ENVIRONMENTAL IMPACT ASSESSMENT REPORT

AT
KILLYCRONE,
STRADONE,
CO. CAVAN

Prepared for
Mr. Hugh Brady

Prepared by
Traynor Environmental Ltd

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NON- TECHINAL SUMMARY

This Environmental Impact Assessment Report (E.I.A.R) has been prepared by Nevin Traynor BSc Env, HDIP IT, Cert SHWW, IAH, of Traynor Environmental Ltd for the proposed broiler house development in Killycrone, Stradone, Co. Cavan. It is the intention of the applicant, Mr. Hugh Brady to construct 1 No. poultry house with associated site works, underground washing holding tanks, concrete aprons and meal silo at Killycrone, Stradone, Co. Cavan. An EIAR is obliged for the development under S.I. No. 600/2001 – Planning and Development Regulations, 2001 – Schedule 5, Part 2 Section 1(e). In addition, the applicant will be required to apply to the EPA for an Industrial Emissions Licence (IED) (>40,000 birds) should the development be granted planning permission.

The site is located 9.3km east of Cavan town and 16.3km from Cootehill. The proposed site is in a rural location and the land-use surrounding is predominantly agricultural. Access to the site will be via an existing entrance servicing the existing poultry units on site. The topography of the area is undulating. It is anticipated that the existing and proposed development once complete will contain c 143,000 broiler hens within the five chicken houses when complete. The dimensions of the new poultry house will be 122.05m in length, 20.50m in width with a total internal footprint of 2,233m2. The finished floor levels (F.F.Ls) have been set to ensure the development is integrated with the existing hedgerows, existing buildings and existing land topography and to ensure that there is no adverse visual impact on the surrounding landscape. In addition, the colour of the wall and roof cladding will be selected so that it is not intrusive on the surrounding landscape.

The new house will be thermally insulated and equipped with computer-controlled ventilation and artificial lighting systems in line with best available technique (BAT) requirements. Similarly, automated feeding and drinking systems in accordance with BAT requirements will be installed. At the end of each 6-7-week growing period all birds will be removed from the farm by specialised bird handlers and delivered to Western Brand for processing. At the end of each batch/growing cycle all manure will be removed offsite by an approved registered contractor. This will be done in accordance with the European Union (Good Agricultural Practice for Protection of Waters) Regulations 2017 S.I. No. 605 of 2017 commonly referred to as the 'Nitrates Regulations'. A 18m^3 waste water storage tank will be positioned to collect all soiled waters generated during the washing process. Similarly, the land application of these waters will be done in line with the requirements of the Nitrates Regulations.

Storm water drainage infrastructure will be installed onsite to collect all roof rainwater and clean yard runoff. This will consist of 225mm diameter storm drains, which will pass through a silt trap to discharge to a drainage ditch which ultimately feeds into Laragh River. Through the Appropriate Assessment (AA) Screening process, it has been determined that the proposed development will not will not have a significant effect on the Natura 2000 network and a Stage 2 AA is not required.

No significant adverse residual effects are likely to occur through in-combination and/or cumulative impacts. Any effects identified can be mitigated through management of the construction and operation process by adherence to the mitigation measures set out in the E.I.A.R together with any conditions/restrictions in any approval/consent as may be granted.

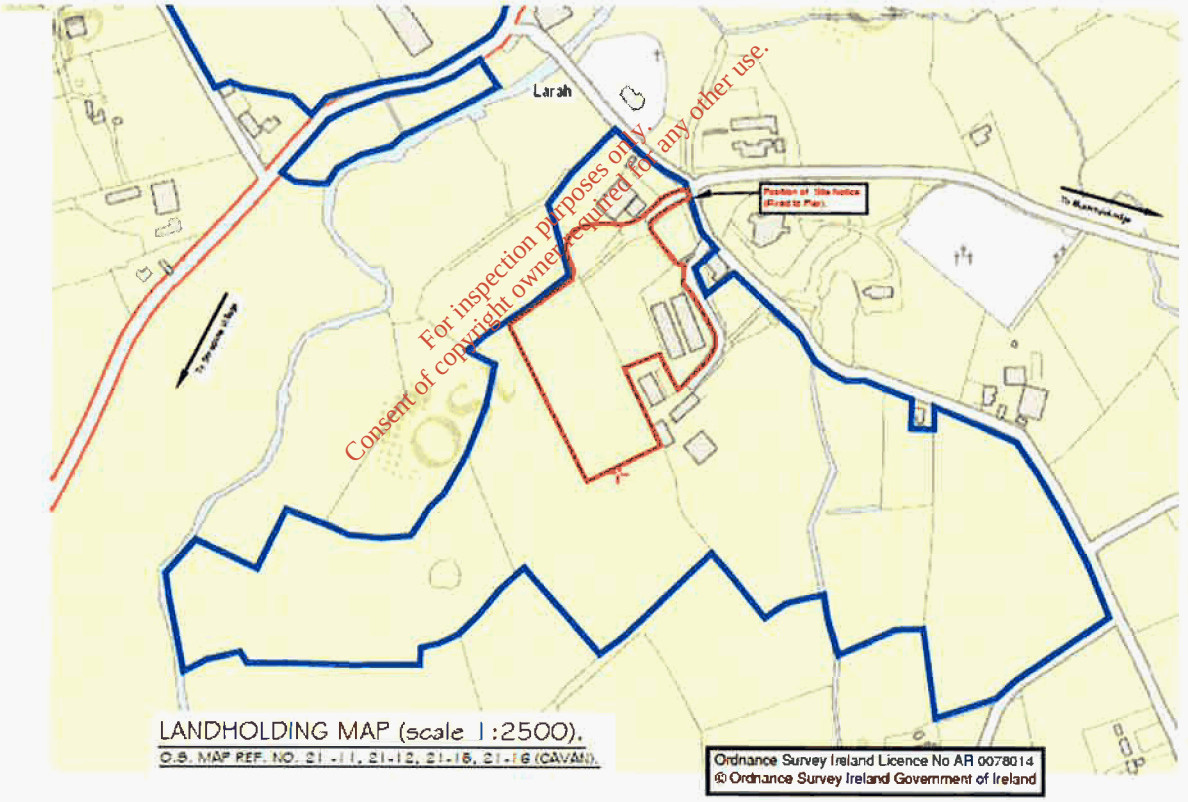
1.0 INTRODUCTION

1.1 Project Background

It is the intention of Mr. Hugh Brady of Killycrone, Stradone Co Cavan to construct 1 No. poultry house with associated site works, underground washing holding tanks, concrete aprons and meal silo with a total capacity of circa 50,000 birds on the brownfield site. This will bring the total bird holding on the site to 143,000 birds. The applicant has an existing poultry farm consisting of four poultry houses on the site adjacent to the poultry unit. An Environmental Impact Assessment Report (EIAR) for the development is obliged under the following regulations:

- "S.I. No. 600/2001 – Planning and Development Regulations, 2001 – Schedule 5, Part 2 Section 1(e) *'Installations for intensive rearing of poultry not included in Part 1 of the Schedule which would have more than 40,000 places for poultry"*.

Figure 1.0: Location of proposed poultry development site, Killycrone, Stradone, Co. Cavan. (site boundary outlined in red)

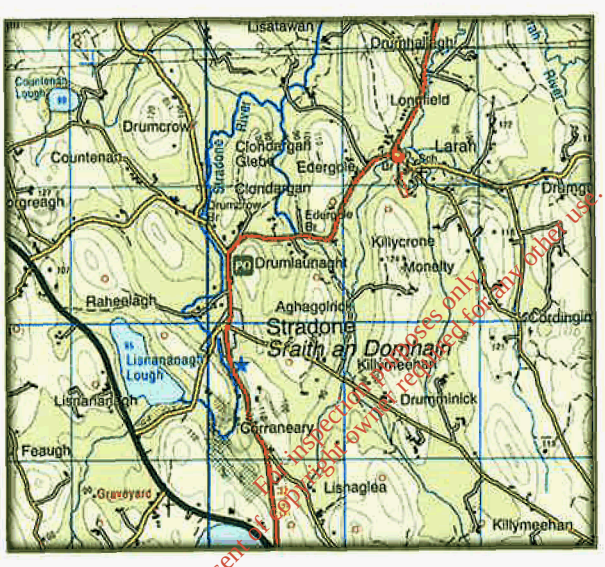


The following Environmental Impact Assessment Report (EIAR) has been prepared by Nevin Traynor, BSc Env, HDIP IT, Cert SHWW, IAH, MSc., of Traynor Environmental Ltd. This EIAR has been produced to accompany an application for planning permission for one poultry house with ancillary structures and associated site works to Cavan County Council for their review.

1.2 SITE DESCRIPTION

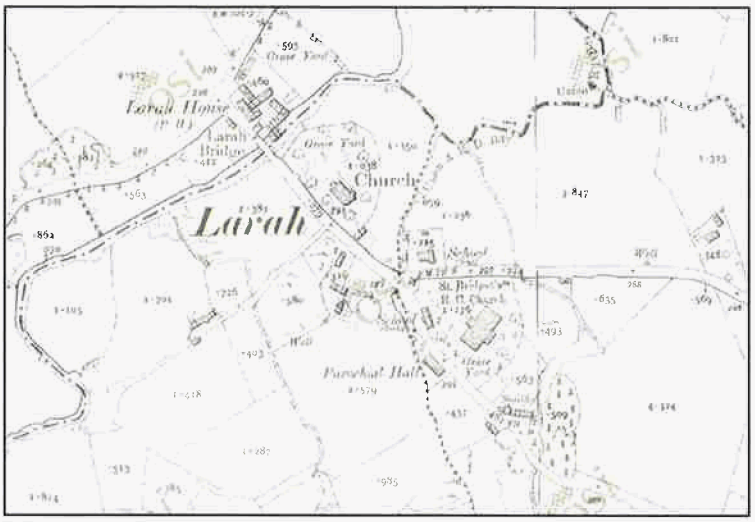
The site of the proposed development is located at Coordinates: E:251440, N:304954 1.5km north-east of Stradone and 9.5km east of Cavan town. The site is in a rural location and the land-use surrounding is predominantly agricultural. Access to the proposed new development will be via a new access road to the site. The topography of the area is undulating. The nearest residential property to the proposed development is >150m. The applicant Mr. Hugh Brady currently operates an existing poultry farm on site and is therefore highly experienced in the operation and management of poultry houses such as the proposed development. Planning permission was granted in 2014 (Planning Reference: 1488) to construct 1 No. Poultry house with associated site works, underground effluent holding tank, concrete aprons and meal silo, at Killycrone, Stradone, Co. Cavan.

Figure 2.0: **Site Location Map.**



The site is located west from the existing poultry sheds. A review of the Ordnance Survey of Ireland (OSI) historic 25'' inch mapping shows that 100% of the site comprises of agricultural grassland. (Figure 3.0).

Figure 3.0: Ordnance Survey of Ireland historic 25" map (1888-1913) of the site. (OSI.ie)



The proposed development is surrounded by agricultural grassland both to the west and south of the site. Existing poultry sheds are located to the east of the sites boundary. Hedge and tress are located to the north of the site. The nearest residential property to the proposed is approximately >150m east from the proposed development.

It is proposed that the poultry development will be accessed via the existing entrance. This entrance will ensure that all vehicles relating to the poultry enterprise can enter and exit in a safe manner.

The proposed site has a relatively flat topography as can be seen from the topography data contained within the OSI MAP. The proposed development will be constructed with regard to its existing surrounding environs.

1.3 Description of Proposed Development

It is anticipated that the proposed poultry development will consist of c.50000 broiler hens. The dimensions of the proposed development are 122.05m in length and 20.50m in width with a total internal footprint of 2,233m^2. These F.F.L have been set to ensure the development is integrated with the existing hedgerows, existing buildings and existing land topography and to ensure that there are no adverse visual impacts on the surrounding landscape.

The proposed house will consist of a timber/steel framework structure with an impermeable insulated concrete base. The floor will consist of 50mm layer of smoothened concrete with a non-slip finish. The walls will be constructed of prefabricated panels and concrete. The lower section of the external walls will have a smooth concrete finish, with corrugated aluminium roof (silver or brown).

The poultry unit will be thermally insulated and equipped with computer- controlled ventilation and artificial lighting systems in line with best available technique (BAT) requirement. Similarly, automated feeding and drinking systems in accordance with BAT requirements will be installed with one feed silo. The feed silo will be approximately 18t of feed. An 18m^3 waste water tank will be positioned to capture all soiled water emanating from the shed during the wash down phase of operation. Storm water drainage infrastructure will be installed onsite to collect all roof rainwater and clean yard runoff. This will consist of 225mm diameter storm drains, which will pass through a silt trap and swale prior to discharge to an open watercourse.

A concrete apron will be constructed to the front and sides of the shed. A new boundary hedgerow will be planted to the west and south boundary. Numerous trees including beech and silver birch will be incorporated into the hedgerow. In addition, a stockproof fence will be installed to the south and west of the development to prevent animal encroachment onto the site from adjacent grassland.

1.4 Description of Proposed Operations

The proposed poultry shed will be operated by the applicant, Mr Hugh Brady and his family members in a similar manner to the existing development. Similar to other broiler farms of this scale in the region, it is envisaged that farming activities will occur from 6.00am to 8.00pm, 7 days a week. It should be noted that as lighting, feeding and ventilation systems will run on a 24-hour basis, some emergency maintenance works outside of these hours may be required. All stock will be supplied to the farm as day old chicks and will remain onsite for approximately 30 – 45 days. It is envisaged that c.7 Batches of hens will be managed onsite per annum (i.e. allowing for 1-2 weeks for the cleaning of each house after each crop of hens has been removed offsite).

All birds will be housed onsite. Litter (i.e. shavings/chopped straw) will be spread across the entirety of the internal floor area. At the end of the 30-45 days growing period birds will be removed from the farm by a specialised bird handling contractor and deliver to the Western Brand processing plant. At the end of each batch all manure will be removed from the shed by an approved registered contractor. Please see letter from CLR Co-op Ltd. This will be done in accordance with the European union (Good Agricultural Practice for Protection of Waters) Regulations 2017 S.I No. 605 of 2017 commonly referred to as the 'Nitrates Regulations'. An 18cu.m. waste water storage tank will be positioned at the front of each house to collect all soiled waters generated during the washing process. Similarly, the land application of these waters will be done in line with the requirements of the Nitrates Regulations.

During each batch it is anticipated that a small number of birds will die prematurely. All dead birds will be stored in sealed and locked contained prior to disposal and removed offsite by Michael Galligan, Gortnaleck, Ballyconnell, Co Cavan when required. To minimise the risk of infection on the farm, only personal essential to its operation are permitted onsite (i.e. staff, veterinarians, servicemen etc).

The mortalities are sent to Hereford Meats Ltd. In addition, all visitors must sign the visitors register and follow all disinfection protocols. To ensure compliance the farm may be subject to various inspections from numerous bodies including Western Brand, Bord Bia, The Department of Agriculture, Food and Marine, Cavan County Council and the Environmental Protection Agency (EPA) throughout the year. Given the number of birds (c89,950) intended to be farmed on site, the applicant will be required to apply to the EPA for an Industrial Emission Licence (IED) (>40000 birds) should the development be granted planning permission.

2.0 SCOPING OF ENVIRONMENTAL IMPACT ASSESSMENT

2.1 Identification of Likely Significant Impacts

The scoping of this EIA was carried out by Mr Nevin Traynor from Traynor Environmental Ltd in conjunction with J.M Johnson and the applicant Mr Hugh Brady. A number of EIS/EIAR's on similar poultry developments in the locality have been subject to review by Cavan County Council in recent years and this project had been scoped similarly to previous submissions, while these developments set a priority for the scoping required within this EIA, an examination of any addition's significant issues unique to the site have been considered.

This EIAR has been prepared in accordance with the EPA- Guidelines on the information to be contained in Environmental Impact Assessment Reports issued in August 2017.It should be noted that the guidelines are currently at the draft stage. In addition, the following previous EPA EIA guidance documentations have been consulted when carrying out this assessment:

- EPA – *Revised Guidelines on the Information to be Contained in Environmental Impact Statements Draft, September 2015;* and
- EPA- *Advise Notes for Preparing Environmental Impact statements, Draft, September 2015.*

When preparing the Soils & Geology and Hydrogeology sections of this EIAR, the following Institute of Geologists (IGI) of Irelands Guidelines were also followed:

- IGI- *Guidelines for the preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements, 2013.*

As part of the EIA scoping process it is necessary to identify, describe and assess the likely significant impacts of a project on the environment. The EPA – Advice Notes for Preparing Environmental Impact Statements, Draft, September 2015 provides guidance on the topics which would commonly be addressed when preparing an E.I.S. (i.e. now E.I.A.R) for developments of a specific project class. Guidance on Poultry-rearing installations are described under Project Type 13 of the advice notes with issues surrounding waste handling (i.e. slurry/manure) and odours identified as the principle causes for concern. Other typical significant impacts likely to affect the receiving environment are also listed within. It should be noted that advice notes to accompany the draft guidelines issued in August 2017 have not been published yet.

A Habitats Directive Screening Report on the site and its surrounding environs at Killycrone Stradone, Co. Cavan was carried out by Noreen Mc Loughlin, Msc, MCIEEM of Whitehall Environmental (Appendix D).

2.2 Methodology

2.2.1 Baseline Information

Under Article 3(1) of the amended EIA Directive 2014/52/EU, an assessment of the direct and indirect significant effects of a project on the following factors are required:

a) Population and Human Health;
b) Biodiversity;
c) Land, soil, water, air and climate;
d) Material assets, cultural heritage and the landscape;
e) The interaction between the factors referring to in points (a) to (d).

For reasons of clarity, the following table, Table 1 outlines the section/sections whereby the above-mentioned factors are addresses within this EIAR.

Table 1. Environmental Factors Assessed & Associated Section No.

Required Environmental Factors	Corresponding EIAR Section No. & Heading
Population and human Health	Section 12 – Population & Human Health
Biodiversity	Section 7 – Ecology
Land	Section 4 – Soils & Geology
Soil	Section 4 – Soils & Geology
Water	Section 5 – Hydrogeology Section 6 – Hydrology
Air & Climate	Section 9 – Air, Noise & Climate
Material Assets	Section 11 – Material Assets
Cultural Heritage & The Landscape	Section 8 – Archaeological & Cultural Heritage Section 10 – Landscape & Visual Impact
Interactions Between the Factors	Section 13 – Inter-relationships & Cumulative Effects

Baseline Information for these factors has been sources from the following bodies/ organisations;

- Teagasc;
- Environmental Protection Agency (EPA);
- Ordnance Survey of Ireland (OSI);
- Geological Survey of Ireland (GSI);
- National Biodiversity Centre;
- National Parks & Wildlife Services (NPWS);
- National Monuments Service;
- National Inventory of Architectural Heritage;
- Met Eireann; and
- Cavan County Development Plan 2014 – 2020

The processes and technologies associated with the construction and operation of the proposed development are well understood given the number of similar poultry enterprises currently operational within the county and as such no limitations or deficiencies in the data/information have been identified.

2.2.2 *Impact Assessment Methodology*

Section 3.7.3 of the Draft EPA Guidelines (2017) provides definitions of impacts as per Table 2. below and these descriptions have been utilised in this impact assessment.

Table 2. Description of Effects

Quality of Effects	
Positive	A change which improves the quality of the environment
Neutral	A change which does not affect the quality of the environment
Negative/Adverse	A change which reduces the quality of the environment
Significance of Effects	
Imperceptible	An effect capable of measurement but without noticeable consequences.
Not Significant	An effect which causes noticeable changes in the character of the environment but without noticeable consequences.
Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging trends.
Significant Effects	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Very Significant Effects	An effect which, by its character, magnitude, duration or intensity significantly alters the majority of a sensitive aspect of the environment.
Profound Effects	An effect which obliterates sensitive characteristics.
Magnitude of Effects	
Extent	Describe the size of the area, the number of sites, and the proportion of a population affected by an effect
Duration	Describe the period of time over which the effect will occur
Frequency	Describe how often the effect will occur (once, rarely, occasionally, frequently, constantly- or hourly, daily, weekly, monthly, annually)
Context	Describe whether the extent, duration, or frequency will confirm or contrast with established (baseline) conditions

Table 2 Continued. Description of Effects

Probability of Effects	
Likely Effects	The effects that can reasonably be expected to occur as a result of the planned project if all mitigation measures are properly implemented
Indeterminable Effects	When the full consequences of a change in the environment cannot be described
'Worst Case Effects'	The effects arising from a project in the case where mitigation measures substantially fail
Duration of Effects	
Momentary	Effects lasting from seconds to minutes
Brief	Effects lasting less than a day
Temporary	Effects lasting less than a year
Short-term	Effects lasting one to seven years
Medium-term	Effects lasting seven to fifteen years
Long-term	Effects lasting fifteen to sixty years
Permanent	Effects lasting over sixty years
Types of Effects	
Cumulative Effects	The addition of many small effects to create one larger, more significant, effects
'Do Nothing Effects'	The environment as it would be in the future should no project of any kind be carried out
Indeterminable Effects	When the full consequences of a change in the environment cannot be described
Irreversible Effects	When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost
Residual Effects	The degree of environmental change that will occur after the proposed mitigation measures have taken effect
Synergistic Effects	Where the resultant effects are of greater significance than the sum of its constituents
Indirect Effects	Effects that arise offsite or are caused by other parties that are not under the control of the developer
Secondary Effects	Effects that arise as a consequence of a project

Table 3. below shows how comparison of the character of the predicted impact to the sensitivity of the receiving environment can determine the significance of the impact.

Table 3. Significance Assessment Matrix

Importance of Attribute	Magnitude of Impact			
	Negligible	Small Adverse	Moderate Adverse	Large Adverse
Extremely High	Imperceptible	Significant	Profound	Profound
Very High	Imperceptible	Significant/Moderate	Profound/Significant	Profound
High	Imperceptible	Moderate/Slight	Significant/Moderate	Profound/Significant
Medium	Imperceptible	Slight	Moderate	Significant
Low	Imperceptible	Imperceptible	Slight	Slight/Moderate

3.0 EXAMINATION OF ALTERNATIVES

3.1 Alternative Site Location

A number of alternative locations for the development were considered by Mr. Hugh Brady and the design team prior to the selection of the proposed site. The selected development site was chosen due to its proximity to the other poultry sheds on the farm, proximity to other residences, existing topography and lack of visual impact of the development.

In addition, (Policy ED010 of the Cavan County Development Plan 2014 – 2020) require all new applications for industry, enterprise and employment uses to include;

- *Detailed description of the process being undertaken and the number of people likely to be employed at the various stages of development;*
- *Detailed analysis of the nature, volume and rate of discharges of all effluents, wastes and atmospheric emissions emanating from the industry and detailed proposals for their treatment, discharge and disposal;*
- *Detailed design drawings using appropriate design and materials, security fencing and signage;*
- *Adequate space to be made available for on-site storage of materials and refuse, on-site circulation, loading and unloading of goods (including fuels) in areas clear of public roads, and preferably behind the building line.*
- *Car park spaces must be clearly delineated;*
- *Landscaping plans shall be submitted and shall include a planting strip, particularly on road frontages;*
- *Full details of the public road serving the site and the impact of any increased traffic volume;*
- *Proposals for waste storage prior to collection or recycling; and*
- *Proposals for the disposal of construction and demolition waste.*

Considering all of the above criteria, it was concluded that the selected site was suitable given that:

I. The location of the proposed poultry development will allow for a more streamlined integration of existing farming activities operated by the applicant's/applicant's family with the newly proposed farming enterprise;

II. The proposed development is consistent with other broiler house developments in the region in terms of both scale and design. The location of the proposed site is deemed to be appropriate and is not located in area which will have a negative effect on any Natura 2000 Site.

III. The proposed development will not have a visual impact on the landscape, given the existing hedgerows, existing buildings and existing land topography surrounding the site. In addition, the development will not be visible from any scenic routes, areas of ecological designation or areas of secondary amenity value;

IV. The proposed development is located adjacent to the existing poultry sheds on the site. As a result, electrical, water supply and road access are currently in place at the site.

V. The proposed development will not have a visual impact on the landscape, given the existing hedgerows, existing buildings and existing land topography surrounding the site;

VI. The proposed development is situated within an agricultural area and will not adversely impact on residential amenity;

VII. The proposed development will not result in a traffic hazard with adequate sight lines/visibility splays achieved

VIII. The proposed development will be operated in a manner which will not cause a pollution threat to water. Similarly, during the construction of the proposed development the mitigation measures outlined will be implemented.

3.2 Alternative Size, Layout & Design

The design and layout of the proposed development is very similar to other broiler house developments in the vicinity of the site. In addition, the number of birds proposed to be farmed onsite (c. 143,000) is a quantity typically managed by individual farmers and allows for economies of scale for the applicant whilst meeting the supply requirements of the processor (i.e. Western Brand). As stated in Section 1.3, the development has been designed in line with the BAT requirements described for the intensive rearing of poultry. Consequently, no other site layouts or designs were deemed to be more appropriate. See Layout / design in Appendix B of this report.

3.3 Alternative Management of By-Products

Given that the applicant will manage all poultry manure and soiled waters in compliance with the requirements of the Nitrates Directive, no alternatives were deemed to be more suitable.

4.0 SOILS & GEOLOGY

4.1 Environmental Setting

4.1.1 Soils & Subsoils

According to the Teagasc and EPA soils map, Till derived chiefly from Lower Palaeozoic rocks with Sandstone and shale till (Lower Palaeozoic). Soil Group Surface water Gleys, Ground water Gleys. The IFS Soil description is derived from mainly non-calcareous parent materials. Mineral poorly drained (Mainly acidic) soil belonging to the Surface water Gleys, Groundwater Gleys soil group exists within site footprint, with a small proportion of River alluvium located on the northern and western boundaries. Directly to the South and west of the site, Surface water Gleys, Groundwater Gleys are also found with river Alluvium identified as the principle soil type to the north.

Figure 4.0: Teagasc/EPA soil map of the site and surrounding lands

In Ireland, the parent material underlying the majority of the country is comprised of quaternary sediments with the remainder composed of bedrock outcrop. These quaternary sediments have resulted from glacial movement, melting and deposition. The Teagasc and EPA subsoil maps identify that most of the site is underlain with a Fine loamy drift with siliceous stones with River Alluvium identified on the northern and western boundaries.

4.1.2 Bedrock Geology

Based on the Geological survey of Ireland (GSI) 1:100k bedrock formation mapping, the entirety of the site is underlain by the Lough Avaghon Formation which is described grey coarse-grained massive quartz/ greywackes / sandstones. Approximately, 150m to the north of the site, the bedrock geology consists of the Dinantian Limestones (undeferential) which comprises of massive sandstone & microconglomerate. No bedrock outcrops are present within the boundaries of the site. The closest bedrock fault line is found 500m to the northeast of the site. No geological heritage sites have been identified within a 16.6km radius of the site.

4.2 Impact Assessment Methodology

The potential impact of the proposed poultry development on the soils and geology environment has been assessed by classifying the importance of the relevant attributes and quantifying the likely magnitude of any effect on these attributes. The rating criteria for assessing the importance of geological features within the study area are outlined in Table 4 whilst the rating criteria for quantifying the magnitude of impacts are outlined in Table 5 below.

Table 4. Criteria for Rating Site Importance (Soil & Geology)

Importance	Criteria`	Typical Example
Very high	Attribute has a high quality, significance or value on a regional or national scale. Degree or extent of soil contamination is significant on a national or regional scale. Volume of peat and/or soft organic soil underlying site is significant on a national or regional scale.	Geological feature rare on a regional or national scale (NHA). Large existing quarry or pit. Proven economically extractable mineral Resource.
High	Attribute has a high quality, significance or value on a local scale. Degree or extent of soil contamination is significant on a local scale. Volume of peat and/or soft organic soil underlying site is significant on a local scale.	Contaminated soil on site with previous heavy industrial usage. Large recent landfill site for mixed wastes. Geological feature of high value on a local scale (County Geological Site). Well drained and/or highly fertile soils.

Medium	Attribute has a medium quality, significance or value on a local scale. Degree or extent of soil contamination is moderate on a local scale. Volume of peat and/or soft organic soil underlying site is moderate on a local scale.	Contaminated soil on site with previous light industrial usage Small recent landfill site for mixed wastes Moderately drained and/or moderate fertility soils Small existing quarry or pit
Low	Attribute has a low quality, significance or value on a local scale Degree or extent of soil contamination is minor on a local scale Volume of peat and or / soft organic soil underlying site is small on a local scale.	Large historical and / or recent site for construction and demolition wastes. Small historical and/or recent landfill sites for construction and demolition wastes. Poorly drained and/or low fertility soils. Uneconomically extractable mineral resources.

Table 5. Criteria for Rating Impact Magnitude at EIAR Stage – Estimation of Magnitude of Impact on Soil/Geology Attribute

Magnitude of Effect	Criteria	Typical Examples
Large Adverse	Results in loss of attribute	Loss of high proportion of future quarry or pit reserves
Moderate Adverse	Results in impact on integrity of attribute or loss of part of attribute	Loss of moderate proportion of future quarry or pit reserves
Small Adverse	Results in minor impact on integrity of attribute or loss of small part of attribute	Loss of small proportion of future quarry or pit reserves
Negligible	Results in an impact on attribute but of insufficient magnitude to affect either use or integrity	No measurable changes in attributes
Minor Beneficial	Results in minor improvement of attribute quality	Minor enhancement of geological heritage feature
Moderate Beneficial	Results in moderate improvement of attribute quality	Moderate enhancement of geological heritage feature
Major Beneficial	Results in major improvement of attribute quality	Major enhancement of geological heritage feature

4.3 Predicated Impacts

An analysis of the predicted effects of the proposed/existing poultry development on soils and geology during construction and operation is presented below.

4.3.1 Construction Phase

Given the low quality/significance of the site, it is envisaged that the impact as a consequence of land take will be imperceptible. It is not envisaged that any excess soil will be generated during the 'Cut and Fill' phase of construction. However, if left unmitigated during the construction phase, the following impacts could have an effect on the site's soil quality and on the wider environment.

- Wash-out and erosion of exposed bare soils during normal earth movement and stockpiling, particularly in vicinity of the surface water drainage ditch when constructing the swale and drainage outfall;
- There is potential for accidental spillage of diesel fuel and hydraulic oil from site machinery during the construction phase. Construction stage storage of fuels and hazardous materials has the potential to impact on soil quality if not stored correctly.

4.3.2 Operational Phase

Potential operational impacts associated with the proposed development if left unmitigated include:

- Accidental spillage of diesel fuel and hydraulic oil from site machinery during the cleaning phase of operations; and
- Accidental spillage of diesel fuel and hydraulic oil from site machinery during the removal of organic manure from site.

4.4 Mitigation Measures

It has been determined that following the implementation of the proposed mitigation measures, all potential impacts associated with the development can be classed as imperceptible. These measures will include:

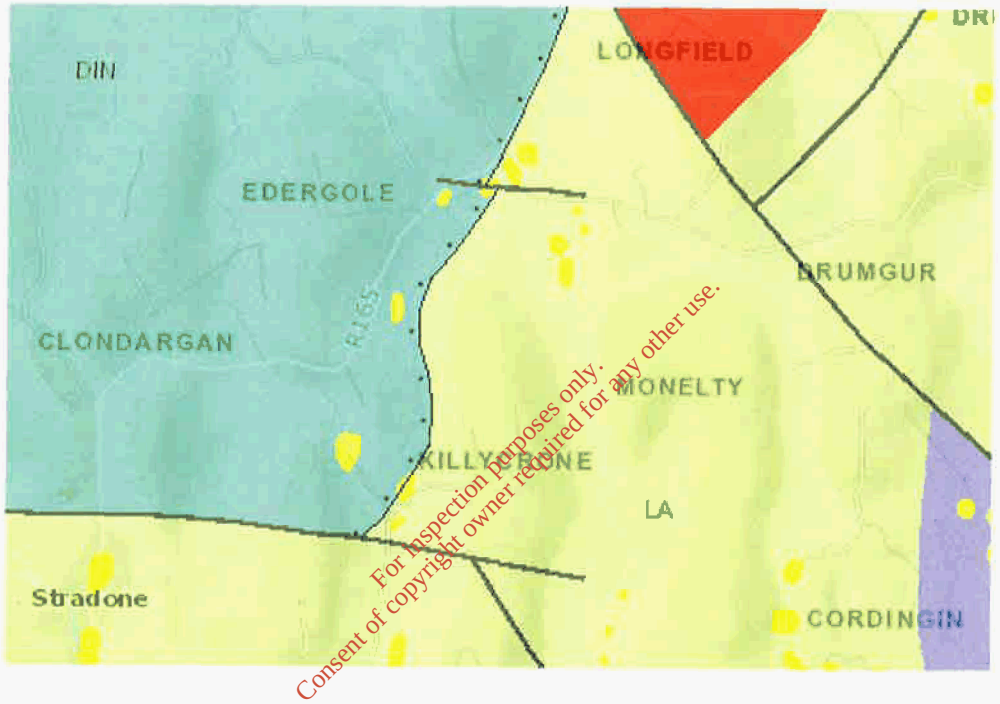
- The designation of appropriate locations and methods for stockpiling soil (e.g. stockpiles will not be located within 50m of a drainage ditch);
- Restricting vehicular movement to prevent unnecessary erosion;
- Revegetating exposed areas as soon as practicable;
- Use of temporary sediment trapping devices (e.g., silt fences, hay bales, etc.) if required;
- To prevent accidental spillages, it is proposed that no hydrocarbons or toxic chemicals are stored within 100m of a watercourse. All oils, solvents and paints used during construction will be stored within temporary bunded areas;
- Temporary bunds for oil/diesel storage tanks will be used on the site during the construction phase of the project as appropriate; and
- Spill kits will be retained on site to ensure that any spillages or leakages are dealt with immediately.

5.0 HYDROGEOLOGY

5.1 Environmental Setting

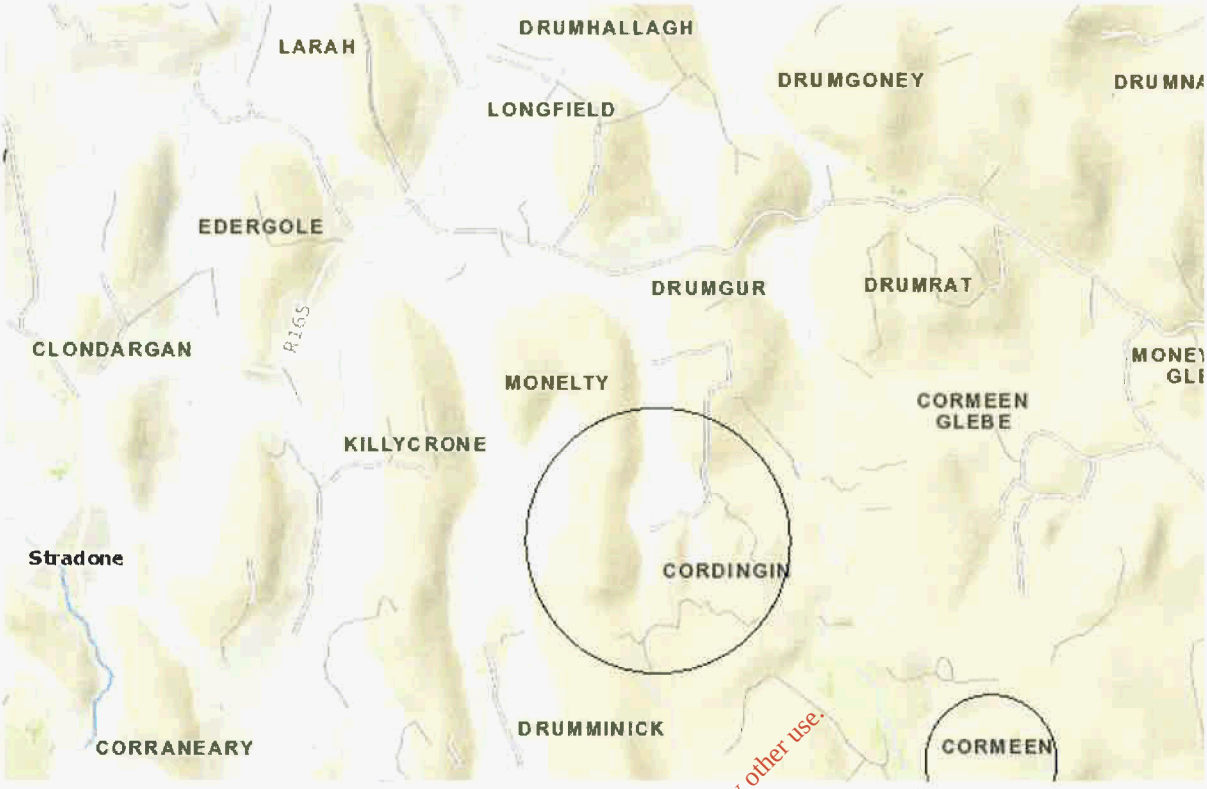
The Geological Survey of Ireland (GSI) have reviewed the 1,200 geological Formations and Members defined within the Republic of Ireland and reduced them into 27 'Rock Unit Groups' (RUGs) based on their hydrogeological properties and significance. Based on the GSI's generalised bedrock RUG mapping, the entirety of the site is underlain by the SMV – Silurian Metasediments and Volcanics. (See Figure 5.0) The area to the southeast of the site which is underlain by the Dinantian Limestones (undeferential) is classified as the DMSSL -Dinantian Mixed Sandstones, Shales and Limestones.

Figure 5.0: Geological Survey of Ireland (GSI) generalised bedrock unit group map within the vicinity of the site



The bedrock aquifer underneath the site is described as a Pl – Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones.

Figure 6.0: Geological Survey of Ireland (GSI) well and spring record map



Groundwater Vulnerability is a term used to represent the intrinsic geological and hydro-geological characteristics that determine the ease with which groundwater may be contaminated by human activities. Groundwater vulnerability maps are based on the type and thicknesses of subsoils (sands, gravels, glacial tills (or boulder clays), peat, lake and alluvial silts and clays), and the presence of certain karst features. Groundwater is most at risk where the subsoils are absent or thin and, in areas of karstic limestone, where surface streams sink underground at swallow holes. There are two groundwater vulnerability classifications found within the site. Approximately 50% of the site is classified as 'H - High' with the remaining proportion categorised as 'E – Extreme' vulnerability.

5.2 Impact Assessment Methodology

The potential impact of the proposed poultry development on the hydrogeological environment has been assessed by classifying the importance of the relevant attributes and quantifying the likely magnitude of any effect on these attributes. The rating criteria for assessing the importance of hydrogeological features within the study area are outlined in Table 6, whilst the rating criteria for quantifying the magnitude of impacts are outlined in Table 7 below.

Table 6. Criteria for Rating Site Importance (Hydrogeology)

Importance	Criteria`	Typical Example
Extremely high	Attribute has a high quality or value on an international scale	Groundwater supports river, wetland or surface water body ecosystem protected by EU legislation e.g. SAC or SPA status
Very high	Attribute has a high quality or value on a regional or national scale	Regionally important aquifer with multiple well fields. Groundwater supports river, wetland or surface water body ecosystem protected by national legislation – NHA status Regionally important potable water source supplying >2500 homes Inner source protection area for regionally important water source
High	Attribute has a high quality or value on a local scale	Regionally Important Aquifer Groundwater provides large proportion of baseflow to local rivers Locally important potable water source supplying >1000 homes Outer source protection area for regionally important water source Inner source protection area for
Medium	Attribute has a medium quality or value on a local scale	Locally Important Aquifer Potable water source supplying >50 homes Outer source protection area for locally important water source
Low	Attribute has a low quality or value on a local scale	Poor Bedrock Aquifer Potable water source supplying <50 homes

Table 7. Criteria for Rating Impact Magnitude at EIS stage – Estimation of Magnitude of Impact on Hydrogeology Attribute

Magnitude of Impact	Criteria	Typical Examples
Large Adverse	Results in loss of attribute and /or quality and integrity of attribute	Removal of large proportion of aquifer Changes to aquifer or unsaturated zone resulting in extensive change to existing water supply springs and wells, river baseflow or ecosystems Potential high risk of pollution to groundwater from routine run-off Calculated risk of serious pollution incident >2% annually
Moderate Adverse	Results in impact on integrity of attribute or loss of part of attribute	Removal of moderate proportion of aquifer Changes to aquifer or unsaturated zone resulting in moderate change to existing water supply springs and wells, river baseflow or ecosystems Potential medium risk of pollution to groundwater from routine run-off Calculated risk of serious pollution incident >1% annually
Small Adverse	Results in minor impact on integrity of attribute or loss of small part of attribute	Removal of small proportion of aquifer Changes to aquifer or unsaturated zone resulting in minor change to water supply springs and wells, river baseflow or ecosystems Potential low risk of pollution to groundwater from routine run-off Calculated risk of serious pollution incident >0.5% annually
Negligible	Results in an impact on attribute but of insufficient magnitude to affect either use or integrity	Calculated risk of serious pollution incident <0.5% annually

5.3 Predicated Impacts

An analysis of the predicted effects of the proposed/existing poultry development on the underlying groundwater during construction and operation are presented below.

5.3.1 Construction Phase

Given that the groundwater vulnerability for the site has been classified as 'High' it is envisaged that construction or operation activities will not pose a significant risk to the underlying groundwater if protocols are not put in place for accidental spillage of diesel fuel and hydraulic oil from site machinery during the construction phase. Construction stage storage of fuels and hazardous materials has the potential to impact on the site's underlying aquifer if not stored correctly. However, the following impacts could influence the hydrogeological condition and wider environment if left unmitigated during the construction phase.

5.3.2 Operational Phase

Since there will be no discharge of any kind to ground, it is not envisaged that operation activities will pose a significant risk to the underlying groundwater. Potential operational impacts associated with the proposed development if left unmitigated include:

- Accidental spillage of diesel fuel and hydraulic oil from site machinery leading to downward vertical migration of pollutants and subsequent contamination of the underlying aquifer;
- Over application of organic manure and soiled water to farm lands leading to downward vertical migration of nutrients and subsequent contamination of the underlying aquifer.

5.4 Mitigation Measures

It has been determined that following the implementation of the proposed mitigation measures, all potential impacts associated with the development can be classed as imperceptible. These measures will include:

- To prevent accidental spillages, it is proposed that all oils, solvents and paints used during construction will be stored within temporary bunded areas;
- Temporary bunds for oil/diesel storage tanks will be used on the site during the construction phase of the project as appropriate;
- Spill kits will be retained on site to ensure that any spillages or leakages are dealt with immediately;
- All organic manure generated on-site will be removed off site by a registered and approved contractor for the transport of poultry manure. The applicant has an agreement in place with CLR Co-op Ltd. to fulfil this duty. It is estimated that 2729.03m^3 of manure will be produced onsite per annum (i.e. 0.39m^3 per bird x 143,000 x 52 weeks = 2900.04m^3);
- A single 18 cu.m. underground waste water tank will be installed to the front of the proposed new shed to collect all soiled water generated during the wash down process; and

- All soiled/wash waters generated during the cleaning phase of operations will be applied to suitable land banks owned by the applicant in accordance with the European Union (Good Agricultural Practice for Protection of Waters) Regulations 2017 S.I. No. 605 of 2017.

It is estimated that c. 930m^3 of soiled water will be generated onsite per annum. Given a soiled water nitrogen (N) content of 1kg Organic N/m^3, 930m^3 of soiled water applied to the available 48.69ha equates to an additional organic N loading to those lands of 25.9kg Organic N/ha. Consequently, this will result in an increase in N loading to 169kg Organic N/ha. This loading is lower than the 170kg Organic N/ha limit stipulated in the Nitrogen Regulations.

6.0 HYDROLOGY

6.1 Environmental Setting

6.1.1 Hydrological Setting

With the publication of Ireland's second River Basin Management Plan (RBMP), the RBMP 2018 – 2021 defines the entirety of the island of Ireland as a single River Basin District (RBD). This single RBD has been broken down into 46 catchment management units. These units are mainly based on the hydrometric areas in use by the authorities. Each of the 46 catchment management units have been further broken down into 583 sub- catchments. The proposed development site is located within the Erne Hydrometric Area (No.03) and WFD Catchment. Additionally, the site is located within the Laragh_SC_020 WFD Sub-catchment. The closest hydrological feature to the site is the Laragh Stream, which is a tributary of the River Annalee, approximately 7km from the site.

6.1.2 Water Quality

Currently, the River Annalee and Laragh Stream's WFD status is classified as 'Moderate' and 'at Risk'.

6.2 Predicated Impacts

An analysis of the predicted effects of the proposed/existing poultry development on the surrounding hydrological features during construction and operation is presented below.

6.2.1 Construction Phase

The closest hydrological features to the site is the Laragh stream. However, given the distance of this waterbody from the site it is not envisaged that the site will be hydrologically linked to these waterbodies.

- There is potential for accidental spillage of diesel fuel and hydraulic oil from site machinery during the construction phase. Construction stage storage of fuels and hazardous materials has the potential to impact the Laragh stream if not stored correctly; and
- Wash-out and erosion of exposed bare soils during normal earth movement and stockpiling, particularly in vicinity of the drainage ditch when constructing the new poultry shed, may result in excessive siltation of the drainage channel;

6.3.2 Operational Phase

Since there will be no effluent/process discharge to any surface waterbody, it is not envisaged that operation activities will pose a significant risk to the Laragh stream. Potential operational impacts associated with the proposed development if left unmitigated include:

- Accidental spillage of diesel fuel and hydraulic oil from site machinery leading to migration of pollutants via surface water flow and subsequent contamination of Laragh Stream;
- Over application of organic manure and soiled water to farming lands leading to migration of nutrients via surface water flow and subsequent eutrophication of Laragh Stream and relevant surface water bodies adjacent to lands receiving soiled water inputs.

6.3 Mitigation Measures

With the implementation of the proposed mitigation measures, all potential impacts associated with the development can be classed as imperceptible. These measures will include:

- All mitigation measures proposed to control sediment/silt runoff from the site as described in Section 4.4;
- All mitigation measures designed to prevent, and control hydrocarbon contamination arising from the site as described in Section 4.4 & Section 5.4;
- The removal of manure offsite by a registered contractor and the application of soiled waters onto the applicants lands according to S.I 605 of 2017 as described in Section 5.4; and
- As stipulated in S.I. 605 of 2017, ''An occupier of a holding shall take all such reasonable steps as are necessary for the purposes of minimising the amount of soiled water produced on the holding''. Measures to ensure that the development complies with this regulation include:
    - The installation of a nipple drinking system to ensure that the manure remains as dry as possible
    - Clean water from roofs and unsoiled paved areas and that flowing from higher ground on to the farmyard is diverted away from soiled yard areas and the soiled water storage tanks.
- A permanent silt trap will be installed and maintained at a location upgradient to the stormwater discharge point and
- Daily inspection of stormwater discharge point with surface water quality sampling in accordance with any EPA IED licence requirements.

7.0 ECOLOGY

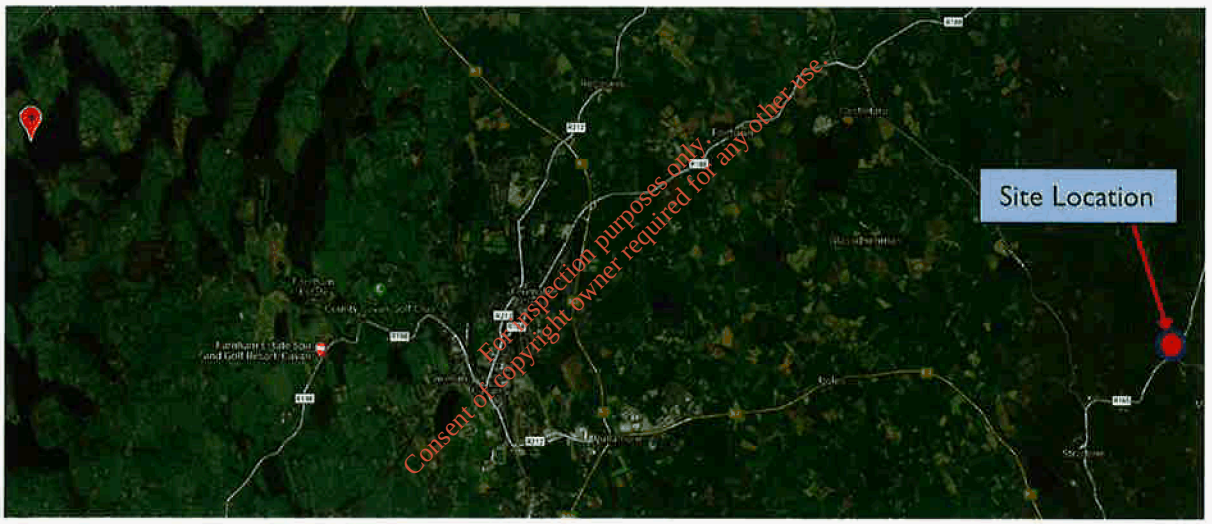
7.1 Environmental Setting

7.1.1 Terrestrial Ecology

The entirety of the proposed development site comprises of agricultural grassland. At present the northern boundary of the site comprises of well-established trees and hedgerows. As part of the development, it is proposed to plant a hedgerow on the western and southern perimeter of the site.

According to the National Biodiversity Centre there have been no protected flora or fauna species identified within or in close proximity to the site. A review of the National Parks and Wildlife Services (NPWS) indicates that there are two Natura 2000 sites within a 15km radius of the site. This site is the Lough Oughter and Associated Loughs SAC 000007 and is located approx. 10.9km to the northwest and Lough Oughter Complex SPA 004049 located within 12km of the proposed development site. (Figure7.0)

Figure 7.0: Proximity of Lough Oughter Complex SPA to the proposed development site



7.1.2 Aquatic Ecology

The application site lies within the Erne Hydrometric Area and Catchment and the Laragh Sub-Catchment and Sub-Basin. There is an open drain along the eastern site boundary and clean surface water from the application site will be directed into this drain. Water from this drain flows in a northerly direction towards the main channel of the Laragh River, which is >150m north of the application site. The Laragh River is a tributary of the Stradone River and the confluence of these two watercourses is 6.8km north of the application site.

The EPA have defined the ecological status of the Laragh River and its tributaries at points close to the application site as good. Under the requirements of the Water Framework Directive, this is satisfactory, and this status must be maintained.

The Biotic Index of Water Quality (BIWQ), better known as the Q-value, was developed in Ireland by the EPA. Q- values and water quality classes are assigned using a combination of habitat characteristics and structure of the macroinvertebrate community within the water body. Individual macroinvertebrates are ranked for their sensitivity to organic pollution and the Q-value is assessed based, primarily on their relative abundance within a biological sample. The EPA's Q-value rating, water quality status class and corresponding WFD status classification is presented in Table 8.

Table 8.0: EPA Q-Rating and Equivalent WFD Water Quality Status Classes

Q-Rating	EPA Quality Status	Water Quality	WFD Status
Q5	Unpolluted	Good	High
Q4-5	Unpolluted	Fair - Good	High
Q4	Unpolluted	Fair	Good
Q3-4	Slightly Polluted	Doubtful – Fair	Moderate
Q3	Moderately Polluted	Doubtful	Poor
Q2-3	Moderately Polluted	Poor – Doubtful	Poor
Q2	Seriously Polluted	Poor	Bad
Q1-2	Seriously Polluted	Bad – Poor	Bad
Q1	Seriously Polluted	Bad	Bad

Two monitoring stations for the river Laragh are in relatively proximity to the site have historically been used to determine the Q-value rating of the water. These include a river station located at Laragh (36L010080) approx. 200m to the north of the site and a river station located at a Laragh – Br on Stradone Laragh Rd (36L010100) approx. 820m to the southwest of the site. Whilst Q4 were observed at Laragh station in 2013 which suggest the river is healthy and unpolluted.

7.2 Predicated Impacts

An analysis of the predicted effects of the proposed/existing development on the surrounding ecology during construction and operation is presented below.

7.2.1 Construction Phase

Given that the development will not impact upon any Natura 2000 site (Screening Report Prepared by Noreen McLoughlin), two protected flora or fauna species have been identified within 15km to the site. The Laragh river is in close proximity to the site with 'Good' waterbody status and it is not envisaged that

construction or operation activities will pose a significant ecological risk. To minimise the loss of the habitat and species, the area of construction should be kept to the minimum required. Construction should be approached from the existing poultry operation to avoid disturbing neighbouring habitats. Increased water flow to drainage ditches should be managed and improved if necessary. However, the following impacts could have an effect on the surrounding ecology if left unmitigated during the construction phase;

- Destruction of ecological habitats;
- Contamination of surface water bodies and subsequent effect on aquatic species as a consequence of silt, hydrocarbon or nutrient pollution.

7.2.2 Operational Phase

It is not envisaged that operational activities will pose a significant risk to the surrounding ecology. However, potential operational impacts associated with the proposed development if left unmitigated include:

- Introduction of rodents which can have a detrimental effect on animal welfare
- Introduction of weed cover which can provide habitat to pests can in turn have a detrimental effect on animal welfare; and
- Contamination of surface water bodies and subsequent effect on aquatic species as a consequence of silt, hydrocarbon or nutrient pollution.

7.3 Mitigation Measures

With the implementation of the proposed mitigation measures, all potential impacts associated with the development can be classed as imperceptible. These measures will include:

- All mitigation measures proposed to control sediment/silt runoff from the site as described in Section 4.4;
- All mitigation measures designed to prevent, and control hydrocarbon contamination arising from the site as described in Section 4.4 & Section 5.4;
- The removal of manure offsite by a registered contractor and the application of soiled waters onto the applicants lands according to S.I 605 of 2017 as described in Section 5.4;
- Measures to ensure that the minimisation of soiled water as described in Section 6.3;
- A permanent silt trap will be installed and maintained at a location upgradient to the stormwater discharge point;
- Daily inspection of stormwater discharge point with surface water quality sampling carried out in accordance with any EPA IED licence requirements;
- The implementation of a rodent control programme;
- Good housekeeping including the regular cleaning of the feed storage areas and the removal of dead birds offsite;

- The planting of the northern boundary hedgerow in accordance with minimum specifications for screening belts and shelter belts for farmyards and farm buildings (S135 of 2008); and
- Hedges and shrubs to be planted.

Conclusion

Following the examination of the processes and associated issues involved with the nature of the proposed development, no significant adverse Impacts or areas of concern are predicted as arising during the construction or operational phases of the development. Where real Impacts are identified, mitigation measures will be put in place to reduce insofar as possible. Given that the existence of agricultural activity and associated industry in the vicinity by the developers, it is proposed that the development of a poultry unit will have limited effects on the surrounding environment.

8.0 ARCHAELOGICAL & CULTURAL HERITAGE

8.1 Environmental Setting

Both the National Monuments Service and the National Inventory of Architectural Heritage's records were reviewed to assess whether the development will have an archaeological or cultural impact. Four sites of cultural significance are recorded within a 1km radius of the site.

The closest archaeological site is a Ringfort at Killycrone (Ref No. CV021-043---) located approximately 0.1km to the west of the proposed development site. Ringfort – Edergole (Ref No. Cv021-038----) located approximately 0.5km to the west of the proposed development site. A nearby graveyard (Ref No. CV021-043002) along with a neighbouring church (Ref No. CV021-043001) is located 0.2km north from the proposed site.

Figure 8.0: Proximity of closest site of cultural significance to the proposed development site

8.2 Predicated Impacts

Given the distance of the nearest archaeological heritage site to the proposed poultry units (i.e. <1km), it is not envisaged that there will be any impact as a consequence. No cultural sites or their corresponding buffer zones/zones of notification are located within the boundary of the development, with the closest located approx. 100m to the north. As no development will occur outside of the site boundary, it is not envisaged that this cultural heritage site will be impacted upon. Therefore, it can be concluded that the impact of the proposed development on the cultural heritage of the area will be imperceptible.

9.0 AIR, CLIMATE & NOISE

9.1 Environmental Setting

9.1.1 Climate

According to the Koppen Climate Classification System, Ireland's climate is defined as a temperate oceanic climate (Cfb), which can be described as mild, moist and changeable with abundant rainfall and a lack of temperature extremes. Climatic parameters such as wind and rain can have a serious effect on the magnitude of environmental impact arising from agricultural developments. The magnitude of potential impacts from the development upon air quality is significantly dependent on local meteorological conditions, in particular wind direction, wind speed and precipitation. A review of climatological conditions in the region was therefore carried out. Meteorological data used to inform this study was sourced from Met Eireann. The nearest Met Eireann weather station is situated in Ballyhaise, Co. Cavan 11 km north west of the subject site. The prevailing wind direction in the region is between south and west. The mean annual rainfall is 1200 mm.

Climate change means a significant change in the measures of climate, such as temperature, rainfall, or wind, lasting for an extended period – decades or longer. Most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic (produced by humans) greenhouse gas (GHG) emissions. Greenhouse gas emissions arise from many different activities. The EPA has responsibility for the compilation of GHG emission figures for Ireland. The most recent emissions figures compiled show that in Ireland, agriculture is the single largest contributor to the overall emissions, at 29.2% of the national total. Ireland is committed to reducing its greenhouse gas emissions under the Kyoto Protocol. This is an international agreement designed to reduce GHG emissions in developed countries by achieving national emission targets.

9.1.2 Air Quality

The EPA has established an ambient air quality monitoring network in Ireland. EPA air quality data was reviewed to assess existing air quality in the locality of the site. Air quality zones have been established in Ireland by the EPA in accordance with the Clean Air for Europe Directive. As part of the implementation of the Framework Directive on Air Quality (1996/62/EC), four air quality zones have been defined in Ireland for air quality management and assessment purposes (11). Dublin is defined as Zone A and Cork as Zone B. Zone C is composed of 15 towns with a population of greater than 15,000. The remainder of the country, which represents rural Ireland but also includes all towns with a population of less than 15,000 is defined as Zone D. In terms of air monitoring, County Cavan is categorised as Zone D.

The EPA applies an Air Quality Index to assess the overall quality of air. Results from this monitoring station (Kilkitt) show that current air quality in the area is of a 'good' standard. The EPA's 2016 Annual Report on Air Quality in Ireland shows that, at the Kilkitt air monitoring station in 2016, there were no exceedances of ambient air quality limits as stipulated in the EU's CAFÉ Directive. Air quality in the region is therefore considered to be of consistently good quality.

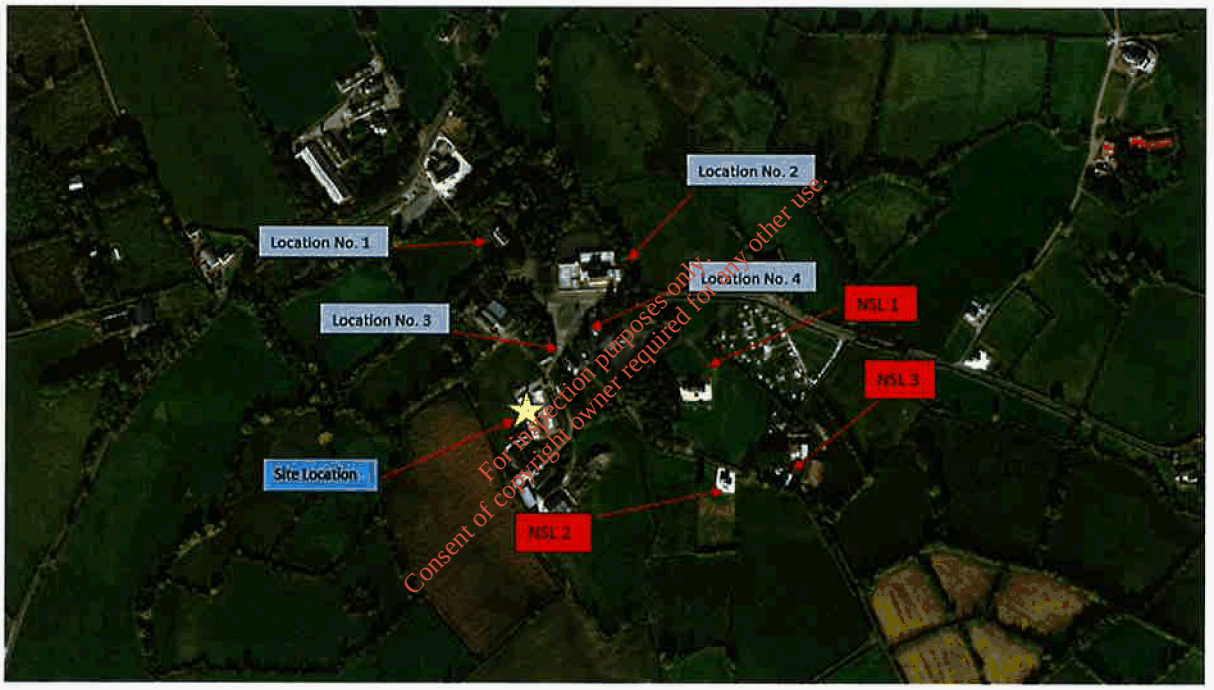
9.1.3 Noise

Typical conditions for sites, licensed by the Environmental Protection Agency (EPA) in order to control noise from the site are outlined below. These conditions stipulate operating noise levels that should not be exceeded at any noise sensitive location surrounding the site.

9.1.4 Sensitive Receptors

One-off housing in the locality is situated east and south-east of the subject site >150m. Agricultural land surrounds the subject site on the north, west and south boundaries. Existing poultry units and local road located on the east boundary. Three Noise Sensitive Locations (NSL) and four Noise Location (NL) have been considered as part of this assessment.

Figure 9.0: Map showing Noise Sensitive Locations (NSL) and Noise Locations (NL)



Monitoring of background noise at the subject site took place on 14/06/2018.

Table 9: Instrumentation Used

	First Set		
Equipment	**Model**	**Serial Number**	**Cal cert**
Larson Davis	831	0003913	Yes
Microphone	377B02	302020	Yes
Calibrator	CR:515	44501	Yes
Tripod	N/A	N/A	N/A
Windshield	N/A	N/A	N/A

Table 10: NSL Details

Noise Monitoring Location	Description	Coordinates
NSL1	Residential property east of the site	X251654, Y305036
NSL2	Residential property south-east of site	X251692, Y304943
NSL3	Residential property east of site	X251762, Y304962

Table 11: Summary of Noise Results

Location	Time	Measured Noise Levels, dB re 2 x 10-5 pa			
		L_{Aeq}	L_{AFMax}	L_{AF10}	L_{AF90}
NSL 1	12:15	52.7	71.4	52.8	45.1
Location	**Time**	**Measured Noise Levels, dB re 2 x 10-5 pa**			
		L_{Aeq}	L_{AFMax}	L_{AF10}	L_{AF90}
NSL 2	13:08	54.0	79.7	51.6	42.6
Location	**Time**	**Measured Noise Levels, dB re 2 x 10-5 pa**			
		L_{Aeq}	L_{AFMax}	L_{AF10}	L_{AF90}
NSL 3	13:30	52.1	73.0	55.7	40.8

Four NL were also identified during a desktop survey of the site. NL's were selected based on their proximity to the proposed development and their positions at various cardinal points of the proposed development. Details on NL's are shown in Table 4.

Table 12: Noise Location Results

Location	Time	Measured Noise Levels, dB re 2 x 10-5 pa			
		L_{Aeq}	L_{AFMax}	L_{AF10}	L_{AF90}
No.1	13.45	58.1	79.4	57.2	37.7
Location	**Time**	**Measured Noise Levels, dB re 2 x 10-5 pa**			
		L_{Aeq}	L_{AFMax}	L_{AF10}	L_{AF90}
No.2	14:10	66.8	91.2	61.1	42.6
Location	**Time**	**Measured Noise Levels, dB re 2 x 10-5 pa**			
		L_{Aeq}	L_{AFMax}	L_{AF10}	L_{AF90}
No.3	14:35	64.0	93.3	59.4	45.6
Location	**Time**	**Measured Noise Levels, dB re 2 x 10-5 pa**			
		L_{Aeq}	L_{AFMax}	L_{AF10}	L_{AF90}
No.4	15:05	47.5	67.6	49.1	36.9

9.2 Predicated Impacts

9.2.1 Construction Phase (Air& Climate)

- Emissions with the potential to cause climate change include carbon dioxide CO^2, which will arise from vehicles delivering construction materials to the site.

9.2.2 Construction Phase (Noise)

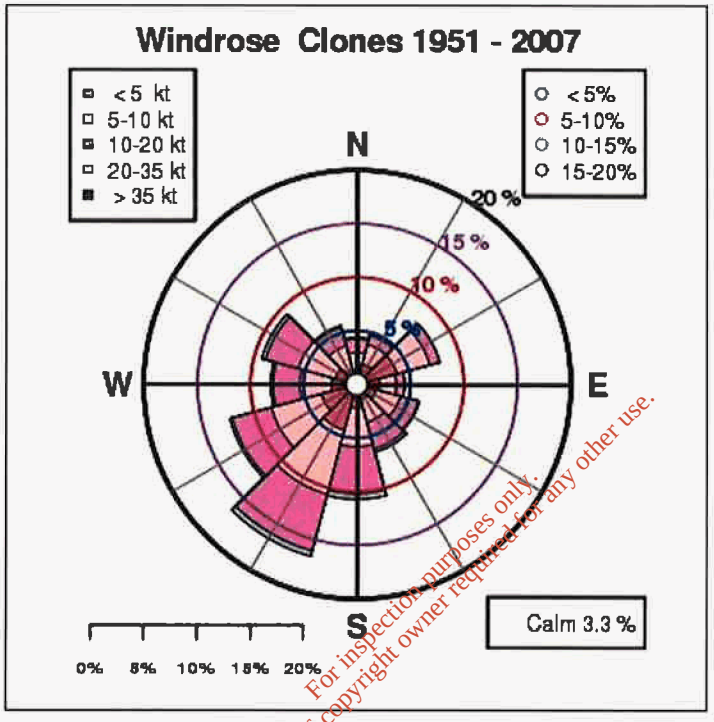
It is estimated that the construction of the development will take approx. 3 months to complete. Principle sources of noise generated during the construction stage, will arise from vehicular movements and the operation of power equipment. However, it is not envisaged that these sources will cause a nuisance or exceed legal limits outside the site boundary.

9.2.3 Operational Phase (Air & Climate)

Agricultural atmospheric emissions are dominated by methane (CH_4). The amount of CH_4 emitted by livestock is a considerably higher for ruminants such as cattle and sheep versus non-ruminants such as poultry. Given that the proposed development is a poultry one, it is not envisaged that an increase in greenhouse gases will occur. Odour emissions from the site are not perceived to cause a nuisance outside of the site boundary with the possible exception of a brief small adverse effect during times of manure disposal. There has been no complaints received by the applicant for the existing site. The potential operational impacts associated with the proposed development if left unmitigated include:

- Emissions with the potential to cause climate change include carbon dioxide CO^2, which will arise from vehicles delivering birds, feed and litter to the site or removing manure from the site.
- Odour emissions during times of manure removal; and
- Odour emissions arising from poor farm management (i.e. poor housekeeping (e.g. odour generated from damp feed supplies) and build-up of dead birds onsite.

Figure 10.0: Windrose for Clones meteorological station



9.2.4 Operational Phase (Noise)

Poultry farming is a traditional agricultural type enterprise. Noise pollution is not a complaint commonly reported as a consequence of this type of development. During the construction stage, the principle sources of noise will arise from vehicular movements and the operation of power equipment. However, it is not envisaged that these sources will cause a nuisance or exceed EIA limits outside the site boundary.

9.3 Mitigation Measures

With the implementation of the proposed mitigation measures, all potential impacts associated with the development can be classed as imperceptible. These measures will include:

- All machinery or delivery/collection vehicles to be turned off when not in use (e.g. no idling of delivery lorries when being unloaded);
- All manure to be immediately removed offsite once loaded into trailers. In addition, all trailers assigned to this task will be properly designed and covered;

- A check for dead birds within the stock will occur twice daily. All dead birds to be stored in 240 litres sealed and locked wheelie bins and removed offsite by an approved contractor;
- Regular cleaning of feed storage areas and concrete aprons to front and sides of houses; and
- Each house to be properly insulated to reduce heating gas consumption.

10.0 LANDSCAPE & VISUAL IMPACT

10.1 Environmental Setting

This Landscape and Visual Assessment (LVIA) has been prepared in respect of an Environmental Impact Assessment Report to extend an existing poultry farm in Killycrone, Stradone, Co. Cavan. The Applicant is constructing one new poultry house in Killycrone, Stradone, Co. Cavan. This chapter uses methodology as prescribed in the following guidance documents:

- Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be contained in Environmental Impact Statements' (updated 2015) and the accompanying Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (updated 2015);
- Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, Draft (August 2017)
- Landscape Institute and the Institute of Environmental Management and Assessment publication, 'Guidelines for Landscape and Visual Impact Assessment' (2013).

10.1.1 Description of the Proposed Development

The existing site is situated in Killycrone, Stradone Co. Cavan which is 10km east of Cavan town and 16.3km from Cootehill. The proposed site is 0.2 km south off the regional road R165. Access to the site is via a local road off the R165. The topography of the area is undulating.

10.1.2 Assessment Methodology

Production of this Landscape and Visual Impact Assessment involved:

- A desktop study to establish an appropriate study area, relevant landscape and visual designations in the Cavan County Development Plan as well as other sensitive visual receptors. This stage culminates in the selection of a set of potential viewpoints from which to study the effects of the proposal;
- Fieldwork to establish the landscape character of the receiving environment and to confirm and refine the set of viewpoints to be used for the visual assessment stage;
- Assessment of the significance of the landscape impact of the proposal as a function of landscape sensitivity weighed against the magnitude of the landscape impact;
- Assessment of the significance of the visual impact of the proposal as a function of visual receptor sensitivity weighed against the magnitude of the visual impact.

10.1.3 Landscape Impact Assessment Criteria

When assessing the potential impacts on the landscape resulting from a proposed development, the following criteria are considered:

- Landscape character, value and sensitivity;
- Magnitude of likely impacts;
- Significance of landscape effects.

The sensitivity of the landscape to change is the degree to which a particular landscape receptor (Landscape Character Area ("LCA") or feature) can accommodate changes or new elements without unacceptable detrimental effects to its essential characteristics. Landscape Value and Sensitivity is classified using the following criteria set out in Table 13 below.

Table 13: Landscape Value and Sensitivity

Sensitivity	Description
Very High	Areas where the landscape character exhibits a very low capacity for change in the form of development. Examples of which are high value landscapes, protected at an international or national level (World Heritage Site/National Park), where the principal management objectives are likely to be protection of the existing character.
High	Areas where the landscape character exhibits a low capacity for change in the form of development. Examples of which are high value landscapes, protected at a national or regional level (Area of Outstanding Natural Beauty), where the principal management objectives are likely to be considered conservation of the existing character.
Medium	Areas where the landscape character exhibits some capacity and scope for development. Examples of which are landscapes, which have a designation of protection at a county level or at non-designated local level where there is evidence of local value and use.
Low	Areas where the landscape character exhibits a higher capacity for change from development. Typically, this would include lower value, non-designated landscapes that may also have some elements or features of recognizable quality, where landscape management objectives include, enhancement, repair and restoration.
Negligible	Areas of landscape character that include derelict, mining, industrial land or are part of the urban fringe where there would be a reasonable capacity to embrace change or the capacity to include the development proposals. Management objectives in such areas could be focused on change, creation of landscape improvements and/or restoration to realize a higher landscape value.

The magnitude of a predicted landscape impact is a product of the scale, extent or degree of change that is likely to be experienced as a result of the proposed Development. The magnitude takes into account whether there is a direct physical impact resulting from the loss of landscape components and/or a change that extends beyond the Application Site boundary that may have an effect on the landscape character of the area, as set out in Table 14 below.

Table 14: Magnitude of Landscape Impacts

Magnitude of Impact	Description
Very High	Change that would be large in extent and scale with the loss of critically important landscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an overall change of the landscape in terms of character, value and quality.
High	Change that would be more limited in extent and scale with the loss of important landscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an overall change of the landscape in terms of character, value and quality.
Medium	Changes that are modest in extent and scale involving the loss of landscape characteristics or elements that may also involve the introduction of new uncharacteristic elements or features that would lead to changes in landscape character, and quality.

The significance of a landscape impact is based on a balance between the sensitivity of the landscape receptor and the magnitude of the impact. The significance of landscape impacts is arrived at using the following matrix set out in Table 15.

Table 15: Impact Significance Matrix

	Sensitivity of Receptor				
Scale/Magnitude	*Very High*	*High*	*Medium*	*Low*	*Negligible*
Very High	Profound	Profound-substantial	Substantial	Moderate	Minor
High	Profound-substantial	Substantial	Substantial-moderate	Moderate-slight	Slight-imperceptible
Medium	Substantial	Substantial-moderate	Moderate	Slight	Imperceptible
Low	Moderate	Moderate-slight	Slight	Slight-imperceptible	Imperceptible
Negligible	Slight	Slight-imperceptible	Imperceptible	Imperceptible	Imperceptible

Please note: The significance matrix provides an indicative framework from which the significance of an impact is derived. The significance judgement is ultimately determined by the assessor using professional judgement. Due to nuances within the constituent sensitivity and magnitude judgements, this may be up to one category higher or lower than indicated by the matrix. Judgements indicated above in yellow/orange text are considered to be 'significant impacts' in EIA terms.

10.1.4: Visual Impact Assessment Criteria

As with the landscape impact, the visual impact of the proposed Development will be assessed as a function of sensitivity versus magnitude; in this instance, the sensitivity of the visual receptor weighed against the magnitude of the visual effect.

10.1.5 Sensitivity of Visual Receptors

Unlike landscape sensitivity, the sensitivity of visual receptors has an anthropocentric basis. It considers factors such as the perceived quality and values associated with the view, the landscape context of the viewer, the likely activity they are engaged in and whether this heightens their awareness of the surrounding landscape. A list of the factors considered by the assessor in estimating the level of sensitivity for a particular visual receptor is outlined below and used in Table 16 to establish visual receptor sensitivity at each Viewshed Reference Point (VRP):

Susceptibility of Receptors - In accordance with the Institute of Environmental Management and Assessment ("IEMA") Guidelines for Landscape and Visual Assessment (3rd edition 2013) visual receptors most susceptible to changes in views and visual amenity are;

- *"Residents at home;*
- *People, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focused on the landscape and on particular views;*
- *Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience;*
- *Communities where views contribute to the landscape setting enjoyed by residents in the area; and Travelers on road rail or other transport routes where such travel involves recognized scenic routes and awareness of views is likely to be heightened".*
- Visual receptors that are less susceptible to changes in views and visual amenity include; *"People engaged in outdoor sport or recreation, which does not involve or depend upon appreciation of views of the landscape; and*
- *People at their place of work whose attention may be focused on their work or activity, not their surroundings and where the setting is not important to the quality of working life".*

10.1.6 Visual Impact Magnitude

The magnitude of visual effects is determined on the basis of two factors; the visual presence (relative visual dominance) of the proposal and its effect on visual amenity.

Table 16: Magnitude of Visual Impact

Criteria	Description
Very High	The proposal intrudes into a large proportion or critical part of the available vista and is without question the most noticeable element. A high degree of visual clutter or disharmony is also generated, strongly reducing the visual amenity of the scene.
High	The proposal intrudes into a significant proportion or important part of the available vista and is one of the most noticeable elements. A considerable degree of visual clutter or disharmony is also likely to be generated, appreciably reducing the visual amenity of the scene.
Medium	The proposal represents a moderate intrusion into the available vista, is a readily noticeable element and/or it may generate a degree of visual clutter or disharmony, thereby reducing the visual amenity of the scene. Alternatively, it may represent a balance of higher and lower order estimates in relation to visual presence and visual amenity.
Low	The proposal intrudes to a minor extent into the available vista and may not be noticed by a casual observer and/or the proposal would not have a marked effect on the visual amenity of the scene.
Negligible	The proposal would be barely discernible within the available vista and/or it would not detract from, and may even enhance, the visual amenity of the scene.

10.1.7 Visual Impact Significance

As stated above, the significance of visual impacts is a function of visual receptor sensitivity and visual impact magnitude. This relationship is expressed in the same significance matrix and applies the same EPA definitions of significance as used earlier in respect of landscape impacts.

10.1.8 Extent of study Area

From similar studies it is anticipated that the proposed development is likely to be difficult to discern beyond approximately 5km and is not likely to give rise to significant landscape or visual impacts beyond approximately 2km. In the interests of a comprehensive appraisal, a 5km radius study area is used in this instance, but with a particular focus on receptors contained within 2km.

10.1.9 Potential Impacts

A development such as this proposal has the impact upon the landscape and visual aspects of the existing built environment in a number of ways, at both construction and operational stages. Effects can be short or long term; temporary or permanent. The purpose of this section of the EIAR report is to describe the likely significant effects of the proposed development; upon the visual and urban aspects of the immediate area, and further across the county if/ where relevant.

10.1.10 Construction Phase

Potential visual impacts during the construction phase are related to temporary works, site activity, and vehicular movement within and around the boundaries of the subject site. Vehicular movements will increase in the immediate area, all construction impacts will be temporary, and will include the following:

- Site preparation works and operations;
- Site infrastructure and vehicular access;
- Construction traffic;
- Dust and other emissions;
- Temporary site lighting;
- Temporary site buildings;
- Drainage.

The extent of visual impact of the development during the construction phase is likely to be similar to that for the operational phase, as set out below.

10.1.11 Operational Phase

The extent of potential visual impact of the proposed development on the built environment from locations around the proposed development is discussed below.

In the do-nothing scenario, no development will take place, and the present character of the site will remain. The character of the impact: positive, negative or neutral, will depend on how well a development is received by the public, and on the general contribution of the development to the built environment. The character of a visual impact, and even the duration of a visual impact, is very dependent on the attitude of the viewer. If a viewer is opposed to a new building in a negative light, no matter how beautiful the building might be.

Figure 11.0 Photomontage No.1

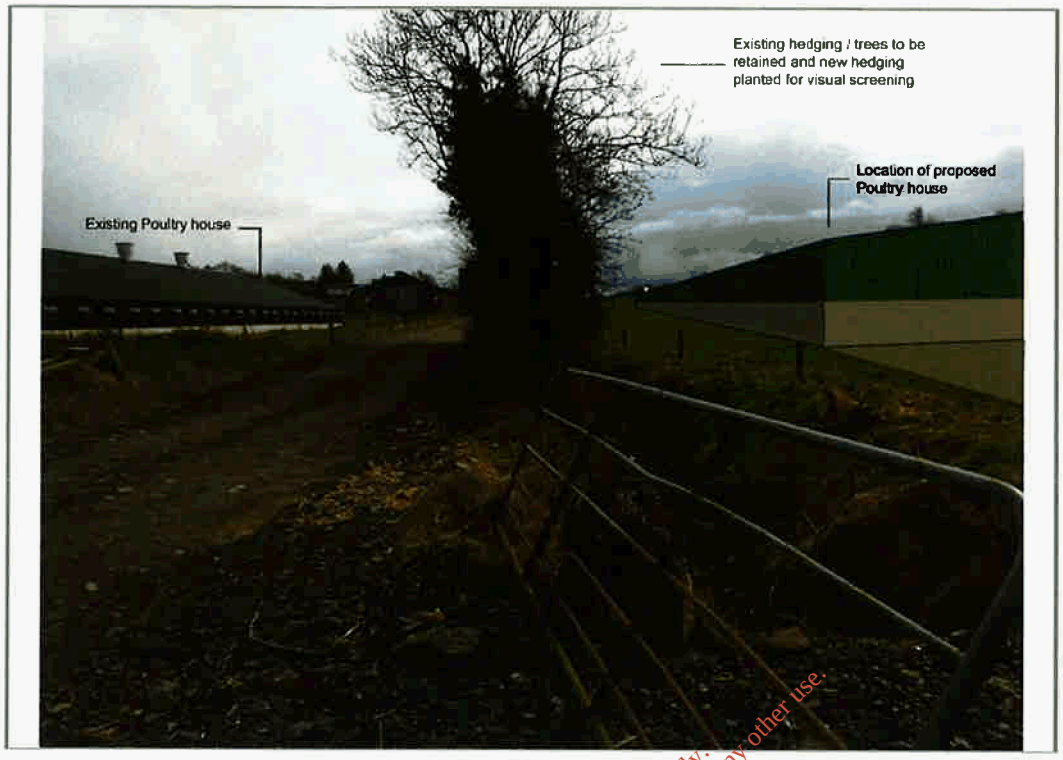
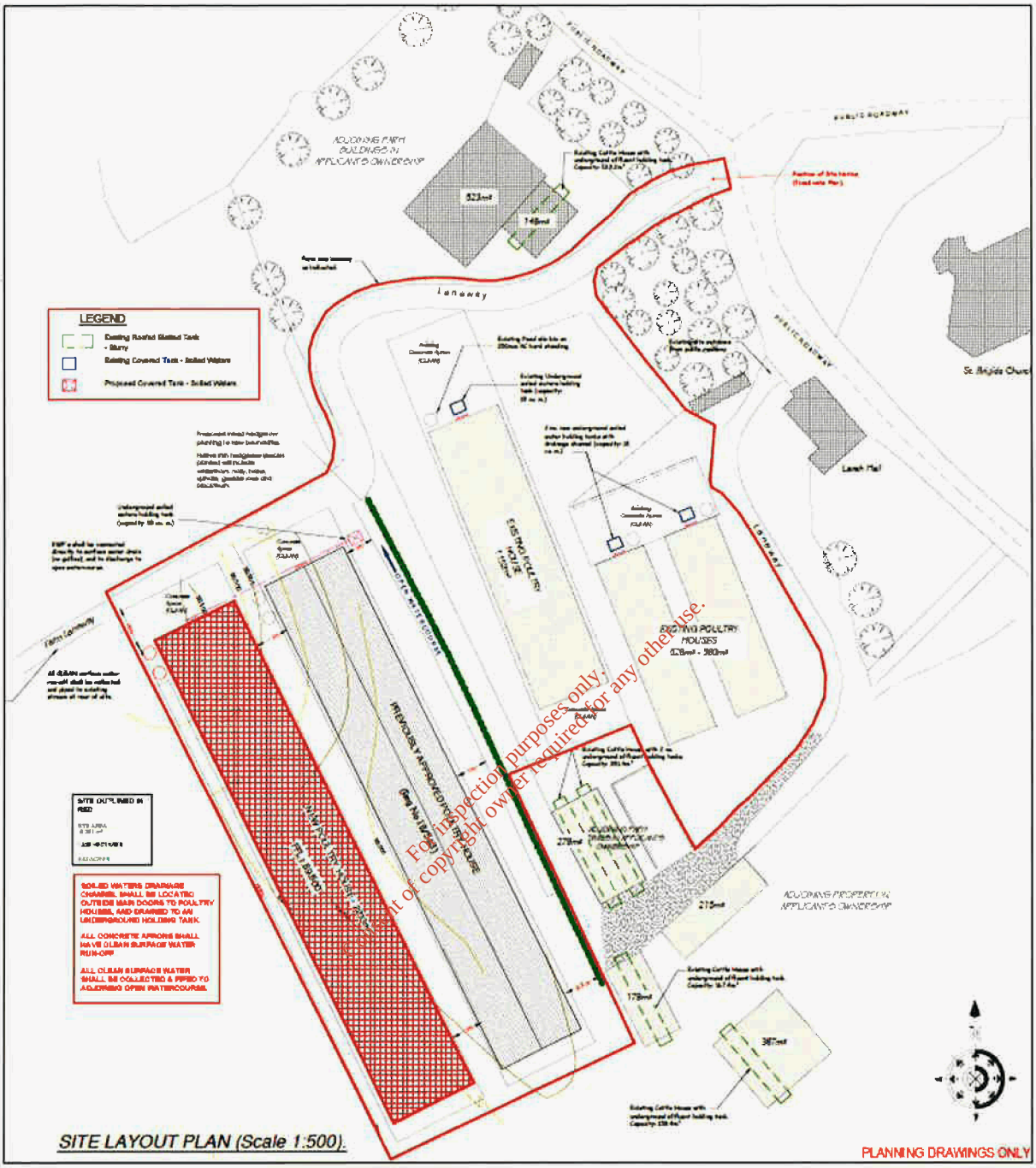


Figure 12.0 Photomontage No.2

Figure 13.0 Landscape Design for the site



11.0 MATERIAL ASSETS

11.1 Introduction

This chapter considers and assesses the potential impacts on the material assets of the surrounding area during the construction and operational phases of the proposed project. Subsequent to Directive 2014/52/EU, the material assets factor can now be taken to mean built services and infrastructure. Traffic is included because in effect traffic consumes roads infrastructure. Therefore, the material assets that are considered include:

- Built services & Utilities;
- Natural resources;
- Roads & traffic;
- Waste Management;
- Surrounding properties; and
- Surrounding agricultural holdings

11.2 Predicated Impacts

An analysis of the predicted effects of the proposed poultry development on the surrounding material assets during construction and operation is presented below.

11.2.1 Construction Phase

It is anticipated that the construction of the proposed development will take approx. 3 months to complete. Based on a review of recent similar poultry developments constructed in the county, the proposed development could be classed as average in size in comparison. A limited quantity of natural resources (e.g. quarried materials, timber etc.) will be required to complete the construction of the project, however given the scale of the development, it is not envisaged that this will result in a negative impact. Given the scale of the development and duration of the proposed construction activities, it is not predicated that there will be an adverse impact on the local road infrastructure as the site is well serviced by the local road network. As the construction of the proposed development will be contained within the confines of the site boundary and will not interact with the surrounding lands/properties, it is not envisaged that there will be an impact on third party residences, commercial, residential, or agricultural land holdings. As mentioned previously, odour emissions from the site are not perceived to cause a nuisance outside of the site boundary with the possible exception of a brief small adverse effect during times of manure disposal. Nevertheless, the following impacts could have an effect on the surrounding material assets if left unmitigated during the construction phase:

- Issues surrounding the mismanagement of construction and demolition (C&D) waste generated during the construction process. This may lead to surface water, groundwater and soil contamination which subsequently may have an ecological or human health impact. Improper disposal may also impinge upon the landscape causing a visual impact; and
- Inappropriate sourcing of construction materials.

11.2.2 Operational Phase

As the operation of the proposed development will be contained within the confines of the site boundary and will not negatively interact with the surrounding lands/properties, it is not envisaged that there will be an adverse impact on third party residences, commercial, residential, or agricultural land holdings.

Once operational, an increase of traffic frequenting the site (i.e. currently greenfield) will increase. This will include feed deliveries, manure transport, consumable deliveries (i.e. gas and wood shavings), bird deliveries/collections and collection of mortalities. An estimation of the volume of traffic associated with the enterprise includes:

- Circa 6 meal deliveries per 6-week batch (i.e. calculated based on an animal consumption of approx. 25 tonnes of meal per week and a lorry capacity of 28 tonnes);
- Circa 6 manure removal runs per 6-week batch;
- Circa 25 lorry runs per 6-week batch relating to bird deliveries/collections, gas and wood shaving deliveries; and
- Circa 3 mortality collections per 6-week batch (i.e. calculated based on a fortnightly collection).

Based on the above information, it is calculated that a total of c. 40 additional truck movements per batch to and from the site will occur once operational. This equates to an average total of c.7 vehicular movements per week. Consequently, it is not predicted that this will cause an adverse impact on the local road infrastructure.

It is not envisaged that the organic waste (i.e. poultry manure and soiled water) produced onsite will cause an environmental impact as it is proposed to be handled in accordance with the Nitrates Directive (S.I 605 of 2017).
Discarded spent fluorescent lighting tubes are the only potential source of hazardous waste onsite and as such will need to be disposed of in accordance with the WEEE Directive 2012/19/EU.

Water and electrical services are currently in place at the proposed development site and given the scale of the development it is not envisaged that any pressures will be exerted on these utilities as a consequence. Gas heating within the rearing houses will be also be required at certain intervals, however the facility has been designed in accordance with BAT and will be sufficiently insulated thus reducing consumption. In addition, all poultry onsite will consume a meal-based diet which is deemed as a renewable natural resource. Therefore, the proposed development during the operational stages is not determined to cause a negative effect on natural resources.

11.3 Mitigation Measures

It has been determined that following the implementation of the proposed mitigation measures, all potential impacts associated with the development can be classed as imperceptible. These measures will include:

- All C&D waste to properly segregated onsite during the construction phase and disposed of in accordance with the Waste Management Act 1996 (S.I. 10 of 1996);
- The removal of manure offsite by a registered contractor and the application of soiled waters onto the applicants lands according to S.I 605 of 2017 as described in Section 5.4.
- Spent fluorescent light tubes will stored in a bunded container prior to disposal in accordance with the WEEE Directive 2012/19/EU;
- Traffic to and from the site will be minimised by optimising load sizes;
- Each rearing house will be sufficiently insulated so as to reduce gas consumption; and
- Each rearing house will be designed and built in accordance with BAT, including the installation of a nipple drinking system to minimise water wastage.

12.0 POPULATION & HUMAN HEALTH

12.1 Introduction

The recitals to the 1985 and 2011 E.I.A Directives refer to human health and include 'Human Beings' as the corresponding environmental factor. The 2014 E.I.A Directive changes the title of this factor to Population and Human Health'. The 2017 E.I.A.R Draft Guidelines outline typical headings under which environmental factors such as 'Population & Human Health' could be addressed. These include employment, human health and amenity. It should be noted that effects on amenity is discussed in the Landscape and Visual Impact chapter (Section 10).

12.2 Predicted Impacts

At present the applicant, Mr. Hugh Brady operates an existing poultry farm. Upon completion of the development, full time employment will be afforded to the applicant. In addition, this enterprise will enhance job security to those offering services and working as suppliers/contractors to the farm (e.g. employees of Western Brand, CLR Co-op Ltd, Michael Galligan etc.). This represents a positive impact on human health and population.

A number of potential impacts on human health and population have been identified in previous sections. These include;

- Impact on drinking water supplies from contaminated groundwater arising from the construction and operational phases of the development; and
- Nuisance caused by odour emissions during the operational phase.

12.3 Mitigation Measures

It has been determined that following the implementation of the proposed mitigation measures, all potential impacts associated with the development can be classed as imperceptible. These measures have been described previously and will include:

- Mitigation measures designed to prevent hydrogeological contamination (see Section 5.4);
- Mitigation measures designed to prevent hydrogeological contamination via improper disposal of C&D wastes (see Section 11.3); and
- Mitigation measures designed to prevent odour migration issues offsite (see Section 9.3).

13.0 INTER-RELATIONSHIPS & CUMULATIVE EFFECTS

The European Communities (Environmental Impact Assessment) (Amendment) Regulations, 1999 stipulates the interaction between impacts on different environmental factors should be assessed.

- **Soil & Geology**

Should soil contamination occur during the construction or operational phase of the development, it has the potential to cause an adverse impact on the surrounding hydrogeology, hydrology and ecology. Pursuant to the proposed mitigation measures being implemented the aforementioned inter-relationships will have a neutral impact on the environment.

- **Hydrogeology**

Should the underlying aquifer get contaminated/enriched during the construction or operational phase of the development, it has the potential to cause an adverse impact on the surrounding hydrology via baseflow and subsequent indirect alteration to aquatic ecology. In addition, contamination in the groundwater has the potential to impact upon human health, should the boreholes/wells in the vicinity of the site become contaminated. Pursuant to the proposed mitigation measures being implemented the aforementioned inter-relationships will have a neutral impact.

- **Hydrology**

Should contamination or nutrient enrichment occur during the construction or operational phase of the development, it has the potential to cause an adverse impact on the aquatic ecology. Consequently, algal blooms caused due to eutrophication, has the potential to adversely impact on the landscape. Pursuant to the proposed mitigation measures being implemented the aforementioned inter-relationships will have a neutral impact on the environment.

- **Ecology**

The inter- relationships between ecology and the other environmental factors have been described under the previous headings.

- **Archaeological & Cultural Heritage**

No inter-relationships between archaeological & cultural heritage and the other the other environmental factors have been identified.

- **Air, Noise & Climate**

Should odour emissions occur during the operational phase of the development, it has the potential to cause an adverse impact on the surrounding population and human health. Pursuant to the proposed mitigation measures being implemented the aforementioned inter-relationships will have a neutral impact on the environment.

- **Landscape & Visual Impact**

The inter-relationships between the landscape and hydrology/ecology have been described under the previous headings. In addition, improper waste disposal (i.e. material assets) can impact on the surrounding landscape. Pursuant to the proposed mitigation measures being implemented the aforementioned inter-relationships will have a neutral impact on the environment.

- **Material Assets**

Should the improper disposal of C&D waste occur during the construction phase or the should organic wastes be mishandled during the operational phase of the development, this has the potential to cause a direct adverse impact on the surrounding soils, hydrogeology, hydrology, landscape and air quality with subsequent indirect impacts on ecology and human health.

- **Population & Human Health**

The inter-relationships between population and human health and the other environmental factors have been described under the previous headings (i.e. contaminated groundwater/drinking water and impact on air quality).

It is not anticipated that the proposed development will when combined with other projects, result in a cumulative impact that is collectively significant. The do-nothing scenario in relation to the proposed development will not result in any change in the surrounding hydrogeology, hydrology, air quality, noise quality, climate conditions, landscape and cultural heritage. The main impact on the human environment if the proposed development does not proceed is the loss of direct and indirect employment opportunities. In addition, the production of poultry manure and application to tillage farm lands as an organic fertiliser represents a slight positive impact on soils which would be lost if the development did not proceed. Hedgerow/trees are to be planted creating slight positive impact on the local ecology.

Table 17.0: Matrix Indicating Inter-Relationships Between EIA Factors

Interaction	Soils & Geology		Hydrogeology		Hydrology		Ecology		Archaeological & Cultural Heritage		Air, Climate & Noise		Landscape & Visual Impact		Material Assets		Population & Human Health	
	Cons.	Op.	Cons.	Op.	Cons.	Op.	Cons.	Op.	Cons.	Op.	Cons.	Op.	Cons.	Op.	Cons.	Op.	Cons.	Op.
Soils & Geology			√	√	√	√	√	√	X	X	X	X	X	X	√	√	X	X
Hydrogeology					√	√	√	√	X	X	X	X	X	X	√	√	√	√
Hydrology							√	√	X	X	X	X	X	X	√	√	√	√
Ecology									X	X	X	X	X	X	√	√	X	X
Archaeological & Cultural Heritage											X	X	X	X	X	X	X	X
Air, Climate & Noise													X	X	√	√	√	√
Landscape & Visual Impact															√	√	√	√
Material Assets																	√	√
Population & Human Health																		

14.0 SUMMARY OF ENVIRONMENTTAL IMPACTS

No significant adverse residual effects are likely to occur through in-combination and/or cumulative impacts. Any effects identified can be mitigated through management of the construction and operation process by adherence to the mitigation measures set out in the E.I.A.R together with any conditions/restrictions in any approval/consent as may be granted.

Signed: _____

Nevin Traynor

BSc Env, HDIP IT, Cert SHWW, IAH

For Traynor Environmental Ltd

POULTRY APPLICATION FOR MR. HUGH BRADY

KILLYCRONE, STRADONE, CO.CAVAN

ENVIRONMENTAL IMPACT ASSESSMENT

COMPLETED BY

TRAYNOR ENVIORONMENTAL LTD

APPENDIX A – LAND REGISTY MAPS

Traynor Environmental Ltd.

Statement of Land Details

PLEASE NOTE:

This information can be used as a reference for your 2018 application. Please retain for your own records. Further details such as your claimed area are available on the Department's online system. Please do not submit this form as this is not an application form and it cannot be accepted as an application. You must apply Online in 2018 at www.agfood.ie.

1 Herd Number	2 Townland	3 Land Parcel Number	4 Commonage Fraction	5 Digitised Area (ha)	6 Maximum Eligible Area (ha)	7 ORL Owned = O Rented-In = R Leased-In = L	8 PARCEL USE
B1801541	MONELTY	B16409094		4.48	4.30	O	Permanent Pasture
B1801541	AGHATEEMORE G	B16003006		4.55	4.52	O	Permanent Pasture
B1801541	AGHATEEMORE G	B18003008		0.34	0.34	O	Permanent Pasture
B1801541	KILLYCRONE	B18021037		1.81	0.00	O	Building
B1801541	KILLYCRONE	B18021077		10.10	9.99	O	Permanent Pasture
B1801541	KILLYCRONE	B18021079		8.00	7.75	O	Permanent Pasture
B1801541	KILLYCRONE	B18021080		0.14	0.00	O	Building
B1801541	LARAH	B18025021		0.22	0.18	O	Permanent Pasture
B1801541	LARAH	B18025024		6.40	6.19	O	Permanent Pasture
B1801541	LARAH	B18025028		2.02	1.91	O	Permanent Pasture
B1801541	LARAH	B18025029		13.53	13.51	O	Permanent Pasture
B1801541	LARAH	B18025030		1.38	0.00	O	Building

Tailmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine

For Basic Payment Scheme, Areas of Natural Constraint Schome and other Area-Based Schemes Purposes only

Year: 2017 Scale: 1:5000

Name: Hugh Brady

Address: Kilcrone Stradone Co Cavan

Townland Code: B-8035
Townland Name: ACHATEVORE G

Parcel	Digitised	MEA*	Claimed
B1802502G	4.55	c.52	4.52

Exclusions

Parcel	Excl	Area	Red%	Elig	Type
B-8002502G	X02	0.09	100%	0.00	Building

Townland Code: B-8035
Townland Name: LABAH

Parcel	Digitised	MEA*	Claimed
B-8025C24	5.40	6.19	5.12
B-8025C2B	2.02	1.91	1.81
B-8002502B	13.83	13.5*	13.76

Exclusions

Parcel	Excl	Area	Red%	Elig	Type
B-8025C24	X01	0.13	100%	0.00	Farm road (M)
B-8025C24	X02	0.06	100%	0.00	Farm Yard
B-8025C24	X03	0.11	100%	0.00	Building
B-8025C2B	X01	0.02	100%	0.00	Farm road (M)

Ortho Used: Color Ortho Full Coverage

All areas displayed above are in Hectares
* MEA calculation available online via agfood.ie

B1801541 2 of 3 - Tue Dec 12 04:45:46 GMT 2017

005024

Department of Agriculture, Food and the Marine

For Basic Payment Scheme,
Areas of Natural Constraint Scheme and
other Area-Based Schemes Purposes only
Year: 2017 Scale: 1:5000

Name: Hugh Brady
Address:

Kilcrone
Stradone
Co Cavan

Townland Code: B18021
Townland Name: KILLYCRONE

Parcel	Digitised	MEA*	Claimed
B18021077	10.10	9.99	9.89

Exclusions

Parcel	Excl	Area	Red%	Elig	Type
B18021077	X01	0.11	100%	0.00	Farm road (Mi

Ortho Used: Color Ortho Full Coverage

All areas displayed above are in hectares
* MEA calculation available online via agfood.ie

Imagery Dates:06/11/2011, 03/04/2013, 06/04/2015

B1801541
B1801541 3 of 3 - Tue Dec 12 04:45:50 GMT 2017

005024

Tailmhaíochta, Bia agus Mara
Department of
Agriculture, Food and the Marine

For Basic Payment Scheme, Areas of Natural Constraint Scheme and other Area-Based Schemes Purposes only
Year: 2017 **Scale:** 1:5000

Name: Hugh Brady
Address:
Kilcrone
Stradone
Co Cavan

Townland Code: 516409
Townland Name: MONELTY

Parcel	Digitised	MEA*	Claimed
B16409094	4.48	4.3	4.17

Exclusions

Parcel	Excl	Area	Red%	Elig	Type
B16409094	X01	0.16	80%	0.03	Other
B16409094	X02	0.04	100%	0.00	Other
B16409094	X03	0.02	100%	0.00	Farm road (M)
B16409094	X04	0.09	100%	0.00	River
B16409094	X05	0.03	100%	0.00	Farm road (M)

Townland Code: B18003
Townland Name: AGHATEEMORE G

Parcel	Digitised	MEA*	Claimed
B18003002	0.34	0.34	0.34

Townland Code: B1902
Townland Name: KILLYCRONE

Parcel	Digitised	MEA*	Claimed
B18021027	1.81	0	0.00
B18021079	8.00	7.75	7.48
B18021080	0.14	0	0.00

Exclusions

Parcel	Excl	Area	Red%	Elig	Type
B18021079	X01	0.04	100%	0.00	Farm road (M)
B18021079	X02	0.01	100%	0.00	River
B18021079	X03	0.02	100%	0.00	Farm road (M)
B18021079	X04	0.05	100%	0.00	Scrub
B18021079	X05	0.03	100%	0.00	Farm road (M)
B18021079	X06	0.001	100%	0.00	Farm road (M)
B18021079	X07	0.072	100%	0.00	Farm road (M)

Townland Code: B18025
Townland Name: LARAH

Parcel	Digitised	MEA*	Claimed
B18025021	0.22	0.16	0.17
B18025030	1.38	0	0.00

Exclusions

Parcel	Excl	Area	Red%	Elig	Type
B18025021	X01	0.09	50%	0.04	Scrub

Ortho Used: Color Ortho Full Coverage

All areas displayed above are in hectares
* MEA calculation available online via agfood.ie

Imagery Dates:06/11/2011, 03/04/2013, 08/04/2015

B18015 41
B18015 41 1 of 3 - Tue Dec 12 04:45:41 GMT 2017

005024

POULTRY APPLICATION FOR MR. HUGH BRADY

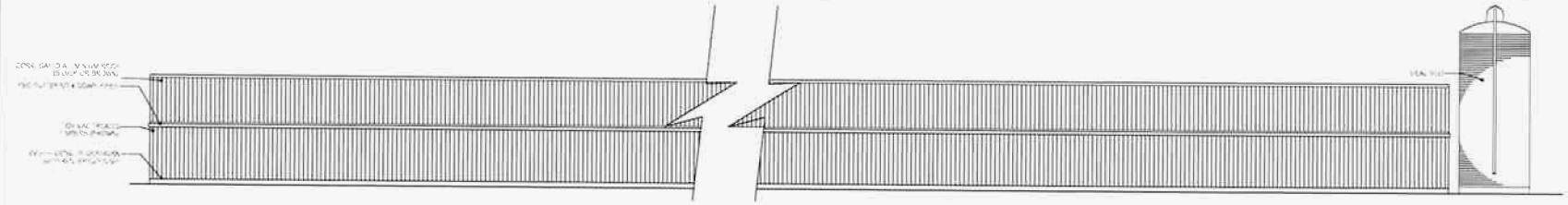
KILLYCRONE, STRADONE, CO.CAVAN

ENVIRONMENTAL IMPACT ASSESSMENT

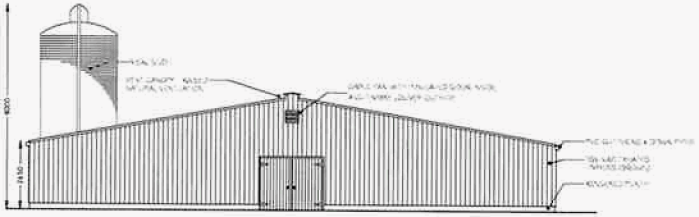
COMPLETED BY

TRAYNOR ENVIORONMENTAL LTD

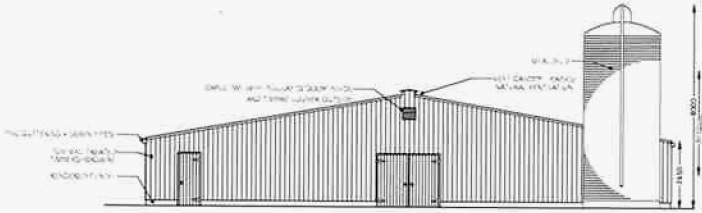
APPENDIX B – DESIGN DRAWINGS



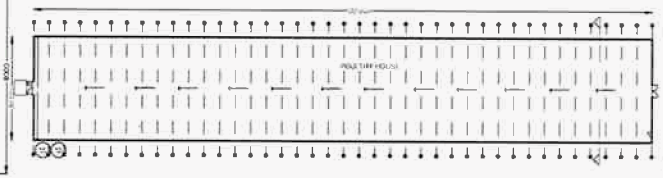
Side Elevation (scale 1:100).



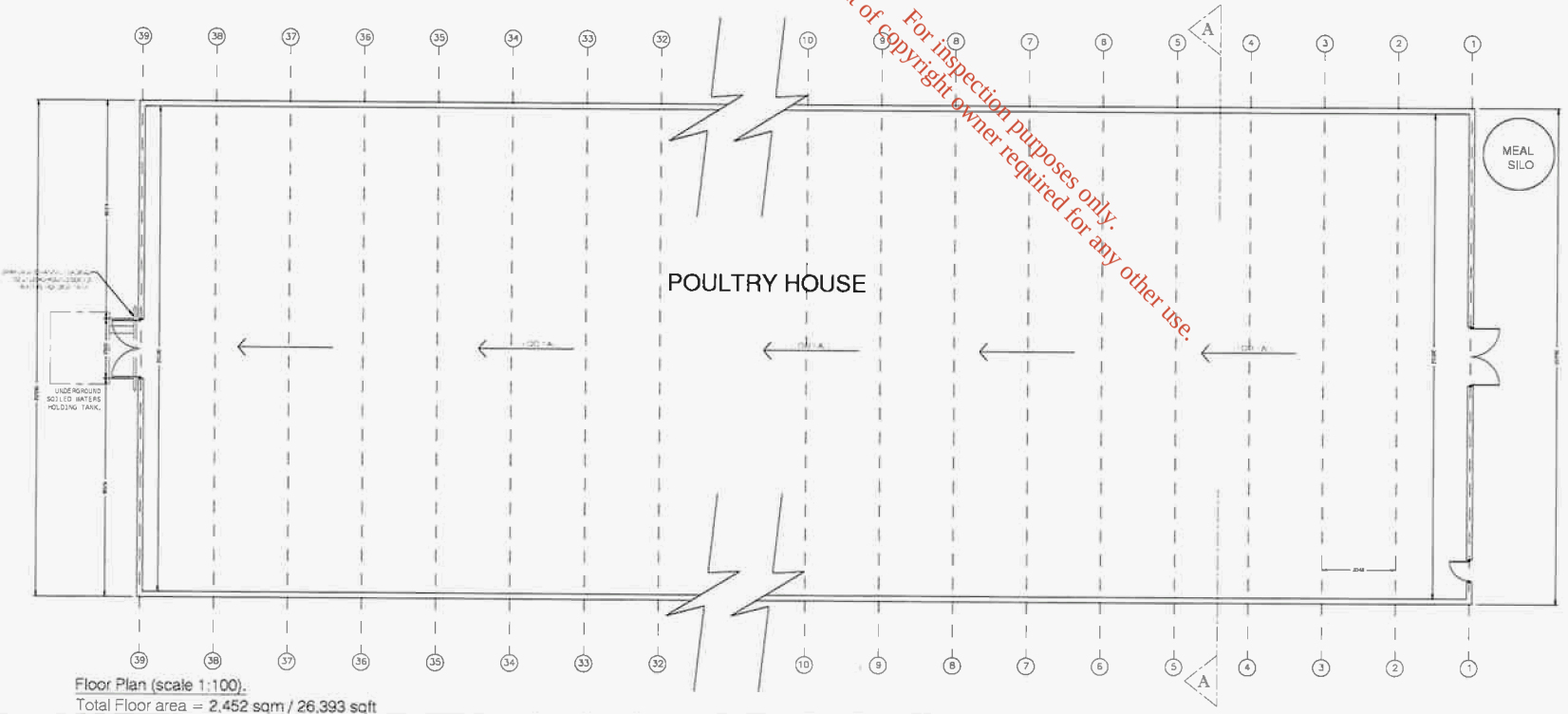
Rear Elevation (scale 1:100).



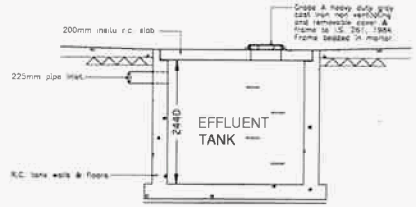
Front Elevation (scale 1:100).

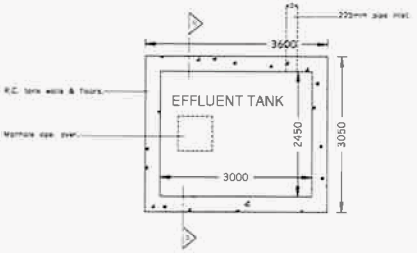


Floor Plan (scale 1:500).



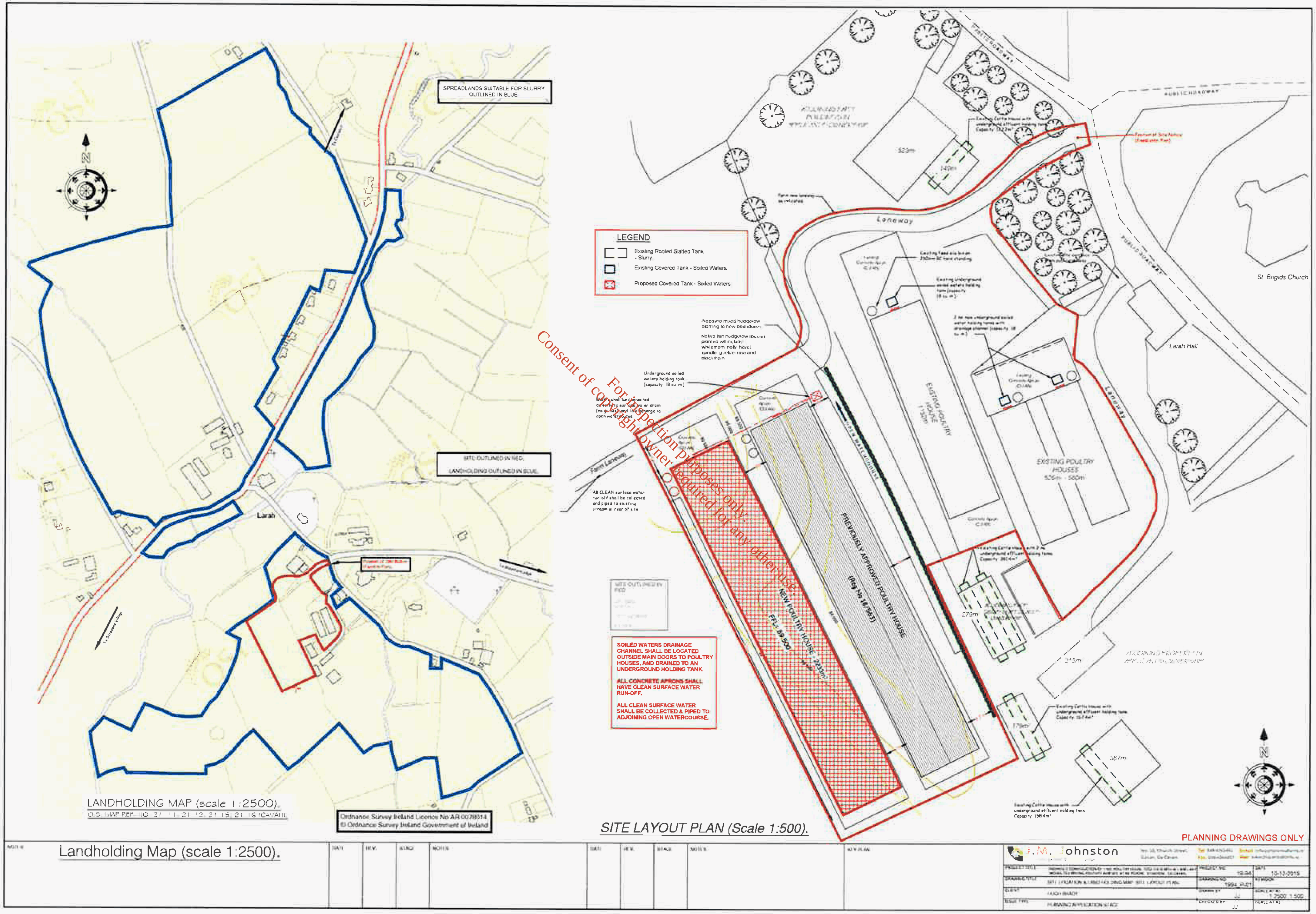
Floor Plan (scale 1:100).
Total Floor area = 2,452 sqm / 26,393 sqft





PLANNING DRAWINGS ONLY

J.M. Johnston



SPREADLANDS SUITABLE FOR SLURRY OUTLINED IN BLUE
SITE OUTLINED IN RED.
LANDHOLDING OUTLINED IN BLUE.
Larah
LANDHOLDING MAP (scale 1:2500).
Ordnance Survey Ireland Licence No AR 0078614
© Ordnance Survey Ireland Government of Ireland
Landholding Map (scale 1:2500).
LEGEND
Existing Rooted Slatted Tank - Slurry
Existing Covered Tank - Soiled Waters.
Proposed Covered Tank - Soiled Waters
Laneway
St. Brigids Church
Larah Hall
PUBLIC ROADWAY
EXISTING POULTRY HOUSE 1152m
EXISTING POULTRY HOUSES 525m - 560m
PREVIOUSLY APPROVED POULTRY HOUSE
(Reg No 18/563)
NEW POULTRY HOUSE - 2233m
FFL: 89.500
OPEN WATERCOURSE
Farm Laneway
523m
149m
279m
215m
179m
367m
All CLEAN surface water run off shall be collected and piped to existing stream at rear of site
SOILED WATERS DRAINAGE CHANNEL SHALL BE LOCATED OUTSIDE MAIN DOORS TO POULTRY HOUSES, AND DRAINED TO AN UNDERGROUND HOLDING TANK.
ALL CONCRETE APRONS SHALL HAVE CLEAN SURFACE WATER RUN-OFF.
ALL CLEAN SURFACE WATER SHALL BE COLLECTED & PIPED TO ADJOINING OPEN WATERCOURSE.
SITE LAYOUT PLAN (Scale 1:500).
PLANNING DRAWINGS ONLY
J.M. Johnston
19-94
10-12-2019
1994_P-01
1:2500 1:500
PLANNING APPLICATION STAGE

POULTRY APPLICATION FOR MR. HUGH BRADY

KILLYCRONE, STRADONE, CO.CAVAN

ENVIRONMENTAL IMPACT ASSESSMENT

COMPLETED BY

TRAYNOR ENVIORONMENTAL LTD

APPENDIX C – CLR ACCEPTANCE LETTER

Traynor Environmental Ltd.

Chicken Litter Re-Cycling Co Op Society Limited
T/A Poultry Manure Supplies (PMS)
Mount Louise, Smithboro, Co. Monaghan, Ireland.

Planning Application

06/09/2018

Dear Sir/Madame,

CLR Co-op Ltd. will be collecting the litter generated from the proposed development of 1 No. poultry house at the farm of Mr. Hugh Brady, Laragh House, Stradone, Co. Cavan. CLR Co-op are a registered contractor with the Department of Agriculture, Food and The Marine for the transport of animal by-products (poultry litter) **DAFM Reference No.CLR**. All necessary paperwork is and will be maintained, including an annual Record 3 form submitted to Department of Agriculture, Food and the Marine.

Poultry litter is currently delivered to a number of mushroom compost yards, and with significant demand for this poultry litter it is intended that the additional litter generated on this poultry farm will be accommodated in these compost yards. The following yards are currently supplied by CLR Co-op.

- Carbury Mushrooms , Derrinturn, Carbury, Co. Kildare.
- Custom Compost, Gorey, Co. Wexford.
- Newry Organic Fertilisers, Mayobridge, Co. Down.

Poultry Litter is considered a much needed raw material for the mushroom industry with considerable demand at present.

Yours faithfully,

James O'Harte
CLR Co-op Ltd

POULTRY APPLICATION FOR MR. HUGH BRADY

KILLYCRONE, STRADONE, CO.CAVAN

ENVIRONMENTAL IMPACT ASSESSMENT

COMPLETED BY

TRAYNOR ENVIORONMENTAL LTD

APPENDIX D – APPROPRIATE ASSESSMENT SCREENING REPORT

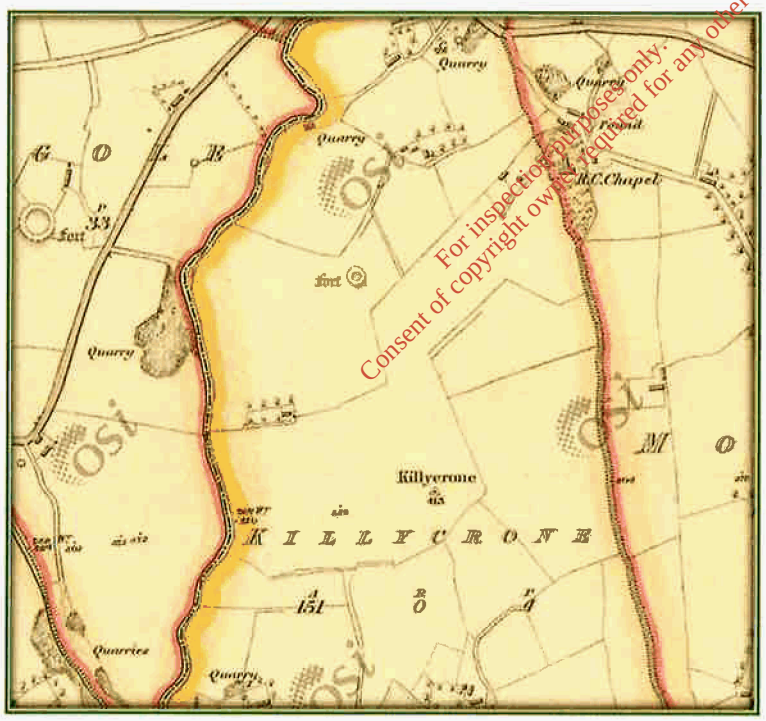
Whitehill
Environmental

Noreen McLoughlin, MSc
Environmental Consultant

Whitehill
Edgeworthstown
Co. Longford
✆ (087) 4127248 / (043) 6672775
✉ noreen.mcloughlin@gmail.com

HABITATS DIRECTIVE SCREENING REPORT FOR A PROPOSED DEVELOPMENT AT KILLYCRONE, STRADONE, CO CAVAN

IN LINE WITH THE REQUIREMENTS OF ARTICLE 6(3) OF THE EU HABITATS DIRECTIVE



Hugh Brady
c/o Traynor Environmental Ltd
Belturbet Business Park
Creeny
Belturbet
Co. Cavan

December 2019

All Maps and Aerial Photography used in this report are reproduced under

TABLE OF CONTENTS

1 INTRODUCTION

1.1 BACKGROUND

Article 6 of the EU Habitat's Directive (Council Directive 92/43/EEC) requires that all plans and projects be screened for potential impacts upon Special Areas of Conservation (SACs) or Special Protection Areas (SPAs). The aim of this screening process is to establish whether or not a full Appropriate Assessment of the proposed plan or project is necessary.

A comprehensive assessment of the ecological impacts of a proposed development at Killycrone, Stradone, Co. Cavan was carried out in December 2019 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.

The location of the proposed development is within 15km of sites designated under European Law. As such and in accordance with Article 6(3) of the EU Habitat's Directive (Council Directive 92/43/EEC) regarding Appropriate Assessment, this screening exercise for Appropriate Assessment was carried out in order to identify whether any significant impacts on designated sites are likely. This exercise will also determine the appropriateness of the proposed project, in the context of the conservation status of the designated sites.

1.2 REGULATORY CONTEXT

RELEVANT LEGALISATION

The Birds Directive (Council Directive 79/409/EEC) implies that particular protection is given to sites (Special Protection Areas) which support certain bird species listed in Annex I of the Directive and that surveys of development sites should consider the status of such species.

The EU Habitats Directive (92/43/EEC) gives protection to sites (Special Areas of Conservation) which support particular habitats and species listed in annexes to this directive. Articles 6(3) and 6(4) of this Directive call for the undertaking of an Appropriate Assessment for plans and projects likely to have an effect on designated sites. This is explained in greater detail in the following section.

The Wildlife Act 1976 (and its amendment of 2000) provides protection to most wild birds and animals. Interference with such species can only occur under licence. Under the act it is an offence to "wilfully interfere with or destroy the breeding place or resting place of any protected wild animal". The basic designation for wildlife is the Natural Heritage Area

(NHA). This is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. Under the Wildlife Amendment Act (2000) NHAs are legally protected from damage. NHAs are not part of the Natura 2000 network and so the Appropriate Assessment process does not apply to them.

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 2015 and that status doesn't 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 site's conservation objectives.

Appropriate Assessment is an assessment of the potential effects of a proposed plan - 'in combination' with other plans and projects - on one or more European sites. The 'Appropriate Assessment' itself is a statement which must be made by the competent authority which says whether the plan affects the integrity of a European site. The actual process of determining whether or not the plan will affect the site is also commonly referred to as 'Appropriate Assessment'.

If adverse impacts on the 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 (European Commission, 2000, 2001).

The conclusions of the appropriate assessment report should enable the competent authority to ascertain whether the proposal would adversely affect the integrity of the site (European Commission, 2000, 2001).

Under the terms of the directive (European Commission, 2000, 2001), 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 the site will not be adversely affected, or (b) where an adverse effect is anticipated, 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.

2 METHODOLOGY

2.1 APPROPRIATE ASSESSMENT

This Statement of Screening for Appropriate Assessment (Stage 1) has been prepared with reference to the following:

- European Commission (2000). Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.
- European Commission (2002). 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 for Appropriate Assessment 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;
- Screening statement with conclusions.

2.2 DESK STUDIES

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 all 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, and geology;
- Myplan.ie – Mapped based information;
- National Biodiversity Data Centre (NBDC) – Information pertaining to protected plant and animal species within the study area;
- Traynor Environmental & J.M. Johnston – Information on the application, its design and specifications.
- Cavan County Council – Information on planning history in the area in order to ascertain potential cumulative impacts.

3 SCREENING

3.1 DEVELOPMENT DESCRIPTION

Hugh Brady has indicated his intention to shortly apply to Cavan County Council for planning permission for a development on a 1.8 hectare site at Killycrone, Stradone, Co. Cavan. Planning permission is being sought for the construction of one new poultry house with all associated site works on a greenfield site. Permission also pertains to an underground washing holding tank, concrete aprons, meal silos and the formation of a new access road into the site. A poultry house was previously approved on this site in 2018 (Reg No: 18/563)

The proposed houses will accommodate approximately 50,000 birds. The applicant also has a poultry farm consisting of three poultry houses on the site adjacent to this current application site. An extract from the planning drawings can be seen in Figure 1.

The operation of the farm will involve the rearing of the chickens from day olds over a period of approximately 30 – 45 days. 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 specialised contractors where it will be composted and used in the mushroom industry or used as an organic fertiliser in accordance with S.I. 605 of 2017 (as amended). 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 for the new structures will be standard and will follow best practice guidelines at all stages. All structures will be complaint 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 (as amended).

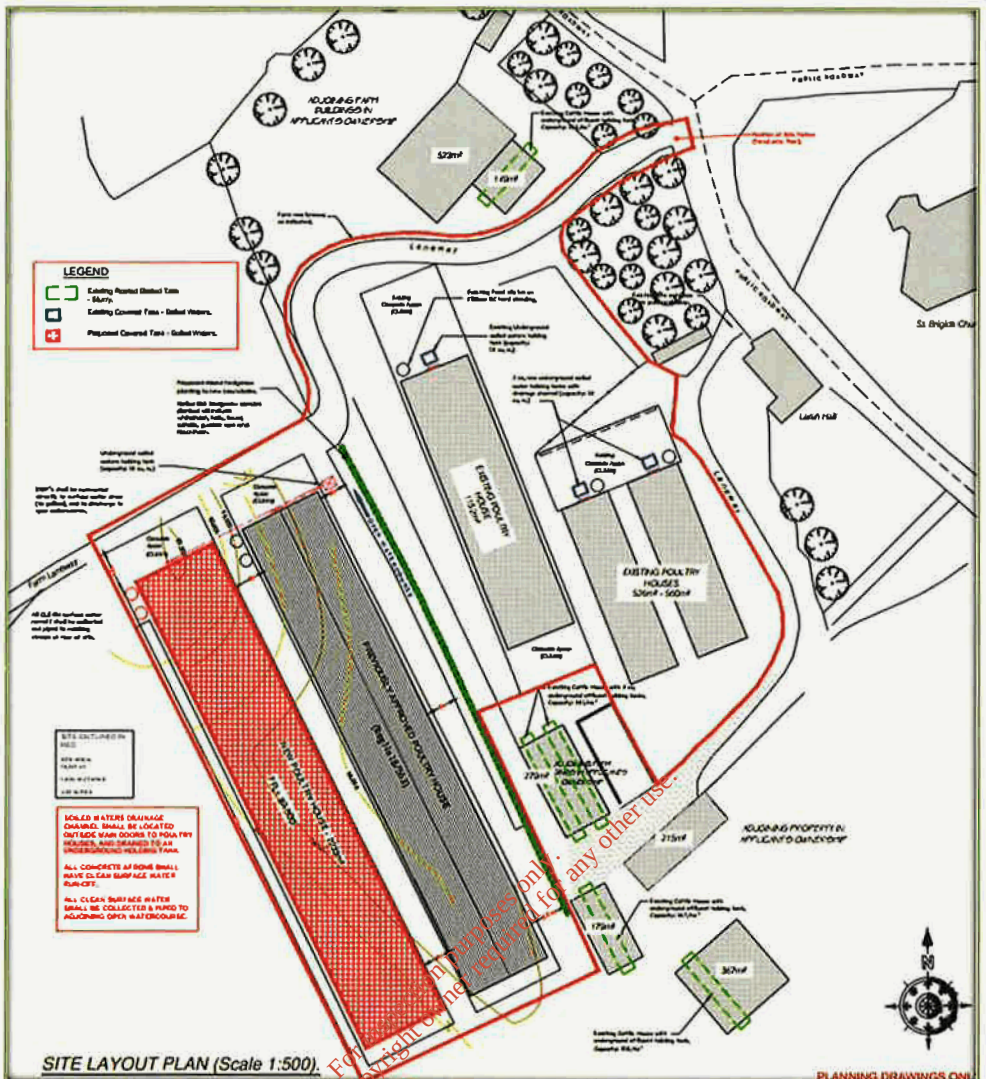


Figure 1 - Site Layout Plan (as Prepared by J.M. Johnston)

LAND-SPREADING

The land-spreading of the manure and wash-waters produced as part of the operation of the applicant's entire farm will be spread on lands within the townlands of Monelty, Aghateemore, Killycrone and Larah. These land-banks are illustrated in Figure 2.

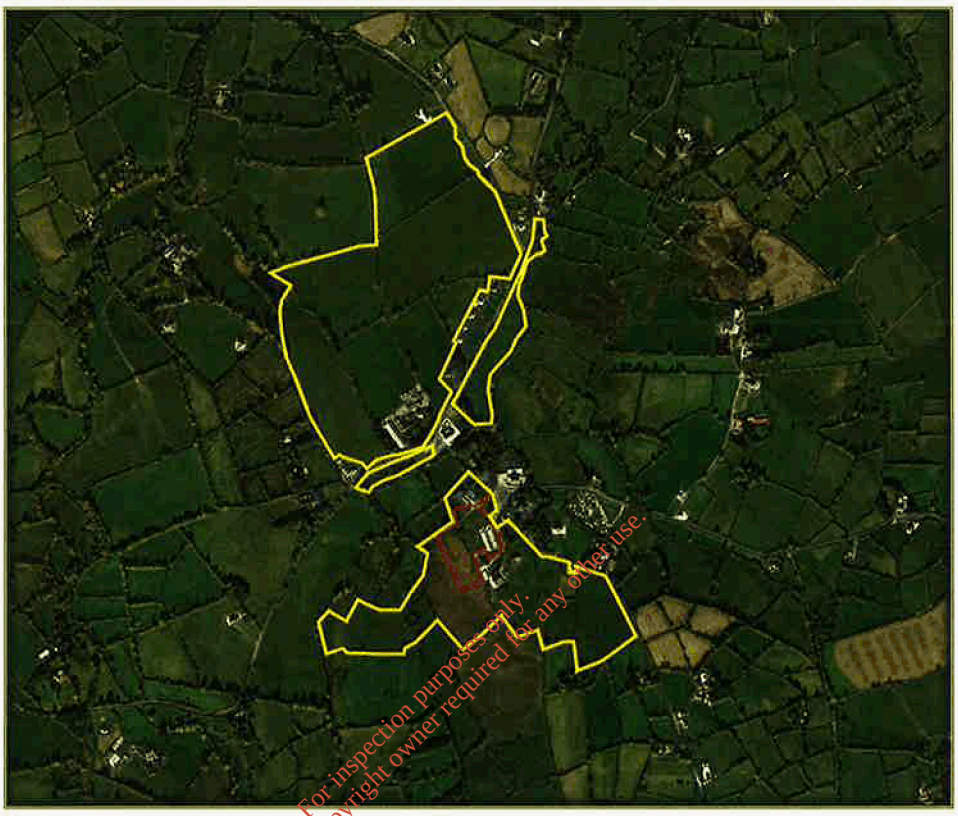


Figure 2 – Map showing Location of the Application Site and Its Spreadlands

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 100m³ 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 10m3 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 floow	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 (as amended).

Prior to its implementation, S.I. 605 of 2017 (as amended) 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 (as amended) 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 located in a rural area within the townlands of Killycrone. It is 1.5km north-east of Stradone and 9.5km east of Cavan town. Access to the site will be via an access road that is just off a local third class road. The area of the site is 0.64 hectares, including the access road. The land-use surrounding the site is predominantly agricultural. The main habitat surrounding the site is improved agricultural grassland. Other habitats represented include small areas of scrub and woodland, hedgerows, treelines, wet grassland and surface water features. Site location maps can be seen in Figures 3 and 4, whilst an aerial photograph of the site and its surrounding habitats can be seen in Figure 5.

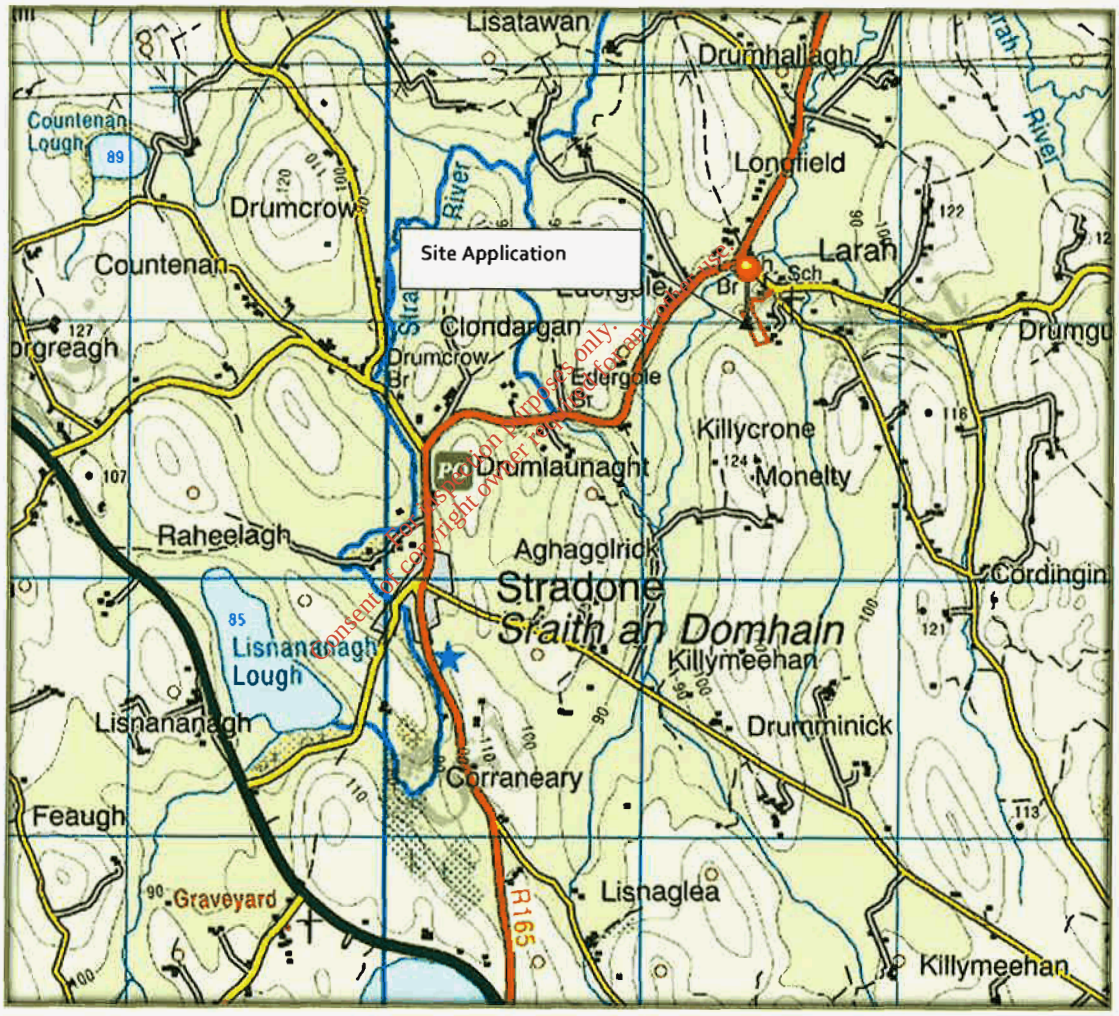


Figure 3 – Map showing the Location of the Proposed Development Site (Pinned)

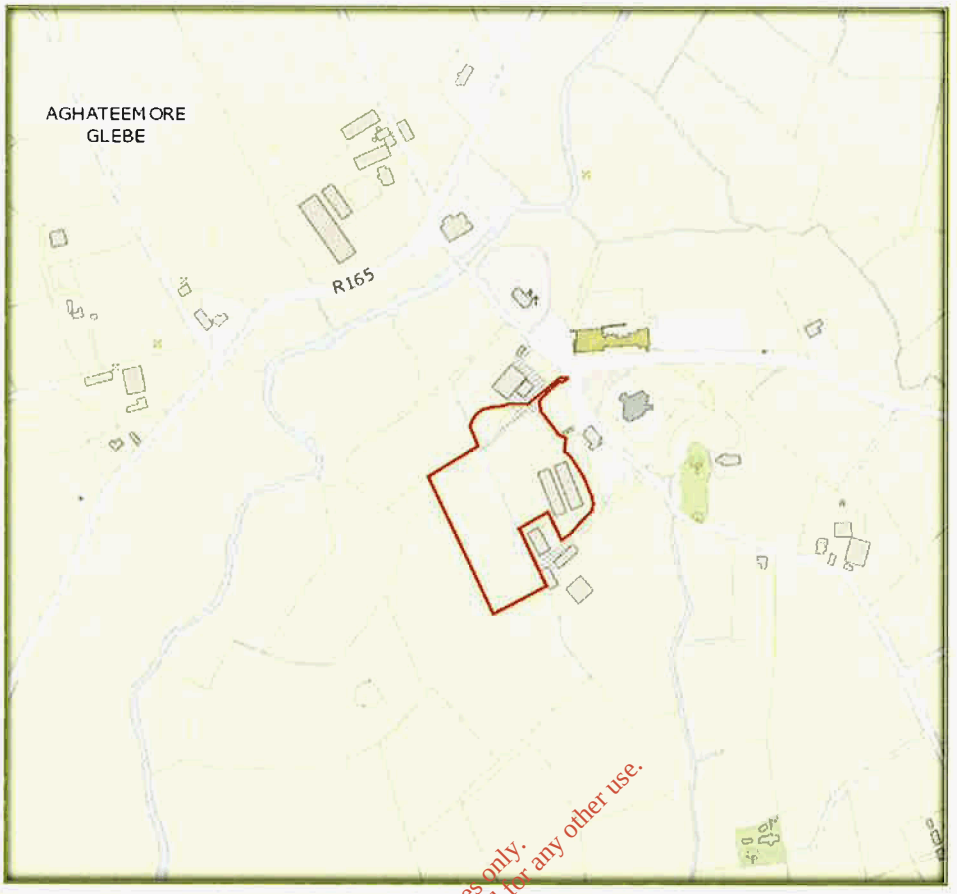


Figure 4 – Map showing the Location of the Proposed Development Site (Outlined in Red)

HABITATS AND NOTABLE SPECIES

Within the application site itself, the main habitat is improved agricultural grassland along with an unimproved / wet grassland habitats in the western section of the site. Where they exist, the site boundaries consist of hedgerows (north-western and north-eastern). The remainder are currently unbounded. There are also some drains within the site and clean water from the site will be directed into these drains.

An examination of the website of the National Biodiversity Data Centre revealed that there are no records for the presence of any notable species from within the relevant one km grid squares (H5105 and H5104) of this proposed application site.

WATER FEATURES AND QUALITY

The application site lies within the Erne Hydrometric Area and Catchment and the Laragh Sub-Catchment and Sub-Basin. There are open drains within the site and clean surface water from the application site will be directed into these drains. Water from here flows in a northerly direction towards the main channel of the Laragh River, which is 149m north of the application site. The Laragh River is a tributary of the Stradone River and the confluence of these two watercourses is 6.8km north of the application site.

The EPA have defined the ecological status of the Laragh River and its tributaries at points close to the application site as good. Under the requirements of the Water Framework Directive, this is satisfactory and this status must be maintained.

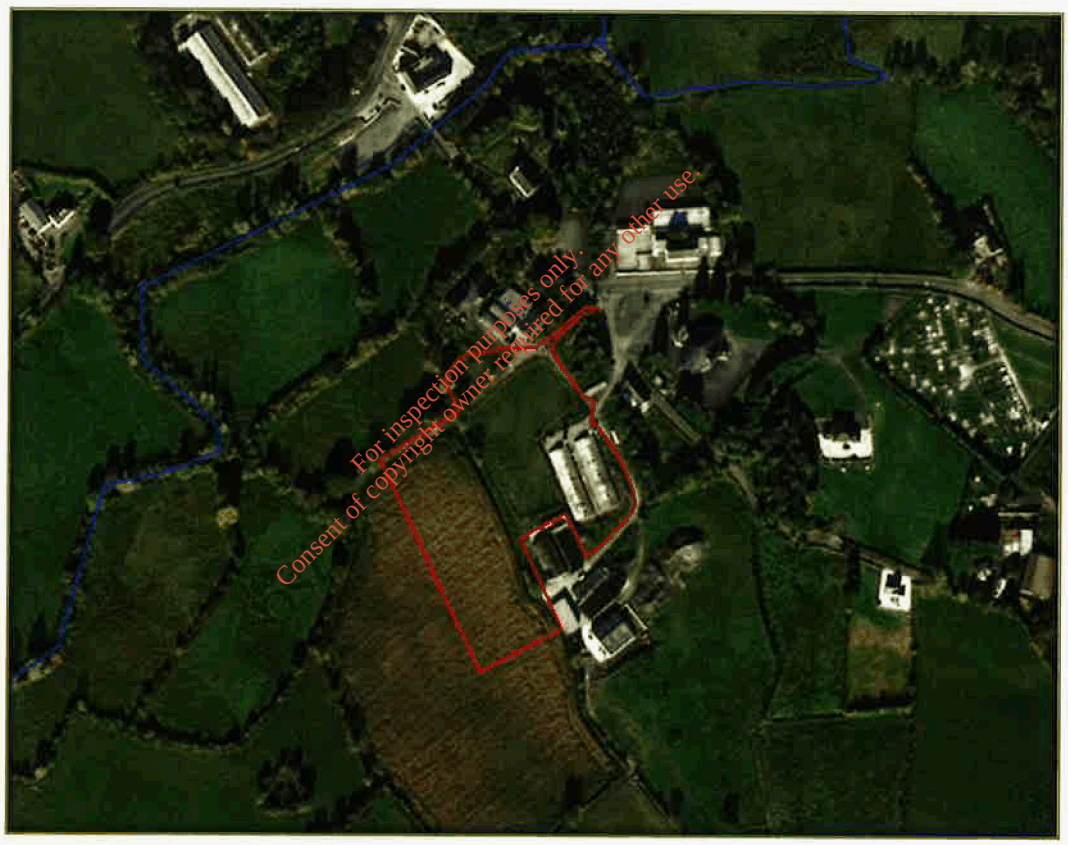


Figure 5 – Aerial Photograph of the Site (Outlined in Red) and its Surrounding Habitats. Local Watercourses (Laragh River) are Highlighted in Blue.

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.

There are two Natura 2000 sites within 15km of the application site and its associated spread-lands. These designated areas are summarised in Table 2 and a map showing their locations relative to the application site is shown in Figure 5. A full description of these sites can be read on the websites of the National Parks and Wildlife Service.

Site Name & Code	Distance from Proposed Development	Qualifying Interests
Lough Oughter and Associated Loughs SAC 000007	**10.9km** north-west and **25.2km** upstream of this SAC via Laragh / Stradone and Annalee Rivers.	• Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation • Bog woodland • Otter *Lutra lutra*
Lough Oughter Complex SPA 004049	**12km** north-west and **32.8km** upstream of this SPA via the Laragh / Stradone and Annalee Rivers.	• Great Crested Grebe (*Podiceps cristatus*) • Whooper Swan (*Cygnus cygnus*) • Wigeon (*Anas penelope*) • Wetlands & Waterbirds

Table 2 – Natura 2000 Sites Within 15km of the Proposed Site

The generic conservation objectives of all 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.

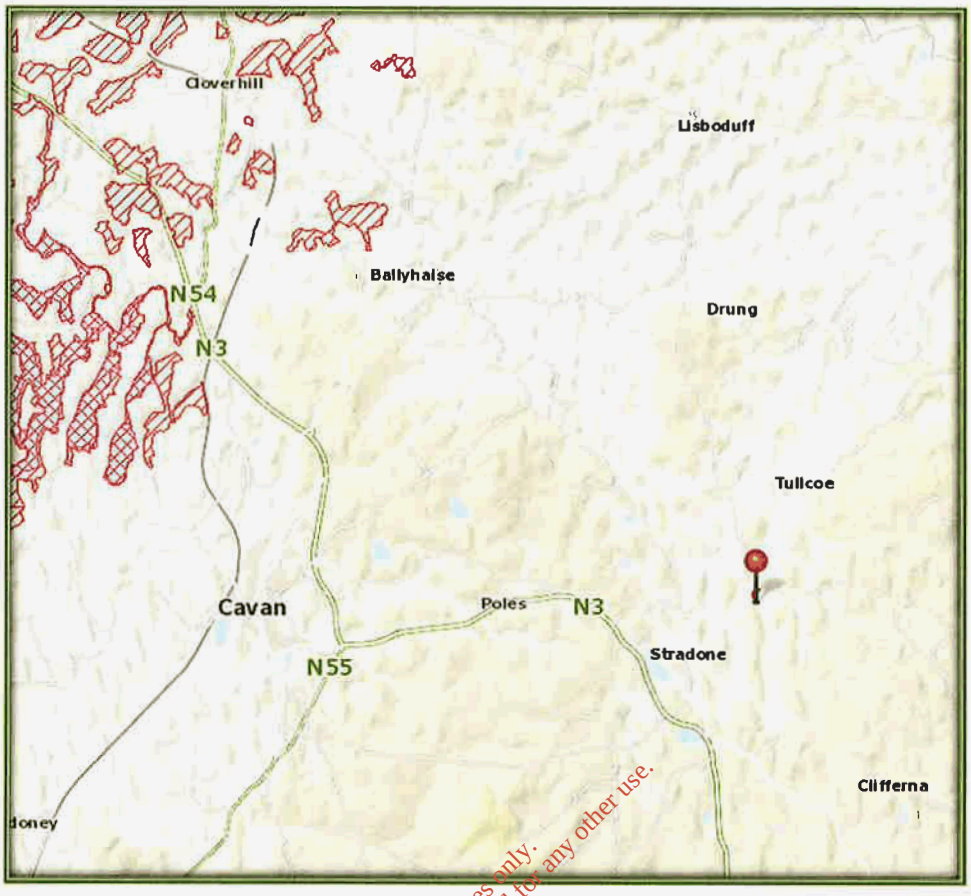


Figure 5 – The Application Site (Pinned) in relation to the Lough Oughter Natura 2000 site (SACs - Red Hatching, SPAs – Pink Hatching)

3.4 ASSESSMENT CRITERIA

The impacts (if any) of the proposed development on the Natura 2000 sites identified above are described below.

Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on nearby Natura 2000 site:

The construction and operation of the proposed development at Killycrone will have **no impacts** upon the integrity or the site structure of the designated sites identified. There are no individual elements of the proposed project that are likely to give rise to negative impacts on these Natura 2000 sites. There will be no impacts upon designated habitats or species arising from the predicted emissions from this facility. There is an adequate distance between the proposed development site and designated areas to ensure that no direct impacts will occur. There is a distance of 25km upstream between the application site and its spreadlands and the Lough Oughter and Associated Loughs SAC. It is 32.8km upstream of the SPA.

There are other agricultural activities ongoing close to the current application site, therefore cumulative impacts arsing 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 Killycrone 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 2014 (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 upon water quality.

In reference to CJEU Judgement in Case C323 / 17, it is not considered relevant to this application. The application site is over 25km upstream of the SAC and over 32km upstream of the SPA. There is no likelihood of any impacts occurring on these designated site arising from the operation of this farm as a whole. No mitigation measures are required as part of this application to protect the integrity of these sites and none have been included as part of this assessment.

Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the nearby Natura 2000 sites by virtue of:

Size and scale: Given the small size and scale of the development in relation to the overall size of the Natura 2000 sites identified, then the likelihood of any direct, indirect or cumulative impacts upon this designated site is low.

Land-take: There will be no land-take from any designated site. There will be no interference with the boundaries of any designated site. There will be no loss of any undesignated priority habitats.

Distance from Natura 2000 site or key features of the site: The closest Natura 2000 site to the application site is the Lough Oughter and Associated Loughs SAC and this is over 10km from the application site. This distance is sufficient to ensure that no impacts will arise.

Resource requirements (water abstraction etc.): No resources will be taken from any Natura 2000 site and there are no resource requirements that will impact upon any designated site.

Emissions: Neither the construction nor the operation of the proposed development will result in any direct emissions to the Natura 2000 sites identified. Only clean surface water run-off will be directed into local watercourses and silt traps will be installed on all lines. Soiled water shall be directed to an underground holding tank for spreading. Any associated land-spreading of the manure from this development will be done to in accordance with S.I. 605 of 2017. This will minimise run-off from land into local watercourses. The application site is on a sufficient distance from the Natura 2000 sites to ensure that there will be no impacts on these sites arising from the deposition of atmospheric nitrogen or ammonia.

Excavation requirements: Excavated material from the construction will be used on site. Bare soil will be reseeded straight away where appropriate. Any remaining soil will be disposed of in a responsible manner in a licensed facility away from any designated sites.

Transportation requirements: There will be no additional transportation requirements resulting from the proposed development and associated works that will have any impact upon the Natura 2000 sites identified.

Duration of construction, operation, decommissioning etc: Once construction begins, it should be complete within one year.

Describe any likely changes to the nearby Natura 2000 sites arising as a result of:

Reduction of habitat area: The proposed development lies outside the boundaries of the Natura 2000 sites identified in Section 3.3. There will be no reduction of designated habitat area. There will be no interference with the boundaries of any designated site.

Disturbance to key species: There will be no direct disturbance to any species listed in Annex I of the Birds Directive or Annex II of the Habitats Directive.

Habitat or species fragmentation: There will be no habitat or species fragmentation within any

SAC, SPA or pNHA. No ecological corridors between the proposed site and any designated area will be damaged or destroyed.

Reduction in species density: There will be no reduction in species density.

Changes in key indicators of conservation value (water quality etc.): There will be no negative impacts upon surface or ground water quality within any designated site. There will be no negative impacts upon the water quality in any designated site.

Describe any likely impacts on the nearby Natura 2000 sites as a whole in terms of:

Interference with the key relationships that define the structure or function of the site: It is not considered likely that there will be any impacts on the key relationships that define the structure or function of the Natura 2000 sites identified.

Provide indicators of significance as a result of the identification of effects set out above in terms of:

Loss - Estimated percentage of lost area of habitat: None

Fragmentation: None

Disruption & disturbance: None

Change to key elements of the site (e.g. water quality etc.): None

3.5 FINDING OF NO SIGNIFICANT EFFECTS

Finding of No Significant Effects Report Matrix	
Name of project	Development of a Poultry Farm at Killycrone, Stradone, Co. Cavan.
Name and location of Natura 2000 site	The closest Natura 2000 site to the application site is the Lough Oughter and Associated Loughs SAC and this is over 10km from the application site.
Description of project	Development of a Poultry Farm
Is the project directly connected with or necessary to the management of the site?	No
Are there other projects or plans that together with project being assessed could affect the site?	All farm land surrounding this proposed development must operate within the requirements of S.I. 605 of 2017. Compliance with this legislation will minimise any in-combination effects.
The Assessment of Significance of Effects	
Describe how the project is likely to affect the Natura 2000 site	No impacts likely
Explain why these effects are not considered significant	Not applicable as there is no potential for negative impacts
Describe how the project is likely to affect species designated under Annex II of the Habitats Directive.	No impacts likely
Data Collected to Carry out the Assessment	
Who carried out the assessment	Noreen McLoughlin, MSC, MCIEEM. Consultant Ecologist
Sources of data	NPWS, EPA, National Biodiversity Data Centre, Cavan County Council
Level of assessment completed	Stage1 Appropriate Assessment Screening
Where can the full results of the assessment be accessed and viewed	Full results included

4 APPROPRIATE ASSESSMENT CONCLUSION

In accordance with Article 6(3) of the Habitats Directive, the relevant case law, established best practice and the precautionary principle, this AA Screening Report has examined the details of the project in relation to the relevant Natura 2000 sites within 10km of the application site.

In view of best scientific knowledge and on the basis of objective information, it can be concluded that this application, whether individually or in combination with other plans and projects, will have no impacts upon the Natura 2000 sites. The integrity of these sites will be maintained and the habitats and species associated with these sites will not be adversely affected. It is of the opinion of this author that this application does not need to proceed to Stage II of the Appropriate Assessment process.

Noreen Mc Loughlin

Noreen McLoughlin, MSc, MCIEEM.
Ecologist.

(PI Insurance details available on request)

APPENDIX I – FURTHER ECOLOGICAL RECOMMENDATIONS

Whilst the proposed development will have no impacts upon the integrity of any area that has been designated as a Natura 2000 site, it is usually best practice to undertake certain measures during the construction and operation of any development. These measures will help to protect the local biodiversity of the surrounding area and ensure the protection of local wildlife and water quality. Therefore it is recommended that the following measures are implemented: (*It should be noted that these recommended measures are* ***not*** *designed for the protection of any Natura 2000 site. Their presence does not indicate that a Stage II Appropriate Assessment is needed and they are fully outside of the Appropriate Assessment process. They have no bearing on any case law pertaining to the Appropriate Assessment process).*

- It is vital that there is no deterioration in water quality in the watercourses within or adjacent to the application site, either during the construction or operational phase. This will ensure that there is no further deterioration in the ecological status of watercourses locally and it will also protect both habitats and species that are sensitive to pollution. Therefore, strict controls of erosion, sediment generation and other pollutants associated with the construction process should be implemented where necessary, including the provision of attenuation measures, silt traps or geotextile curtains to reduce and intercept sediment release into any local watercourses. *The protection of water quality in this area is vital.*

- Riparian habitats along the drains or streams within or adjacent to the applicant site should not be damaged or altered.

- Post construction surface water run-off from hardcore / concreted / tarmacadum 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.*

- The proposed storage tanks must adhere to the Department of Agriculture's Farm Building and Structures Specifications. Before use, they should undergo an integrity test that is performed by a suitably qualified person. They should be inspected regularly for deficiencies.

- The applicant must ensure that any excavated soil is used / disposed of responsibly. Its disposal should not lead to the loss or damage of any natural or semi-natural habitats elsewhere. It should not be spread close to any local watercourse as it may result in an increase in the sediment load of that watercourse.

- Fuels, oils, greases and hydraulic fluids must be stored in bunded compounds well away from watercourses. Refuelling of machinery, etc., should be carried out in bunded areas. Stockpile areas for sands and gravel should be kept to a minimum size, well away from any drain or watercourse. .

- Any hedgerows that remain should be protected and maintained where possible. They should be carefully cordoned off from the development activities on site. If possible, a natural verge should be allowed to remain along these hedgerows. This will maintain the biodiversity on the site once the development is operational. It is illegal to remove hedgerows and trees during the bird nesting season.

- Any landscaping should involve the planting of native Irish species that are indigenous to the site. The characteristics of newly planted hedgerows should mimic those in the surrounding area.

- Bare soil should be seeded as soon as possible with grass seed. This will minimise erosion into local drains and watercourses.

MANAGEMENT AND LAND-SPREADING OF ORGANIC FERTILISER

In order to avoid any reductions in water quality within the Moynalty catchment as a whole, all organic fertiliser should be used in accordance with S.I. 605 of 2017 European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2014). The following measures may be considered:

- The storage and handling of all fertilisers on site must be in accordance with S.I. 605 of 2017.

- In order to avoid any reductions in water quality within local river catchments, all organic fertiliser should be allocated for use in accordance with S.I. 605 of 2017 European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2014).

- Slurry should only be applied to fields with an N and P requirement.

- Fields *within* any area that has been designated as an SAC, SPA or NHA should be excluded from land-spreading.

- A minimum buffer zone of 20m should be put in place and adhered to for areas which are *adjacent* to any area that has been designated as an SAC, SPA or NHA. These buffer zones should be increased depending on the gradient of the land.

- To avoid contamination of the local watercourses in areas identified for land-spreading, a minimum buffer zone of 10m for any main river channels and 5m for smaller watercourses should be adhered to at all times during the application of effluent. Buffer zones should be increased depending on the gradient of the land. In addition, when the waterbody is with 1km upstream of a water dependent designated site the buffer for a river should be increased to 20m while a stream should be increased to 10m.

- Effluent should not be applied with within 3m of open field drains or ditches in accordance with Good Agricultural Practice for Protection of Water 2014 SI 31 of 2014.
- Land spreading should only take place when suitable climatic and environmental conditions exist. Spreading must be avoided on:
  - wet or waterlogged soils
  - land sloping steeply towards water courses
  - frozen or snow covered soils
- Effluent should not be applied in proximity of hedgerows and field margins. This will maintain the biodiversity of these areas and allow for a more natural ecological corridor.
- New technologies for spreading slurry that improve efficiency and minimize emissions should be considered, e.g., bandspreader, trailing shoe and the shallow injection technique.

POULTRY APPLICATION FOR MR. HUGH BRADY

KILLYCRONE, STRADONE, CO.CAVAN

ENVIRONMENTAL IMPACT ASSESSMENT

COMPLETED BY

TRAYNOR ENVIORONMENTAL LTD

APPENDIX E – POULTRY DISPOAL ACCEPTANACE LETTER

Traynor Environmental Ltd.

(L)

Gortnaleck
Ballyconnell
Co.Cavan
12-02-2014

To Whom it may Concern,

As a carrier of category 2 By-Product, I undertake to collect any-fallen birds from the farm of Hugh Brady of Laragh House, Stradone Co Cavan

Yours Sincerely
Michael Galligan.

Michael Galligan
Gortnaleck
Ballyconnell
Co.Cavan