

Ecological Impact Assessment

Poultry Unit

Gorteen

Co. Limerick

Report prepared for Enfield Broiler Breeders Ltd

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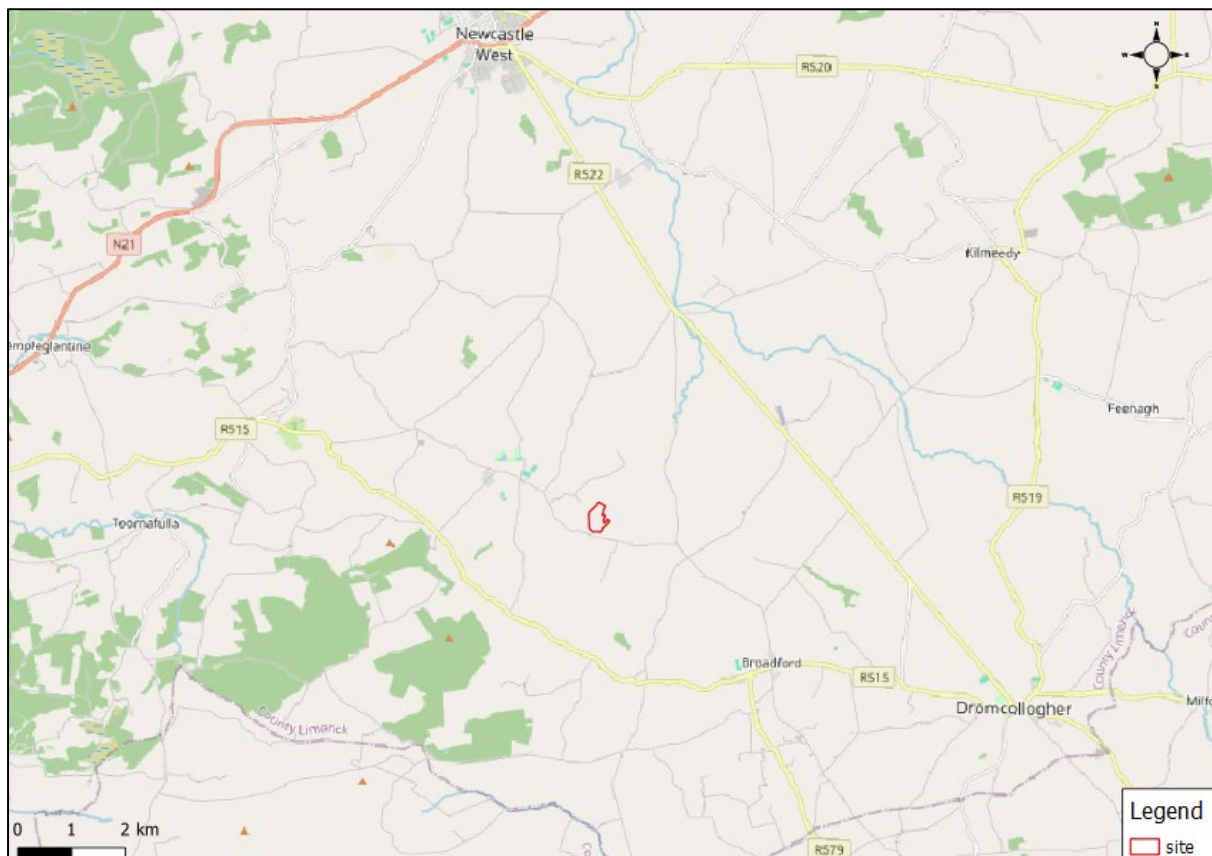
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1 Introduction

Greenleaf Ecology was commissioned by Enfield Broiler Breeders Ltd to undertake an Ecological Impact Assessment (EclA) of a Broiler Breeder House at Gorteen, Co. Limerick. For the purposes of this EclA, the broiler breeder house will be referred to as “the proposed project” hereafter.

The site is located in the townland of Gorteen, to the south of Newcastle West, as illustrated in Figure 1-1.

Figure 1-1: Site Location Map



The purpose of this EclA is to:

- Establish baseline ecological data for the site;
- Determine the ecological value of the identified ecological features;
- Identify, describe and assess the likely significant effects of the site operations on ecological features; and
- Propose effective mitigation measures to avoid, prevent or reduce and, if possible, offset likely effects on ecological features.

1.1 Statement of Competence

This ecological impact assessment was carried out by Karen Banks, MCIEEM. Karen is an ecologist with Greenleaf Ecology and has 18 years' experience in the field of ecological assessment. Karen has extensive experience in the production of Ecological Impact Assessments (EclA) including those for transport infrastructure, small to large scale housing and mixed-use developments, flood alleviation schemes and wind farms. Karen is an experienced and licenced bat surveyor and has conducted bat survey and assessment for numerous projects, including bridge repair and replacement works, domestic dwelling repair and demolition works and large-scale energy and infrastructure projects.

1.2 Description of Proposed Project

The description of the broiler breeder house operation is as follows:

- 39,000 birds on site at any one time
- Chicks arrive at 18 wks old
- Birds stay on site for approx. 13 months and site is run by 2-3 full-time staff during this time
- The site is effectively operated as a closed unit for this entire period
- Water is sourced from an on-site well
- Birds are then removed en masse by specialist operators
- Entire site (all 8 buildings) are emptied/cleaned/disinfected at the end of each 13 month cycle; the cleaning and restocking process takes c.6wks
- Litter is removed by licenced specialist operators (Kelly Brothers)
- 13 month cycle then restarts

Any wastewater generated from the cleaning process is diverted and stored in concrete slatted tanks. This wastewater is subsequently land spread during suitable weather conditions. No soiled wastewater enters the drainage ditches within the site at any time.

Surface water from roofs of sheds and clean concrete yards is diverted directly to land drains.

2 Methodology

2.1 Relevant Planning Policy and Legislation

This report has been prepared with regards to the following legislation, policy documents and guidelines as relevant:

- CIEEM (2017) Guidelines for Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester;
- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester;
- DoEHLG (2010) Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government;
- European Communities (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission;
- European Commission Notice Brussels C (2021) 6913 final 'Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC' (EC, 2021);
- EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission. European Commission;
- EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission;
- EPA (2022) Guidelines on the information to be contained in Environmental Impact Assessment Reports. Environmental Protection Agency;
- EPA (2003), Advice Notes on current practice in the preparation of Environmental Impact Statements. Environmental Protection Agency;
- Fossitt, J., 2000. A Guide to Habitats in Ireland. The Heritage Council, Kilkenny;
- HA (2001) DMRB Volume 10 Section 4 Part 4 - Ha 81/99 - Nature Conservation Advice In Relation To Otters. The Highways Agency;
- National Parks and Wildlife Service (NPWS) (2019) The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht;
- NRA (2009) Guidelines for the Assessment of Ecological Impacts of National Road Schemes Rev. 2. National Roads Authority;
- NRA (2008) NRA Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes). National Roads Authority; and
- NRA Environmental Assessment and Construction Guidelines (both adopted and draft versions).

Studies were also carried out in accordance with the following legislation:

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and Directive 2009/147/EC (codified version of Directive (79/409/EEC as amended (Birds Directive)) – transposed into Irish law as European Communities (Birds and Natural Habitats) Regulations 2011;
- European Communities (Environmental Impact Assessment) Regulations, 1989 to 2006;
- European Communities (Environmental Liability) Regulations, 2008 (S.I. No. 547 of 2008);
- European Communities (Quality of Salmonid Waters) Regulations, 1988 (S.I. No. 84 of 1988);
- Flora Protection Order, 2015;
- Planning and Development Act, 2000 (as amended);

- Water Framework Directive (2000/60/EC); and
- Wildlife Act 1976, as amended.

2.2 Study Area and Zone of Influence

Determination of this project's Zone of Influence (Zoi) was achieved by assessing all elements of the proposed project against the ecological features within the project footprint, in addition to all ecological receptors that could be connected to and subsequently impacted by the project through impact pathways. To this end, the Zoi extends outside of the proposed project footprint to include ecological features connected to the project through proximity and connectivity through features such as waterbodies. Following consideration of the characteristics of the proposed project, as described in Section 1.2, the Zoi for significant impacts to fauna is considered to extend no more than 150m from the proposed project to take account of disturbance impacts.

2.3 Desk Study

The sources of published material that were consulted as part of the desk study for the purposes of the ecological appraisal are as follows:

- Review of the National Parks & Wildlife Service (NPWS) natural heritage database for designated areas of ecological interest and sites of nature conservation importance within the proposed site and its environs;
- Review of Ordnance Survey maps and ortho-photography;
- Review of the National Biodiversity Data Centre (NBDC) database for records of rare and protected species within a 0.5km radius of the proposed site, including:
 - Annex I habitats, Annex II species and their habitats, and Annex IV species and their breeding sites and resting places (wherever they occur) as identified in the EU Habitats Directive;
 - The presence of species of flora and fauna as identified and strictly protected under the European Communities (Birds and Natural Habitats) Regulations, 2011; and
 - Species of fauna and flora which are protected under the Wildlife Acts (as amended), 'Protected species and natural habitats' as defined in the Environmental Liability Directive (2004/35/EC) and European Communities (Environmental Liability) Regulations, 2008;
- Collation of known bat records from within a 4km radius¹ of the proposed site from the National Bat Database held by the NBDC;
- 1:50,000 Ordnance Survey (OS) Map; Discovery Series; and
- Environmental Protection Agency mapping (<http://gis.epa.ie/Envision>).

2.4 Field Survey

A walkover survey of the proposed site was carried out by ecologist Ms Karen Banks on 19th April 2024. Flora and habitats within the proposed site were surveyed using the methodology outlined in the guidance document Best Practice Guidance for Habitat Survey and Mapping (Smith et al., 2011). The habitats found in the proposed site (shown on Figure 3-3), were classified in accordance with the guidelines set out in 'A Guide to Habitats in Ireland' (Fossitt, 2000), which classifies habitats based on the vegetation present and management history. The classification is a standard scheme for identifying, describing and classifying wildlife habitats in Ireland. The classification is hierarchical and operates at three levels, outlining the correlation between its habitat categories and the phytosociological units (plant communities) of botanical classifications. Dominant species, indicator species and/or species of conservation interest were recorded and species recorded were given both their Latin and common names, following the nomenclature as given in the 'New flora of the British

¹ A 4km radius search distance was selected to encompass records of bat roosts within Core Sustainance Zones (CSZ) of the study area for Irish species of bat. A CSZ refers to the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the conservation status of the colony using the roost (Collins, 2016).

Isles' (Stace, 2019). Habitat potentially linked to European Annex I habitats was assessed based on the Interpretation Manual of EU Habitats (European Commission, 2013) and The Status of EU Protected Habitats and Species in Ireland (NPWS, 2019).

A survey for invasive species was conducted during the habitat and botanical survey undertaken on the on 19th April 2024. This survey included the identification and mapping of Invasive Alien Plant Species (IAPS). This survey was conducted in accordance with the NRA publication "Guidelines for the Management of Noxious Weeds and Non- Native Invasive Plant Species on National Roads".

The site walkover conducted on the on 19th April 2024 included an assessment of the presence, or likely presence, of protected species. The survey was conducted in accordance with the standard protected species survey guidelines contained in the National Roads Authority publication 'Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes' (2009). The surveys were conducted for areas of habitat that might support protected mammals in addition to recording any field signs, such as well-used pathways, droppings, places of shelter and features or areas likely to be of particular value as foraging resources. Any badger setts present were recorded during the site walkover, along with potential pine marten den sites. In addition, the suitability of the habitat for pygmy shrew, hedgehog, Irish stoat, pine marten, amphibians and invertebrates were recorded.

Targeted faunal surveys were undertaken as detailed in Section 2.4.1 to Section 2.4.3 below.

2.4.1 Badger Survey

Badger survey was conducted within the proposed site on the 19th April 2024. The badger survey was conducted in accordance with Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes (NRA, 2009).

Field signs of badger activity are characteristic and sometimes quite obvious and can include tufts of hair caught on barbed wire fences and scrub, conspicuous badger paths, footprints, small excavated pits or latrines in which droppings are deposited, scratch marks on trees, and snuffle holes, which are small scrapes where badgers have searched for insects and plant tubers (NRA, 2009).

Notes were made on signs of other mammals in order to deduce the likelihood of faint tracks and/or feeding signs belonging to badgers. The objectives of the badger survey were to:

- Confirm whether or not badger setts occur within the area surveyed.
- Confirm where possible the status of any setts identified in survey.
- Describe field signs of badger activity.

2.4.2 Otter

An otter survey of the Ballintober East stream adjoining the proposed site boundary was conducted on 19th April 2024.

The banks of the watercourses were searched for field signs including:

- Sleeping and resting places including holts, couches and natal dens;
- Breeding sites;
- Spraints;
- Pathways/ trails;
- Slides;
- Hairs;
- Footprints; and
- Food remains.

Natal dens tend to be well hidden and therefore can be hard to locate. Survey for natal dens was undertaken by searching for field signs including:

- Any heavily used path or paths from the water into dense cover or an enclosed structure;
- Bedding within the structure which may consist of grass, ferns or reeds (bedding may also be present in other types of resting places);
- A latrine containing a large number of spraints at the den or within 2m of it (however, it is important to note that there are often no droppings at a natal den as the female will excrete in the water to ensure that there are no signs of occupation near the natal den);
- A cub play area which may be a well-worn area around a tree or on a bank; and
- Different sized otter prints.

2.4.3 Bats

Bat survey and assessment at the proposed site was in accordance with the following guidelines:

- Andrews, H. (2018) *Bat Roosts in Trees*. A guide to identification and assessment for tree-care and ecology professionals. Pelagic Publishing;
- Collins, J. (ed.) (2023). *Bat Surveys for Professional ecologists: Good Practice Guidelines* (4th ed.). The Bat Conservation Trust, London; and
- Marnell, F., Kelleher, C. & Mullen, E. (2022) *Bat mitigation guidelines for Ireland v2*. Irish Wildlife Manuals, No. 134. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.

2.4.3.1 Preliminary Roost Assessment

The trees within the proposed site were surveyed in conjunction with the site walkover surveys undertaken on 19th April 2024 for potential roost sites and signs of bats. A detailed inspection of the exterior of trees was undertaken to look for features that bats could use for roosting (Potential Roost Features, or PRFs) from ground level. The aim of the survey was to determine the actual or potential presence of bats and the need for further survey and/or mitigation.

A detailed inspection of each tree within the site was undertaken. The inspection was carried out in daylight hours from ground level, and information was compiled about the tree, PRFs and evidence of bats. All trees supporting PRFs were marked on a map and a description of each PRF observed was recorded. PRFs that may be used by bats include:

- Rot holes;
- Hazard beams;
- Other horizontal or vertical cracks or splits (e.g. frost cracks) in stems or branches;
- Lifting bark;
- Knotholes arising from naturally shed branches or branches previously pruned back to the branch collar;
- Man-made holes (e.g. flush cuts) or cavities created by branches tearing out from parent stems;
- Cankers in which cavities have developed;
- Other hollows or cavities;
- Double leaders forming compression forks with included bark and potential cavities;
- Gaps between overlapping stems or branches;
- Partially detached ivy with stem diameters in excess of 50mm; and
- Bat or bird boxes.

Signs of a bat roost (excluding the actual presence of bats), include:

- Bat droppings in, around or below a PRF;
- Odour emanating from a PRF;

- Audible squeaking at dusk or in warm weather; and
- Staining below the PRF.

It should be noted that bats or bat droppings are the only conclusive evidence of a roost and many roosts have no external signs. In the current survey, potential roost sites were viewed by a bat specialist working from ground level. Trees were categorised according to the highest suitability PRF present.

The criteria for categorisation of suitability for bats is described further in Table 2-2.

Table 2-1: Suitability of Habitats for Bats

Suitability	Description Roosting habitats in structures	Potential flight paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/ suitable shelter at all ground/ underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/ protection for flight-lines, or generate/ shelter insect populations available to foraging bats).
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or un-vegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation- the categorisation described in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved

	status roosts e.g. maternity or classic cool/stable hibernation site.	woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
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2.5 Impact Assessment Criteria

The information gathered from desk study and survey has been used to make an ecological impact assessment (EclA) of the proposed project upon the identified ecological features. The EclA has been undertaken following the methodology set out in CIEEM (2018). EclA is based upon a source-pathway-receptor model, where the source is defined as the individual elements of the proposed project that have the potential to affect identified ecological features. The pathway is defined as the means or route by which a source can affect the ecological features. An ecological feature is defined as the species, habitat or ecologically functioning unit of natural heritage importance. Each element can exist independently however an effect is created where there is a linkage between the source, pathway and feature.

A significant effect is defined in CIEEM (2018) as:

“an effect that either supports or undermines biodiversity conservation objectives for ‘important ecological features’.... or for biodiversity in general”.

Further, BS 42020:2013 states that if an effect is sufficiently important to be given weight in the planning balance or to warrant the imposition of a planning condition, e.g. to provide or guarantee necessary mitigation measures, it is likely to be “significant” in that context at the level under consideration. The converse is also true: insignificant effects would not warrant a refusal of permission or the imposition of conditions.

The geographical reference used for ecological valuation follows NRA (2009) *Guidelines for the Assessment of Ecological Impacts of National Road Schemes Rev. 2.*, as detailed in Appendix A. Ecological features might also be important because they play a key functional role in the landscape as ‘stepping stones’ for migratory species to move during their annual migration cycle, as well as for species to move between sites, to disperse populations to new locations, to forage, or move in response to climate change.² Features of lower ecological value are not assessed.

² Ref Article 10 of the Habitats Directive: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0043:EN:HTML>

3 Receiving Environment

3.1 Designated Sites

A review of European designated sites within a 10km radius of the proposed site was undertaken (www.npws.ie). Special Areas of Conservation (SACs) are sites of international importance due to the presence of Annex I habitats and / or Annex II species listed under the EU Habitats Directive. Special Protection Areas (SPAs) are designated for birds based on the presence of internationally significant populations of listed bird species.

A review of nationally designated sites within a 10km radius of the proposed site was also undertaken. Natural Heritage Areas (NHAs) are sites deemed to be of national ecological importance and are afforded protection under the Wildlife Acts. The proposed Natural Heritage Area (pNHA) have not been statutorily proposed or designated; however, they do have some protection under agri-environmental farm planning schemes such as Rural Environment Protection Scheme (REPS 3 and 4) and Agri Environmental Options Scheme (AEOS), Forest Service requirement for NPWS approval for afforestation grants in pNHA lands and recognition of the value of pNHAs by Planning and Licensing Authorities.

There are three European sites within 10km of the proposed site. The proposed site is located c.2.2km north-east of the Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA. A review of nationally designated sites indicates that there are no proposed Natural Heritage Areas (pNHAs) and one Natural Heritage Areas (NHA) within 10km of the proposed project.

A list of European sites recorded within 10km of the proposed project is presented in Table 3-1 and a list of nationally designated sites within 10km of the proposed project is presented in Table 3-2. European sites are illustrated in Figure 3-1 and proposed Natural Heritage Areas are illustrated in Figure 3-2.

Table 3-1: European sites within 10km of the proposed site

Site Name and Code	Qualifying Interests	Distance from Proposed Development (km) ³	Connectivity
Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (Site Code: 004161)⁴	Bird Species Hen Harrier (<i>Circus cyaneus</i>) [A082]	2.2km	There is no hydrological connectivity between the proposed site and this SPA. The proposed site and this SPA are both located within the Shanagolden ground waterbody. However, review of local topography indicates that ground water at the proposed site would not flow in the direction of this SPA. No connectivity.
Lower River Shannon SAC	Annex I Habitats	4.7km	The Lower River Shannon SAC is located c.40km

³ Distance measured "as the crow flies"

⁴ [Lower River Shannon SAC | National Parks & Wildlife Service \(npws.ie\)](http://www.npws.ie)

Site Name and Code	Qualifying Interests	Distance from Proposed Development (km) ³	Connectivity
<p>(Site Code: 002165)</p>	<p>Sandbanks which are slightly covered by sea water all the time [1110] Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoons [1150] Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] <i>Salicornia</i> and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glaucopuccinellietalia 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] <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0] Annex II Species <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] <i>Petromyzon marinus</i> (Sea Lamprey) [1095] <i>Lampetra planeri</i> (Brook Lamprey) [1096] <i>Lampetra fluviatilis</i> (River Lamprey) [1099] <i>Salmo salar</i> (Salmon) [1106] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349] <i>Lutra lutra</i> (Otter) [1355]</p>		<p>downstream of the proposed site. There is no hydrogeological connectivity or connectivity via any other pathway.</p>
<p>Blackwater River (Cork/Waterford) SAC (Site Code: 002170)</p>	<p>Annex I Habitats Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Perennial vegetation of stony banks [1220] <i>Salicornia</i> and other annuals colonising mud and sand [1310]</p>	<p>6.1km</p>	<p>There is no connectivity via surface water, ground water or any other pathway.</p>

Site Name and Code	Qualifying Interests	Distance from Proposed Development (km) ³	Connectivity
	<p>Atlantic salt meadows (Glaucopuccinellietalia maritimae) [1330]</p> <p>Mediterranean salt meadows (Juncetalia maritimi) [1410]</p> <p>Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation [3260]</p> <p>Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]</p> <p>Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) [91E0]</p> <p>Annex II Species</p> <p><i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]</p> <p><i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092]</p> <p><i>Petromyzon marinus</i> (Sea Lamprey) [1095]</p> <p><i>Lampetra planeri</i> (Brook Lamprey) [1096]</p> <p><i>Lampetra fluviatilis</i> (River Lamprey) [1099]</p> <p><i>Alosa fallax fallax</i> (Twaite Shad) [1103]</p> <p><i>Salmo salar</i> (Salmon) [1106]</p> <p><i>Lutra lutra</i> (Otter) [1355]</p> <p><i>Trichomanes speciosum</i> (Killarney Fern) [1421]</p>		

Table 3-2: Nationally designated sites within 10km of the proposed site

Site Name and Code	Qualifying Interests	Distance from Proposed Development (km) ⁵	Connectivity
Lough Gay Bog NHA (Site Code: 002454)	Peatlands [4]	4.1	There is no connectivity via surface water, ground water or any other pathway.

⁵ Distance measured “as the crow flies”

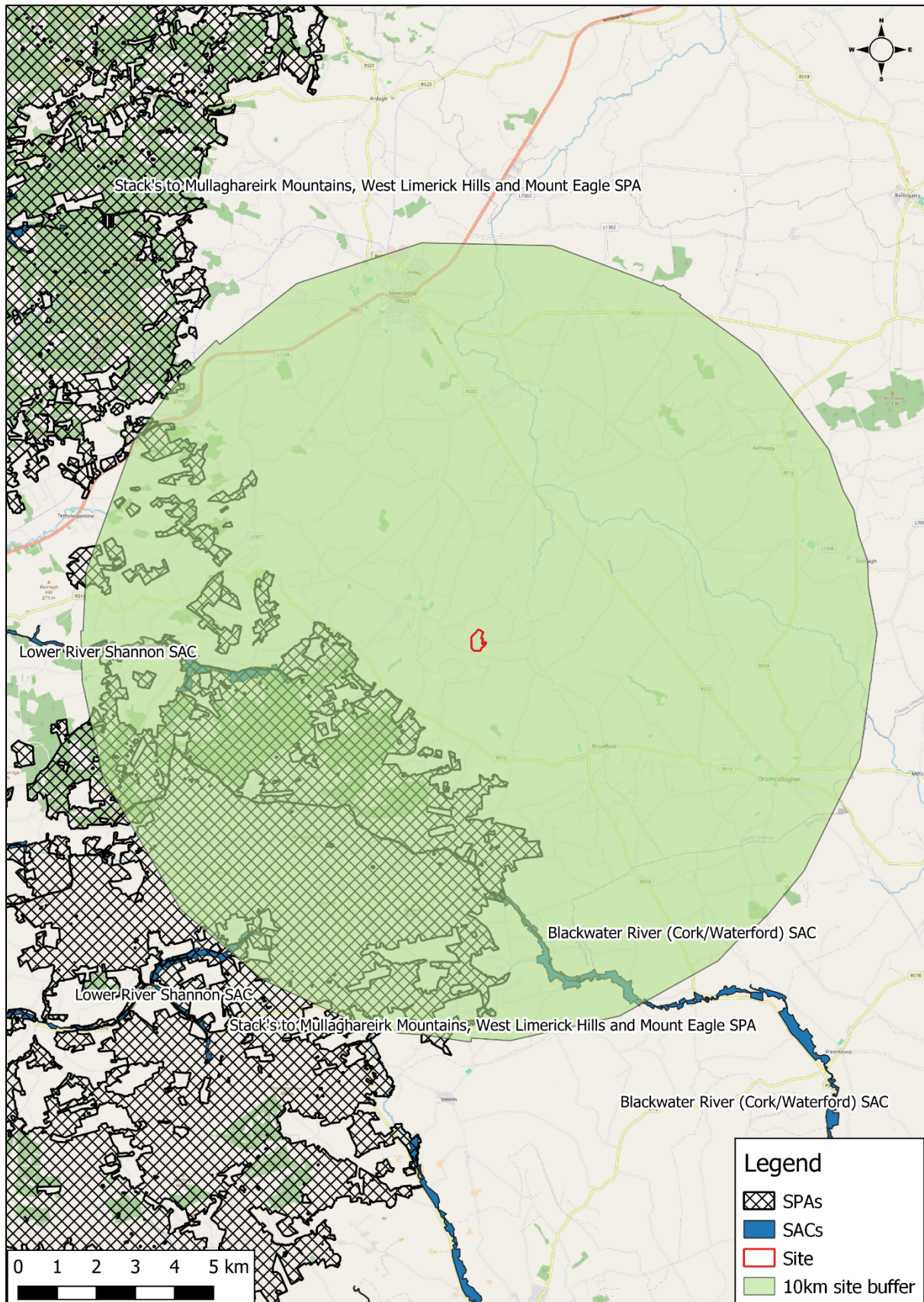


Figure 3-1: European sites within 10km of the proposed site

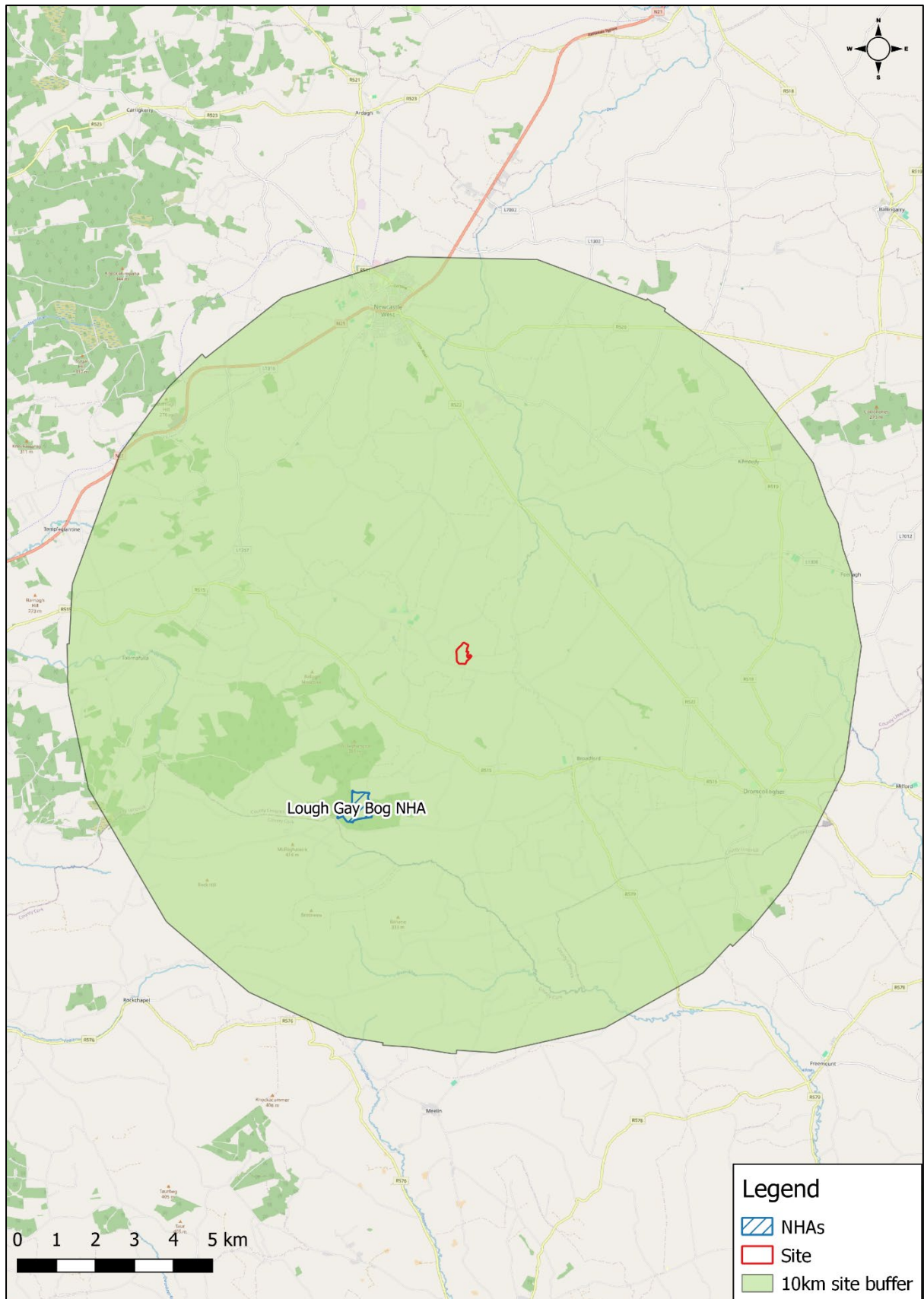


Figure 3-2: Nationally designated sites within 10km of the proposed site

3.2 Terrestrial Ecology

3.2.1 Habitats

The site comprises the poultry houses (built land) and wet grassland bound by hedgerows as described below.

The grassland has not been improved in recent years and comprises Timothy, Meadow Foxtail, Yorkshire Fog (*Holcus lanatus*), Creeping Bent, Sweet Vernal-grass (*Anthoxanthum odoratum*), Soft Rush (*Juncus effusus*) and occasional Hard Rush (*J. inflexus*). Herbs present include Cuckoo-flower (*Cardamine pratensis*), Dandelion (*Taraxacum* agg), Curled Dock (*Rumex crispus*), Common Sorrel (*R. acetosa*), Common Mouse-ear (*Cerastium fontanum*) and Meadowsweet (*Filipendula ulmaria*) and Iris (*Iris pseudacorus*) locally in wet depressions in the topography. This habitat is a relatively species poor example of wet grassland (GS4). As it occurs at the proposed site, this habitat does not correspond to the Annex I habitat '*Molinia meadows on calcareous, peaty or clayey-siltladen soils (Molinion caeruleae)* [6410].

The site is bound by hedgerows (WL1) dominated by Hawthorn (*Crataegus monogyna*), with Willow (*Salix cinerea*), Bramble (*Rubus fruticosus* agg) and Gorse (*Ulex europaeus*) also present.

Two wet ditches (FW4) are present within the site which drain towards the Ballintober East stream on the eastern site boundary. As mapped by the EPA ([EPA Maps](#)), the Ballintober East stream rises at the proposed site and at its location on the eastern site boundary is a drainage ditch associated with the hedgerow, and is completely overgrown with Bramble and Willow scrub.

Buildings and artificial surfaces (BL3) are also present in the form of the poultry houses, staff facilities and access road.

A habitat map of the site is illustrated in Figure 3-3.

Figure 3-3: Habitats recorded at the site



3.2.2 Species

This section describes the species that have been recorded historically in the environs of the site, results from site surveys and the potential for the site to support protected species. Species records extracted from the NBDC database are included in Appendix B.

3.2.2.1 *Amphibians and Reptiles*

The NBDC does not hold any records of amphibians or reptiles from the site and its environs. Standing water within the drainage channels at the site support habitat suitable for breeding frog, however, no signs of frog were observed on site during the survey undertaken on 19th April 2024.

3.2.2.2 *Flora*

There are no records of protected species of vascular plants, bryophytes or liverworts from the vicinity of the site. No protected plant species were recorded during the site survey.

3.2.2.3 *Invasive Species*

There are no records of invasive species from the site and its environs. No invasive plant species were recorded at the site and its immediate environs during the site survey.

3.2.2.4 *Invertebrates*

The NBDC does not hold any records of protected species of invertebrate from the site and its environs. The Annex II butterfly Marsh Fritillary can be found on wet grassland habitat, however, as noted previously, the wet grassland at the site is relatively species poor and does not support Devil's-bit-Scabious, the food plant of Marsh Fritillary. The habitats present within the site are not suitable to support Marsh Fritillary.

3.2.2.5 *Birds*

The NBDC hold records of eight species included in Annex I of the EU Bird's Directive from within a 0.5km radius of the site, namely Kingfisher, Corn Crake, Golden Plover, Nightjar, Hen Harrier, Little Egret, Merlin and Peregrine Falcon. Twelve BoCCI (Gilbert, G. *et al* (2021)) Red List species have been recorded from within a 0.5km radius of the site: Barn Owl, Black-headed Gull, Corn Crake, Eurasian Curlew, Golden Plover, Nightjar, Herring Gull, Northern Lapwing, Northern Shoveler, Red Grouse, Twite and Yellowhammer.

Avifaunal species recorded at the site during the walkover survey reflected the habitats present (Table 3-3). A total of ten species were recorded, nine of which are widespread and are included on the BoCCI Green List (Least Conservation Concern) and one included on the BoCCI red list: Meadow Pipit. The treelines and woodland at the site supported passerines including Robin, Wren, Chiffchaff, Chaffinch, Song Thrush, Willow Warbler and Goldfinch.

Table 3-3: Results of bird survey (April 2024)

Common Name	Species Name	BOCCI ⁶
Blackbird	<i>Turdus merula</i>	Green
Chaffinch	<i>Fringilla coelebs</i>	Green
Chiffchaff	<i>Phylloscopus collybita</i>	Green
Goldfinch	<i>Carduelis carduelis</i>	Green
Meadow Pipit	<i>Anthus pratensis</i>	Red
Robin	<i>Erithacus rubecula</i>	Green
Rook	<i>Corvus frugilegus</i>	Green
Song Thrush	<i>Turdus philomelos</i>	Green
Willow Warbler	<i>Phylloscopus trochilus</i>	Green
Wren	<i>Troglodytes troglodytes</i>	Green

3.2.2.6 Bats

The review of existing records of bat species in the environs of the site indicates that three of the ten known Irish species of bat have been recorded within a 4km radius of the site (last checked June 2024). These bats include soprano pipistrelle (*P. pygmaeus*), Leisler's bat (*Nyctalus leisleri*) and Daubenton's bat (*Myotis daubentonii*) as shown in Table 3-4 below. There are no records on the NBDC database of bats roosting within 4km of the site.

Table 3-4: NBDC bat records from within a 4km radius of the site.

Common Name	Scientific Name	Present	Known Roost (to OS 1km grid square)	Date of Last Record
Pipistrelle sp.	<i>Pipistrellus pipistrellus sensu lato</i>	x	n/a	n/a
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	√	None	24/04/2021
Nathusius's Pipistrelle	<i>Pipistrellus nathusii</i>	x	n/a	n/a
Leisler's Bat	<i>Nyctalus leisleri</i>	√	None	24/04/2021
Brown Long-eared Bat	<i>Plecotus auratus</i>	x	n/a	n/a
Daubenton's Bat	<i>Myotis daubentonii</i>	√	None	24/04/2021
Whiskered Bat	<i>Myotis mystacinus</i>	x	n/a	n/a
Natterer's Bat	<i>Myotis nattereri</i>	x	n/a	n/a
Lesser Horseshoe Bat	<i>Rhinolophus hipposideros</i>	x	n/a	n/a
Brandt's Bat	<i>Myotis brandtii</i>	x	n/a	n/a

The bat landscape association model (Lundy *et al*, 2011) suggests that the site is part of a landscape that is of moderate to high suitability for bats including common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle, brown long-eared, Leisler's, Daubenton's and Natterer's bat. The site and its environs are of low suitability for Nathusius' pipistrelle, whiskered bat and lesser horseshoe bat.

⁶ Gilbert *et al* (2021)

3.2.2.6.1 Preliminary Roost Assessment

The hedgerows at the proposed site are dominated by Hawthorn; no mature standard trees are present. As such, no potential tree roosts were recorded within the proposed site.

The buildings at the proposed site are agricultural sheds/ poultry houses and are not suitable to support roosting bats.

3.2.2.7 Badger

The NBDC database does not hold any records of badger from the site and its environs. No badger setts were recorded within the site, however mammal tracks and badger droppings were recorded at the east of the site indicating that the site forms part of the foraging territory of a local badger population.

3.2.2.8 Other Mammals

Records of fallow deer are general records from the 10k OS grid square that the site is situated in (R32), last recorded in 2008. No evidence of deer was recorded during the site surveys, and it is unlikely that the site supports this species.

The NBDC does not hold any records of other protected species of mammal at the site and its environs. However, there is suitable habitat for hedgehog within field boundaries.

3.3 Hydrology

3.3.1 Water Bodies

The site is located within the Bunoke_020 sub-basin. The Ballintober East 1st order stream rises at the eastern site boundary. The Bunoke_010, a 3rd order watercourse, is located c.400m south of the site. The Ballintober East stream flows into the Bunoke River to the north of the site; the Bunoke River then and flows into the Deel (Newcastle West)_070 c.4.9km north of the site. The Deel then flows into the Lower Shannon Estuary a total of c.40km downstream of the site.

The site overlies the Shanagolden Ground Waterbody (GWB).

EPA codes for these water bodies are shown below in Table 3-5.

Table 3-5: EPA water body codes

EPA water body name	Water body type	EPA Code	EPA water body code
Bunoke	River	24B06	IE_SH_24B060100
Deel (Newcastle West)	River	24D02	IE_SH_24D020600
Lower Shannon Estuary	Transitional	n/a	IE_SH_060_0300
Shanagolden	Groundwater	n/a	IE_SH_G_203

3.3.2 Surface Water Quality and Risk Characterisation

The nearest Q-value available is at the Bunoke Bridge c.4.8km downstream from the site. The Q-value was given a rating of '4' classified as 'Good'. The Bunoke_20 waterbody is considered 'Not at risk' and 'Good' under the 2016-2021 WFD, while the Deel (Newcastle West) river is recorded as 'at risk' and 'moderate' under the WFD. The Lower Shannon Estuary was 'not at risk' and 'good' under the WFD. The Shanagolden ground waterbody was 'not at risk' and 'good' under the WFD.

A summary of the WFD and Risk status⁷ is shown below in Table 3-6.

Table 3-6: Summary of WFD status for waterbodies in the environs of the site

EPA Name	Waterbody	Code	Risk	WFD Status 2016-2021
Bunoke		IE_SH_24B060100	Not at risk	Good
Deel West)	(Newcastle	IE_SH_24D020600	At risk	Moderate
Lower Estuary	Shannon	IE_SH_060_0300	Not at risk	Good
Shanagolden		IE_SH_G_203	Not at risk	Good

3.4 Summary of Ecological Evaluation

Table 3-7 summarises all identified ecological features. Ecological features have been identified as being at risk of potentially significant impacts via a source-pathway-receptor link. Ecological features are valued as being of local ecological importance (higher value) or above as per the criteria set out in Appendix A.

Table 3-7: Ecological Features within the site and it's receiving environment

Site/ Habitat/ Species	Ecological Value ⁸	Ecological Feature
European Site	International. There is remote hydrological connectivity between the proposed site and Lower River Shannon SAC and the site is in relatively close proximity to the Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA.	Yes
Natural Heritage Area	National. There is no connectivity between the proposed site and nationally designated sites.	No
Buildings and artificial surfaces (BL3)	Negligible conservation importance.	No
Wet grassland (GS4)	Local conservation importance (lower value). As it is represented at the proposed site, this habitat is not of botanical importance. However, it does provide suitable habitat for mammals, invertebrates and avifauna.	No
Drainage ditch (FW4)	The drainage ditches within the fields support standing/ very slow flowing water and a layer of sediment. The drainage ditch at the east of the site is completely overgrown and is not of fisheries value. Nonetheless, the drainage ditches provide a drinking resource for fauna and feed into the EPA mapped Ballintober East stream. Local importance (higher value).	Yes
Hedgerows (WL1)	Local importance (Higher Value). Linear woodland habitats such as hedgerows and treelines provide valuable ecosystem services for other semi-natural habitats and faunal species in the locality in terms of cover, refuge and connectivity.	Yes
Amphibians & Reptiles	The drainage ditches at the site provides suitable breeding habitat for common frog, however no	No

⁷ <https://www.catchments.ie/maps/>

⁸ In accordance with NRA (2009) Guidelines for the Assessment of Ecological Impacts of National Road Schemes Rev. 2. National Roads Authority

	evidence of this species was recorded during the site survey.	
Avifauna	Avifauna as they occur within the proposed site are considered to be of local importance (higher value)	Yes
Bats	There is no potential bat roosting habitat at the proposed site. However, the proposed site provides foraging and commuting habitat for bats. Bats, as they likely occur at the site, are considered to be of local Importance (higher value)	Yes
Badger	No badger setts were recorded within the proposed site, however mammal tracks and badger droppings were recorded in a field at the east of the site. The proposed site likely forms part of badger territory.	Yes
Ground mammals	The field boundaries may support hedgehog, however the site is unlikely to provide sustained support for other protected species of ground mammal.	No

4 Potential Impacts of the Proposed Project

This section identifies in detail the potential impact of the proposed project on habitats and species of conservation value (i.e. ecological features as identified in Table 3-7) that have been identified as present, or that have the potential to be present, at its receiving environment.

4.1 Construction Phase

The Broiler Breeder House at Gorteen, Co. Limerick has already been constructed and no further construction is proposed. Therefore, there will be no effects on ecological features as a result of construction activities.

4.2 Operational Phase

This section details the principle potential impacts of the Broiler Breeder House, Gorteen, Co. Limerick during the operational phase, in the absence of mitigation.

4.2.1 Designated Sites

Potential impacts on European sites are considered in the Report to Inform Screening for Appropriate Assessment accompanying the planning application. The Report to Inform Screening for AA concludes that:

“The Broiler Breeder House at Gorteen, Co. Limerick, either alone or in-combination with other plans and/or projects, does not have the potential to significantly affect any European site, in light of their conservation objectives. Therefore, a Stage 2 Appropriate Assessment is deemed not to be required.”

No risk of adverse effects on nationally designated sites during the operational phase has been identified.

4.2.2 Habitats

4.2.2.1 Drainage ditch

During the operation of the broiler breeder house, wastewater generated from the cleaning process undertaken approximately every 13 months is diverted and stored in concrete slatted tanks. This wastewater is subsequently land spread during suitable weather conditions. No soiled wastewater enters the drainage ditches within the site at any time.

Surface water from roofs of sheds and clean concrete yards is diverted directly to land drains.

The broiler breeder house does not emit any substances into drainage ditches within the proposed site. Therefore, no significant adverse effects on the drainage ditch (EPA mapped stream) at the eastern site boundary are expected to occur during the operation of the broiler breeder house.

4.2.2.2 Hedgerows

No significant adverse effects on hedgerows will occur during the operation of the broiler breeder house.

4.2.3 Species

4.2.3.1 Avifauna

There are no emissions associated with the operation of the poultry house that would affect birds as a result of degradation of habitat or disturbance impacts. No significant adverse effects on avifauna will occur during the operation of the broiler breeder house.

4.2.3.2 *Bats*

There is no nighttime lighting at the site therefore there will be no impacts on bats as a result of artificial lighting at night.

There are no emissions associated with the operation of the poultry house that would affect bats as a result of degradation of habitat or disturbance impacts. No significant adverse effects on bats will occur during the operation of the broiler breeder house.

4.2.3.3 *Badger*

Badger droppings were recorded at the east of the site and it is likely that the proposed site forms part of the foraging area of a badger population. The operation of the broiler breeder house will not affect available foraging habitat for badger.

No significant adverse effects on badger will occur during the operation of the broiler breeder house.

5 Mitigation

5.1 Construction Phase

The broiler breeder house is already constructed and no further construction works are proposed. Therefore, no specific mitigation is required for construction.

5.2 Operational Phase

5.2.1 Designated Sites

The requirement for mitigation for European sites is considered within in the AA screening report accompanying the Planning Application.

No significant adverse effects on nationally designated sites have been identified, therefore no specific mitigation measures are required.

5.2.2 Habitats

As described in Section 4.2.2.1, no soiled wastewater enters the drainage ditches within the site at any time. Therefore, no further specific mitigation measures are required.

5.2.3 Species

No significant adverse effects on species are expected to arise during the operational phase, therefore no specific mitigation measures are required.

5.3 Residual Impacts

No residual impacts on ecological receptors will occur as a result of the Broiler Breeder House at Gorteen, Co. Limerick.

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Appendix A: Geographic Reference for Ecological Assessment

Ecological Valuation
<p>International Importance:</p> <p>'European Site' including Special Area of Conservation (SAC), Site of Community Importance (SCI), Special Protection Area (SPA) or proposed Special Area of Conservation. Proposed Special Protection Area (pSPA). Site that fulfils the criteria for designation as a 'European Site' (see Annex III of the Habitats Directive, as amended). Features essential to maintaining the coherence of the Natura 2000 Network. Site containing 'best examples' of the habitat types listed in Annex I of the Habitats Directive. Resident or regularly occurring populations (assessed to be important at the national level) of the following: Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; and/or Species of animal and plants listed in Annex II and/or IV of the Habitats Directive. Ramsar Site (Convention on Wetlands of International Importance Especially Waterfowl Habitat 1971). World Heritage Site (Convention for the Protection of World Cultural & Natural Heritage, 1972). Biosphere Reserve (UNESCO Man & the Biosphere Programme). Site hosting significant species populations under the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals, 1979). Site hosting significant populations under the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats, 1979). Biogenetic Reserve under the Council of Europe. European Diploma Site under the Council of Europe. Salmonid water designated pursuant to the European Communities (Quality of Salmonid Waters) Regulations, 1988, (S.I. No. 293 of 1988).</p>
<p>National Importance:</p> <p>Site designated or proposed as a Natural Heritage Area (NHA). Statutory Nature Reserve. Refuge for Fauna and Flora protected under the Wildlife Acts. National Park. Undesignated site fulfilling the criteria for designation as a Natural Heritage Area (NHA); Statutory Nature Reserve; Refuge for Fauna and Flora protected under the Wildlife Act; and/or a National Park. Resident or regularly occurring populations (assessed to be important at the national level) of the following: Species protected under the Wildlife Acts; and/or Species listed on the relevant Red Data list. Site containing 'viable areas' of the habitat types listed in Annex I of the Habitats Directive.</p>
<p>County Importance:</p> <p>Area of Special Amenity. Area subject to a Tree Preservation Order. Area of High Amenity, or equivalent, designated under the County Development Plan. Resident or regularly occurring populations (assessed to be important at the County level) of the following: Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; Species of animal and plants listed in Annex II and/or IV of the Habitats Directive; Species protected under the Wildlife Acts; and/or Species listed on the relevant Red Data list. Site containing area or areas of the habitat types listed in Annex I of the Habitats Directive that do not fulfil the criteria for valuation as of International or National importance. County important populations of species or viable areas of semi-natural habitats or natural heritage features identified in the National or Local BAP, if this has been prepared. Sites containing semi-natural habitat types with high biodiversity in a county context and a high degree of naturalness, or populations of species that are uncommon within the county. Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.</p>

Local Importance (higher value):

Locally important populations of Priority species or habitats or natural heritage features identified in the Local BAP, if this has been prepared;

Resident or regularly occurring populations (assessed to be important at the Local level) of the following:

Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive;

Species of animal and plants listed in Annex II and/or IV of the Habitats Directive;

Species protected under the Wildlife Acts; and/or

Species listed on the relevant Red Data list.

Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or populations of species that are uncommon in the locality;

Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value.

Local Importance (lower value):

Sites containing small areas of semi-natural habitat that are of some local importance for wildlife;

Sites or features containing non-native species that are of some importance in maintaining habitat links.

Appendix B: NBDC Records

NBDC Species Records from within 500m of the Broiler Breeder House, Gorteen

Species Name	Date of Last Record	Designation
Barn Owl (<i>Tyto alba</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Red List
Barn Swallow (<i>Hirundo rustica</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Black-headed Gull (<i>Larus ridibundus</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Red List
Common Coot (<i>Fulica atra</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Common Grasshopper Warbler (<i>Locustella naevia</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Common Kestrel (<i>Falco tinnunculus</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Common Kingfisher (<i>Alcedo atthis</i>)	31/12/2011	Wildlife Acts, Annex I Bird Species, Birds of Conservation Concern - Amber List
Common Linnet (<i>Carduelis cannabina</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Common Pheasant (<i>Phasianus colchicus</i>)	31/12/2011	Wildlife Acts
Common Snipe (<i>Gallinago gallinago</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Common Starling (<i>Sturnus vulgaris</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Common Swift (<i>Apus apus</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Common Wood Pigeon (<i>Columba palumbus</i>)	31/12/2011	Wildlife Acts
Corn Crake (<i>Crex crex</i>)	31/07/1972	Wildlife Acts, Annex I Bird Species, Birds of Conservation Concern - Red List
Eurasian Curlew (<i>Numenius arquata</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Red List
Eurasian Teal (<i>Anas crecca</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Eurasian Woodcock (<i>Scolopax rusticola</i>)	29/02/1984	Wildlife Acts, Birds of Conservation Concern - Amber List
European Golden Plover (<i>Pluvialis apricaria</i>)	31/12/2011	Wildlife Acts, Annex I Bird Species, Birds of Conservation Concern - Red List
European Nightjar (<i>Caprimulgus europaeus</i>)	31/07/1972	Wildlife Acts, Annex I Bird Species, Birds of Conservation Concern - Red List
Great Cormorant (<i>Phalacrocorax carbo</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Great Crested Grebe (<i>Podiceps cristatus</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List

Hen Harrier (<i>Circus cyaneus</i>)	31/12/2011	Wildlife Acts, Annex I Bird Species, Birds of Conservation Concern - Amber List
Herring Gull (<i>Larus argentatus</i>)	29/02/1984	Wildlife Acts, Birds of Conservation Concern - Red List
House Martin (<i>Delichon urbicum</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
House Sparrow (<i>Passer domesticus</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Jack Snipe (<i>Lymnocyptes minimus</i>)	31/12/2011	Wildlife Acts
Little Egret (<i>Egretta garzetta</i>)	31/12/2011	Wildlife Acts, Annex I Bird Species
Little Grebe (<i>Tachybaptus ruficollis</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Mallard (<i>Anas platyrhynchos</i>)	31/12/2011	Wildlife Acts
Merlin (<i>Falco columbarius</i>)	31/07/1972	Wildlife Acts, Annex I Bird Species, Birds of Conservation Concern - Amber List
Mute Swan (<i>Cygnus olor</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Northern Lapwing (<i>Vanellus vanellus</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Red List
Northern Shoveler (<i>Anas clypeata</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Red List
Northern Wheatear (<i>Oenanthe oenanthe</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Peregrine Falcon (<i>Falco peregrinus</i>)	31/12/2011	Wildlife Acts, Annex I Bird Species
Red Grouse (<i>Lagopus lagopus</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Red List
Sand Martin (<i>Riparia riparia</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Sky Lark (<i>Alauda arvensis</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Spotted Flycatcher (<i>Muscicapa striata</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Stock Pigeon (<i>Columba oenas</i>)	31/12/2011	Wildlife Acts, Birds of Conservation Concern - Amber List
Twite (<i>Carduelis flavirostris</i>)	29/02/1984	Wildlife Acts, Birds of Conservation Concern - Red List
Yellowhammer (<i>Emberiza citrinella</i>)	31/07/1991	Wildlife Acts, Birds of Conservation Concern - Red List
Fallow Deer (<i>Dama dama</i>)	31/12/2008	High Impact Invasive Species, Invasive Species Regulation S.I. 477 (Ireland), Wildlife Acts

