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NATURA IMPACT STATEMENT OF AN APPLICATION FOR A LICENCE AT LENNAGHT, SCOTSTOWN, CO MONAGHAN

(EPA LICENSE APPLICATION NO. P1167-01)



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1 INTRODUCTION

1.1 REQUIREMENT FOR AN APPROPRIATE ASSESSMENT

This Natura Impact Assessment was prepared to accompany an EPA License for a poultry farm at Lennaght, Scotstown, Co. Monaghan. It followed on from an Appropriate Assessment Screening Determination made by the EPA in February 2022 regarding this License application.

Having regard to the location of the application site and its proximity to certain sites designated under the Natura 2000 network, an Appropriate Assessment of the proposed development was prepared in accordance with Article 6 of the Habitats Directive.

The purpose of the assessment is to determine the appropriateness of the proposed project, in the context of the conservation status of the site or sites. In Ireland, an Appropriate Assessment takes the form of a Natura Impact Statement (NIS), which is a statement of the likely impacts of the plan or project on a Natura 2000 site. The NIS comprises a comprehensive ecological impact assessment of the plan or project and it examines the direct and indirect impacts that the plan or project might have on its own or in combination with other plans or projects on one or more Natura 2000 sites in view of the sites' conservation objectives.

1.2 THE AIM OF THIS REPORT

This Natura Impact Statement (NIS) has been prepared in accordance with the current guidance (DoEHLG, 2009, Revised February 2010), and it provides an assessment of the potential impacts of the atmospheric emissions from a poultry farm at Lennaght, Scotstown, Co. Monaghan on designated European sites.

An NIS should provide the information required in order to establish whether or not a proposed development is likely to have a significant impact on certain Natura sites in the context of their conservation objectives and specifically on the habitats and species for which the Natura 2000 conservation sites have been designated.

Accordingly, a comprehensive assessment of the ecological impacts of this application was carried out in February 2022 by Noreen McLoughlin, MSc, MCIEEM of Whitehill Environmental. This assessment allowed areas of potential ecological value and potential ecological constraints associated with this proposed development to be identified and it also

enabled potential ecological impacts associated with the proposed development to be assessed and mitigated for.

1.3 REGULATORY CONTEXT

RELEVANT LEGISLATION

The Birds Directive (Council Directive 2009/147/EC) recognises that certain species of birds should be subject to special conservation measures concerning their habitats. The Directive requires that Member States take measures to classify the most suitable areas as Special Protection Areas (SPAs) for the conservation of bird species listed in Annex 1 of the Directive. SPAs are selected for bird species (listed in Annex I of the Birds Directive), that are regularly occurring populations of migratory bird species and the SPA areas are of international importance for these migratory birds.

The EU Habitats Directive (92/43/EEC) requires that Member States designate and ensure that particular protection is given to sites (Special Areas of Conservation) which are made up of or support particular habitats and species listed in annexes to this Directive.

Articles 6(3) and 6(4) of this Directive also call for the undertaking of an Appropriate Assessment for plans and projects not directly connected with or necessary to the management of, but which are likely to have a significant effect on any European designated sites (i.e. SACs and SPAs).

The Water Framework Directive (WFD) (2000/60/EC), which came into force in December 2000, establishes a framework for community action in the field of water policy. The WFD was transposed into Irish law by the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003). The WFD rationalises and updates existing legislation and provides for water management on the basis of River Basin Districts (RBDs). RBDs are essentially administrative areas for coordinated water management and are comprised of multiple river basins (or catchments), with cross-border basins (i.e. those covering the territory of more than one Member State) assigned to an international RBD. The aim of the WFD is to ensure that waters achieve at least good status by 2021 and that status does not deteriorate in any waters.

Appropriate Assessment and the Habitats Directive

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora – the 'Habitats Directive' - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats

and species of European Community interest, at a favourable conservation status. Articles 3 - 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as *Natura 2000*. *Natura 2000* sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC).

Articles 6(3) and 6(4) of the Habitats Directive sets out the decision-making tests for plans or projects affecting *Natura 2000* sites. Article 6(3) establishes the requirement for Appropriate Assessment:

“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”

Article 6(4) deals with the steps that should be taken when it is determined, as a result of appropriate assessment, that a plan/project will adversely affect a European site. Issues dealing with alternative solutions, imperative reasons of overriding public interest and compensatory measures need to be addressed in this case.

Article 6(4) states:

“If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of *Natura 2000* is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”

The Appropriate Assessment Process

The aim of Appropriate Assessment is to assess the implications of a proposal in respect of a designated site's conservation objectives.

The 'Appropriate Assessment' itself is an assessment which must be carried out by the competent authority which confirms whether the plan or project in combination with other plans and projects will have an adverse impact on the integrity of a European site.

Screening for Appropriate Assessment shall be carried out by the competent authority as set out in Section 177U(1) and (2) of the Planning and Development Act 2000 (as amended) as follows:

(1) A screening for appropriate assessment of a draft Land use plan or application for consent for proposed development shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site.

(2) A competent authority shall carry out a screening for appropriate assessment under subsection (1) before—

(a) a Land use plan is made including, where appropriate, before a decision on appeal in relation to a draft strategic development zone is made, or

(b) consent for a proposed development is given.'

The competent authority shall determine that an Appropriate Assessment is not required if it can be excluded, that the proposed development, individually or in combination with other plans or project will have a significant effect on a European site.

Where the competent authority cannot exclude the potential for a significant effect on a European site, an Appropriate Assessment shall be deemed required.

Where an Appropriate Assessment is required, the conclusions of the Appropriate Assessment Report (Natura Impact Statement (NIS)) should enable the competent authority

to ascertain whether the plan or proposed development would adversely affect the integrity of the European site. If adverse impacts on the integrity of a European site cannot be avoided, then mitigation measures should be applied during the appropriate assessment process to the point where no adverse impacts on the site remain. Under the terms of the Habitats Directive consent can only be granted for a project if, as a result of the appropriate assessment either (a) it is concluded that the integrity of any European sites will not be adversely affected, or (b) after mitigation, where adverse impacts cannot be excluded, there is shown to be an absence of alternative solutions, and there exists imperative reasons of overriding public interest for the project should go ahead.

Section 177(V) of the Planning and Development Act 2000 (as amended) outlines that the competent authority shall carry out the Appropriate Assessment, taking into account the Natura Impact Statement (amongst any other additional or supplemental information). A determination shall then be made by the competent authority in line with the requirements of Article 6(3) of the Habitats Directive as to whether the plan or proposed development would adversely affect the integrity of a European site, prior to consent being given.

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2 METHODOLOGY

2.1 APPROPRIATE ASSESSMENT

This NIS has been prepared with reference to the following:

- European Commission (2018). Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.
- European Commission (2001). Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.
- European Commission (2006). Nature and Biodiversity Cases: Ruling of the European Court of Justice.
- European Commission (2007). Clarification of the Concepts of: Alternative Solution, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.
- Department of Environment, Heritage and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities.

The EC Guidance sets out a number of principles as to how to approach decision making during the process. The primary one is 'the precautionary principle' which requires that the conservation objectives of Natura 2000 should prevail where there is uncertainty.

When considering the precautionary principle, the emphasis for assessment should be on objectively demonstrating with supporting evidence that:

- There will be no significant effects on a Natura 2000 site;
- There will be no adverse effects on the integrity of a Natura 2000 site;
- There is an absence of alternatives to the project or plan that is likely to have an adverse effect to the integrity of a Natura 2000 site; and
- There are compensation measures that maintain or enhance the overall coherence of Natura 2000.

This translates into a four stage process to assess the impacts, on a designated site or species, of a policy or proposal.

The EC Guidance states that "each stage determines whether a further stage in the process is required". Consequently, the Council may not need to proceed through all four stages in undertaking the Appropriate Assessment.

The four-stage process is:

Stage 1: Screening – The process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether or not these impacts are likely to be significant;

Stage 2: Appropriate Assessment – The consideration of the impact on the integrity of the Natura 2000 site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts;

Stage 3: Assessment of Alternative Solutions – The process which examines alternative ways of achieving objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site;

Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain – An assessment of the compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

In complying with the obligations set out in Articles 6(3) and following the guidelines described above, this screening statement has been structured as a stage by stage approach as follows:

- Description of the proposed project;
- Identification of the Natura 2000 sites close to the proposed development;
- Identification and description of any individual and cumulative impacts on the Natura 2000 sites likely to result from the project;
- Assessment of the significance of the impacts identified above on site integrity. Exclusion of sites where it can be objectively concluded that there will be no significant effects;
- Description of proven mitigation measures.

2.2 STATEMENT OF COMPETENCY

This NIS report was carried out by Noreen McLoughlin, BA, MSc, MCIEEM. Noreen has an honours degree in Zoology and an MSc in Freshwater Ecology from Trinity College, Dublin and she has been a full member of the Chartered Institute of Ecology and Environmental Management for over fifteen years. Noreen has over 17 years' experience as a professional ecologist in Ireland.

2.3 DESK STUDIES & CONSULTATION

Information on the site and the area of the proposed development was studied prior to the completion of this statement. The following data sources were accessed in order to complete a thorough examination of potential impacts:

- National Parks and Wildlife Service - Aerial photographs and maps of designated sites, information on habitats and species within these sites and information on protected plant or animal species, conservation objectives, site synopses and standard data forms for relevant designated sites.
- Environmental Protection Agency (EPA)- Information pertaining to water quality, geology and licensed facilities within the area, correspondence from the EPA regarding this License application;
- Myplan.ie – Mapped based information;
- National Biodiversity Data Centre (NBDC) – Information pertaining to protected plant and animal species within the study area;
- CLW Environmental Planners – Site plans, development description and information on potential emissions.
- Monaghan County Council – Information on planning history in the area for the assessment of cumulative impacts.

2.4 ASSESSMENT METHODOLOGY

The proposed development was assessed to identify its potential ecological impacts and from this, the Zone of Influence (Zoi) of the proposed development was defined. Based on the potential impacts and their Zoi, the Natura 2000 sites potentially at risk from direct, indirect or in-combination impacts were identified. The assessment considered all potential impact sources and pathways connecting the proposed development to Natura 2000 sites, in view of the conservation objectives supporting the favourable conservation condition of the site's Qualifying Interests (QIs) or Special Conservation Interests (SCIs).

The conservation objectives relating to each Natura 2000 site and its QIs/SCIs are cited generally for SACs as “to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or Annex II species for which the SAC has been selected”, and for SPAs “to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA”.

As defined in the Habitat’s Directive, the favourable conservation status of a habitat is achieved when:

- Its natural range and area it covers within that range is stable or increasing;
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future;

The favourable conservation status of a species is achieved when:

- The population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future;
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Where site-specific conservation objectives (SSCOs) have been prepared for a European site, these include a series of specific attributes and targets against which effects on conservation condition, or integrity, can be measured. Where potential significant effects are identified, then these SSCO should be considered in detail.

3 DESCRIPTION OF THE PROPOSED PROJECT

3.1 PROJECT DESCRIPTION

OVERVIEW

In October 2021, Monaghan County Council granted planning permission to Kevin Keenan for a development at his existing farm in Lenaght, Scotstown, Co. Monaghan. Planning permission was granted here for the construction of one additional low emission poultry house along with the upgrading of an existing poultry house (granted planning permission under 18/153) to low emission spec also. The more modern and efficient upgraded houses will lead to an overall reduction in emissions from the farm. The existing poultry house has a standard emission factor of 0.08kg/yr/bird resulting in 3040 kg ammonia. The new and upgraded houses will have one of two low emission housing systems with an emission factor 0.035 kg @:85,000 birds =2975 Kg Ammonia (98% of Existing). The specs of these are provided in Appendix 1.

The applicant is now seeking a License from the EPA for the operation of this farm

An extract from the planning drawings can be seen in Figure 1.

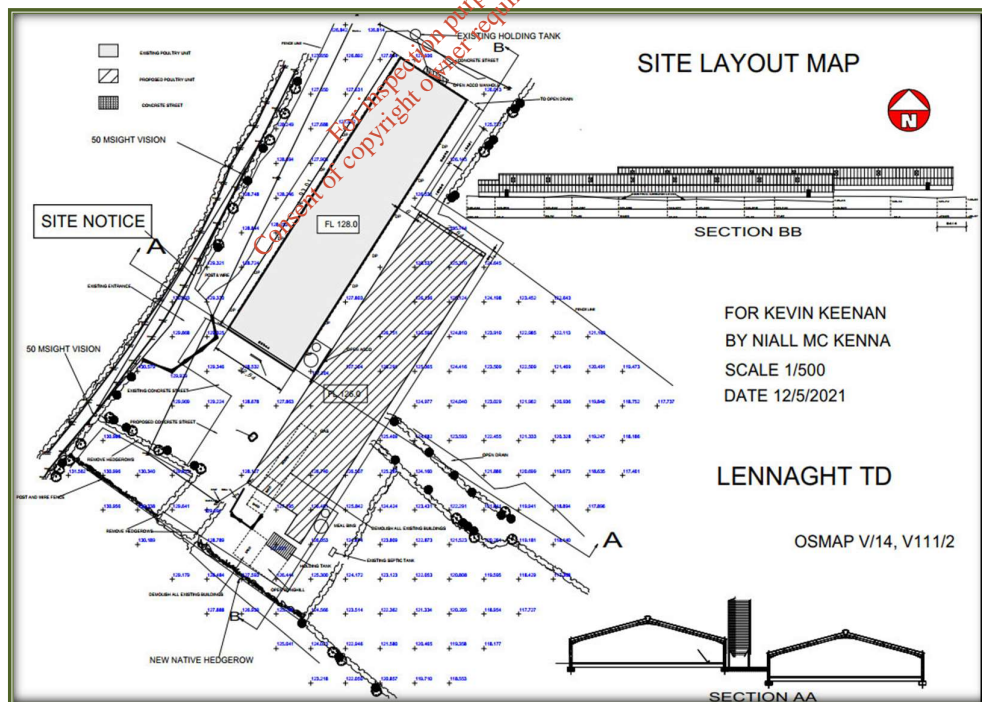


Figure 1 –Site Plan as Prepared by Niall McKenna

Once operational, the proposed development will house 85,000 broilers in total. The operation of the farm will involve the rearing of the chickens from day olds over a period of approximately 6-7 weeks. There will be approximately 7 cycles of per annum, with a break between batches during which time the cleaning of the houses and yards is carried out. The spent poultry litter and manure will be removed from the farm by a registered contractor where it will be composted and used in the mushroom industry. All records for the movement of fertiliser will be kept on site and presented to the Department of Agriculture, Food and Marine as requested.

Construction methods will be standard and will follow best practice guidelines at all stages. All structures will be compliant with the recommendations of the Department of Agriculture, Food and the Marine. The operation of the farm and all its associated activities will be done in accordance with S.I. 605 of 2017.

S.I. 605 OF 2017 (AS AMENDED)

The European Union (Good Agricultural Practice for Protection of Waters) Regulations 2017 provides a basic set of measures to ensure the protection of waters, including drinking water sources, against pollution caused by nitrogen and phosphorus from agricultural sources, with the primary emphasis being on the management of livestock manures and other fertilisers. The purpose of these Regulations is to give effect to Ireland's Nitrates Action Programme. This directive outlines measures that must be followed during the land-spreading of manure. These measures are summarised in the points below.

- The amount of livestock manure applied in any year to land on a holding, together with that deposited to land by livestock, shall not exceed an amount containing 170 kg nitrogen per hectare.
- The spreading of any organic fertiliser during certain times of the year is prohibited (The prohibited spreading period, generally between Mid-October and Mid-January).
- Farmers must keep within the overall maximum fertilisation rates for nitrogen and phosphorus.
- Farmers must have sufficient storage capacity to meet the minimum requirements of the regulations.
- All storage facilities must be kept leak proof and structurally sound.
- Records for the movement of fertilisers must be kept.
- Chemical fertilisers, livestock manure and other organic fertilisers, effluents and soiled water must be spread as accurately and as evenly as possible.

- An upward-facing splash plate or sludge irrigator on a tanker or umbilical system must not be used for the spreading of organic fertiliser or soiled water.
- Chemical fertilisers, livestock manure, soiled water or other organic fertilisers must not be spread when:
 - The land is waterlogged;
 - The land is flooded, or it is likely to flood;
 - The land is frozen, or covered with snow;
 - Heavy rain is forecast within 48 hours;
 - The ground slopes steeply and there is a risk of water pollution, when factors such as surface run-off pathways, the presence of land drains, the absence of hedgerows to mitigate surface flow, soil condition and ground cover are taken into account.
- Chemical fertilisers must not be spread on land within 2 metres of a surface watercourse.

Table 1 shows the buffer zones for various water bodies (lakes, rivers, wells etc.). Soiled water, effluents, farmyard manures or other organic fertilisers must not be spread inside these buffer zones.

Water Feature	Buffer Zone
Any water supply source providing 100m ³ or more of water per day, or serving 500 or more people	200m (or as little as 30m where a local authority allow)
Any water supply source providing 10m ³ or more of water per day, or serving 50 people or more	100m (or as little as 30m where a local authority allows)
Any other water supply for human consumption	25m (or as little as 15m where a local authority allows)
Lake shoreline or a turlough likely to flood	20m
Exposed cavernous or karstified limestones features	15m
Any surface watercourse where the slope towards the watercourse exceeds 10%	10m
Any other surface waters	5m

Table 1 – Requirements for the Application of Fertilisers and Soiled Water as set out in S.I. 605 of 2017.

Prior to its implementation, S.I. 605 of 2017 was subjected to Appropriate Assessment (AA) and a Strategic Environmental Assessment (SEA) Screening at draft stage (March 2017). At this stage, it was referred to as Ireland’s Fourth Nitrates Action Programme (NAP). This draft NAP was assessed in terms of the likely significant effects of the programme and

where it would adversely affect the integrity of European sites. The NIS identified that the existing and proposed measures would be predominantly positive for European sites. The measures of the NAP were influenced to avoid, as appropriate, measures that would have an adverse effect upon the integrity of the European sites. Any project falling under the requirements of the NAP will be required to conform to the mitigation measures contained within the NIS prepared and to any further regulatory provisions aimed at preventing pollution or other environmental effects. The applicant is fully aware of his obligations under S.I. 605 of 2017 and they will meet all the requirements under this Directive with the proposed application.

3.2 SITE LOCATION AND SURROUNDING ENVIRONMENT

The site in question is 1.3ha and it is located in a rural area within the townland of Lennaght. Access to the site will be via an existing entrance into the farm that is just off a local, third class road. It is 1.2km south of Knockatallon and 6.2km west of Scotstown.

The main land-use surrounding the application site is agriculture and improved agricultural grassland and rough grasslands are the dominant habitats in the lands surrounding the site. Other habitats represented locally include areas of wet and neutral grasslands, areas of mixed forestry and scrub, along with dry heaths, hedgerows, treelines and watercourses. Site location maps can be seen in Figures 2 and 3 whilst an aerial photograph of the site and its surrounding habitats can be seen in Figure 4.

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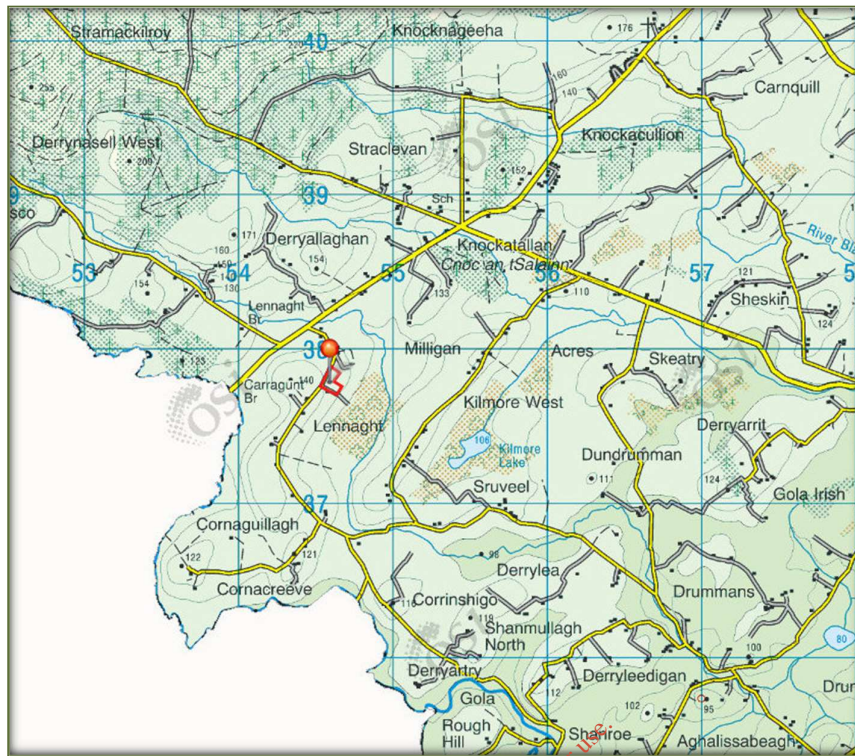


Figure 2 – Map showing the Location of the Proposed Development Site (Pinned)

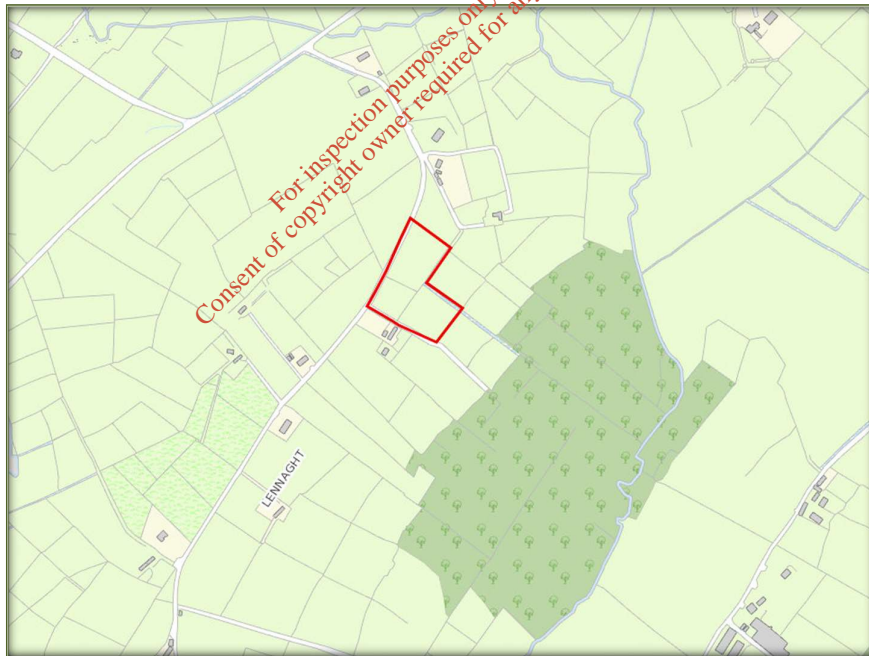


Figure 3 – Map showing the Location of the Proposed Development Site (Outlined in Red).

HABITATS AND SPECIES

The application site does not lie within or adjacent to any area which has been designated for nature conservation purposes. The dominant habitat within the application site currently is buildings and artificial surfaces, i.e., the existing poultry unit and associated hard

core/concreted areas. There are also some areas of improved grasslands in the site. The perimeters of the site consist of mature hedgerows / treelines.

An examination of the website of the National Biodiversity Data Centre revealed that there are records for the presence of one protected mammal species from within the relevant one km grid square (H5437) of the proposed development. This species is the badger *Meles meles* and this is a protected under the Irish Wildlife Act. A custom polygon for the site revealed that these records do not pertain from within the application site itself.

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WATER FEATURES AND QUALITY

The application site lies within the Erne Hydrometric Area and Catchment, the Finn (Monaghan) Sub-Catchment and the Maghery Sub-Basin. There is a drain in the site and this leads to the Maghery Stream, which is 270m east of the application site. This stream flows south until its confluence with the River Finn, approximately 9km south of the application site.

The EPA have classified the ecological status of the Maghery Stream and its tributaries at points close to the application site as being of poor ecological status. Under the requirements of the Water Framework Directive, this is unsatisfactory and good status must be restored in these waters.

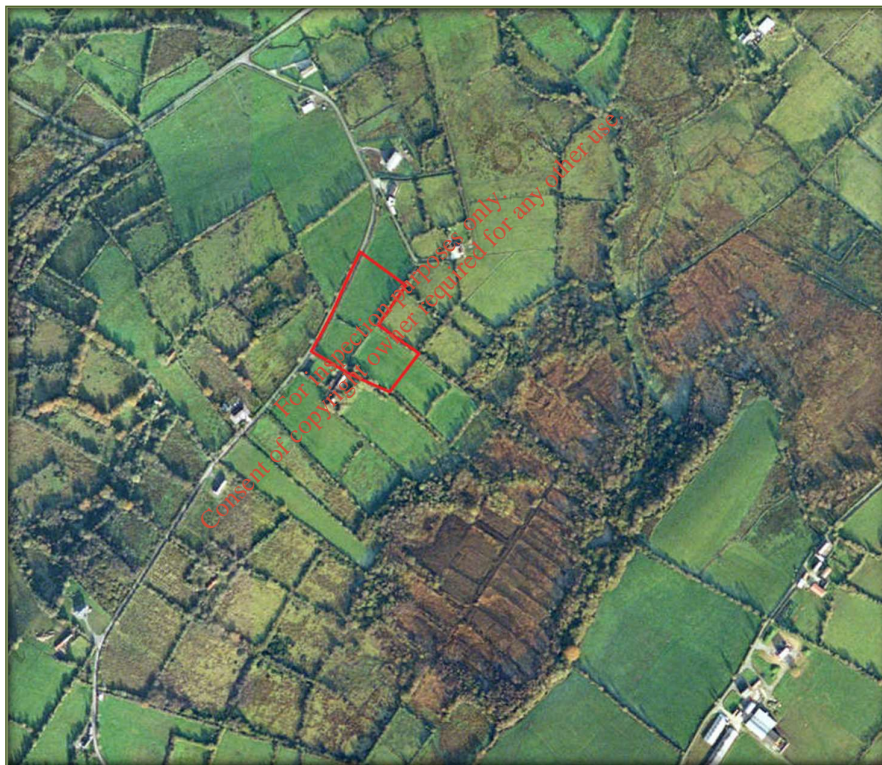


Figure 4 – Aerial Photograph of the Site (Outlined in Red) and its Surrounding Habitats Local Watercourses are Highlighted in Blue

3.3 NATURA 2000 SITES IDENTIFIED

In accordance with the guidelines issued by the Department of the Environment and Local Government, a list of Natura 2000 sites within 15km of the proposed development have been identified and described according to their site synopsis, qualifying interests and conservation objectives. In addition, any other sites further than this, but potentially within its zone of interest were also considered. The zone of impact may be determined by an assessment of the connectivity between the application site and the designated areas by virtue of hydrological connectivity, atmospheric emissions, flight paths, ecological corridors etc.

There are five Natura 2000 designated sites within 15km of the application site. These sites are summarised in Table 2 and a map showing their locations relative to the application site is shown in Figure 5. Sites beyond 15km were also included here following the AA screening determination that was issued by the EPA. A full description of the sites can be read on the website of the National Parks and Wildlife Service (www.npws.ie) and the Joint Nature Conservation Committee (jncc.defra.gov.uk).

Site Name & Code	Distance	Qualifying Interests	Potential Impacts
Slieve Beagh-Mullaghfad-Lisnaskea SPA UK9020302	1km north-west	<ul style="list-style-type: none"> Hen Harrier <i>Circus cyaneus</i> 	<i>Potential impacts arising from atmospheric emissions will be considered further.</i>
Slieve Beagh SPA 004167	3km north-west	<ul style="list-style-type: none"> Hen Harrier <i>Circus cyaneus</i> 	<i>Potential impacts arising from atmospheric emissions will be considered further.</i>
Magheraveely Mark Loughs SAC UK0016621	4.5km south	<ul style="list-style-type: none"> Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion davallianae Alkaline fens <i>Austropotamobius pallipes</i> (White-clawed Crayfish) 	<i>No potential hydrological impacts. Potential impacts arising from atmospheric emissions will be considered further.</i>
Slieve Beagh SAC UK0016622	4.9km north	<ul style="list-style-type: none"> Natural dystrophic lakes and ponds European dry heaths 	<i>Potential impacts arising from atmospheric emissions will be considered further.</i>
Kilroosky Lough Cluster SAC 001786	10.3km south-west	<ul style="list-style-type: none"> Hard oligo-mesotrophic waters with benthic 	<i>No potential hydrological impacts. Potential impacts arising</i>

		<ul style="list-style-type: none"> vegetation of <i>Chara</i> spp. • Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion davallianae • Alkaline fens • <i>Austropotamobius pallipes</i> (White-clawed Crayfish) 	<p>from atmospheric emissions will be considered further.</p>
Upper Lough Erne SPA UK9020071	18km south	<ul style="list-style-type: none"> • Whooper Swan <i>Cygnus cygnus</i> 	<p>Direct downstream distance (~45km) is sufficient to ensure no impacts will arise by virtue of hydrological connectivity. Potential impacts arising from atmospheric emissions will be considered further.</p>
Upper Lough Erne SAC UK0016614	21.5km south-west	<ul style="list-style-type: none"> • Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i>-type vegetation • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) • Otter (<i>Lutra lutra</i>) 	<p>Direct downstream distance (~55km) is sufficient to ensure no impacts will arise by virtue of hydrological connectivity. Potential impacts arising from atmospheric emissions will be considered further.</p>

Table 2 – Natura 2000 Sites within 15km of Application Site

The generic conservation objectives of these sites are:

1. To maintain the favourable conservation status of the qualifying interests (outlined above) of this SAC and SPA.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

The favourable conservation status of a habitat is achieved when:

- Its natural range and area it covers within that range is stable or increasing and the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future;
- The conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- The population dynamics data on the species concerned indicate that it is maintaining itself on a long -term basis as a viable component of its natural habitats;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future;
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

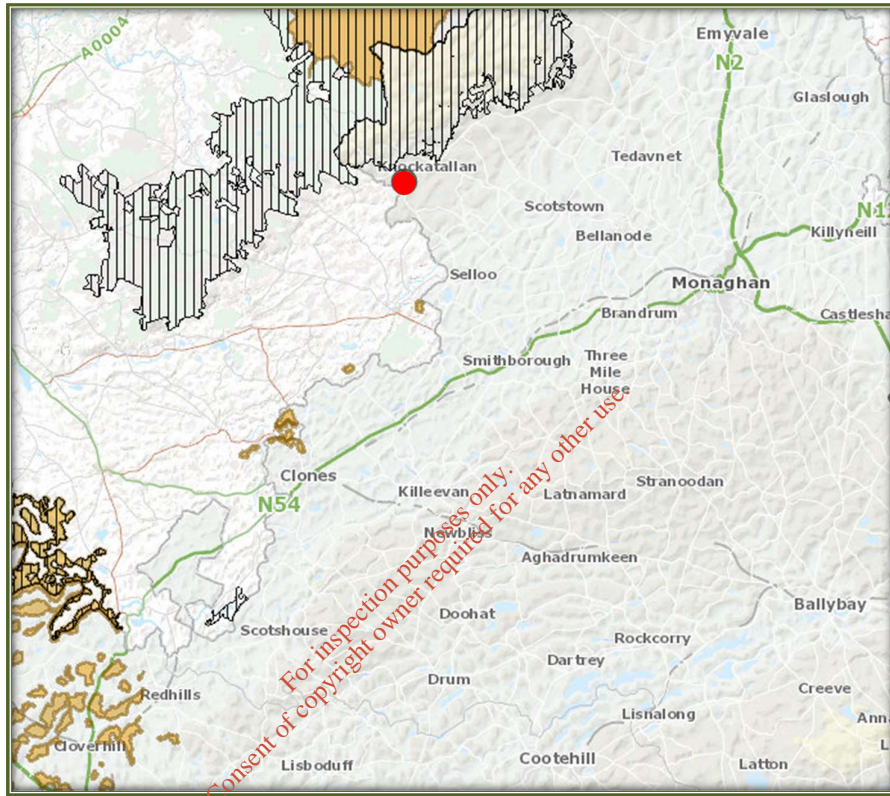


Figure 5 – The Application Site (Red Dot) in relation to the Natura 2000 sites. SACs – Brown Hatching, Hatching, SPAs – Vertical Hatching

4 IDENTIFICATION AND ASSESSMENT OF POTENTIAL IMPACTS

4.1 INTRODUCTION

An Appropriate Assessment Screening undertaken by the EPA (15/2/2022) identified the following impacts:

That the activity is not directly connected with or necessary to the management of any European site and 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 is required, and for this reason determined to require the applicant to submit a Natura Impact Statement.

In general, the identification of potential impacts and the assessment of their significance typically requires the identification of the type and magnitude of the impacts. For example, will the impacts be short term or long term, direct, indirect or cumulative and will they occur during construction or operation.

In their screening report, the EPA identified the following sites as having the potential to be impacted upon from emissions arising from the proposed development:

- Slieve Beagh-Mullaghfad-Lisnaskea SPA UK9020302
- Slieve Beagh SPA 004167
- Magheraveely Mark Loughs SAC UK0016621
- Slieve Beagh SAC UK0016622
- Kilroosky Lough Cluster SAC 001786
- Upper Lough Erne SPA UK9020071
- Upper Lough Erne SAC UK0016614

Significant Effects on Natura 2000 sites arising from Atmospheric Emissions

The EPA have recently produced guidance documents for the assessment of impacts of emissions on Natura 2000 sites (*Assessment of the Impact of Ammonia and Nitrogen on Natura 2000 sites from Intensive Agriculture Installations, EPA 2021*). This document contains a step-by-step assessment process which allows the applicant to ascertain the level of assessment and information needed when determining potential effects from emissions on Natura 2000 sites. Step 6c of the flow chart (Figure 6) makes a provision for applicants to demonstrate that the emissions from the new installations will result in an overall reduction in emissions from the baseline numbers.

The proposed development consists of the construction of one additional low emission poultry house along with the upgrading of the existing poultry house to low emission spec also. The more modern and efficient upgraded houses will lead to an overall reduction in emissions from the farm. The existing poultry house has a standard emission factor of 0.08kg/yr/bird resulting in 3040 kg ammonia. The new and upgraded house will have either:

1. Heaters and an air mixing system with an emission factor 0.035 kg @:85,000 birds =2975 Kg Ammonia (98% of Existing), or:
2. Heating system with heaters and fans with an emission factor 0.035 kg @:85,000 birds =2975 Kg Ammonia (98% of Existing),

The specs of these are provided in Appendix 1.

As the final emissions from the farm upon completion of the two houses will be lower than the current baseline levels, neither modelling in SCAIL not detailed atmospheric modelling is required in this instance.

Annex 1: Flow Chart

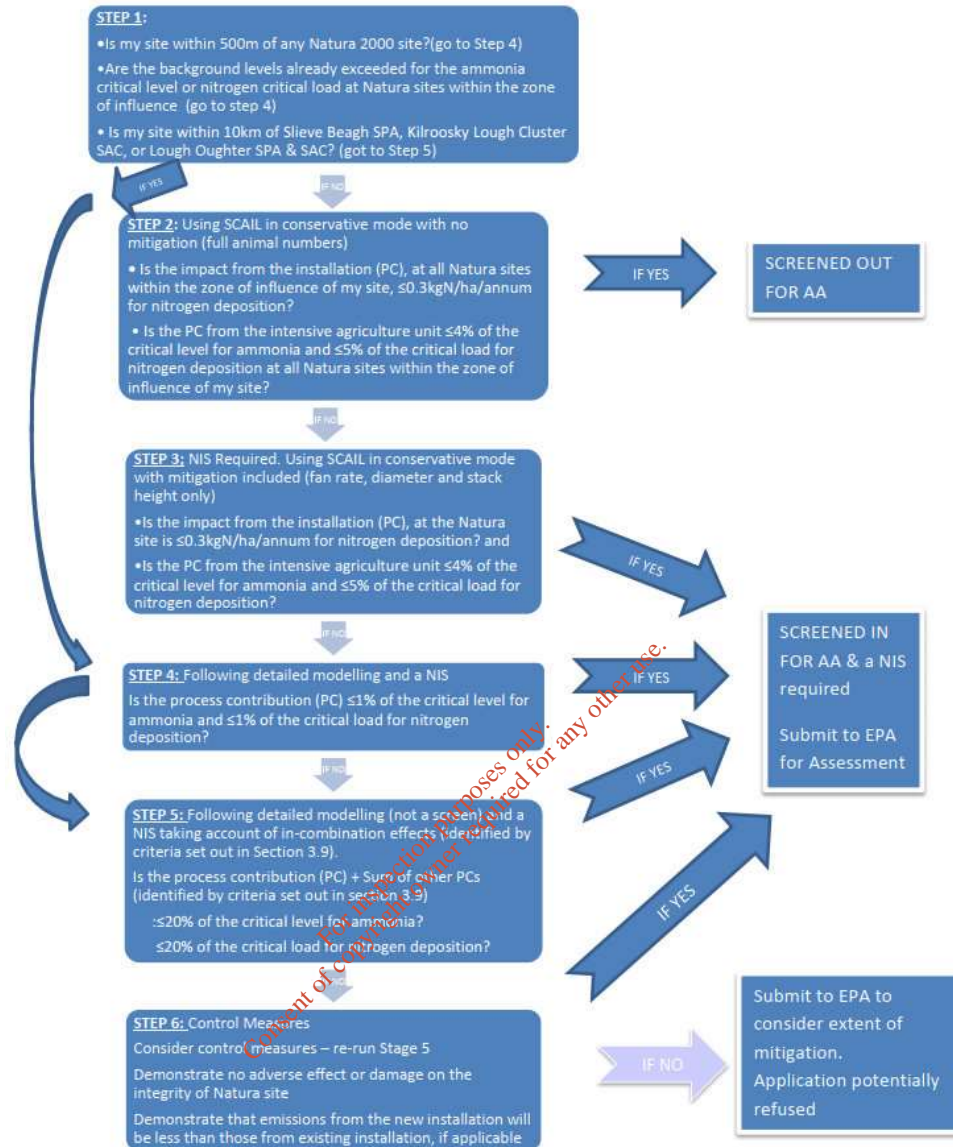


Figure 6 – EPA Flow Chart, Taken from Annex I of the Assessment of the Impact of Ammonia and Nitrogen on Natura 2000 sites from Intensive Agriculture Installations, EPA 2021

4.2 CUMULATIVE IMPACTS

There are other agricultural activities ongoing close to the current application site, therefore cumulative impacts arising from the operation of these farms together were considered. All farms, regardless of whether licensed by the EPA or not, are required to operate within the legalisation defined in S.I. 605 of 2017 regarding manure storage, minimisation of soiled water and general good agricultural practice, etc. Therefore, cumulative impacts arising from the combined operation of these activities with the proposed operation of the poultry farm at Lennaght will be negligible.

The land-spreading of the poultry manure produced at the proposed facility has also been considered as part of this process. Records for the distribution and movement of all the manure produced will be kept on site and presented to the Department of Agriculture, Food and Marine if necessary. All organic fertiliser will replace the use of chemical fertiliser; therefore there will be no overall increase in the amount of nutrients spread.

All farmers that receive the manure from the proposed farm will do so under the European Union (Good Agricultural Practice for the Protection of Waters) Regulations 2017 (S.I. 605 of 2017). Upon the receipt of the manure, they will be informed of their obligation under this legalisation. Compliance with these regulations will minimise cumulative impacts as well as any impacts

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5 MITIGATION MEASURES

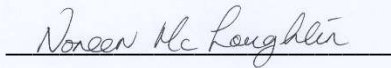
In order to further minimise emissions from the Poultry facility at Lennaght, a number of mitigation measures should be implemented and followed.

- Techniques for the reduction of emissions from the poultry houses must be employed on the farm. These are outlined in the document *Best Available Techniques Reference Document for the Intensive Rearing of Poultry or POOUULLTTYs* (http://eippcb.jrc.ec.europa.eu/reference/BREF/IRPP/JRC107189_IRPP_Bref_2017_published.pdf).
- Post construction surface water run-off from hardcore / concreted / tarmac areas should be directed into a soak-pit. If soak-pit disposal is not viable or practical, then surface water run-off from these areas should be treated via serviced sediment and oil interceptor traps, prior to discharge into the local watercourse.
- The applicant must follow the guidelines set out in the Department of Agriculture's *Explanatory Handbook for Good Agricultural Practice Regulations*.

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6 NIS CONCLUSIONS

This Natura Impact Statement has concluded that with the mitigation measures outlined in this document and with the construction of the houses to a low emissions specification, the proposed operation of the poultry farm at Lennaght will not lead to any significant impacts upon the designated sites identified. Although the stock numbers on the farm will increase, the upgrading of the houses to low emissions spec will lead to an overall reduction in atmospheric emissions from the farm.



Noreen McLoughlin, MSc, MCIEEM.
Ecologist.

(PI Insurance details available on request)

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Appendix I: LOW EMISSIONS HOUSING SPECIFICATIONS

Rav number - BWL 2011.13.V5

System name - Barn with heaters with air mixing system for drying litter layer

Animal category - Broilers (E 5.14), (grand) parent stock of broilers in rearing (E 3.7), parent animals of fattening turkeys in rearing up to 6 weeks (F 1.6) and from 6 to 30 weeks (F 2.6), and meat turkeys (F.4.8)

System description of November 2017 Replaces BWL 2011.13.V4 of June 2016

Working principle

Ammonia emission limitation is based on drying and heating the fertilizer / litter layer by means of heaters and continuously rotating circulation fans mixing of the house air creates an even temperature in the entire barn. The fertilizer / litter layer is dried and the carbon dioxide (CO₂) is expelled from the animals.

THE TECHNICAL EQUIPMENT OF THE SYSTEM ; ARCHITECTURAL

Part

Execution requirement

1 Floor version

The total barn floor construction including any underlying sand layer must have a heat resistance (Rc value) of at least 0.5.

THE TECHNICAL EQUIPMENT OF THE SYSTEM ; TECHNICAL EQUIPMENT

Part

Execution requirement

2 Housing form Full litter floor

3 Drinking water

Drinking water supply with anti-spill system

4a Heating and air circulation system

It must be well maintained and fireproof

heat heaters : consisting of a heat source with fans for the warm air distribution

4b

The heat heaters for heating the house are distributed over the shed length under the ridge of the shed and / or along the side wall of the shed hung up.

When the heat heaters are placed under the ridge, it is maximally suspended 1.5 meters below the ridge.

When the heat heaters are placed along the side wall, it is suspended maximum 1.5 meters from the facade and maximum 1.5 meters distance above the floor 2 .

The heated air is mixed with circulation fans warm air in the house.

The point is that air can be heated and that this air is distributed. The combustion chamber in which a fuel is burned may be present in the heater (directly fired heater). The combustion chamber must have a supply duct for the supply of combustion air from outside the house and exhaust channel for the discharge of flue gases to the outside of the house (closed combustion). Also it is possible that elsewhere outside the animal area there is a combustion device and the heat is supplied via pipes transferred to the heaters (indirectly fired heater)

2 The distances are measured from the outside of the heater.

4c

The minimum installed fan capacity of the heat heater amounts to 0.35 m³ per animal place per hour (or 8 m³ per m² shed area).

If the fan capacity of the heat heater is adjustable, is a frequency inverter available for this.

4d

When the heat heaters are placed in the ridge, the blowing direction of the heaters to one as well as from the center to both end walls be targeted.

When installing the heaters along the side wall, the blowing direction of the heaters are equal to the direction of rotation of the hands of the clock.

4th Circulation fans

The circulation fans are in line with the heaters on one mutual distance of up to 20 meters.

When the heat heaters are placed under the ridge of the house, the circulation fans at a maximum of 1.5 meters below the ridge of the house.

When installing the heat heaters, hang along the side wall of the barn the circulation fans at a maximum distance of 1.5 meters from the facade and at a maximum distance of 1.5 meters above the floor.

4f

The circulation fans continuously stop the air movement in the house hallway. The blowing direction of the circulation fans is equal to the blowing direction of the heat heater.

4g

The minimum installed capacity of the circulation fans is 20 m³ per m² shed area.

5 Registration

equipment

The following recording equipment must be present:

- equipment for registering the on of the heat heaters (hour counter);
- equipment for registering the realized temperature curve, indoor and outdoor temperature;
- equipment for registering the realized ventilation flow
- equipment for registering the fan capacity curve circulation fans

6 Capacity

As a rule of thumb, the following heating capacities to be installed are listed used (at a desired house temperature of 35 ° C):

- new-build stables; 100 W / m²

- existing stables; 125 W / m²

Different situations may occur for meat turkeys:

- in addition to the space heating by the heaters is also local heating available: the capacity of the heaters can then be increased reduced (the desired room temperature is 25 - 28 ° C).

- some of the animals (usually the roosters) are transferred to another stable transferred after a rearing period of approx. 6 weeks: in this stable need a lower room temperature, of 20 - 23 ° C. The capacity of the heaters can be adjusted to this.

The following applies in all situations: calculation of heaters capacity by supplier.

3 The distance is measured from the outside of the circulation fan.

HEATING USING THE SYSTEM

Part

Usage requirement

a

In (grand) parent animals of broilers in rearing up to 19 weeks:

minimum 900 cm² and maximum 1100 cm² per animal with intent (8.3 to 11.1 animals per m²)

In parent animals of meat turkeys in rearing up to 6 weeks:

At least 625 cm² per animal with intent (16 animals per m²)

In parent animals of meat turkeys in rearing up to 6-30 weeks:

At least 1330 cm² per animal with intent (7.5 animals per m²)

With meat turkeys:

Male animals: Minimum 3330 cm² / animal with intent (3.0 animals per m²)

Female animals: Minimum 2040 cm² / animal at setup (4.9 animals per m²)

b Air flow

The stable air is generated by the continuous operation of the circulation fans

well distributed over the litter surface.

c

Institution

temperature curve

The heating is switched on as needed for extra heat in the house, for this the temperature curve is followed.

d Fan setting

in heat theatre when there is heated

The heating is switched on when the room temperature falls below the temperature set for this purpose is reached, the fan in the heater.

e Fan setting

in heat theater

when not there is heated

When there is no additional heat requirement and therefore not heated

the fan in the heater is off.

f1 Circulation setting fans

The circulation fans run at minimum when the animals are placed 20% capacity. This is increased to a minimum of 30% as soon as the maximum capacity of the heaters has been reached. The capacity is allowed are controlled based on the fan capacity for total ventilation. When there is no more heating, the circulating fans at a minimum of 30% of the capacity. Bee maximum ventilation requirement should be the capacity of the circulation fans also have to be 100%.

f2

The circulation fan located within a few feet of the ejector the heat heater may be used during heating

disabled 4 .

g Registration

For the purpose of verifying the operation of the system, the following data is automatically recorded:

- switching on the heat heaters;
- the on of the circulation fans and the course of the capacity over a round. This to establish that there is continuous sufficient drying air is blown over the litter bed;
- the temperature curve.

Emission factor

Broilers:

0.035 kg NH₃ per animal place per year

Free-range broilers:

0.035 kg NH₃ per animal place per year

Organic broilers:

0.035 kg NH₃ per animal place per year

Large) parent animals of broilers in rearing:

4 The operation of the circulation fan is taken over by the fan in the heating system during heating

heater.

0.129 kg NH₃ per animal place per year

Parent animals of meat turkeys in rearing up to 6 weeks:

0.08 kg NH₃ per animal place per year

Parent animals of meat turkeys in rearing from 6 to 30 weeks:

0.24 kg NH₃ per animal place per year

Meat turkeys:

0.35 kg NH₃ per animal place per year

Reference measurement report

Investigation of ammonia emissions Wesselmannheaters

(BL2009.13756.01, version 3, March 2009)

Update of ammonia emission factors for poultry; Advice for adjustment of ammonia emission factors from poultry in the Ammonia and Livestock Farming Scheme (Rav). Wageningen Livestock

Research, Report 1015

Floor plan and cross-section when using heat heaters and circulation fans

Versions with longitudinal ventilation:

Note: the direction of blowing of the heat heaters can also be from the center to both sides. Versions for ridge ventilation (or combination of ridge and facade ventilation):

Note: The heaters can also be placed in the ridge with this variant. However, because of

this is not preferred to have a negative effect on the air movement.

Name:

Stable with heaters with air mixing system for drying litter layer

Number:

BWL 2011.13.V5

System description

November 2017

System number	BWL 2009.14.V7	
System name	Stable with heating system with heat heaters and fans	
Diercategorie	Rearing hens and roosters of laying breeds (E 1.11), (large) parents of broiler chickens in rearing (E 3.4), broiler chickens (E 5.10), parents of broiler turkeys reared up to 6 weeks and 6 to 30 weeks (F 1.3), (F 2.3), and veal turkeys (F 4.5)	
System description of	January 2020	
Replaces	BWL 2009.14.V6 of November 2017	
Principle of operation	Ammonia emission control is based on drying and heating the manure/litter layer by means of (indirectly fired) heat heat burners and fans. These ensure that warm air is brought down from above the barn. Next, this air is heated by a heat exchanger equipped with a fan (heater) and blown out over the litter. By mixing the barn air, an even temperature is achieved throughout the barn. The manure/litter layer is sprayed and the heavy CO ₂ is expelled from the animals.	
DE TECHNICAL IMPLEMENTATION OF THE SYSTEM; ARCHITECTURAL		
	Part	Uitvoeringseis
1	Vloeruitvoering	The total barn floor construction including any underlying sand layer must have a heat resistance (Rc value) of at least 0.5.
DE TECHNICAL IMPLEMENTATION OF THE SYSTEM; TECHNICAL FACILITIES		
	Part	Uitvoeringseis
2	Huisvestingsvorm	<u>In the case of rearing hens and roosters of laying breeds:</u> Slatted floors with beunen in combination with litter floor. A maximum of 2/3 part of the living surface ¹ is slatted floor. In the middle of the barn there should be a litter floor. <u>For the other animal categories:</u> Full litter floor
3	Drinking water	Drinking water supply equipped with anti-spill system

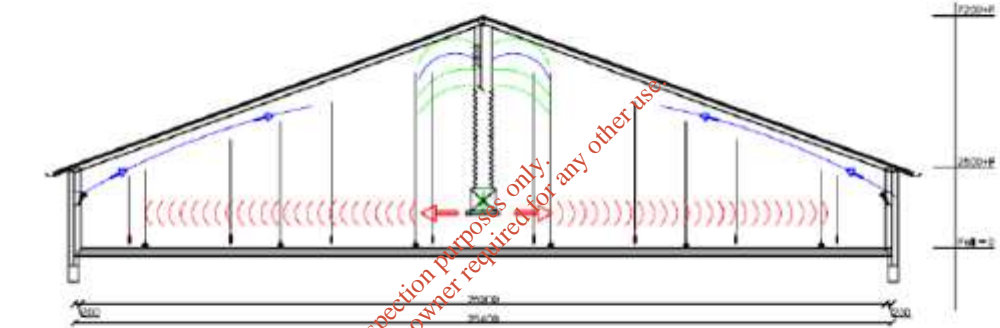
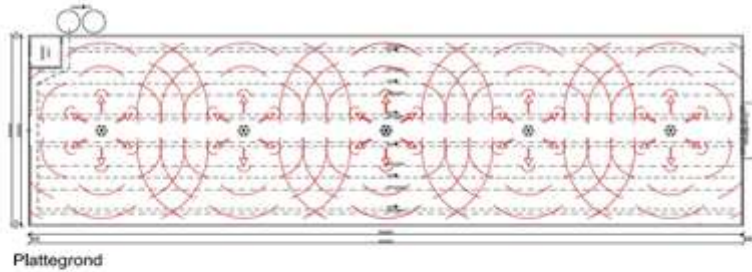
¹ The concept of living area in chickens reared for laying is not defined in legislation and regulations. In practice, the following parts of the barn equipment are included: all available grids, approach platforms up to 40 cm wide and perches (per cm per cm per perch 30 cm² surface). If several perches are placed next to each other (as if in a platform), the size is the outer perches and the length of the system (just like with grids).

4a	Heating and air circulation system	There must be low-maintenance and fire-safe (indirectly fired) heat heaters consisting of a convector with fan, possibly supplemented by a gas combustion chamber.
4b		<p><u>Heat heater with hot water</u> Heater connected to heat pump outside the room available for animals.</p> <p><u>Indirectly fired heat heat</u> Stainless steel indirectly fired heat heat with propane or natural gas as fuel. Combustion air supply from outside the barn and exhaust of flue gases also outside the barn, via a double-walled chimney.</p>
4c		<p><u>Heat heater with hot water</u> Heater on top of the shaft with flexible square shaft or removable fixed shaft. The upper side of the shaft is located at a maximum distance of 2 meters from the highest point of the ceiling of the stable. <u>In naturally ventilated stables with an open ridge, the shaft may be omitted to prevent outside air from being sucked in.</u></p> <p><u>Indirectly fired heat heat</u> In addition to the above specifications, flexible combustion air supply and flue gas exhaust ducts</p>
4d		The heaters are hung under the ridge, spread over the stall length. The heaters hang a maximum of 25 meters apart.
4E		The heat heat is equipped at the bottom with a hexagonal distribution box with movable slats or with a square distribution box, with both vertical and horizontal movable slats or a round conical distribution plate. The position of the slats is such that the air is well distributed over the litter surface, according to the supplier's specification.
4f		A covered floor area of up to 450 m ² per heater.
4h		Fan capacity to be installed: minimum 16 m ³ per m ² barn area per hour
5		Side beunen in rearing hens and roosters of laying breeds
6	Registratieapparatuur	The following recording equipment shall be provided: <ul style="list-style-type: none"> - equipment for recording the lighting of the heat heaters (hour meter) - equipment for recording the realized temperature curve; - equipment for recording the realized ventilation flow rate
7	Capacity of existing stables	Veal turkeys: The capacity of the heaters to be installed is at least 125 Watts per m ² at 25°C ambient temperature. Capacity according to supplier's statement. Other animal categories: The capacity of the heaters to be installed is at least 125 Watts per m ² at 35°C ambient temperature. Capacity according to supplier's statement.
	Capacity of new stables	Veal turkeys: The capacity of the heaters to be installed is at least 100 Watts per m ² at 25°C ambient temperature. Capacity according to supplier's statement. Other animal categories: The capacity of the heaters to be installed is at least 100 Watts per m ² at 35°C ambient temperature. Capacity according to supplier's statement.

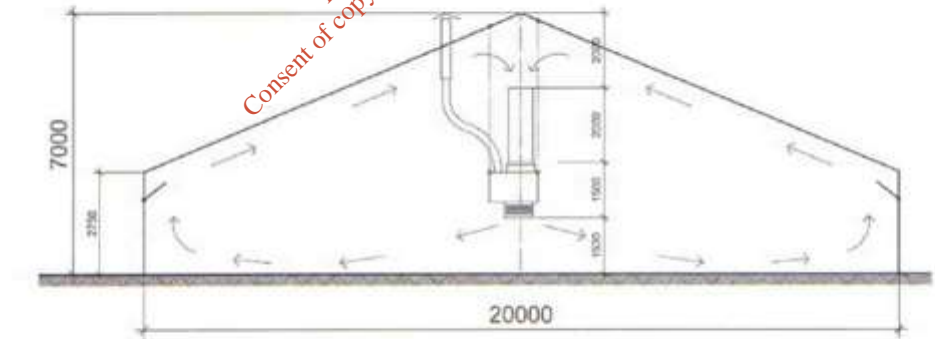
USE OF THE SYSTEM		
	Part	Gebruikseis
a	Leefoppervlak	<p><u>In the case of rearing hens and roosters of laying breeds:</u> Minimum 625 cm² and maximum 714 cm² per animal when set up (14-16 animals per m²)</p> <p><u>In the case of (large) parents of broiler chickens rearing up to 19 weeks:</u> minimum 900 cm² and maximum 1100 cm² per animal by design (8.3 to 11.1 animals per m²)</p> <p><u>In parents of broiler turkeys rearing up to 6 weeks:</u> Minimum 625 cm² per animal at set-up (16 animals per m²)</p> <p><u>In parents of broiler turkeys rearing up to 6-30 weeks:</u> Minimum 1330 cm² per animal at set-up (7.5 animals per m²)</p> <p><u>In broiler turkeys:</u> Male animals: Minimum 3330 cm²/animal by design (3,0 animals per m²) Female animals: Minimum 2040 cm²/ animal by design (4,9 animals by m²)</p>
b	Distance between floor and bottom heater	<p><u>In the case of rearing hens and roosters of laying breeds:</u> The heat heaters should be installed a maximum of 0.5 m above the litter floor in the middle of the barn, so that the air is partly blown out under the gels.</p> <p><u>For the other animal categories:</u> The heat heaters must be installed a maximum of 1.5 m above the floor.</p>
c	Airflow	<p>The air from the upper part of the stall² is led down through the square or round shaft and the heat heaters and then blown well distributed over the litter surface.</p> <p>In the case of rearing hens and roosters of laying breeds, the air must be directed for at least 50% towards the manure storage under the slatted floors of the beunen.</p>
d	Temperature curve setting	The heating is switched on as there is a need for extra heat in the barn, for this the temperature curve is followed.
and	Fan setting in heater when heating	The heating is switched on when the room temperature falls below the temperature curve by 0.5 °C. The fan in the heater runs at minimum level and starts running 100% when the return water is warm enough (this is at 60°C water temperature in a central heating heater) or if the indirectly fired heater is burning at maximum power.
f	Fan setting in heater when not heated	When there is no extra heat requirement and therefore no heating is done, the fan switches to a frequency-controlled control, which must run at at least 20% of the maximum capacity.
g	Registration	For the purpose of checking the operation of the system, the following data shall be recorded automatically: <ul style="list-style-type: none"> - turning on the heater; - turning on the fan in the heater if there is no hot water supply; - of temperatuurcurve.
Emission factor		<p><u>For rearing hens and roosters of laying breeds:</u> 0.088 kg NH₃ per animal place per year</p> <p><u>(Large) parents of broiler chickens reared up to 19 weeks:</u> 0.129 kg NH₃ per animal site per year</p> <p><u>Broiler chickens (including free-range and organic):</u> 0.035 kg NH₃ per animal place per year</p>

² This concerns the air under the roof/ridge of the stable. The air there is warmer than elsewhere in the barn.

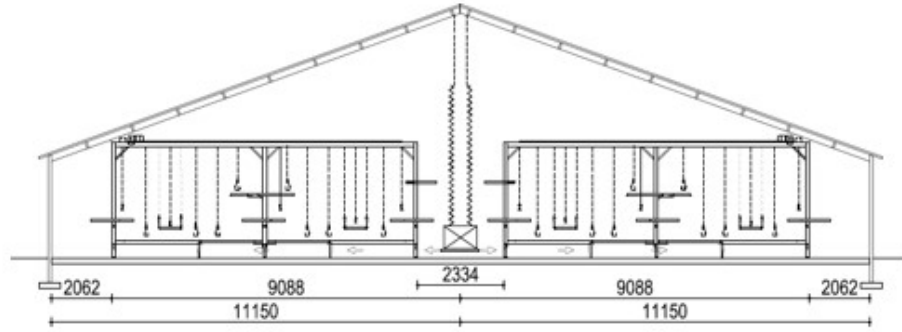
	<p>Parents of broiler turkeys in rearing up to 6 weeks: 0.08 kg NH₃ per animal site per year</p> <p>Parents of broiler turkeys in rearing up to 6-30 weeks: 0.024 kg NH₃ per animal site per year</p> <p>Vleeskalkoenen: 0.350 kg NH₃ per animal pitch per year</p>
Reference measurement report	<p>Research ammonia emissions Wesselmannheaters (BL2009.3756.01)</p> <p>Update ammonia emission factors poultry; Advice for adjusting ammonia emission factors of poultry in the Regulation on ammonia and livestock farming (Rav). Wageningen Livestock Research, Report1015.</p>



Cross-section when using heat heaters with central heating pipes



Cross-section when using indirectly fired heat heat burners



Cross-section when applying heat heaters in combination with beunen in a stable with rearing hens and roosters up to 18 weeks of rearing

Name: stable with Heater with (indirectly fired) heat heaters and ventilators	Number: BWL 2009.14.V7 <hr/> System Description: January 2020
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