt that this method of handling the organic fertiliser (poultry litter) from the activity will not have a significant effect on any European site.
- Noise levels from poultry installations are very low, the nearest European Site is 230m north west of the installation (Stacks to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA) and it is considered that noise will not impact on the qualifying interests within that European Site.

- Air emissions have been modelled using a screen model (SCAIL Agriculture, <http://www.scail.ceh.ac.uk>), initially by the Agency using limited input data and subsequently remodelled by the applicant as part of a NIS, with details such as house design and type and position of ventilation. The model results indicate that process emissions from the site will contribute insignificantly to ammonia and nitrogen deposition levels at the remaining designated sites. The SCAIL Agriculture model is conservative.
- The licensee has proposed a number of measures which comply with BAT to reduce the likely impact of ammonia and nitrogen deposition on the designated sites. This includes a commitment to use low protein diets for the birds.

In light of the foregoing reasons, no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of those European sites Lower River Shannon SAC, Blackwater River (Cork/Waterford) SAC and Stack's to Mullaghareirk Mountains, West Limerick Hills Mount Eagle SPA and Moanveanlagh Bog SAC.

16. Fit & Proper Person Assessment

The Fit & Proper Person test requires three elements of examination:

(1) Technical Ability

The applicant, Michael Noel O Connor is the owner/operator of this installation. Mr. O Connor is an experienced operator of this poultry farm, which has been in operation for more than 25 years. It is considered that the applicant has demonstrated the technical knowledge required.

(2) Legal Standing

The applicant stated and the Office of Environmental Enforcement (OEE) confirmed that neither the applicant nor any relevant person has relevant convictions.

(3) Financial Standing/Provision

Due to the nature of the activity, poultry rearing, it is not likely to lead to significant environmental liabilities.

The applicant has supplied a declaration confirming that no relevant bankruptcy or other insolvency proceedings exist. He declares no creditor arrangements with creditors nor has he been forced to suspend business activities due to financial insolvency. The application states that the Licensee will maintain adequate public liability insurance in relation to the farm to cover any unforeseen accidents.

It is my view that the applicant can be deemed a Fit & Proper Person for the purposes of this application.

17. Capacity of Installation

Planning permission 12/283 imposed a restriction of 100,000 on the number of places for broilers. The licence application made to the Agency was for 74,00 birds,

Therefore, Schedule A of the RD limits the number of birds housed onsite to 74,000 broilers.

18. Site Visit

A site visit was undertaken on 07 February 2018 by Éimer Godsil (ELP). The following aspects were noted during a tour of the site:

- The existing houses were stocked, and there were no notable odours detectable outside the site boundary.
- Site infrastructure, wellheads, storm water discharge point, gas storage and storm water collection system were inspected.

19. Cross Office Consultation

Consultation took place with Deirdre French (OES), regarding the Natura Impact Statement submitted by the applicant.

Extensive communication has taken place between the Environmental Licensing Programme (ELP) and the OEE in relation to licensing of the intensive agricultural sector. Advice and guidance issued by the OEE co-ordinated Intensive Agriculture Sectoral Working Group was followed in my assessment of this application.

20. Charges

The annual enforcement charge recommended in the RD is €2,552, which is considered appropriate to cover the costs associated with the enforcement of the RD.

21. Recommendation

The RD specifies the necessary measures to provide that the installation shall be operated in accordance with the requirements of Section 83(5) of the EPA Act 1992 as amended and has regard to the AA screening and EIA screening. The RD gives effect to the requirements of the Environmental Protection Agency Acts 1992 as amended and has regard to submissions made.

I recommend that a Proposed Determination be issued subject to the conditions and for the reasons as drafted in the RD.

Signed



Éimer Godsil

Procedural Note

In the event that no objections are received to the Proposed Determination of the application, a licence will be granted in accordance with Section 87(4) of the Environmental Protection Agency Acts 1992 as amended as soon as may be after the expiration of the appropriate period.

Appendices

Appendix 1: Relevant European (and international) legal instruments

The following Irish and European and international legal instruments are regarded as relevant to this application assessment and have been considered in the drafting of the RD.

Industrial Emissions Directive (IED) (75/10/EU)
Environmental Impact Assessment (EIA) Directive (85/337/EEC, as amended)
Habitats Directive (92/43/EC) & Birds Directive (79/409/EEC)
Water Framework Directive [2000/60/EC]
Air Quality Directives (2008/50/EC and 2004/107/EC)
Environmental Liability Directive (2004/35/CE)
Groundwater Directive (80/68/EEC) and 2006/118/EC
Regulation (EC) No 1069/2009, (Animal by-products Regulation)
Nitrates Directive, 91/676/EEC
Energy Efficiency Directive.

Appendix 2: Other BREF documents and National BAT notes relevant to this assessment

Sectoral Commission Implementing Decision	Publication date
CID establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the Intensive Rearing of Poultry or Pigs.	February 2017
Horizontal BREF	Publication date
Reference Document on the Best Available Techniques on Emissions from Storage	July 2006
Reference Document on the Best Available Techniques for Energy Efficiency	February 2009

Appendix 3: List of European sites assessed, their associated qualifying interests, conservation objectives and the assessment of the effects of the activity on the European Sites.

European Site (Site Code)	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161)	<p>Species Hen Harrier (<i>Circus cyaneus</i>)</p>	As per NPWS (2016) Conservation objectives for Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161) Generic version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (dated 15/08/2016).	The project site is not located within the vicinity of any known breeding site for hen Harriers.
Lower River Shannon SAC (002165)	<p>Habitats Sandbanks which are slightly covered by sea water all the time Estuaries Mudflats and sandflats not covered by seawater at low tide. Coastal lagoons.* Large shallow inlets and bays. Reefs. Perennial vegetation of stony banks. Vegetated sea cliffs of the Atlantic and Baltic coasts. Salicornia and other annuals colonising mud and sand Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>). Mediterranean salt meadows (<i>Juncetalia maritimi</i>). Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation. Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>). Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)*</p> <p>Species <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel). <i>Petromyzon marinus</i> (Sea Lamprey). <i>Lampetra planeri</i> (Brook Lamprey). <i>Lampetra fluviatilis</i> (River Lamprey). <i>Salmo salar</i> (Salmon). <i>Tursiops truncatus</i> (Common Bottlenose Dolphin). <i>Lutra lutra</i> (Otter).</p>	As per NPWS (2012) Conservation objectives for Lower River Shannon SAC (002165). Generic version 1.0. Department of Arts, Heritage and the Gaeltacht (dated 07/08/2012).	Ammonia emissions from the project site are unlikely to cause an impact on the priority habitats for this European Site. The project site is not located within the vicinity of any known breeding site for the priority species for this European Site.

European Site (Site Code)	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
Blackwater River (Cork/Waterford) SAC (002170)	<p>Habitats Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Perennial vegetation of stony banks [1220] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>). <i>Trichomanes speciosum</i> (Killarney Fern)</p> <p>Species <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] <i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092] <i>Petromyzon marinus</i> (Sea Lamprey) [1095] <i>Lampetra planeri</i> (Brook Lamprey) [1096] <i>Lampetra fluviatilis</i> (River Lamprey) [1099] <i>Alosa fallax fallax</i> (Twaiite Shad) [1103] <i>Salmo salar</i> (Salmon) [1106] <i>Lutra lutra</i> (Otter)</p>	As per NPWS (2012) Conservation objectives for Blackwater River (Cork/Waterford SAC (002170). Generic version 1.0. Department of Arts, Heritage and the Gaeltacht (dated 31/07/2012).	<p>Ammonia emissions from the project site are unlikely to cause an impact on the priority habitats for this European Site.</p> <p>The project site is not located within the vicinity of any known breeding site for the priority species for this European Site.</p>
Moanveanlagh Bog SAC (002351)	<p>Habitats Active raised bogs Degraded raised bogs still capable of natural regeneration Depressions on peat substrates of the <i>Rhynchosporion</i></p>	As per NPWS (2015) Conservation objectives for Moanveanlagh Bog SAC (002165). Generic version 1.0. Department of Arts, Heritage and the Gaeltacht (dated 07/15/2015).	Ammonia emissions from the project site are unlikely to cause an impact on the priority habitats for this European Site.