08/12/2021

Environmental Impact Assessment Report

Proposed Poultry Farm Development

In respect of an
proposedpoultry farm at:

Rathescar Middle, Gunstown
and Whiteriver,
Dunleer,
Co. Louth.

On behalf of:

Mr. Michael Callan
Paughanstown,
Dunleer,
Co. Louth

CLW Environmental Planners Ltd.

C.L.W. Environmental Planners
The Mews
23 Farnham Street
Cavan
Tel: 049 4371447/9
E-mail info@clw.ie

Table of Contents

Appendixes

Appendix No. 1	~	***Customer Farmland Details (Soiled water)***
Appendix No. 2	~	***Site Location Map***
Appendix No. 3	~	***Site Layout (Not to scale)***
Appendix No. 4	~	***Engineers Drawings (Not to scale)***
Appendix No. 5	~	***Environmental Protection Agency – Draft Advice Notes on EIS – Project Type 13***
Appendix No. 6	~	***Location of Farmland Areas for the receipt of Soiled Water***
Appendix No. 7	~	**Litter Contractor & Compost Yard Confirmation**
Appendix No. 8	~	**Feed Details**
Appendix No. 9	~	**Animal Tissue Disposal**
Appendix No. 10	~	***Local Water Quality Data***
Appendix No. 11	~	***Extracts from Louth Co. Development Plan***
Appendix No. 12	~	***Met Data***
Appendix No. 13	~	**Natura Impact Statement**
Appendix No. 14	~	***Extract from General Soil Map of Ireland. Profile of Soil***
Appendix No. 15	~	***Site Characterisation Form***
Appendix No. 16	~	**European Communities (Welfare of Farmed Animals) Regulations 2010 – S.I. 311 of 2010**
Appendix No. 17	~	**Copy of – S.I. 605 of 2017**
Appendix No. 18	~	**Copy of GSI Data**
Appendix No. 19	~	**Construction Waste Management Plan**
Appendix No. 20	~	**Swale Attenuation Calculations**
Appendix No. 21	~	**Air Quality Impact Assessment**
Appendix No. 22	~	**Noise Impact Assessment**
Appendix No. 23	~	**Traffic Impact Assessment**

1. Non - Technical Summary

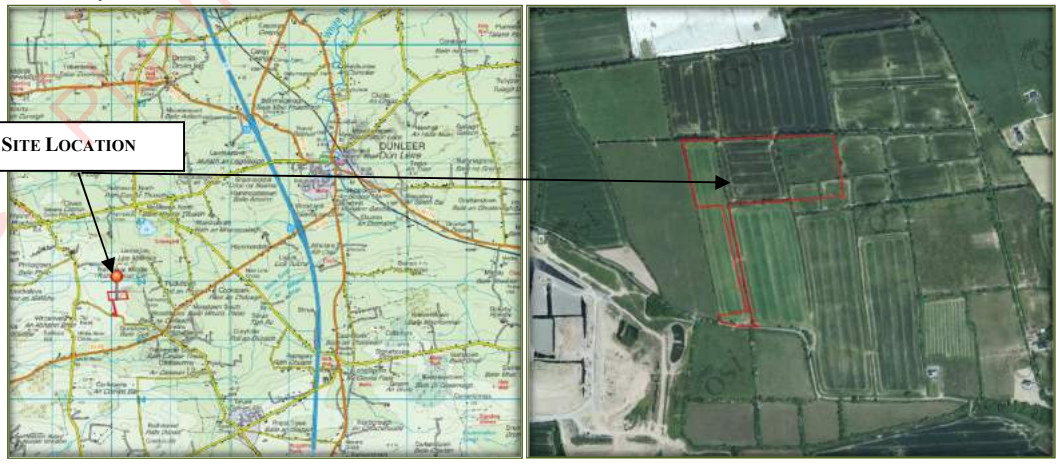
1.1 Introduction

This Environmental Impact Assessment Report (E.I.A.R.) has been prepared by Mr. Paraic Fay B.Agr.Sc., Mr. Hugh Larkin B.Agr.Sc. and Mr. Oliver Leddy B.Agr.Sc. of C.L.W. Environmental Planners Ltd. with the assistance of persons and bodies referred to hereafter**.** This E.I.A.R. has been prepared after an Environmental Impact Assessment (E.I.A.) of the proposed development in accordance with the Planning and Development Act 2000 (as amended), Planning & Development Regulations 2001, as amended, and Protection of Environment Act 2003.

This E.I.A.R. forms part of a planning application to Louth Council on behalf of ***Mr. Michael Callan, Rathesar Middle, Gunstown and Whiteriver, Dunleer, Co. Louth,*** for permission to construct 4 No. Poultry Houses together with roofed/enclosed service yard, 1 No. office, 1 No. Generator Store, and 1 No. Bin/General Purpose Store along with all ancillary structures (to include gas storage tanks, soiled water tanks, meal storage bins and the provision of an on-site waste water treatment system and percolation area) and associated site works (to include new/upgraded site entrance , internal laneway, and the provision of lay-by's on/adjacent to the adjoining public road) associated with the above development at Rathesar Middle, Gunstown and Whiteriver, Dunleer, Co. Louth (National Grid Reference: E 302147 N 285736). The operation of the proposed poultry houses will be integrated with the operation of the applicant's / applicant's families existing farming activities.

1.2 Site Location

This site of the proposed development/farm is a greenfield site/agricultural land, owned by / available to the applicant. The existing farm, and the site of the proposed development, is adjoining a local road, on c. 4.923 Ha, in the town land of Rathescar Middle. The site is c. 1-1.5 Km's from the regional route, the R169, between Collon and Dunleer and a further c. 2 Km's from the N2 National Route, and 3.4km's from the M1 motorway.



The site is to be accessed via c. 275 m of an internal farm roadway to be developed within the landholding. The surrounding landscape is typically rural in character, dominated by a patchwork of agricultural fields interspersed with one off dwellings or groupings of same and agricultural buildings. This proposed development will be situated in an agricultural area c. 4.25 km's south west of Dunleer and c. 7.5 km's south east of Ardee.

1.3 Description of Development

The E.I.A.R. relates to an application seeking planning permission for the erection of 4 No. Poultry Houses with the capacity for 50,000 birds each in line with modern environmental and animal welfare standards, along with ancillary structures as previously referred to. Total site capacity upon completion of proposed development will be c. 200,000 birds. The development is to be constructed in accordance with, and to comply with, S.I. No. 311 of 2010 EUROPEAN COMMUNITIES (WELFARE OF FARMED ANIMALS) REGULATIONS 2010.

The proposed development will encompass;

- the proposed poultry houses to comply with the above mentioned regulations,
- office, general purpose store and generator shed, and,
- all ancillary structures (to include gas storage tanks, soiled water tanks, meal storage bins and the provision of an on-site waste water treatment system and percolation area) and associated site works (to include new/upgraded site entrance , internal laneway, and the provision of lay-by's on/adjacent to the adjoining public road) necessary for the construction, operation and management of the proposed farm developments.

The design, layout and operation of the proposed development will also comply with the provisions of S.I. No. 605 of 2017, as amended, EUROPEAN COMMUNITIES (GOOD AGRICULTURAL PRACTICE FOR PROTECTION OF WATERS) REGULATIONS 2017, (the legislation that implements the EU Nitrates Directive requirements).

The applicant, Mr. Michael Callan will operate and manage the proposed development. This proposed development will be one of the most modern and efficient in the Republic of Ireland, and will be fully compliant with the requirements of animal welfare, bio-security and environmental legislation. The daily management practices on-site will involve the feeding, management and husbandry of birds, automated feeding and ventilation systems and general site management. At the end of each cycle (i.e. when the birds are moved off-site) the houses will be emptied of organic fertiliser / poultry manure, washed down, disinfected and left ready for the next batch of birds. Prior to restocking, houses will be bedded with wood shavings/chopped straw, heated and prepared. This cycle happens on average 7 times/annum.

All chickens reared on this site are to be sent to Carton Brothers / Manor Farm's facility at Shercock, Co. Cavan. Carton Brothers / Manor Farm. have developed trading contacts with all the large Irish marketing chains, which are all anxious for modern, welfare quality standard ***Irish*** chickens for the Irish retail market.

The applicant has received significant assistance and guidance from Carton Brothers / Manor Farm, who have in excess of 100 farmers currently producing chicken for them. In addition, as they deal directly with the large retailers they have first-hand knowledge of what the market place currently requires. This experience in all areas of the business and combined with experienced and well educated staff will be of a significant advantage to the management and operation of the proposed development.

The purpose for which this Environmental Impact Assessment Report has been completed is in support of a planning application for the proposed development as required by the planning and development regulations. The E.I.A.R. will also be submitted to the E.P.A. as part of the Licensing procedures to be completed for this farm.

It is the intention of the applicant to operate the farm with the uppermost regard for environmental protection while at the same time implementing modern welfare and environmentally friendly management processes on the farm. The structures for which permission is being sought incorporate modern design concepts in the areas of animal welfare, insulation, ventilation and environmental protection in the operation of the farm. The proposed development has been laid out and designed so as to be welfare friendly and as labour and input efficient as possible while at the same time providing maximum protection to the environment, and integrating with the existing site and local landscape.

The long term viability of poultry farms is dependent on;

1. the production of high quality food for the supermarket shelves.
2. complying with all welfare and environmental requirements.
3. maximising production efficiencies,
4. maximising performance and feed conversion efficiencies.
5. minimising non-feed costs such as labour and transport where possible.

All of the above are dependent on the provision of top quality housing and welfare in tandem with modern, energy efficient, feeding and ventilation systems and top quality genetics. This will be provided within the proposed development along with the optimum layout, whereby feeding and internal environmental management systems are automated.

Mr. Michael Callan ***proposes*** to construct the following:

- 4 No. Poultry Houses ~ Floor Area c. 2,400 m^2 each,
- Covered Ancillary common area linking the proposed four poultry houses.
- office, general purpose store and generator shed, and,
- All ancillary structures and site works associated with the construction and operation of this proposed poultry farm.

The type of house proposed on this farm is a closed building of steel and pre-fabricated panel construction on a concrete base, thermally insulated with a forced computer controlled ventilation system and artificial lighting. The proposed buildings are of a form, design, colour and materials that are similar to existing agri./poultry developments, located elsewhere in the country, and sympathetic to the surrounding area.

1.4 Organic fertiliser / Poultry manure / Soiled Water Production

The management of organic fertiliser / poultry manure / soiled water and the efficient use of the nutrients contained therein is an important factor in developing poultry enterprises. Organic manure production from the proposed development will equal c. 1,575 tonnes per annum, based on the average occupancy rate of c. 200,000 birds. Soiled water production will equate to 325m3/annum.

1.5 Utilisation of Organic fertiliser / Poultry manure / Soiled Water

All poultry manure produced on the farm will be transported off-site by an approved and registered contractor and will be utilised in the production of mushroom compost, unless otherwise agreed with the E.P.A. Due to the mitigation measures to be implemented, the organic fertiliser / poultry manure produced on this site as a result of the proposed developments will not have a significant adverse environmental impact on the surrounding area or further afield.

Soiled water generated on site will be used on the applicant's / applicant's families lands as an organic fertiliser to replace imported inorganic chemical that is currently being used to satisfy crop agronomic requirements. These lands have an agronomic requirement for this organic fertiliser / soiled water.

1.6 Application of Organic fertiliser / Soiled Water

The applicant/applicant's family are experienced farmers. They currently utilise organic fertiliser, along with additional chemical fertiliser to meet the agronomic requirements of their crops. This fertiliser will be replaced in part by the soiled water that will arise in the proposed development. This experience will be of significant advantage with regard to the management and utilization of organic fertiliser / soiled water from the proposed development. ***The farmlands identified have the capacity to utilise all of the soiled water from this proposed development in accordance with S.I. 605 of 2017, as amended,*** and will replace/reduce chemical fertiliser currently imported onto their farm(s).

All information required by, S.I. 605 of 2017, as amended, (European communities (Good Agricultural Practice for Protection of Waters Regulations 2017) will be maintained on-site and will be made available for inspection as required.

1.7 Soil

The allocation and utilisation of all soiled water produced on this farm in accordance with S.I. 605 of 2017, as amended, will ensure that this farm has no negative impacts on the farmland. The applicant will ensure that soiled water is spread only under the most favorable soil and climatic conditions, preventing any soil structural damage. Hydraulic and chemical loading will not be exceeded due to the fact that all organic fertiliser / poultry manure is to be applied in accordance with S.I. 605 of 2017, as amended, thus preventing

nutrient accumulation. As part of this Mr. Michael Callan will ensure that any additional farmers, if they arise, receive a copy of all relevant information as required by, and referred to in, S.I. 605 of 2017, as amended.

1.8 Surface and Ground Water

The poultry farm will be located in the catchment area of the White River, a tributary of the River Dee. The E.P.A., Louth Co. Co. and the local regional fisheries board carry out water quality monitoring on an ongoing basis county wide. Surface and ground waters in the proximity of the site will remain protected due to separation of clean and soiled waters and the provision of adequate facilities. All soiled water will be directed to the soiled water storage facilities, which will provide in excess of 6 months capacity.

All roof water and uncontaminated storm water from the hard standing areas on site will discharge, to a swale drainage system and will subsequently discharge to the local water course, a tributary of the White River, which is in turn a tributary of the River Dee which enters the Irish Sea / Dundalk Bay SPA/SAC at Annagassan. The proposed swale has been designed to ensure that the proposed discharge from the site is equivalent to existing greenfield runoff rates. The proposed development will be built to current Department of Agriculture and Food standards, and will have modern feeding and ventilation systems in the house.

It is envisaged that as part of the E.P.A. Licence requirements for this farm, Mr. Michael Callan will be required to monitor storm water run-off from the site on a weekly basis. This continuous monitoring, in addition to the mitigation measures put in place, will identify any adverse effect on surface water quality in the area of the farm. This monitoring will include any storm water discharge points that arise as a result of this proposed development. Soiled water will be directed into the soiled water storage tanks. All proposed soiled water storage facilities will be constructed and monitored in line with E.P.A., Louth Co. Co. and Department of Agriculture requirements.

The applicant as well as all farmers are obliged to farm in accordance with S.I. 605 of 2017, as amended, or any subsequent amendment to/derogation from same. This will also apply to the organic fertiliser /soiled water utilised by the applicant / applicant's family from the proposed developments. This will have a long-term benefit, and will ensure that there is no adverse impact on water quality in these areas.

The poultry farm site is located in the catchment area of the White River, a tributary of the River Dee within the Newry Fane Glyde and Dee Hydrometric Area (Hydrometric Area 06). The White River flows east then north until its confluence with the River Dee, at a point approximately 6.7km north-east of the application site. The River Dee flows into the sea at Annagassan. The proposed development is located c. 7 km from the closest Natura 2000 site, Stabannan-Braganstown SPA 004091 The Natura Impact Statement has determined no potential for adverse impact on Natura 2000 sites.

1.9 Air / Climate / Climate Change

All practicable steps will be planned for and will be taken so as to minimise odour from the site. Its rural setting and location distant from local residences will ensure no effect on Human Health/Population. This development will have no significant adverse affect on climate. The closest third party dwelling to the proposed site, is located > c. 400m east of the proposed development. Site specific studies on odour, ammonia and particulate matter have confirmed no adverse impact at sensitive locations.

As the birds will be maintained in a controlled environment within the proposed house, the operation of the farm is not directly significantly susceptible to climate change, however climate change may impact on energy use associated with heating/ventilation systems to maintain a controlled environment within the house relative to outside climatic conditions, and, may have implications for feed supply to feed the birds, as same may impact on crop yields etc.

1.10 Visual Aspects and Landscape

This site of the proposed development is agricultural land, and forms part of an overall area of c. 325 Ha, farmed by the applicant/applicant's family. The area of the proposed development is predominantly a tillage field(s).

This area is located in an area referred to as ***Land Zoning Category K1 of the Co. Louth Development Plan 2021-2027,*** which is designated *"This zone is for the use of land for agricultural purposes and farming-related activities and to* provide for the development of existing established uses*."*

It is an objective, from both social and economic perspectives, that agricultural activity and local communities should be protected and permitted to develop and prosper in this area. This area also affords opportunities for certain resource based and location specific developments and critical infrastructure projects of significant regional or national importance. Such development proposals will be subject to the provision of adequate environmental and landscape protection, and as such this area is suitable in principle for Agricultural development such as that currently proposed.

The existing farm, and the site of the proposed development, is adjoining a local road, in the town land of Rathescar Middle. The site, measuring c. 4.923 Ha is c. 1-1.5 Km's from the regional route, the R169, between Collon and Dunleer and a further c. 2 Km's from the N2 National Route, and 3.4km's from the M1 motorway. The site is to be accessed via c. 275 m of an internal farm roadway to be developed within the landholding. The surrounding landscape is typically rural in character, dominated by a patchwork of agricultural fields interspersed with one off dwellings or groupings of same and agricultural buildings. This proposed development will be situated in an agricultural area c. 4.25 km's south west of Dunleer and c. 7.5 km's south east of Ardee.

In the Louth Louth County Development Plan 2021-2027, (which came into effect on 11/11/2021.)(Landscape Character Area taken from the Louth County Council Landscape Character Assessment – 2002), this area is identified as being located in the Muirhevna Plain. This is the largest landscape area in the county and is predominantly agricultural in nature.

The agricultural nature of the proposed development and the site, and its location integrated into the existing agricultural holding, and relatively low set in the landscape, will ensure that there will be no visual impact on the local environment from the proposed development. The site is not located near to or likely to affect any Natural Heritage Areas, Special Areas of Conservation (S.A.C.), Special Protection Area (S.P.A.), and/or key views/prospects as listed in the Louth County Development Plan 2021-2027, and will be nestled into the surrounding land topography and integrated into the landscape.

1.11 Noise/Traffic

It is not anticipated that noise at this site will have any adverse impact on the local environment due to the fact that there are no third party dwellings, and no other sensitive locations, located close (i.e. within c. 400m) to the proposed poultry house to be affected by the proposed development. The potential noise emissions from the poultry house are low and should have an imperceptible impact on the closest dwelling(s). Site specific studies on noise have confirmed no adverse impact at sensitive locations. As previously detailed the proposed development seeks to complete a sustainable farm diversification from tillage/grassland to poultry farming in line with current supermarket/consumer requirements.

While the proposed development will alter the traffic to and from the site, this will be achieved without any significant adverse impact on the local road network. A significant effort will be made by the applicant to minimise traffic flow by optimising load sizes, however there will be a net increase in traffic associated with this development. The proposed development will result in a net increase in traffic of on average 2 journeys/day associated with deliveries, collections and contractors in addition to two staff vehicles on a daily basis.

Transport of dead birds will occur on a weekly/fortnightly basis in line with Louth Co. Co. and E.P.A. requirements, and will be integrated into the waste collectors regular collection schedule. All other wastes such as fluorescent tubes, general waste etc. will be stored appropriately and will be removed from the farm by approved contractors and/or to approved sites in line with E.P.A. and Louth Co. Co. requirements. The amount of any such wastes will vary on a weekly basis, however the collection of all such wastes will be co-ordinated to optimise same

There will be a temporary increase in traffic due to the construction of the proposed development, however this will cease once the development has been completed. This will involve deliveries of steel, concrete, building materials, equipment etc. While there will be new traffic movements to and from the site due to additional, feed deliveries, manure transport and other associated traffic, this will be minimised by optimising load sizes, and co-ordinating collections/deliveries so as to minimise this traffic.

As detailed in the traffic Report accompanying this EIAR / Application, it has been considered that the subject to the mitigation measures to be implemented, traffic generated by the proposed development during both construction and operational stages, shall have no adverse impact on the surrounding road network or on existing road users.

1.12 Bio Diversity - Flora and Fauna / Special Policy Areas

The organic fertiliser / poultry manure produced on this farm will be allocated to approved sites for use in the production of mushroom compost. All soiled water is to be allocated to the applicant's family lands as a source of organic fertiliser to replace the imported fertiliser that would otherwise have to be, and is currently being, used to meet agronomic requirements. All habitats within these lands such as wooded areas, scrubland etc. would be excluded from receiving organic fertiliser / soiled water from this farm due to the requirements of the nitrates directive, S.I. 605 of 2017, as amended.

A pest control programme, to take account of the proposed development, will be implemented on the farm, in line with the requirements of Bord Bia Poultry Product Quality Assurance Scheme (PPQAS). This will be devised, completed and maintained in line with Bord Bia requirements.

As this proposed development is planned on a predominantly agriculturally managed area which has been part of an intensively managed agricultural enterprise for a significant number of years, the ecological value of the site reflects these previous management practices. This area, albeit that a small portion of the site is immature conifers/scrub has been intensively managed for productive grass/crop production, and thus has a low level of plant diversity and is of no significant ecological importance as a habitat. The majority of the surrounding area is traditional grassland/arable based agricultural lands.

The poultry farm site is located in the catchment area of the White River, a tributary of the River Dee within the Newry Fane Glyde and Dee Hydrometric Area (Hydrometric Area 06). The White River flows east then north until its confluence with the River Dee, at a point approximately 6.7km north-east of the application site. The River Dee flows into the sea at Annagassan.

Activities at this site are not expected to have any adverse affect on the conservation of these areas and the wildlife contained therein for the following reasons,

- The proposed poultry farm is located a significant distance (>c. 7km) from the closest S.P.A. / S.A.C.
- The existing farming activities have been carried out on these lands without any adverse impact on the designated areas, and the same high levels of management and expertise will be afforded to the operation of the proposed development.
- All poultry manure arising from this farm is to be allocated to approved sites for use in the production of mushroom compost, or such similar products (peat replacement, anaerobic digestion etc.) as may be approved by the E.P.A.
- Given that the manure will be in a dry/solid form there are none of the perceived risks that may be associated with liquid manures.

1.13 Amenity Areas

The proposed poultry house site is not located close to or likely to adversely impact on;

- Areas of Outstanding Natural Beauty,
- Areas of High Scenic Quality,
- Scenic Routes, Views and/or prospects,

as listed in the Louth Development Plan 2021-2027.

The proposed development will be set low in the surrounding land topography, nestled into the existing landscape.

1.14 Cultural Heritage (Architectural and Archaeological Features)

There are no buildings/structures of architectural significance located on or adjacent to the proposed site or likely to be impacted by the proposed development. There is no evidence of any archaeological features at the site.

There are no previously recorded archaeological features/monuments located within the subject development area and no physical features of archaeological potential were noted by a surface reconnaissance survey of the site, which included a walkover survey of the site. Likewise, there are no previously recorded artefacts known from the subject site. There are no recorded archaeological features within c. 0.5 km of the proposed site. The closest such feature is an enclosure located 530 m south west of the proposed development. The proposed poultry houses are to be constructed predominantly on intensively managed farmland, with the site area also incorporating a small area of scrub/immature conifers. This development will not involve the construction of significant underground tanks etc. that require significant excavation.

It is not considered likely that the development, as proposed, will cause any direct impacts to any identified archaeological monuments. Furthermore, given the locations of the extant archaeological monuments, together with the topographical situation of the site and its environs, it is considered that no impacts will occur to the setting of any monuments.

1.15 Wastes/By-Products Generated on-site and Emissions from the Farm

All wastes generated on site, such as dead birds, general packaging etc., will be stored and disposed of/recovered in accordance with applicable regulations and in accordance with Louth Council and E.P.A. requirements.

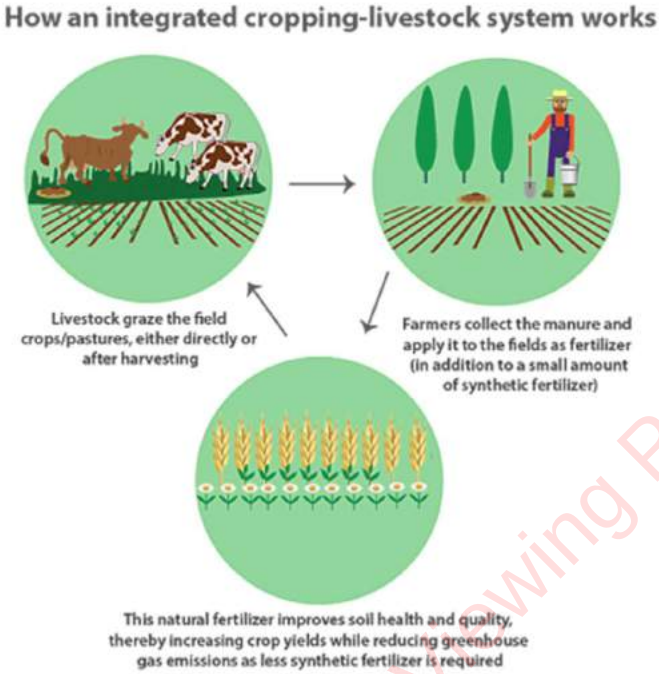
The potential of the proposed poultry farm for adverse impact on environmental parameters is negligible, due to the nature and management of the proposed development. All wastes will be removed from the site by authorised waste contractors for either disposal or use elsewhere. All soiled water generated on-site will be collected in the proposed soiled water collection tanks, pending its application to the landholding adjoining / adjacent to the site. While waste generated on the site would be accumulated and stored temporarily on the site, there will be no disposal or recovery of any waste undertaken on the site.

Poultry manure is the main by-product produced on the site. This manure is a valuable organic fertiliser, and is keenly sought by farmers (for use as an organic fertiliser), and approved sites for use in the production of mushroom compost. All manure from the proposed development will be removed off site for use in the production of mushroom compost (or such similar products) and all soiled water will be used as an inexpensive organic fertiliser to replace purchased expensive inorganic/chemical fertiliser.

Integrated farming systems fight climate change and boost crop yields

Integrated cropping-livestock systems are another sustainable agricultural practice. These practices are based on a simple concept: that crop yields can be maximized by recycling nutrients present in both animal manure and crop residues. This reduces the need for chemical fertilizers that release large quantities of greenhouse gases and thereby contribute to climate change. In an integrated cropping-livestock system, livestock may either graze the field crops directly or may be fed the crop after harvesting. Farmers then collect the manure from the livestock and use it as fertilizer, thereby returning many of the nutrients to the soil. In this regard;

- Soiled water – is to be utilised as an organic fertiliser in the production of a tillage crop.
- Poultry Manure is to be used in the production of mushroom compost (or similar) for mushroom (horticultural) production.



1.16 Material Assets

Resources that are valued and that are intrinsic to specific places are called 'material assets'. They may be of either human or natural origin and the value may arise for either economic or cultural reasons. The potential impact of the proposed development on *archaeology / cultural assets* has been discussed previously.

Material Assets that may potentially be affected by the proposed development include:

- (A) Material Assets: Agricultural Properties including all agricultural enterprises
- (B) Material Assets: Non-agricultural Properties including residential, commercial, recreational and non-agricultural land.
- (C) Material Assets: Natural or other resources including mineral resources, land and energy

The proposed development will be completed on a portion of existing agricultural land, and will not adversely impact on agricultural and/or other properties outside of the site boundary. The development will involve the use of a limited amount of construction materials (including quarry products and other construction materials), however the extent of the development is limited in nature and the amount of resources required in the construction of the houses, and potential adverse impact of same, is negligible when sourced from authorized sources.

The operation of the farm will require additional feed (classified as a renewable resource), energy and water. The applicant will operate modern feeding, ventilation and heating systems to minimize same. The farm does not require any major modifications to the existing electricity supplies, water or road infrastructure in the area.

1.17 Population / Employment / Human Health

This development will have a positive effect on population in the area. This farm will employ a minimum of 2 people directly including the applicant, and will support additional jobs in the chicken processing, distribution and sales business, and the numerous other supporting industries, as well as providing much needed employment to the local construction industries and support services. The proposed development will successfully integrate with the wider agricultural and horticultural sectors in the area of feed supply, bedding and providing a resource ingredient for use in compost production. This farm will have no adverse effect on tourism in the area of the site due to its remote location and comprehensive management and operational practices.

Agriculture is the mainstay of the local/national economy and provides a significant source of local/national employment. Within the country the poultry and chicken (production, packaging, marketing and sales) industry is a key component of this. Together the poultry sector, including meat and eggs, produces ***an annual output of €611 million at wholesale prices***. ***The sector supports over 5,000 jobs and over 3,500 of these are based in the border region***. An input intensive industry, over €250 million is spent on farm inputs (including animal feed), while the processing sector spend in the order of €140 million on wages, salaries and other inputs. All of this expenditure provides a welcome boost to rural economies across the country but especially in the border region where the sector is most prevalent. If poultry sector output expanded by €10 million (to displace imports for example), the multiplier effect is such that this would generate almost €19 million worth of output in the Irish economy.

An investment/development of the nature proposed will guarantee new jobs, and will secure a significant number of existing jobs (construction servicing etc.), for the local community well into the future. The potential risk to human health / cultural heritage and/or the environment due to accidents and/or disasters is limited due to the innate nature of the production system and activities on-site. There are no significant high risk/hazardous products used, produced and/or released by the proposed development which would pose a risk to human health, cultural heritage and/or the environment outside of the site boundary as a result of any accident/disaster.

1.18 Potential Effects (Cumulative, Long/Medium/Short Term, and/or Transboundary).

Within the County;

This proposed poultry farm is located in Co. Louth. County Louth does not have as intensive an agriculture sector as counties such as Cavan, Monaghan, Cork etc., and farming in the county in based more around the traditional enterprises such as tillage, dairy and beef.

There are only three licensed poultry farms in Co. Louth, and 2 licensed pig farms, representing a limited extent of intensive agricultural development. The existing tillage and arable sectors in Co. Louth have relied heavily over the years on a consistent reliable supply of organic fertiliser / poultry manure from Counties such as Cavan and Monaghan, so as to minimise the need for, and costs associated with expensive imported chemical fertiliser.

This application is for planning permission for the erection of 4 No. poultry houses with the capacity for 50,000 birds each in line with modern environmental and animal welfare standards. Total site capacity upon completion of proposed development will be c. 200,000 birds. All poultry manure from the proposed development is primarily destined to support the horticultural (or other such sectors) as a resource ingredient in mushroom compost (or other such approved processes) production.

The agriculture industry is facing challenges which may have significant impacts on the profitability of farms. Irish farms are heavily dependent on the UK as an export market and the uncertainty surrounding any trade agreements associated with Brexit brings serious concerns to farmers in relation to prices, potential tariffs and the associated higher operating costs associated with this. In addition the industry is coming under pressure to play a greater role in climate change and the reduction of carbon emissions. This may require changes to farming practices which may result in higher costs. The EU Farm to Fork Strategy and EU Biodiversity Strategy 2030 are key policy documents in the development of sustainable agriculture and the protection integration and management of wildlife habitats. Louth County Council will continue to support the agriculture industry and will promote any changes to farming practices that will adapt to climate change and provide more sustainable methods of production.

Poultry meat is Ireland's most consumed meat and consumption levels continues to grow. Although production levels of Irish poultry meat have been increasing in recent years, consumption has grown faster. Ireland is a net importer of poultry meat and import volumes continue to grow. The output of the poultry meat sector was valued at €441 million at wholesale prices in 2019. Export values, which reflect processing and value added, were estimated to be €300 million in 2019. The multiplier of the poultry sector is such that if the poultry sector could expand to displace €10 million of imports, this would generate €18.8 million worth of output in the Irish economy.

Within the Local Area;

While it has been detailed previously that the proposed development will not have any significant adverse cumulative impact within the county the potential cumulative impact on the immediate local area needs to be assessed separately.

The proposed development will result in a significant increase in stock numbers on the site, to c. 200,000 birds. While this may be perceived as a significant development, it is in line with the current scale of existing poultry farm developments, elsewhere in the country.

The impact of the proposed development within the local area will be minimised by integrating it successfully with the existing farming activities, proper management and storage of all wastes produced on the site and the utilisation of all poultry manure in the production of mushroom compost.

A number of measures have been provided for in the design, layout and planned operation of the proposed development, so as to mitigate against any adverse impact in the local area or further afield. Any additional requirements placed on this development by Louth Co. Co. and/or the E.P.A. as a result of planning permission or E.P.A. Licence conditions will be integrated into the development and operation of this farm. This will ensure that this proposed development will have no adverse environmental impact on the immediate area and will not lead to a negative cumulative impact on the local environment.

Trans-boundary;

Given the location of the proposed development well removed from any other international boundary, and the inert nature of the construction and operation of the farm and any of any materials used and/or produced on-site together with the range of processes to be carried out there is no potential for adverse trans-boundary impact.

1.19 Measures to avoid, prevent, reduce or if possible offset significant environmental effects.

Although no significant adverse environmental effects are anticipated a number of best practice measures will be implemented in the construction and operation of the farm to ensure that there is no adverse environmental impact. These include, but are not limited to;

- Proper storm water drainage system.
- Collection and appropriate management of all soiled water.
- Management of all organic fertiliser / poultry manure in line with requirements of S.I. 605 of 2017, as amended. All poultry manure to be used in authorised sites for the production of mushroom compost etc.
- Proper management and segregation of all wastes produced on site, with use of approved contractors and wastes sent for recycling, recovery where appropriate in preference to disposal.
- Proper management and oversight of the farm at all times.
- Appropriate landscaping.

1.20 Difficulties encountered in compiling the required information

The processes and technology involved in the construction and operation of the proposed development are standard for poultry farm developments, and well understood. In addition the principles are already in practice within a large number of existing poultry farms elsewhere in the country.

The principles with regard to the feeding and management of the birds, the operation of the feeding, water, ventilation and heating systems, the treatment, storage and management of wastes produced, and the storage, management, distribution and utilisation of the organic fertiliser / poultry manure produced on this farm is similar to existing poultry farm operations. In this regard the proposed development will employ the highest construction, environmental and welfare standards and will include high insulation standards, natural light into the houses, indirect or hot water based heating systems, etc., and the allocation of all poultry manure for use in mushroom compost production (or similar).

The technical information on which to base an assessment of impact on environmental parameters is readily available in the public domain and additional information can be extrapolated from the operation of the existing farming activities and similar developments elsewhere in the country.

In essence all of the parts of this project (i.e chicken farming, feed production using Irish grain, use of poultry manure in the production of mushroom compost) have been widely practiced country wide. Same will;

- Improve both the economic and environmental sustainability of the existing farm.
- Allow the applicant to diversify into an alternative farming enterprise that has the potential for significant symbiosis with and benefits to/from the existing farming activities.
- The location of the proposed development outside of the traditional poultry farming areas will also help to maximise bio-security on the farm.
- Interaction with Mushroom compost production will ensure the utilisation of the poultry manure produced on the farm in another sector of Irish Agri-Food production.

As a result the assessment of any potential impact from the proposed development is factual as well as projected. There were no particular difficulties encountered and there is no reason to consider that there is any serious risk of error attaching to plans and projections for the treatment of wastes to be generated in the proposed development.

1.21 *Summary*

The proposed agricultural development is to be completed on/in an agricultural area, consistent with local, regional and national policy. This development will assist in diversifying, and integrating with the applicant's existing farming activities. The proposal as outlined will make a significant positive contribution to the rural economy of Co. Louth as it will serve to increase employment and secure the viability and competitiveness of the local agri-food sector

Simultaneously, it will integrate seamlessly with the wider agricultural and horticultural sectors to the mutual benefit of both, in an environmentally friendly and sustainable manner, as depicted in the Process Flow Diagram below.

The new farm buildings will integrate successfully with their surroundings and will not give rise to any significant environmental effects.

The granting of permission to the proposed development would strongly accord with the provisions of the County Development Plan and will provide a significant boost to the economy of Co. Louth. The proposed development will operate under the conditions imposed as part of any grant of planning permission and E.P.A. Licence for this farm.

Signed:

Paraic Fay
BAgrSc

09/12/2021
Date

C.L.W. Environmental Planners Ltd.
The Mews,
23 Farnham St.,
Cavan Town,
Co. Cavan.

Tel: 049-4371451
Fax: 049-4371447
Email: info@clw.ie

Process Flow Diagram

Straw bedding

Horticulture / Agri. Sector ***M. Callan Poultry Farm***

Organic fertiliser / poultry manure
c.1,575 tonne

Cereals

Feed
c. 75%

Chicken

2. INTRODUCTION

The agri-food sector has been credited with playing an integral role in the national economic recovery in recent years. The sector is the country's largest indigenous industry, with an export value of c. €14.5 billion and providing c.165,000 jobs or 7% of the total employment. The sector makes a significant contribution to employment in rural areas, being a pivotal source of enterprise creation and opportunities. The sector has particularly appealing characteristics in that its supply chain is labour intensive in the local economy while its output is primarily for export. This means that it is rich in employment locally but can harness growth opportunities globally.

Reflective of the growing importance and economic potential of the sector, a strong policy emphasis has been placed on the sector in recent years through a number of national frameworks issued by the Department of Agriculture, Food and the Marine including Food Harvest 2020: A Vision for Irish agri-food and fisheries, Milestones for Success 2014, which charts the achievements of the former, and Food Wise 2025: A 10-year Vision for the Irish agri-food industry. Food Wise 2025 sets out a strategic plan for the coming decade, covering the period of the Plan, and focusses on opportunities to increase primary production, exports, add value to the products within the sector, and create 23,000 additional jobs throughout the sector. The sector is broadly described as encompassing everything from primary agriculture to food and beverage production, from fisheries and fish processing to forestry and forestry outputs.

Of the unique nature of the sector, Food Wise comments: 'Its strategic importance to the Irish economy, its roots in local communities and its strengthening global reach (the industry provides quality, safe and nutritious food to consumers in at least 175 countries around the world) make it a sector unlike any other.

Food Vision 2030, seeks to built on these previous strategies with a strengthened focus on sustainability to ensure that Ireland will become a world leader in Sustainable Food Systems (SFS) over the next decade. This will deliver significant benefits for the Irish agri-food sector itself, for Irish society and the environment. In demonstrating the Irish agri-food sector meets the highest standards of sustainability – economic, environmental, and social – this will also provide the basis for the future competitive advantage of the sector. By adopting an integrated food systems approach, Ireland will seek to become a global leader of innovation for sustainable food and agriculture systems, producing safe, nutritious, and high-value food that tastes great, while protecting and enhancing our natural and cultural resources and contributing to vibrant rural and coastal communities and the national economy.

2.1 Poultry Industry

- **National Basis**

The poultry sector is an important sector in the Irish economy accounting for c. 2% of agricultural output (>€600 million of wholesale value) and about 5,000 jobs primarily in rural areas. The predominant outlet for Irish chicken is the Irish retail market, where there is strong demand for fresh Irish product although, the vast majority of poultry meat sold in the food service sector is imported. The poultry sector has faced considerable challenges in recent years from rising feed and energy costs combined with significant pressure from unlabelled cheaper imports. The sector is small scale and highly vertically integrated from breeding stock to final processing. However, it competes with international enterprises which are larger in scale and avail of economies of scale by producing large volumes of product at lower cost.

There are opportunities in the sector to reduce costs and increase efficiency through increased scale and modern housing facilities as well as improved food conversion rates. In addition, recent developments in country of origin labelling etc. have increased demand for Bord Bia Quality Assured Irish chicken.

As detailed in Food Wise 2025 (source DAFM), for Ireland to develop a more competitive chicken industry, the poultry industry may consider operating at 'complex' scale i.e. breeding farms, hatcheries, growing farms, feed mills and slaughter plants operating at scale (1.3m to 1.5m birds per week) which would allow for a more cost effective operation at each stage of this integrated chain. This is in line with the expansion plans of Manor Farm, to whom the birds from this farm will be supplied once operational.

The poultry industry is divided into 2 separate sections – poultry meat and egg production. Both of these industries are of significant importance to the Irish economy. The poultry and egg sector makes a valuable contribution to the Irish agricultural economy, with output at farm level estimated at €156 million in 2016. The sector is a significant employer in rural Ireland with over 5,000 people employed in poultry processing, and at farm level. Chicken production in the Republic of Ireland is below market demand for the prime portions (breast), and as a country we are not self-sufficient, while at the same time exporting a significant amount of wings, legs etc..

There are about 2 Million chickens produced in the Republic of Ireland, on a weekly basis, with the majority of these produced under the Bord Bia Quality Assurance Scheme. The purpose of this Standard is to set out the requirements to ensure that the highest commercially achievable standards are achieved in the production of poultry products. The Bord Bia Poultry Products Quality Assurance Scheme is an integrated scheme involving the producer and the processing plant working in partnership to provide the customer with quality assured product. The scheme describes the essential quality assurance requirements for chicken, turkey and duck production from level through factory processing to final despatch which are required to meet customer requirements. In

addition, the scheme lays down additional standards to be complied with at each step of the production chain. The Scheme was accredited under EN45011 in 2008.

The majority of chicken (95%) produced in Ireland is in conventionally production systems such as the proposed development. The remainder (c. 5%) is predominantly in Free Range production systems, which by their nature are less efficient, but produce a premium price product.

The Irish chicken industry can be characterised as follows;

- Small family based farms with low average flock size (relative to the UK, EU and/or further afield.).
- Concentrated in the North-East.
- Ageing producer profile and lack of succession.
- Substantial capital investment required.

Within the poultry industry, the trend is towards larger scale poultry farms reflecting, 1) the concentration of resources in terms of skilled labour and capital 2) domestic and more increasingly, global pressures and 3) economies of scale. Due to rising input costs, additional environmental and welfare requirements and the reduction in poultry prices (in real terms) Irish poultry farmers need to improve efficiencies wherever possible.

The challenges for the industry into the future include;

1. Potential competition from imports.
2. Economic muscle of supermarkets / chain stores
3. Environmental and Welfare requirements restrictions
4. Labour costs.
5. Efficiency of production.

The Irish Poultry Sector

2020

117M
BIRDS P.A.

>€600M
@WHOLESALE VALUE

900M
TABLE EGGS P.A.

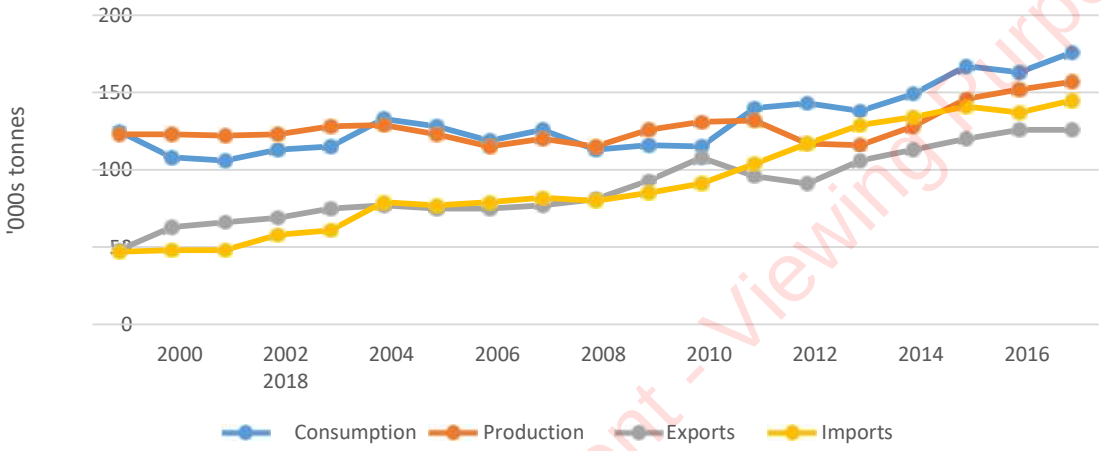
5000
PEOPLE EMPLOYED

ECONOMIC IMPACT
VERY HIGH OUTPUT MULTIPLIER @1.88X

LOWEST
CARBON FOOTPRINT MEAT TYPE

The volume of poultry production in Ireland increased gradually from 2000 to 2004 but then was on a downward trajectory from 2004 to 2009, see Figure 3. From 2009 to 2018 the volume of production increased by 36 percent or an average of 4 percent per year. Production volumes increased by a further 5% in 2019, with most of the increase evident in chicken and duck production. Based on the number of birds slaughtered in the first half of 2020, slaughter numbers are expected to break the 2019 record.

Figure 3: Volume of Poultry Meat Consumption and Production in Ireland 2000-2018



Source: Central Statistics Office

Consumption levels have grown faster than production, and since 2012 Ireland's self-sufficiency in poultry meat has been below 100%. Despite the growth in Irish poultry meat exports, Ireland shifted from a position of a net exporter of poultry meat in the early 2000's to a net importer since 2012 due to the growth in domestic consumption levels.

Poultry meat is Ireland's most consumed meat and consumption levels continues to grow. Although production levels of Irish poultry meat have been increasing in recent years, consumption has grown faster. Ireland is a net importer of poultry meat and import volumes continue to grow. Approximately 73 percent of fresh poultry meat sold in Irish retail is produced in Ireland, implying that most of the imported meat is sold through food service channels. The output of the poultry meat sector was valued at €441 million at wholesale prices in 2019. Export values, which reflect processing and value added, were estimated to be €300 million in 2019. The multiplier of the poultry sector is such that if the poultry sector could expand to displace €10 million of imports, this would generate €18.8 million worth of output in the Irish economy.

The poultry meat sector is highly integrated and efficient, with integrators involved in the supply chain from hatching to consumer.

- ***Co. Louth***

Intensive livestock farming has not developed in County Louth, to the same extent as it has in counties such as Cavan, Monaghan, Cork etc. There are only three licensed poultry farms (and 2 licensed pig farms) in Co. Louth.

Notwithstanding same, the proposed location of this farm, is in close proximity to;

- Manor Farms processing facilities
- Manor Farms Feed Mill (Kolbe Feeds)

at Shercock, Co. Cavan. The majority of transport to and from the proposed development will be birds and feed. The site location is closer to these facilities and with better road infrastructure than a significant number of existing farmers supplying Manor Farm from North Co. Monaghan.

In addition the agriculture and tillage sector in particular in Co. Louth has relied heavily on the supply of organic fertiliser / poultry manures such as pig and principally poultry manure from Cavan and Monaghan over the years. Agriculture is the mainstay of the local economy, and the north east has a well organised agri-business sector. Local processing facilities, feed mills, haulage contractors and other service industries rely heavily on the poultry industry, not to mention the local tillage farmers in the area producing grain to feed Irelands livestock sector, and straw to be used for bedding in the proposed development.

The poultry industry also provides a significantly valuable source of organic fertiliser / poultry manures for farmers and in particular the tillage farmers, and as a resource ingredient in the production of mushroom compost. As part of this application the applicant has decided to prioritise the allocation of poultry manure from this farm to mushroom compost production. Should alternative outlets develop in the future (such as Anaerobic Digestion, etc.), approval for same would be required under any E.P.A. Licence issued to this farm.

- **Carton Brothers / Manor Farm.**

It is envisaged that all chickens from the proposed farm are to be supplied to Carton Bros./Manor Farm.

Carton Bros. is the name of the company that produce Manor Farm chicken. It is one of the oldest family companies in the country and dates back to 1775 when it was first born in the very heart of trading in the Dublin Markets. Originally in those heady days over 200 years ago chickens would be brought from the farmyards all around the country to the Dublin Markets and Carton's would sell them on. In later years people would send their live chickens on the train marked for Carton's where they would then be sold and the money would be sent back to the Farmers by return.

Notwithstanding that Manor Farm have integrated with Scandi Standard a Nordic chicken processor, the business will continue to operate as before and Manor Farm retain control over all stages of the chicken production process, with all stages carried out here in Ireland. As part of this they have;

- their own mill (Kolbe Feeds) producing dedicated poultry feed only (and using a significant proportion of Irish grain, such as that produced by the local tillage farmers),
- a contracted hatchery approved by the Department of Agriculture, Food and The Marine,
- A long standing relationship with farmers who produce eggs for the hatchery.
- A strong relationship with a large number of farmers rearing the newly hatched birds (commonly referred to as day olds) to market weight, such as planned in the currently proposed development.

Manor Farm have invested heavily in the plant and premises in recent years and in 2016 announced a €25 million investment plan to increase capacity by 50% and increase employment by 600 from the current level of c. 850-900. While this development has been hampered due to the impact of the covid pandemic, it is still the long term goal, so as to meet rising Irish consumer demand for Irish produced food. Concurrent with the proposed increase in capacity at the plant, and to meet consumer demand for Irish produced chicken there is a requirement for additional poultry farms/houses such as the proposed development.

Manor Farm prides itself on the number of awards consistently achieved down the years and continues to invest heavily in quality assurance through its highly trained quality assurance personnel and quality systems.

Manor Farm were:

- the **first** chicken company to be awarded the Irish Quality Mark.
- the **first** chicken company in Ireland and Britain to be EEC approved.
- the **first** chicken company to be ISO approved.
- the **first** chicken company to win the Overall National Hygiene & Food Safety award.

Carton Brothers / Manor Farm deal with in excess of 120 farmers and currently process in the order of 1 million birds/week. In line with current expansion plans this will increase to 1.5 million/week. The currently proposed development will supply c. 2% of this demand. The experience of Carton Brothers / Manor Farm, was invaluable when designing the proposed development, and will be extremely beneficial to the operation of the proposed development.

As a company, Carton Brothers / Manor Farm., rely heavily on enthusiastic farmers such as the applicant who are prepared to invest to comply with increasing standards in all areas of food production.

In addition to the above Manor Farm have fully embraced Bord Bia's Origin Green Programme. The origin Green Programme is the only sustainability Programme in the world that operates on a national scale, uniting government, the private sector and food producers through Bord Bia. Origin Green is independently verified and it enables Ireland's farmers and producers to set and achieve measurable sustainability targets, reducing environmental impact, serving local communities more effectively and protecting the extraordinarily rich natural recourses that our country enjoys. All farmers supplying chicken to Manor farm are Bord Bia Quality Assured.

Manor Farm are committed to environmentally friendly and sustainable food production, and the proposed development and integration of same with the existing agricultural and horticultural sectors will have significant benefits in terms of;

- high building standards,
- reduced energy input (due to high insulation standards
- improved bio-security (minimising mortality and treatment of birds) etc.
- Minimizing transport distances by location the proposed development with the radius of existing farmers supplying Manor farm, but outside of the more intensive poultry areas of Monaghan and Cavan.

2.2 Context

This Environmental Impact Assessment Report was prepared in conjunction with a planning application to Louth Council to construct 4 No. poultry houses (and associated works) at Rathesar Middle, Gunstown and Whiteriver, Dunleer, Co. Louth. This proposed development is to be completed on a greenfield site and will have an overall site capacity of c. 200,000 birds.

The development is to be constructed in accordance with, and to comply with, S.I. No. 311 of 2010 EUROPEAN COMMUNITIES (WELFARE OF FARMED ANIMALS) REGULATIONS 2010., (See Appendix. No. 16).

This farm will have to apply for and operate under an E.P.A. Licence (Class 6 - Intensive Agriculture), as required for all poultry farms over the relevant thresholds. This process will be developed with the E.P.A. upon receipt of planning permission from Louth Co. Co.

Mr. Michael Callan ***proposes*** to construct the following:

- 4 No. Poultry Houses ~ Floor Area c. 2,400 m^2 per house,
- Covered Ancillary common area linking the proposed four poultry houses.
- office, general purpose store and generator shed, and,
- All ancillary structures and site works associated with the construction and operation of this proposed Poultry farm.

The proposed buildings are of a form, design, colour and materials that are similar to existing agricultural/poultry houses within the country and sympathetic to the surrounding area.

This Environmental Impact Assessment Report (E.I.A.R.) has been prepared by Mr. Paraic Fay B.Agr.Sc., Mr. Hugh Larkin B.Agr.Sc. and Mr. Oliver Leddy B.Agr.Sc. of C.L.W. Environmental Planners Ltd. with the assistance of persons and bodies referred to hereafter**.** This E.I.A.R. has been prepared after an Environmental Impact Assessment (E.I.A.) of the proposed development in accordance with the Planning and Development Act 2000 (as amended), Planning & Development Regulations 2001, as amended, and the Protection of Environment Act 2003.

2.3 Project Type as per EPA Guidelines (Note revised Advice Notes specific to E.I.A.R. not yet published)

The EPA has published Draft Guidelines on the Information to be contained in an EIAR (August 2017) and Draft Advice Notes for Preparing EIS. In these advice notes they have classed development listed under the *Planning and Development Regulations 2001 fifth schedule* into various Project Types. For each project type they have outlined the information to be contained within an EIS for a project of this type. In this case, a poultry farm is classed under *Project Type 13 Pig Rearing Installations* and *Poultry Rearing Installations*.

Under *Project Type 13* the EPA Advice Notes outline the information to be contained within the Development Description and the description of the Environmental Effects. Appendix No. 5 includes the summary provided in these notes for *Project Type 13*. It outlines possible mitigation options for this type of development. The notes describe the principle concerns likely to arise as stemming from the issues of manure handling (mainly slurry/manure) and odours. The significance of impacts is very much a factor of the site's proximity to sensitive receptors although it highlights that such projects frequently dispose of wastes at locations which are not adjacent to the animal rearing operations.

While these advice notes remain in a Draft format, and they relate to the preparation of an EIS (forerunner of E.I.A.R.), consideration has been given to these in the preparation of this E.I.A.R. Details of Project Type 13 from the EPA Guidelines have been included as Appendix No. 5.

2.4 Farm Background

This proposed site is located on a greenfield site at Rathesar Middle, with ancillary works at Gunstown and Whiteriver, Dunleer, Co. Louth. The area of the proposed site is currently in tillage/grassland production with a small area of scrub / immature conifers. The applicant has extensive agricultural interests in the area mainly in dairying, however the proposed diversification will be the first venture into poultry farming.

The proposed development/farm diversification, represents an opportunity to firstly diversify into an alternative agricultural production system, but also allows it to integrate with the existing tillage farming activities carried out by the tillage farmers (in the area of feed supply & bedding), and with the wider horticultural sector in terms of organic fertiliser / poultry manure (for use in the production of mushroom compost etc.), with cumulative benefits to all enterprises.

Furthermore given the recent discussions around the further expansion of dairy farming sector in Ireland, the intention of the applicant to expand in an alternative agricultural enterprise, with a low carbon footprint per unit of output, and to meet a requirement for additional production to meet increasing demand in the Irish market is prudent for both the applicant, and the wider agri. food sector.

This application represents a proposed development for c. 200,000 birds, for broiler chicken production. This is a significant development in terms of poultry farm developments and the level of investment required. It will also be a significant boost to local employment in this area, and the local construction industries. The proposed development is intended to form a strategic part of the planned expansion by Manor Farm, and will afford the applicant the ideal opportunity to diversify into an alternative agricultural enterprise, which can have significant benefits and opportunities for both the new development and the wider agricultural / horticultural enterprises.

A previous application for similar development on this site was previously refused by Louth Co. Co. and An Bord Pleanala, however it is considered that all deficiencies identified have been appropriately addressed.

2.5 Integration of the Proposed development into the Existing Farm:

This proposed enterprise will have a number of advantages to ensure its economic viability. It will have cost savings due to;

- quality modern buildings resulting in, an improvement in flock performance and feed conversion efficiencies, i.e. less feed will be required to produce each bird, and improved energy efficiency.
- efficient use of labour, due to an optimum layout, and optimum technical efficiency.
- Specialisation of labour, most of the smaller scale existing producers operate on a part time / family supplied labour basis.
- Economies of scale with regard to input costs, etc.

The integration of this proposed development into the local tillage farming sector, and wider agricultural/horticultural sector, will be mutually beneficial to both sectors as;

- There is an opportunity for the applicant to use cereals (wheat) grown on the family farm directly in the diet fed to the birds. c. 25 – 30% of the overall feed requirement (equivalent to c. 1,250 – 1,500 tonnes) can be met by the use of whole wheat produced on the farm, without any additional milling etc. This represents a significant saving in economic terms and also in terms of traffic generation.
- There is an opportunity for the applicant to use straw produced on the tillage lands in the bedding of the birds to replace wood shavings.
- The organic fertiliser / poultry manure produced on the farm (c. 1,575 tonnes) represents a valuable resource ingredient in the production of mushroom compost (or such similar products)
- In the future there may be options to utilise straw and or the poultry manure as an energy source to heat the houses on site.

Mr. Michael Callan will manage and operate the poultry farm in a manner that is,

1. Compliant with E.U. and Irish animal welfare standards,
2. Beneficial to the local community in terms of direct employment (poultry farm staff, advisors and consultants) and indirect employment (animal feed and processing industries, agricultural contractors, haulage contractors), and,
3. Compliant with Louth Co. Co. and E.P.A. environmental standards and without adverse impact on the local environment.

The development of the new poultry houses will be operated and managed in a similar way to existing poultry houses within the county and/or further afield, and will provide much needed employment in the local area due to the additional staff required. The development of the proposed site will also provide additional, much needed work for the local construction and associated services industries, both in terms of labour and inputs required, and will secure the supply and quality of locally produced chickens to the Irish consumer.

The integration of the proposed development and the existing activities is as detailed in the following process flow diagram.

Process Flow Diagram

Straw bedding

Horticulture / Agri. Sector ***M. Callan Poultry Farm***

Organic fertiliser / poultry manure
c.1,575 tonne

Cereals

Feed
c. 75%

Chicken

2.6 Louth Development Plan 2021-2027, (which came into effect on 11/11/2021.)

The County Development Plan is the central document of the planning system and sets out the Local Authorities view of the future development of the county. The strategy of the county development plan is based around facilitating the economic development of the county while conserving the natural and built environment of the county and improvement of its physical infrastructure.

Agriculture is an important source of employment and income in rural areas. The County's agricultural land bank is not only a source of value in terms of food production, but also a vital ingredient in the County's character. The 2011 Census illustrates that 2.75% of the population of County Louth is employed directly in the agricultural sector. This is equivalent to 902 persons, representing a slight increase from the 2006 census figure of 2.4% and a significant drop from 6%, as recorded in the 2002 Census.

The locational advantage of Louth along the Dublin-Belfast Economic Corridor with excellent access to Dublin and Belfast City Centre, Airport, Port, and surrounding Key Towns in the Region means the County is well positioned to attract economic investment. The identification of Drogheda and Dundalk as Regional Growth Centres (RGCs) in the National Planning Framework (NPF) and Regional Strategic Economic Strategy (RSES) is recognition of the importance of these settlements at both a regional and national level in facilitating future population and economic growth. Economic development and employment in the County is concentrated in business parks, industrial estates, and town centres in Drogheda, Dundalk, Ardee, and Dunleer. Outside of these settlements there are smaller scale enterprises in the small towns, villages, and open countryside. With over 35,000 jobs in the County and a Jobs:Workforce ratio of 0.71 recorded in Census 2016, the economic benefits associated with the strategic location of the County, and in particular the strength of the employment base, are apparent.

As farming practices evolve and continue to modernise, the design, scale and layout of farm buildings and farmyards has changed. Depending on the farming enterprise e.g. beef, dairying, pigs, poultry, organic or tillage, the type of housing, livestock numbers and storage facilities will vary. Different farming types and enterprises will result in the criteria for assessing applications focusing on different issues such as visual impact, traffic, residential amenity and public health. Each application will be assessed on its individual merit and will take account of the ability of the local landscape to absorb the development, the capacity of the local infrastructure including roads, water and waste water infrastructure to accommodate any additional loading and traffic movements, and any possible impacts on the amenities of residents living in the vicinity of the development. To assist in the assessment of planning applications for agricultural buildings and in particular new farm enterprises on an undeveloped landholding, a business plan setting out the requirement for the development will be required. This shall include full details of the land holding, livestock number and herd number (if applicable). New buildings shall be designed to maximise efficiency, address any pollution control requirements (e.g. collect soiled

water and farm waste management), provide additional feed and machinery storage areas, and improve livestock welfare.

It is acknowledged that the scale of agricultural buildings are such that they will be visible from surrounding roads and public viewpoints. However, new buildings shall be positioned and designed so they are as unobtrusive as possible. When designing a building particular attention shall be given to the sensitivity of the landscape in which it will be located. If the scale and height of the building is particularly large, the reasons for a building of the particular size shall be set out. Wherever possible, new buildings shall be clustered with existing buildings in the yard. Finishes to buildings will normally include rendered/block walls and dark coloured panels to the side and roof of buildings such as dark green, red, or grey. Landscaping can assist in the integration of new buildings into the landscape. Any planting shall include native species only. Details of how any effluent and run-off associated with the development will be collected and stored within the farmyard shall be provided.

Rural areas make an important economic contribution to County Louth, including the provision of local employment, access to areas of high amenity, and the output of high quality agricultural produce. In 2016 33.9% of the population was identified as living in rural areas in Louth. This Plan supports the sustainable development of rural communities and seeks to address the challenges they are facing. It will support job creation, social inclusion, the rejuvenation of towns and villages, and improvements to infrastructure including transport and broadband. At a national level, the Action Plan for Rural Development 'Realising Our Rural Potential' published in 2017 sets out the policy approach for Rural Development by the Government. The EU LEADER Programme supports private enterprises and community groups in delivering projects that aim to improve quality of life and diversification of economic activity in rural areas. Between 2014-2020 Louth received an allocation of €6.1 million to support rural development projects and initiatives. The rural economy in Louth consists of a range of businesses and enterprises including agriculture, equine, construction, manufacturing, and tourism. There is often a high degree of interdependency between rural enterprises in both the supply and manufacturing of products and materials.

This is particularly evident in the agricultural and equine industry, where the nature of activities is such that there is a high level of direct and indirect employment. Any volatility in the agricultural sector therefore extends into the wider rural economy.

The agriculture industry is facing challenges which may have significant impacts on the profitability of farms. Irish farms are heavily dependent on the UK as an export market and the uncertainty surrounding any trade agreements associated with Brexit brings serious concerns to farmers in relation to prices, potential tariffs and the associated higher operating costs associated with this. In addition the industry is coming under pressure to play a greater role in climate change and the reduction of carbon emissions. This may require changes to farming practices which may result in higher costs. The EU Farm to Fork Strategy and EU Biodiversity Strategy 2030 are key policy documents in the development of sustainable agriculture and the protection integration and management of wildlife

habitats. This Plan will continue to support the agriculture industry and will promote any changes to farming practices that will adapt to climate change and provide more sustainable methods of production.

Farming is the traditional form of economic activity in rural areas. However, traditional farming methods have undergone significant changes, through increased mechanisation and the emergence of larger commercial farm units. County Louth occupies an area of 82,613 hectares, of which 63,862 hectares is farmed. A significant proportion of farms in County Louth, some 46%, operate on farm holdings of less than 20 hectares. The average farm size in the county in 2010 was 36.6 hectares which is an increase from the average size of 35.1 hectares in 2006.

It is felt by the applicant that the proposed development satisfies the requirements of Louth Co. Co. as per ***the policies on the rural economy*** as outlined in the Louth County Development Plan 2021-2027, which came into effect on 11/11/2021.), detailed below;

- ***Policy Objective EE 55*** To support rural entrepreneurship and rural enterprise development of an appropriate scale at suitable locations in the County.
- ***Policy Objective EE 59*** To secure vibrant and viable rural communities by supporting the development of rural based enterprises.
- ***Policy Objective EE 60*** To continue to support the agricultural sector and to facilitate the development of environmentally sustainable agricultural activities.
- ***Policy Objective EE 61*** To facilitate the diversification of the agricultural sector by supporting alternative farm enterprises subject to the nature and use of any enterprise being compatible with the environment in which it is located.

Agricultural Buildings: Good quality, purpose built agricultural buildings are important for efficient and sustainable agricultural production. Agricultural buildings should be integrated into the countryside and in this respect the palette of materials used is important. Site selection, setting, landscape features and the maintenance of existing native hedgerows or the planting of new hedgerows is important in terms of screening farm buildings and thus blending these into the landscape in the least obtrusive manner. This Plan will continue to support the agriculture industry and will promote any changes to farming practices that will adapt to climate change and provide more sustainable methods of production.

K1 Agriculture Objective To preserve agricultural land. Guidance This zone is for the use of land for agricultural purposes and farming-related activities and to provide for the development of existing established uses. Individual dwellings for permanent occupancy for persons principally involved in agriculture will be open for consideration subject to normal site suitability considerations and compliance with the policy objectives set out in Chapter 3 of this Plan. Permitted Use Allotments, Agri-Tourism. Open for Consideration B&B/ Guest House, Community Facility, Craft Centre/Shop, Garden Centre, Home Based Economic Activities, Recreational/Sports Facility, Residential, Telecommunications Structures.

This proposed development is located in a rural agricultural area, where such developments are to be facilitated by the local authority, and it is not located near any scenic walks or viewing points. The location of the proposed site, integrated into the surrounding landscape, obscured by its location and integrated where possible with the land topography and the existing landscaping, will ensure that this proposed development is incorporated into the local environment, with no adverse visual impact, while at the same time complying with Department of Agriculture, Food and The Marine and Bord Bia requirements.

These agricultural and rural development plan policies recognise the important and varied role of agriculture within the economy of Co. Louth. These policies serve to recognise and support development proposals that will enable farming to become more competitive, sustainable, environmentally and welfare friendly; adapt to new and changing markets; diversify into new agricultural opportunities; and broaden their operations to "add value" to their primary produce, while at the same time protecting the environmental and cultural heritage of the County.

The proposed development of poultry housing, will modify the existing farming activities and will provide for a sustainable farm diversification for Mr. Michael Callan in line with supermarket and consumer requirements. The proposed development will be located;

1. in a rural agricultural area,
2. significantly removed from any population centres,
3. located away from any designated areas and/or tourist attractions.
4. well integrated into the local environment with sympathetic design and layout,
5. with proper measures in place for the storage and removal of wastes off site,
6. with all organic fertiliser / poultry manure from the proposed developments to be utilised in accordance with S.I. 605 of 2017, as amended, (in the production of mushroom compost or utilisation of soiled water as an organic fertiliser.)

will help to ensure that the proposed development will be in accordance with the stated plans and objectives of Louth Co. Co. as outlined in the county development plan.

2.7 Organisations and Bodies Consulted

The scoping exercise for this E.I.A.R. / planning application was carried out with due consideration to Louth Co. Co. Planning File 19469 and An Bord Pleanála File ABP-307333-20, and in consultation with;

- C.L.W. Environmental Planners Ltd.,
  - ❖ Paraic Fay B.Ag.Sc. Project lead,
  - ❖ Oliver Leddy B.Ag.Sc. and Hugh Larkin B.Ag.Sc.- Technical Input]
- Teagasc,
- the applicant Mr. Michael Callan and
- Carton Brothers / Manor Farm [Mr. Tom Horan – B.Ag.Sc, Poultry Farm Operation, Management and Characteristics].

Other organisations and bodies consulted directly/indirectly include:

- Big Dutchman (Equipment Suppliers)
- Bord Bia
- Department of Agriculture,
- Department of Environment.
- Duchas - The Heritage Service
- Environmental Protection Agency.
- [Sean O'Connor]Hydrocare Environmental Ltd. Masters In Applied Science, Diploma in Public Health, PG Diploma in Environmental Engineering — Percolation[Site Characterisation Assessment
- Daniel Nolan Hydrocare Environmental Ltd. MIEI, BA BAI Msc Environmental Engineering — Stormwater Attenuation
- Louth Co. Co.
- Geological Survey of Ireland
- I.D.S. Ltd., Portlaoise
- Irish Farmers Association (I.F.A.)
- Met Eireann
- Myles O'Reilly, Civil Engineering Services, Crubany, Cavan, Co. Cavan, — (Site Survey/Drawing)
- Brian Johnson MIOA CLV Consulting — Noise monitoring and Assessment
- Noreen McLoughlin, MSc, MCIEEM, Whitehill Environmental — Ecology Natura Impact Statement
- PE Services, Crubany, Co. Cavan — Ventilation/equipment
- Rockview Engineering — House design/Construction
- Christy Carr / Shane Carr Irwin Carr Consulting — Air Quality (Ammonia & Odour) Impact Assessment
- Louth Co. Co. — Planning / Infrastructure
- P. Herr & Associates — Civil Engineering
- Joseph Cunningham & Associates — Chartered Engineers

2.8 References / Publications Consulted

The following references, among others were consulted when compiling this Environmental Impact Assessment Report:

- Advice Notes for preparing Environmental Impact Assessment Reports, Draft September 2015 – E.P.A.
- Advice Notes on Current Practice in the preparation of Environmental Impact Assessment Reports
- Agri-Environmental Specifications for R.E.P.S. 2000, *Department of Agriculture, Food and Rural Development.*
- Code of Good Agricultural Practice to Protect Waters from Pollution by Nitrates, *Dept. of Agriculture Food and Forestry (D.A.F.F.) and Dept. of Environment (D.o.E.)*
- Commission Implementing Decision (EU) 2017/302 of 15 February 2017 establishing best available techniques (BAT) conclusions under directive 2010/75/EU of the European Parliament and of the council for the intensive rearing of poultry or pigs.
- EIAR relating to proposed poultry farm at Rathescar Middle, Dunleer, Co. Louth For Mr. Michael Callan (May 2019)
- European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2017 (SI No. 605 of 2017, as amended,).
- European Communities (Welfare of Farmed Animals) Regulations 2010 (SI No. 311 of 2010).
- Explanatory Bulletin to the Soil Map of Ireland, *Teagasc 1980*.
- Food Harvest 2020 – Department of Agriculture, Fisheries and Food.
- Food Vision 2030 – Department of Agriculture, Food and the Marine.
- Food Wise 2025 – A 10 year vision for the Irish Agri-Food Industry– Department of Agriculture, Food and the Marine.
- Guidelines on information to be contained in Environmental Impact Assessment Report - EPA Draft August 2017
- Guidelines on the information to be contained in Environmental Impact Assessment Reports.
- Integrated Pollution Prevention and Control (IPPC) Reference Document on Best Available Techniques for Intensive Rearing of Poultry and Pigs. – July 2003
- Louth Development Plan 2021-2027.
- Poultry Products Quality Assurance Scheme Poultry Producer Standard Revision 01, June 2008, Bord Bia
- Protecting our Freshwaters, Nutrient Management Planning Guidelines for Local Authorities, *Dept. of Environment and Local Government.*
- Protection of the Environment Bill 2003.
- Revised guidelines on the information to be contained in Environmental Impact Assessment Reports, Draft September 2015, E.P.A.
- Suitable Development, A Strategy for Ireland, *Department of Environment*
- *Teagasc, Major and Macro Nutrient Advice for Productive Agricultural Crops - 4th Edition 2016.*
- The Economic Importance of the Poultry (Meat and Egg) Sector in Ireland, Prof. Thia Hennessy, Cork University Business School, University College Cork, Ireland

- www.agriculture.gov.ie
- www.archaeology.ie
- www.bordbia.ie
- www.epa.ie/
- www.gsi.ie
- www.Louthcoco.ie

2.9 Environmental Impact Assessment Regulations

The *European Communities (Environmental Impact Assessment) Regulations, (as amended)* (and Directive 2014/52/EU) has laid down a standard list of areas of the environment that must initially be addressed in any E.I.A.R. These areas comprise of:

- Population/Human Health.
- Bio-diversity (Flora and Fauna, Special Policy Areas etc.).
- Land/Soil.
- Water.
- Air.
- Climate.
- Landscape.
- Material Assets.
- Traffic.
- Architectural and Archaeological Heritage.
- Cultural Heritage.
- The inter-relationship between the factors listed above.

It is necessary to encompass each of these sections of the environment with respect to the impacts that the proposed development will have on them. The purpose of this exercise is to shape and mould the E.I.A.R. so as not to overlook any impacts that may be significant, and to focus on the issues that have potential for environmental impact.

Potential Impacts During Construction and Operation

In this case the above criteria were studied and prioritised, ensuring that particular attention was paid to the issues that are directly relevant to the impact of the proposed development. A Matrix has been developed so as to assess the magnitude and nature of any potential impacts at the Scoping stage. Resulting from this preliminary assessment, only those issues identified as potentially significantly impacted by this development have been assessed in detail in this E.I.A.R.

Any development may result in indirect effects, along with the direct effects of construction. The potential impacts that the proposed development could impose on each aspect of the environment were sub-divided into the following categories, and analysed separately:

- Potential impacts if the proposed development does not proceed.
- Potential impacts during construction phase of proposed development.
- Potential impacts during operational phase of proposed development.

	NO DEVELOPMENT	CONSTRUCTION PHASE	OPERATIONAL PHASE
Human Health/Population	≈	✓✓	✓✓
Flora	≈	×	≈
Fauna	≈	×	≈
Soil	≈	≈	✓✓
Water	≈	×	××
Air	≈	≈	×
Climate	≈	≈	≈
Ambient Noise	≈	×	≈
Cultural Heritage	≈	≈	≈
Landscape	≈	××	×
Material Assets			
▪ Traffic	≈	×	×
▪ Land Use	≈	≈	✓
▪ Employment	×	✓✓	✓

Key:

≈	No Impact		
×	Slight Negative Potential Impact	✓	Slight Positive Potential Impact
××	Moderate Negative Potential Impact	✓✓	Moderate Positive Potential Impact
×××	Significant Negative Potential Impact	✓✓✓	Significant Positive Potential Impact

3. DESCRIPTION OF DEVELOPMENT

This proposed farm development will ensure that a high standard of animal welfare and environmental protection are achieved by this farm enterprise. The proposed development will be built to exacting Department of Agriculture specifications, and will ensure that the highest standards of animal welfare and environmental protection are provided for. The site is situated in a rural location where agriculture is the main industry. The site, which is not visible from any major road or housing complex, is well situated to screen the poultry farm from view.

3.1 Site Location

This site of the proposed development/farm is a predominantly a greenfield site / agricultural land, farmed by the applicant, with a small amount of scrub/immature conifers. The existing farm, and the site of the proposed development, is adjoining a local road, on c. 4.923 Ha, located in the town land of Rathesar Middle, Gunstown and Whiteriver. The site is c. 1-1.5 Km's from the regional route, the R169, between Collon and Dunleer and a further c. 2 Km's from the N2 National Route, and 3.4km's from the M1 motorway.

Figure 3.1 – Map showing the Location of the Proposed Development Site (Site Outlined in Red)

Figure 3.2 – Aerial Photograph of the Site (Outlined in Red) and its Surrounding Habitats.

The site is to be accessed via c. 275 m of an internal farm roadway to be developed within the landholding. The surrounding landscape is typically rural in character, dominated by a patchwork of agricultural fields (tillage and grassland) interspersed with one off dwellings or groupings of same and agricultural buildings. This proposed development will be situated in an agricultural area c. 4.25 km's south west of Dunleer and c. 7.5 km's south east of Ardee.

3.2 Objective of this development

The objective of this planning application is to develop a sustainable farm diversification enterprise that can integrate with the existing farming activities to the benefit of both enterprises. Poultry farming is seen as the ideal enterprise;

1. For the proposed site in question and,
2. To integrate with the existing customer farmers tillage farming activities with significant potential for symbiosis in the areas of,
   - feed (using Irish produced grain as a significant proportion of the diet to be fed to the birds to be housed in the proposed development),
   - bedding (using straw produced on tillage farms to bed the birds instead of wood shavings), and,
3. To integrate with the wider horticultural sector in the provision of a necessary resource ingredient in the production of mushroom compost.

There may also be options in the future to integrate the development into green energy projects via the use of poultry manure in Anaerobic Digestion etc., and this may be explored with the E.P.A. should such facilities come on-stream in the future.

All organic fertiliser / poultry manure is to be used in the production of mushroom compost and arrangements have been made with a registered contractor to transport all poultry manure from the farm for use in mushroom compost production. It is envisaged that subject to E.P.A. agreement potential alternative uses my also be considered (anaerobic digestion etc., as these facilities develop in the future.)

This proposed development will operate to the highest standards of animal welfare, environmental protection, animal/bird performance and efficiency. This will ensure that this farm will be viable and will operate with a satisfactory level of profitability to provide the applicant with a satisfactory income, after repayments. The scale and layout off the proposed development will be designed so as to maximise the economies of scale, while at the same time keeping within a scale that the applicant can manage to a high level.

The scale of the proposed development is linked to;

- The resources available to the applicant in terms of the site, labour and capital.
- The requirement from Manor Farm for a consistent supply of fresh Irish produced chickens to meet increasing consumer demand as a result of population growth, country of origin labelling etc., and trends in consumer demand and increasing consumption of poultry meat due to its health and environmental benefits (lower emissions/impact per unit produced and higher efficiencies than other meat production models).
- Carbury Compost / Marley Compost requirements for poultry manure for use in the production of mushroom compost.

The location of the proposed development is a significant advantage to the operation of this farm as it is located within a reasonable distance from Manor farms premises (fed mill and production centre) at Shercock Co. Cavan, while also being well removed from any other poultry farms to maximise bio-security. While the previous BATNEEC requirements referred to the location of a farm in close proximity to mushroom compost production or tillage areas to operate as back to back enterprises, the updated requirements as per the Commission implementing decision of February 2017, refers to ***"Proper location of the plant/farm and spatial arrangements of the activities in order to: reduce transport of animals and materials (including manure)".***

In this regard as the predominant volume of traffic will be associated with the transport of Birds/feed to / from Manor Farms processing and feed milling facilities at Shercock, it is deemed prudent to locate the proposed development closer to same, than the mushroom compost facilities.

At a time in the Irish poultry and tillage industries when margins are extremely tight it is essential that every farm is run and managed as efficiently as possible.

Due to the location of the proposed site, the assessment of any impact from this proposed development, needs to take into account the potential cumulative impact of the proposed development along with any existing developments, adjacent to the proposed site. The existing farming activities have been carried out without any adverse impact on the environment, and without any complaint from local residents and/or the local authority. The site of the proposed development is part of an overall landholding of c. 325 hectares farmed by the applicant/applicant's family, and is located a significant distance from any local residences, and close to good road infrastructure.

The proposed development will be integrated into the existing farming activities owned and operated by the applicant. The proposed development will not be overtly visible within the landscape. Sympathetic colours/ finishes and landscaping will help to integrate the proposed development into the surrounding landscape.

3.3 Size and Scale of the Development and Construction

The following details should be read in conjunction with the engineers drawings provided in Appendix 2, 3 & 4. Appendix 2 contains site location maps. Appendix 3 contains a site layout plan and site sections. Appendix 4 contains the cross-sections, plans and elevations of the structures for which planning permission is sought. Appendix No. 19 contains a Construction Waste Management Plan.

Broiler rearing design principles are relatively simple and have not changed significantly over recent years. The type of poultry housing proposed on this farm is designed for Broiler rearing and comprises a simple closed building of block and timber/steel construction on an impervious concrete base, thermally insulated with a forced computer controlled ventilation system and artificial lighting. Birds are to be housed on a solid floor, with litter (wood shavings/chopped straw) spread over the entire floor area. Automated feeding and drinking systems are proposed and are in line with Best Available Techniques (BAT) requirements. A button nipple drinking system is to be used in the houses as this is the most efficient type of drinking system and it ensures that the manure remains as dry as possible.

Mr. Michael Callan ***proposes*** to construct the following:

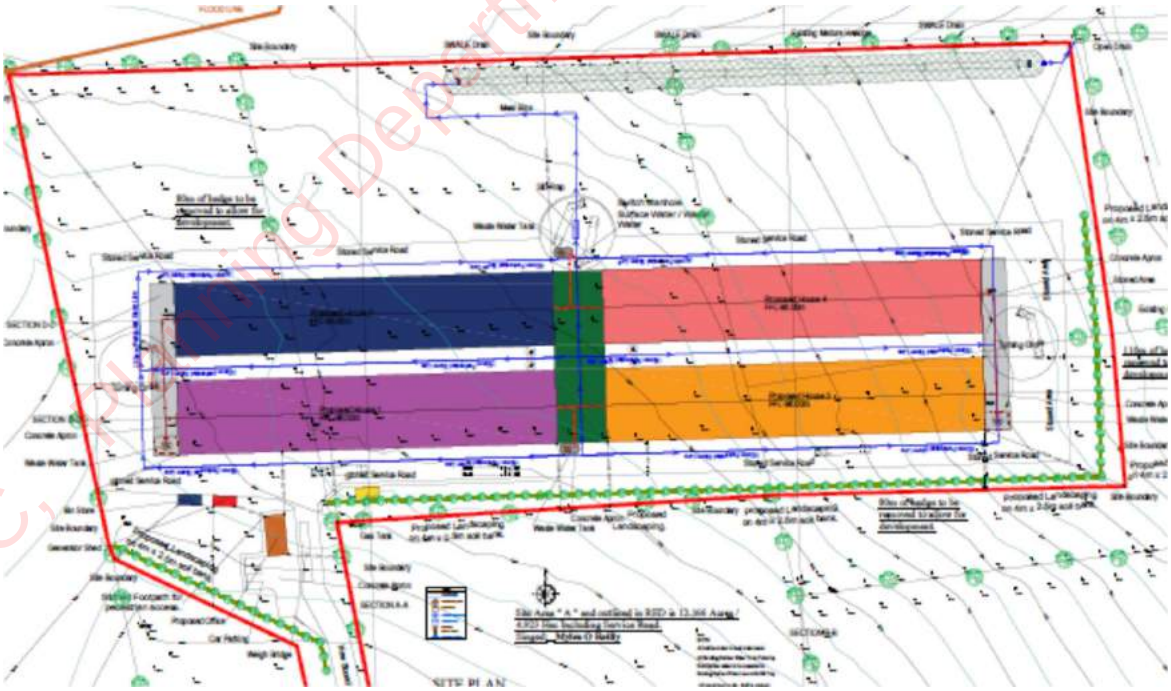
- 4 No. Poultry Houses ~ Floor Area c. 2,400 m^2 per house,
- Covered Ancillary common area linking the proposed four poultry houses.
- office, general purpose store and generator shed, and,
- All ancillary structures and site works associated with the construction and operation of this proposed poultry farm.

The proposed development of 4 No. Broiler rearing houses will be of similar design to the existing houses located elsewhere within the country, and will also comply with BAT requirements. Birds will be housed on the floor and the house will be open plan with no internal divisions. The proposed poultry houses will be of a timber/steel portal frame construction on a concrete base. Walls will be concrete, with a pre-fabricated panel construction. The roof cladding will be box profile juniper green (or similar) cladding. The proposed poultry houses will be c. 112.8m long by 21.35 m wide with a height of c. 6.5 m.

The measures outlined as BAT for the Poultry Sector, (***COMMISSION IMPLEMENTING DECISION (EU) 2017/302 of 15 February 2017 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the intensive rearing of poultry or pigs)***, and in particular this type of production include:

- ***Natural ventilation, equipped with a non-leaking drinking system (in case of solid floor with deep litter).***
- ***Forced ventilation and a non-leaking drinking system (in case of solid floor with deep litter).***

Figure 3.2 Proposed Site Layout



3.4 Operation of the Farm

Operating Hours

The operation of this proposed development, will be along similar lines to, the existing activities on other poultry farms in the county. The main activities at this farm occur during normal working hours between 06.00 a.m. and 20.00 p.m. Stock inspections in line with normal farming practices are and will be carried out every day including weekends and holidays. Automatic feeding and ventilation systems operate on a 24 hour basis and in addition, essential activities may be carried out outside of core working hours. The proposed development will require 2 labour units, in addition to farm management.

The poultry farm manager, and/or other designated person(s) will be available at all times should any emergency arise regarding this farm. In addition Mr. Michael Callan will retain overall responsibility for the day to day running of the farm.

3.4.1 Stocking and Production Cycle

The proposed development is for 4 No. purposely designed broiler houses, each with a capacity for c. 50,000 birds. Stocking rates are based on current standards as prescribed by Bord Bia, i.e. 39 Kg Liveweight /m^2. The production cycle on the farm is c. 5-6 weeks with 1 – 2 weeks empty after every batch. This results in c. 7 batches per annum.

Day 1 – Birds Moved to the farm.
Day 35 – 42 – Birds removed from the houses.
Day 43 – 45 – Manure Removed from the houses.
Day 45 – 47 – Houses Washed down and left to dry.
Day 50 – Houses bedded with shavings and left ready for the next batch of birds.

3.4.2 Use of Natural Resourses

There are no significant negative effects expected as a result of the proposed development in relation to the use of natural resources. As previously detailed the development will require a limited land area to facilitate the proposed development, however same will have no adverse impact on land, soil and/or bio-diversity outside of the site area. While there are no processes involved that have a high requirement for fuel energy some ancillary heating will be required. Gas heating will be provided during the early stages of each batch and the demand for heat will depend on local weather conditions at the time of stocking. Gas requirements will be minimised by high insulation standards and a modern efficient heating system.

The proposed development will have a definite requirement for a supply of water during the construction phase and once completed there will be additional water used on the farm as a result of this proposed development. The main resource to be consumed would be poultry feed, which is classifiable as a natural resource that is a renewable resource, and water

- ***Feeding -*** All birds will be fed by means of an energy efficient, low maintenance, automated feeding system. Feed will be moved from the external feed storage bins, into the houses.

  There are four stages of rations fed throughout the lifecycle, Starter, Grower1, Grower 2, and Finisher. Each diet is tailored to meet the birds nutritional requirements for protein/amino acids, energy, minerals and vitamins at that stage of production and to minimise nutrient excretion. This will ensure that birds are healthy and contented and are reared properly so as to produce healthy efficient birds which achieve set target food conversion efficiencies.

  Total Feed Consumption/annum is expected to be c. 5,150 t. All feed to be used on this farm will be supplied from specialised feed suppliers such as Manor Farms own Feed Mill Kolbe Feeds. Please refer to Appendix No. 8 for additional information with regard to the feed to be supplied to this farm.

- **Water supply and use.**

It is intended that the proposed water supply will be from a public supply to be available on-site, and confirmation has been received from Irish Water to confirm that same is available. Furthermore the applicant will have access to a well elsewhere on the landholding to supply the proposed development. Water is to be stored in an on-site water storage tank with a capacity of up to c. 24 hours.

The water used per annum will equal, circa 9,100 m^3 (c. 25m3/day on average) As detailed in Section 6.2 of the E.I.A.R. the site is located over a Poor (Aquifer Bedrock which is generally unproductive except for local zones (Pl), with a Low vulnerability.

GSI Aquifer Yield data;

- Regionally important (R) aquifers should have (or be capable of having) a large number of 'excellent' yields: in excess of approximately 400 m^3/d (4,000 gph).
- Locally important (L) aquifers are capable of 'good' well yields 100-400 m^3/d (1,000-4,000 gph).
- Poor (P) aquifers would generally have 'moderate' or 'low' well yields - less than 100 m^3/d.

All of which are more than adequate to meet demand

Irish water have confirmed that they are in a position to provide a water supply to the farm.

All animal drinking appliances will be regularly maintained to ensure that there is no leakage. Water on this Poultry farm will be used for the following:

(a) ***Drinking water for livestock.***

Water is to be supplied ad-lib to the birds via a highly efficient button nipple drinking system. This system may also have cups under each nipple so that no water is wasted. This also has the additional advantage of keeping the manure as dry as possible.

(b) ***High pressure wash down systems (3,000 psi)***

The proposed houses will be cleaned and washed down after each batch of birds so as to ensure that the highest levels of bio-security are maintained on the farm. Soiled water collection tanks have been allowed for so as to facilitate this process.

3.4.3 Heating and Ventilation

Energy supply to the farm will be electric three phase supply.

(a) Heating

Gas is used for heating the houses and houses will be, insulated to ensure that this is used as efficiently as possible. Heating will be by indirect heaters, and/or a hot water based heating system to minimise gas usage and improve the internal environment within the houses.

(b) Ventilation

All ventilation within the poultry houses will be computer controlled mechanical ventilation.

3.5 Proposed Poultry Housing

The proposed poultry houses are a steel portal frame structure, with green/dark coloured prefabricated insulated wall panels constructed on a mass concrete base. The roof cladding will be box profile juniper green (or similar) cladding. The proposed poultry houses are c. 112.8 m long and 21.35m wide with an eaves height of c. 2.6 m rising to an overall height of c. 6m.

Broiler rearing design principles are relatively simple and have not changed significantly over recent years. The type of poultry housing proposed on this farm is designed for Broiler rearing and comprises a simple closed building of block and timber/steel construction on an impervious concrete base, thermally insulated with a forced computer controlled ventilation system and artificial lighting. Birds are housed on a solid floor, with litter (wood shavings/chopped straw) spread over the entire floor area. Automated feeding and drinking systems are in operation and are in line with Best Available Techniques (BAT) requirements. A button nipple drinking system is to be used as this is the most efficient type of drinking system and it ensures that the manure remains as dry as possible.

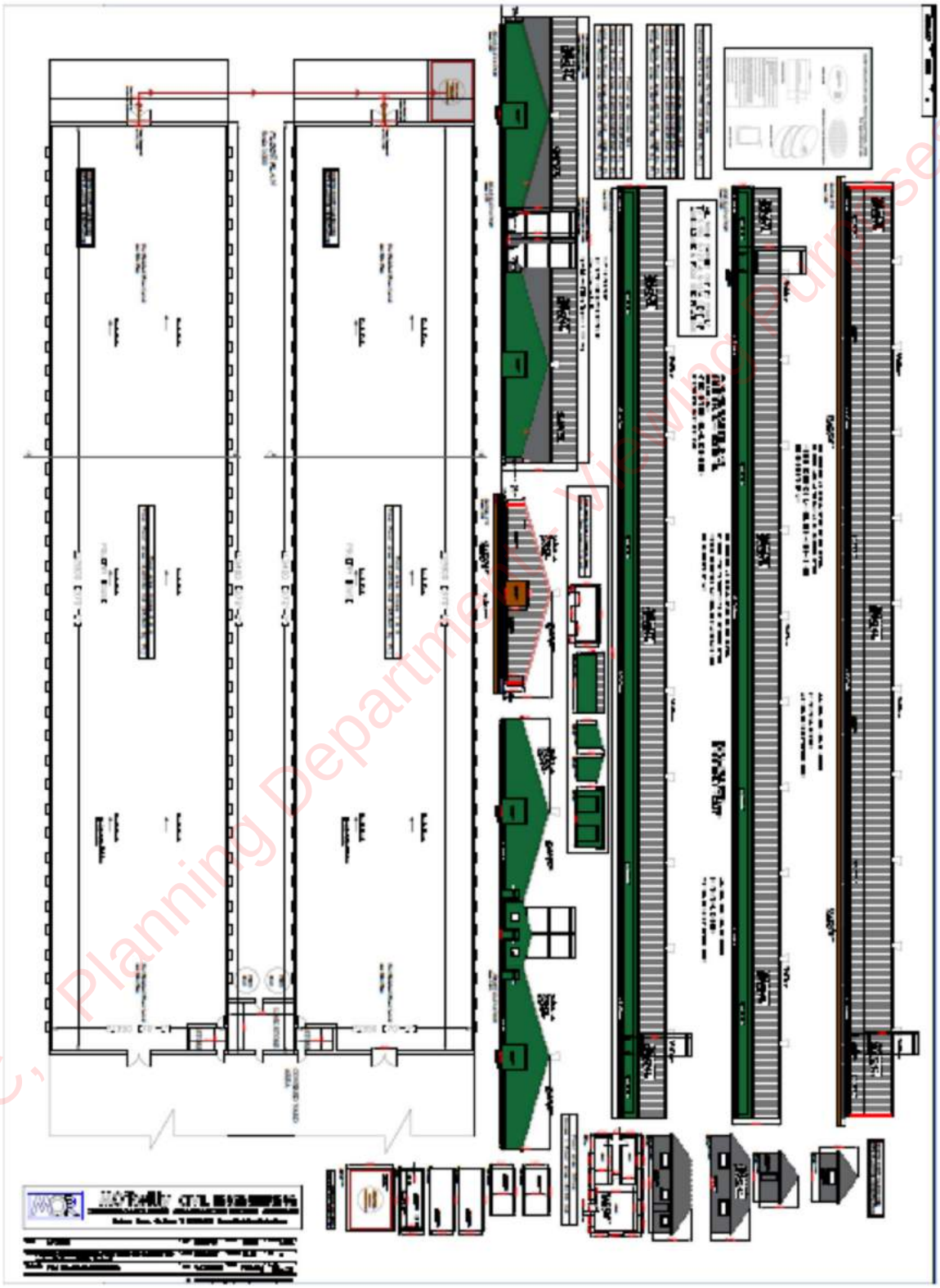
The proposed development of Broiler rearing houses will be of similar design to existing houses elsewhere in the country, will be of similar scale, and will also comply with BAT requirements. Birds will be housed on the floor and the house will be open plan with no internal divisions.

All systems will be well maintained and serviced so as to ensure that they are operating to maximum efficiency.

The measures outlined as BAT for the Poultry Sector, (***COMMISSION IMPLEMENTING DECISION (EU) 2017/302 of 15 February 2017 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the intensive rearing of poultry or pigs)***, and in particular this type of production include:

- ***Natural ventilation, equipped with a non-leaking drinking system (in case of solid floor with deep litter).***
- ***Forced ventilation and a non-leaking drinking system (in case of solid floor with deep litter).***

Figure 3.5 – Drawing of Proposed Houses



3.6 Process of Production

The main activities at this farm occur during normal working hours between 06.00 a.m. and 20.00 p.m. Stock inspections in line with normal farming practices are and will be carried out every day including weekends and holidays. Automatic feeding and ventilation systems operate on a 24 hour basis and in addition, essential activities may be carried out outside of core working hours.

The production process on this farm will be in line with the requirements of the poultry processors, Manor Farm, and customers of the processors. Manor Farm arrange for a number of farm inspections to be carried out during the year, so as to ensure that all of their production standards and requirements are being complied with. In addition to the above the applicant is /will be subject to inspections from Bord Bia, the Department of Agriculture, Food and Marine, Louth Co. Co., and the Environmental Protection Agency.

All birds will be fed by means of an energy efficient, low maintenance, automated feeding system. Feed will be moved from the external feed storage bins, into the houses. There are four stages of rations fed throughout the lifecycle, Starter, Grower1, Grower 2, and Finisher. Each diet is tailored to meet the birds nutritional requirements for protein/amino acids, energy, minerals and vitamins at that stage of production and to minimise nutrient excretion. This will ensure that birds are healthy and contented and are reared properly so as to produce healthy efficient birds which achieve set target food conversion efficiencies. Total Feed Consumption/annum is expected to be c. 5,150 t. All feed to be used on this farm will be supplied from a specialist feed supplier such as Kolbe Feeds.

The applicant is responsible for the maintenance and preparation of the houses, management of the birds, feeding, water and ventilation systems and for ensuring that all of the required records are maintained for each flock. The stock for this farm will be transported from the hatchery as day olds, and will remain in the houses until c.5-6 weeks when they will be caught by specialist bird catchers and transported by HGV to the processors at Shercock, Co. Cavan. The proposed houses will operate in an all in - all out basis to maintain a single age profile, and to maintain the health status of the birds, within each house.

As previously detailed the production cycle on the farm is c. 5-6 weeks with 1 – 2 weeks empty after every batch. This results in c. 7+ batches per annum.

Day 1 – Birds Moved to the farm.
Day 35 – 42 – Birds removed from the houses.
Day 43 – 45 – Manure Removed from the houses.
Day 45 – 47 – Houses Washed down and left to dry.
Day 50 – Houses bedded with shavings and left ready for the next batch of birds.

The poultry manure from this farm will be removed off site direct to the mushroom compost production facilities (Such as Carbury Compost or Custom Compost) by an authorised contractor, CLR Co-op, on behalf of the applicant. The contractor provides the machinery and labour necessary for cleaning out the houses and is responsible for cleaning of the houses, arranging transport and making arrangements for the receipt of this material and will move organic fertiliser / poultry manure direct to the compost yards. CLR Co-op carry out this function for a number of poultry farmers so as to provide a consistent, reliable service to all farmers and to provide a consistent supply of manure to the compost yards. The estimated manure production as a result of the proposed development will be c. 1,575 tonnes/annum. Please refer to correspondence direct from the Compost yards in Appendix 7.

Additional details provided by the contractor have been included as Appendix No. 7.

Soiled water from the proposed development where applicable will arise from washing of the houses at the end of each batch and will be collected in dedicated soiled water collection tanks, located at the end of the houses. The cleaning of the houses after each batch will involve the physical removal of all organic fertiliser / poultry manure, washing down of the houses (incl. the use of a suitable approved detergent), followed by Disinfection (with a suitably approved disinfectant) post washing. Detergents/disinfectants used are typically at a dilution rate of 1 – 5% and only products approved for use on farms, in line with the cleaning protocol to be designated for the farm, by Manor Farms's bio-security and veterinary consultants, Agri-health, Monaghan.

Estimated soiled water production will be c. 330 m^3/annum. This soiled water will then be applied to the applicant's family farmland in line with S.I. 605 of 2017, as amended, (See Appendix No. 17). A map is included in Appendix 6 indicating the location and extent of farmland adjacent to the site farmed by the applicant / applicant's family.

The applicant's son farms c. 39 hectares of , 20 Ha of which are tillage suitable for the application of soiled water. The on-farm organic N stocking rate on these lands (2021) is/was c. 0 kg organic N/Ha. ***The application of 330 m^3 of soiled water to these lands with an estimated Organic N content of c. 1 kg organic N/m^3 will result in an application rate of c. 16.5 kg organic N/Ha, (on this 20 Ha) well inside the 170 kg organic N/Ha limit.*** The applicant's son will reduce any additional organic fertiliser / poultry manure imports to ensure compliance with S.I. 605 of 2017, as amended.

To minimise the risk of personnel bringing infection into the poultry farm all visitors are banned with the exception of essential personnel such as veterinarians and servicemen. All visitors must sign a register and use appropriate disinfectant procedures. Designated lorries are to be used to deliver feed to the farm. A vital part of maintaining health within the unit is the necessity to fully clean out after each flock is removed. This avoids the build-up of bacteria and viruses which challenge the incoming stock and which may affect their production efficiency. Once litter has been removed by the designated contractor all internal surfaces are washed down using a power washing system and then disinfected.

3.7 Procedures of Production

It is envisaged that Mr. Michael Callan will seek approval under the Bord Bia approval system, as per the Poultry Products Quality Assurance Scheme (PPQAS), upon completion of the proposed development and commencement of poultry farming activities on the site. As part of this approval the daily procedure will follow the Bord Bia Poultry Products Quality Assurance Standard Producer Requirements.

The following house checklist and flock inspection checklist are included as part of this standard;

House Preparation Checklist

Preparation of the House:

- Spread fresh bedding evenly to cover the floor.
- Pre-heat the house gradually, at a minimum, 24 hours before the birds arrive.
- The temperature must be stable.
- Set up space heaters or brooders so as to ensure that there are no extremes of temperature in the house.
- Place independent thermometers around the house with at least two of them at bird level, to monitor uniformity of temperature.
- Provide fresh, clean water to the birds immediately on their arrival at the house. Starter ration must also be available.
- Use trays and paper to supplement pan or track feeders, if required.
- Feeders and drinkers must not be placed directly under a heat source.
- Before the birds arrive, carry out a final house-check to ensure that temperatures are at the correct levels and that there are no water leaks.

A house preparation sheet must be completed before the arrival of each batch of chickens that records the following at a minimum:

Flock Inspection Checklist

MINIMUM REQUIREMENTS FOR FLOCK INSPECTION CHECKLIST

House Identification

Date Housed

Number of Birds Housed

DAILY

- Maximum & minimum temperatures
- Water meter reading
- Lighting – functioning as per programme
- Litter quality
- Mortalities & cause e.g. culls, leg weakness, injuries
- Corrective actions where required

TWICE-DAILY RECORDS OF:

- Ventilation – functioning as per settings
- Feed lines – charged with feed
- Drinkers – operational
- General flock appearance

WEEKLY CHECK RECORDS OF:

- Generator
- Alarms
- Fire extinguishers in place
- Foot dips

YEARLY:

- Electrical equipment
- Water test

4. Description of the physical characteristics of the proposed development, the land use requirements during construction and operation and the likely significant effects of the project on the environment.

The poultry farm operation will result in the production of 2 saleable products, 1) chickens for the processing sector (Manor Farm) and 2) organic fertiliser / poultry manure (destined for mushroom compost manufacture). In addition, the proposed development will require a significant amount of grain and bedding (straw) from the local agri-sector, while at the same time providing a necessary resourse ingredient for the horticultural sector (mushroom compost).

It is intended that the chickens reared on this farm would be supplied to the Carton Brothers / Manor Farm, and that all organic fertiliser / poultry manure would be utilised in the production of compost for the mushroom (horticulture) industry (poultry manure), or organic fertiliser / Soiled water.

In addition a number of waste streams will also be generated, and these may/will include, bird carcasses, general waste and paper bags. The quantities of the various wastes generated, their storage and their ultimate disposal are detailed in the following sections. The only remaining emission from this farm is clean storm water from roofs and yards which will be, discharged via a proposed storm water attenuation swale drainage system, and gaseous emissions as will be discussed herafter.

4.1 Organic fertiliser / poultry manure/Manure Production

The annual estimated production of organic fertiliser / poultry manure from the farm is calculated in Figure 4.1.1. While this is a considerable amount of poultry manure, it is significantly below that required by the Compost yards identified for the receipt of this resource and will represent c. <5% of the annual requirement of one of the proposed destinations.

Figure 4.1.1 Organic fertiliser / poultry manure Production

Estimated Annual Manure Production.				
Animal Type Proposed	**Number**	**Manure Production tonnes /Batch**	**Batches / annum**	**Total** tonnes
Broilers	200,000	225	7	**1,575**

European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2017 (S.I. No. 605 of 2017, as amended,) data would suggest that the manure would have a nutrient content of 11 Kg N and 6 kg P / tonne.

The manure management system is based on maintaining dry manure at all times. At the end of each cycle the houses will be cleaned and brushed down to remove all organic fertiliser / poultry manure from same. All manure is to be directly loaded into lorries at the end of each cycle and moved off-site. Thereafter the houses will be washed, disinfected and left to dry, prior to re-bedding in preparation for the next batch of birds.

4.2 Manure Management

Poultry Manure is categorised as a Category 2 Animal By-product and the options for the utilisation of this produce are set out in Article 13 of Regulation 1069/2009, as amended. The options included therein include the commonly practised destinations of composing and application to land as a fertiliser.

All manure will be moved off-site directly by an haulier (authorised and registered with DAFM under the Animal By-Product Regulations), to mushroom compost yards for use in accordance with animal by-products regulations and S.I. 605 of 2017, as amended. There will be no ancillary storage of poultry manure on the farm.

4.3 Allocation of Organic fertiliser / soiled water

The practice of applying animal manure/soiled water to agricultural farmland as a valuable source of fertiliser is a well-established practice in farming. The soiled water from the farm will be allocated to lands that have a recognised agronomic need for additional fertiliser. Soiled water from the site would be supplied for use in accordance with the requirements and stipulations of, S.I. 605 of 2017, as amended, (European communities (Good Agricultural Practice for Protection of Waters Regulations 2017).

4.4. Location of customer farmlands (Soiled Water).

Due to the nature and location of this poultry farm, and its integration into the applicant's families tillage farming activities, ***all potential proposed customer farmlands for Soiled Water currently identified for the receipt of soiled water from this proposed development are*** tillage/arable lands farmed by the applicant's family and are located adjacent to the site.

The applicant's family, will utilise the soiled water for efficient tillage production and to reduce the amount of imported chemical fertiliser required and in accordance with S.I. 605 of 2017, as amended. Please refer to Appendix No. 1 for details pertaining to the location of the farmlands currently identified.

4.5. Farmlands identified for the receipt of organic fertiliser (Soiled Water).

In line with the requirements and stipulations of, S.I. 605 of 2017, as amended, (European communities (Good Agricultural Practice for Protection of Waters Regulations 2017), all information pertaining to land farmed by the applicants family and identified for the receipt of soiled water and all other information as required by this directive will be maintained on-site and will be made available for inspection as required. In addition each customer farmer will receive a copy of all applicable information as required by S.I. 605 of 2017, as amended.

Included in Appendix No. 1 is a customer list detailing the current potential customers for soiled water from this farm. This format details the general location of the farmland areas and the requirement for additional fertiliser, calculated in line with S.I. 605 of 2017, as amended. Additional information will be maintained on-site for inspection. This customer list is to be revised and updated as required in accordance with legislation, E.P.A. requirements etc. as they arise.

4.6. Organic fertiliser / Soiled Water Application Rates

Soiled Water from this farm will be allocated for use in accordance with the requirements of S.I. 605 of 2017, as amended, and in line with crop requirements.

This will ensure proper utilisation of the nutrient content of the soiled water, which is estimated as follows:

Nitrogen	1.1 kg/tonne
Phosphorous	0.6 kg/tonne

The lands farmed by the applicant's family will benefit from receiving organic fertiliser / soiled water and this will reduce the amount of imported energy in-efficient chemical fertiliser that would otherwise be used.

4.7. Surface Water and Ground Water

All soiled/wash water will be directed to the soiled water storage facilities. All roof water and uncontaminated storm water from the hard standing areas will discharge to the proposed storm water attenuation swale drainage system, and from there to the local watercourse. The applicant and/or other appointed person will inspect these emission point(s) on a regular basis, as may be dictated by E.P.A. Licence requirements.

As the proposed development involves the management and storage of a dry manure, there is no significant potential for contamination of ground water. Dedicated soiled water tanks will be installed to collect the washwater from each house.

4.8 Animal/Bird Carcasses

Animal/Bird carcasses will arise as a result of mortalities on the farm. While a certain level of mortality is unavoidable this will be minimised due to a high health status and the provision of a high quality environment for the birds. All such waste is and will be collected by College Proteins Ltd. to be disposed of at their approved rendering plant. Temporary storage of this waste will be provided at the farm by means of a covered skip.

Animal carcasses will be transported by College Proteins Ltd. and/or other approved contractor from this farm on average on a weekly basis in the April to September period and on a fortnightly basis in the October to March period. Please refer to Appendix No. 9 for further information in this regard. In the event of an outbreak of a disease requiring de-stocking this will be in accordance with and controlled by Dept. of Agriculture supervision and E.P.A. Guidelines, in order to avoid any detrimental impacts on the local environment.

4.9 An estimate, by type and quantity, of expected residues and emissions (including water, air and soil pollution, noise vibration, light, heat and radiation) and quantities and types of waste produced during the construction and operation phases.

The expected residues and emissions that will result from the construction / operation of the proposed development are referred to below. The proposed residues/emissions will be proportionate to the scale of the farm.

Lighting in the premises will in so far as is possible, be by L.E.D. and/or other energy efficient lighting devices. Spent fluorescent and/or other specialised light tubes may be hazardous waste. If used spent tubes will be accumulated in the store area pending delivery periodically to a local Civic Bring Centre and/or returned to the supplier by/or on behalf of the applicant. Lighting of the site will be the normal for farmyard sites and will not exert influence or interference outside the site boundary.

Supplementary heating is to be provided by gas burners. The amount of gas used will vary depending on outside climatic conditions. Energy efficiency will be a key deciding factor in the selection of a heating system and modern poultry heating systems are considerably more efficient than those used in older poultry houses. The amount of gas required has been/will be significantly reduced due to the high insulation standards. In the future there is potential for the applicant to review biomass heating (straw, wood chip/pellet etc.), however a gas back up will still be required.

General wastes [c. 0.5 tonnes/month] such as packaging, paper, disposable clothing etc. will be collected regularly by a local contractor and delivered to the Landfill facility. It is intended that the frequency of collection of all wastes produced on site will be in line with E.P.A. and/or legislative requirements in this regard.

Dead animals and animal tissues [c. 2 tonnes/month] will be accumulated in a sealed leak proof container on site for collection by College Proteins at 1 - 2 week intervals for transport to an authorised Animal By-Products facility at Nobber, Co. Meath. It is intended that the frequency of collection will be in line with Local Authority / E.P.A. requirements in this regard. See correspondence which is included in Appendix No 9.

The organic fertiliser / soiled water from this farm is/will be managed as previously detailed i.e. removed off site by an experienced contractor registered with the Department of Agriculture, Food and The Marine, and transported direct to the identified mushroom compost production sites (and/or other appropriate and permitted outlets as may be agreed with the E.P.A.). This organic fertiliser / poultry manure is not considered a waste product and is to be utilised as a resource ingredient in the production of mushroom compost, (or such similar products).

Soiled water from the proposed development will be collected in a number of dedicated soiled water collection tanks, located at the end of each house. Provision for >200m3 soiled water storage capacity has been provided which is c. 7.5 months capacity. This soiled water will then be applied to farmland in accordance with S.I. 605 of 2017, as amended, (European communities (Good Agricultural Practice for Protection of Waters Regulations 2017). Normal operations on the site of the proposed development, as for the existing activities, will not cause any pollution of soil.

Noise generated in the proposed development in the site will not exceed legal limits at the site boundary. As detailed later in this E.I.A.R. [Appendix No. 22] noise is not expected to cause a nuisance at this site. Extensive experience with a large number of other existing sites, and noise assessment for other similar developments would not suggest that the proposed development is likely to have any adverse noise impact. A site specific Noise Impact Assessment for this farm has been completed and will be discussed later in Section 6.7 and 7.7. This assessment has not determined and significant adverse impacts.

There would not be any source of significant *vibration* on the site. There will not be any significant *dissipation of heat* from the proposed/existing development. There will be no source of *radiation* on the site that could exert significant influence outside the site.

Gaseous Emissions from the proposed development (including Ammonia, Odour, and particulate matter) have been quantified and assessed and are discussed later in sections 6.4 and 7.4. This assessment has not determined any significant adverse impacts.

Waste materials generated on the site, under normal operating conditions, and/or during site development works, will be collected and transported off the site by appropriately authorised waste contractors to be consigned for disposal, recovery and/or recycling in appropriately authorised installations, as outlined in the Construction and Demolition Waste Management Plan (See Appendix 19). Any paper or other such waste arising from paper waste or any other packaging waste will be stored in an appropriate bin. It is proposed that this will be collected by a local approved waste disposal contractor, such as

Oxigen, and brought to an approved site for disposal. The amount of the above waste types would be minimal on this farm.

All spent fluorescent tubes etc. and/or any other wastes generated on site including all construction and excavation waste from the proposed development, that is to be moved off-site, will be separated and stored in accordance with Louth Co. Co./E.P.A. guidelines prior to transport off site by an authorised contractor(s) for disposal/recovery at an approved disposal/recovery site.

The collection of all waste materials from the proposed development will be managed so as to ensure that, where possible, all waste collection activities are optimised, thus minimising additional traffic as a result of the proposed development.

Implementation of the control measures proposed will ensure in so far as it is possible that significant adverse effects on environmental parameters will not occur and that accidental emissions are unlikely from the proposed development.

Mitigation measures are to be implemented to prevent any significant effect of the proposed/existing installation, and the activities carried out therein, on environmental parameters. These measures are directed towards ensuring that the systems for collecting wastes and removing them from the site for appropriate treatment in authorised waste treatment installations will be adequate for that purpose.

4.10 Description of measures envisaged to avoid, reduce, prevent or if possible, offset any identified significant adverse effects on the environment.

The site selection criteria as previously detailed, including location away from third party dwellings, sensitive landscape and/or other features, environmentally sensitive areas, and in an agricultural/tillage area, go a significant way to minimising any potential impact.

Notwithstanding same, the following best practice / mitigation measures have been proposed to reduce any potential adverse impact, significant, or otherwise:

(i) Provision of sufficient and safe access to the site and measures to avoid excessive soiling of the public road during construction on the site.

(ii) Preservation of existing trees and hedgerows surrounding the site, where possible, together with sympathetic design and layout so as to screen the installation from obtrusive view and to allow it to be absorbed into the rural landscape.

(iii) Provision of a storm water attenuation and drainage system to properly collect and discharge to field drainage all clean rainwater from roofs and clean surfaces, as described in Appendix No. 3 and 20.

(iv) Provision of soiled water drains to properly collect any effluent or soiled water and divert it to the nearest soiled water tank.

(v) The collection and the removal from the site of all manure for use as a resource ingredient in compost production. All soiled waters to be collected and used on farmland in accordance with S.I. 605 of 2017, as amended.

(vi) Appropriate collection and removal from the site of waste materials generated on the site. Record and maintain records of all consignments of waste despatched from the site in accordance with requirements.

(vii) The collection and the removal from the site of all dead animals and all animal tissues. A small proportion of the birds maintained on the farm die prematurely. These carcasses are and will be stored in a covered sealed container on site, awaiting collection by an authorised contractor.

College Proteins is an authorised contractor who will regularly remove these carcasses, and any other such material to their authorised Animal By-Products plant at Nobber, Co. Meath, in compliance with existing requirements. Correspondence in this regard is included hereafter, in Appendix No. 6. Ensure collection of animal tissue from the site is in appropriate watertight and covered containers, and timely removal so as to ensure minimal generation or release of odours either at the site, or during transit to the disposal/recovery destination.

(viii) Comprehensive cleaning and hygiene routine to minimise potential odour from the site.

(ix) Specially formulated diets to maximise performance and reduce nutrient excretion. See Appendix No. 8.

(x) Proper maintenance and inspection procedures to ensure that all feeding, water supply, manure removal, and ventilation systems are working to maximum efficiency, ensuring manure is maintained as dry as possible and minimising energy (electricity and gas) consumption.

(xi) The applicant will receive technical advice, support and guidance from Manor Farm's highly skilled, efficient and experience fields people, as well as veterinary support from Agri-Health Ltd. and Agri./environmental Consultancy from C.L.W. Environmental Planners Ltd.

Implementation of the above will ensure that significant effects on the environment will be avoided and the risk of incidents of environmental significance will be near zero.

4.11 Services

4.11.1. Energy

Mains electricity exists adjacent to the site with a single phase supply. This will be upgraded to three phase to facilitate the proposed development. The electricity will be used for the following:

- Control systems for automatic feeding and water supply, including augers and pumps.
- Power for automatic ventilation systems.
- All artificial lighting to Poultry housing, offices and outside yards
- Power for water pumps and showers.

Proposed Annual electricity usage is estimated at 0.75-1 kWh/bird place/year.

A generator will be installed on-site to provide a back-up energy supply. This is essential from an animal welfare as well as an operational perspective.

Gas – Heating to the houses will be from LPG Gas delivered in bulk consignments and stored on site, as is the norm in practically all other broiler farm sites. Estimated gas usage = c. 1 lt per bird place/annum. In the future there is potential for the applicant to review biomass heating (straw, wood chip/pellet etc.), however a gas back up will still be required.

4.11.2. Water

Water supply will come from a proposed public supply (and/or a well located close to the applicant's sons dwelling c. 500m North of the site, should a public supply not be feasible). Water is to be stored in an on-site water storage tank. Water usage will be minimised by using nipple drinkers in all houses. This will ensure that the dry manure management system is not compromised.

Proposed Average daily water usage = c. 25 - 30 m^3/day

4.12. Fly and Pest Control

Flies, rats and mice are carriers of some of the infections that are detrimental to flock health. In addition, rats and mice can cause considerable damage to insulation materials and accessible woodwork, thereby reducing buildings thermal efficiencies and longevity. A comprehensive programme for fly control and rodent control, to be carried out in accordance with Bord Bia requirements on this farm will be implemented.

4.13 Difficulties encountered in compiling the required information

The processes and technology involved in the construction and operation of the proposed development are standard for agricultural, and in particular poultry farm developments, and well understood. In addition the principles are already in practice on existing facilities already operating within the county and further afield.

The technical information on which to base an assessment of impact on environmental parameters is readily available in the public domain and additional information can be extrapolated from the operation of existing poultry farms, currently supplying Manor Farm. As a result the assessment of any potential impact from the proposed development is factual as well as projected.

There were no particular difficulties encountered and there is no reason to consider that there is any serious risk of error attaching to plans and projections for the treatment of wastes to be generated in the proposed development.

While Irish water have confirmed that a connection is feasible, the applicant will also have access to a well located close to the applicant's sons dwelling c. 500m North of the site, as a back up supply.

5. DESCRIPTION OF REASONABLE ALTERNATIVES

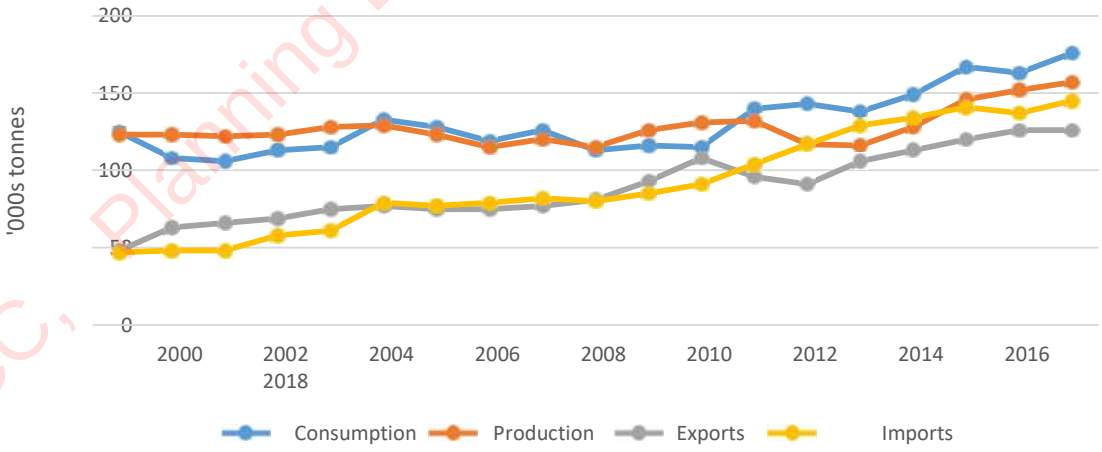
The Food Vision 2030 Strategy is a ten year Strategy for the Irish agri-food sector (taken to include primary agriculture, food and drink processing and manufacturing, fisheries, aquaculture and fish processing, forestry and forestry processing and the equine sector).

Its Vision is that Ireland will become a world leader in Sustainable Food Systems (SFS) over the next decade. This will deliver significant benefits for the Irish agri-food sector itself, for Irish society and the environment. In demonstrating the Irish agri-food sector meets the highest standards of sustainability – economic, environmental, and social – this will also provide the basis for the future competitive advantage of the sector.

Ireland will seek to become a global leader of innovation for sustainable food and agriculture systems, producing safe, nutritious, and high-value food that tastes great, while protecting and enhancing our natural and cultural resources and contributing to vibrant rural and coastal communities and the national economy.

As an be seen from the data below, demand for and consumption of poultry meat in Ireland is increasing, and increasing faster than increases in production, with a result that imports have exceeded exports for most of the past 10 years. The applicant is already heavily invested in Dairy Farming (like a significant amount the Irish Agricultural Industry). The development proposed is a diversification from the existing dairy livestock farming (where we export a significant proportion of what we produce) to poultry farming (where we are net importers). This balance is applicable to the applicant, and the agri-food sector at large and a diversification to re-balance in some small way these trends is appropriate for both the applicant and the agri-sector, to ensure that as an economy we meet out national demands/requirements first.

Figure 3: Volume of Poultry Meat Consumption and Production in Ireland 2000-2018



Source: Central Statistics Office

Given the recent debate(s) relating to the expansion of the Irish Dairy/Bovine Herd and our commitment as a society to reduce green house gas emissions, looking at alternative farming systems, to meet current/future food requirements is pragmatic on the part of the applicant.

Overall, animal-based foods tend to have a higher footprint than plant-based but poultry meat and eggs tend to be at the lower end of the spectrum. The lower rate of methane emissions from chicken relative to cows, the shorter life-cycle and the more efficient conversion of feed to weight gain all make poultry meat more carbon efficient than beef, sheep-meat or pork.

Given the proximity of the proposed development to the existing services (processing, feed supply, service industries etc.) it is envisaged that it is logical for future development of the poultry sector to radiate out from these facilities, to minimise transport costs and emissions. As the proposed development is to supply Manor farm this location is within the radius of existing farms supplying them and given the added advantages of a better road network, distance from other poultry farms etc., the geographic areas is deemed by the applicant and Manor Farm as suitable for the proposed development.

5.1. Alternative Sites Considered

The proposed development of a farm diversification into poultry is a relatively traditional activity in the North east region. Notwithstanding same this diversification has been seen more in the adjoining counties of Cavan and Monaghan resulting in a mote varied agricultural sector. As a result of this a significant number of ancillary business have established around this production base including , processing, packing and service industries. In the context of the development at hand, the site is located c. 35km south east of Manor Farms Processing plant and Kolbe Feeds Feed mill at Shercock (a similar distance to a significant proportion of Manor Farms existing farmer supply base in North Co. Monaghan (35-45 Km).

While the previous BATNEEC requirements referred to the location of a farm in close proximity to mushroom compost production or tillage areas to operate as back to back enterprises, the updated requirements as per the Commission implementing decision of February 2017, refers to ***"Proper location of the plant/farm and spatial arrangements of the activities in order to: reduce transport of animals and materials (including manure)".***

In this regard as the predominant volume of traffic will be associated with the transport of Birds/feed to / from Manor Farms processing and feed milling facilities at Shercock, it is deemed prudent to locate the proposed development closer to same, than the mushroom compost facilities.

As part of the scoping exercise for this proposed development a number of alternative sites were considered. The areas considered by the applicant for the proposed development, included, but were not limited to the following;

- ***Other lands owned by, and/or available to, Mr. Michael Callan*** at various locations in the surrounding area. While additional potential sites were looked at, on lands owned by / available to the applicant, they were deemed to be less suitable for a number of reasons, including poorer road access, higher density of residential dwellings in close proximity, etc. The existing site has no significant and/or specific environmental constraints which mitigate against the proposed site and/or would support the selection of any alternative site available to the applicant, in preference to the currently proposed site.

- ***Purchase and re-development of an existing poultry site.*** This option had to be discounted as there were no suitable sites located close to the applicant's existing activities, with which the proposed development will integrate with.

- ***Purchase of an entire Green-field site.*** This option has been discounted at present as it was determined that a separate site would be significantly less efficient due to the additional costs involved in the site purchase cost. This would place the proposed development under significant additional financial strain.

Notwithstanding that the applicant required additional lands from a neighbouring farmer to facilitate the currently proposed development, the site selected was done so on the basis that;

- the proposed site has good access with an existing entrance onto the local public road,
- the selected site is more secluded given the land topography and the proposed development can be easily integrated to the rear of the applicant's existing land parcel.
- The applicant's son's dwelling is / is to be located close to the site thus making flock management easier and improving site security.
- Location of the proposed site in close proximity to the lands proposed for the receipt of soiled water from this development.
- The site was in a rural location with a low density of housing in the area, and well screened from local housing and the public road.
- As previously detailed the proposed development site is within the geographic radius of existing farmers currently supplying Manor Farm, and if the poultry sector is to develop to meet the Irish consumer requirement for Irish Produced food, development in areas such as this will be required to be facilitated.

The existing site has no significant and/or specific environmental constraints which mitigate against the proposed site and/or would support the selection of any alternative site available to the applicant, in preference to the currently proposed site.

5.2. Alternative Layout and Design

The design of the proposed development to be undertaken by the applicant was researched and reviewed with the aid and guidance of Carton Brothers/Manor Farm, commercial poultry house designers, the engineer and commercial poultry equipment suppliers, after the appropriate production system (as detailed in Section 5.3 hereafter) had been reviewed.

The layout of the proposed housing was designed to ensure that the proposed developments were integrated into the existing site with minimal, if any, adverse visual impact on the surrounding landscape. The proposed layout was also designed so as to ensure optimum access on site for all traffic associated with the proposed developments, and to ensure that the site is contained, safe and efficient in operation. Same has been modified in line with the Traffic Impact Assessment report contend in Appendix No. 23.

Existing landscaping will be maintained where possible, and strengthened where necessary, along the boundary to further screen the proposed developments from view. Additional landscaping will be provided, along the boundaries of the development where deemed necessary to screen same from view from the public road and/or any other public vantage points, and to minimise any potential visual impact.

As previously stated the design of the proposed housing is in line with BAT requirements. The exterior finish, where practicable will be green or similar in colour and will be sympathetic to the local environment. All roofing materials will be green or dark in colour. As the proposed design is in line with BAT requirements and as natural/dark coloured/grey finishes are proposed, no other alternatives were deemed appropriate.

No other alternative sites, layouts and/or designs were deemed satisfactory and/or appropriate, as the proposed location, design and layout;

- Complies with the requirements of the Nitrates Directive.
- Satisfies the applicants need for efficiencies of scale while not requiring significant additional lands.
- Is in line with BAT requirements. The measures outlined as BAT for the Poultry Sector, (***COMMISSION IMPLEMENTING DECISION (EU) 2017/302 of 15 February 2017 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the intensive rearing of poultry or pigs)***, and in particular this type of production include:
    - ***Natural ventilation, equipped with a non-leaking drinking system (in case of solid floor with deep litter).***
    - ***Forced ventilation and a non-leaking drinking system (in case of solid floor with deep litter).***
- Will be well integrated into the landscape with the use of standard construction techniques, natural/dark coloured finishes as proposed, and additional landscaping where required.
- Complies with the requirements of the County Development Plan.

5.3. Alternative Size

The proposed development of 4 No. poultry houses has been designed and scaled to take into account the;

- Physical restraints/parameters of the site/available lands.
- Economies of scale for the applicant so that the scale of the proposed development is sufficient to cover the development as well as operational costs.
- The requirements of Manor Farm in terms of their supply requirements and recommendations from same with regard to economic and sustainable food production.

The scale of the proposed development is in keeping with the scale of other existing farms supplying Manor Farm, and licensed by the E.P.A. which are operating without adverse environmental impact, and are of a scale that can be appropriately managed by the applicant.

5.4 Alternative Process's Considered

As this is a greenfield site the applicant looked at a number of alternative processes, including but not limited to;

1. Layer Housing – (i.e. utilising the site for the construction of houses for the production of eggs. However as a result of recent changes announced by supermarkets and the goal that all eggs will be sourced from alternative or free range systems by 2025, the completion of enriched cage housing was not an option.

2. Free Range layer/Broiler– This is the main alternative to the conventional production systems, however this system does not suit the applicant as it requires significant additional land (significantly adversely impacting on the applicants / applicant's families existing farming activities) The market for same is small and already well supplied, and from an environmental perspective the production of free range broilers would actually consume more resources (Feed, water, energy etc. per bird produced).

3. Pig Farming – The main alternative to poultry production (not requiring additional lands) is pig farming. The applicant considered same (Namely contract rearing of finisher pigs), and while same would also be suitable for the proposed site, the applicant considered that poultry farming integrated better with his existing farming activities, and current workload.

The proposed development offers the best fit between the proposed and existing enterprise on the farm, both from a labour and efficiency viewpoint and to maximise the symbiosis between both enterprises, to ensure that both are carried out in a more sustainable manner. All chickens from the proposed farm are to be sent to Manor Farm.

5.5. Alternative Management of By-products

Application to land and/or for use in compost production are the two practical economic means of utilising the nutrients in poultry manure.

Previously concerns were expressed by the planning authorities in relation to the allocation of organic fertiliser / poultry manure from this proposed development to customer farmers, therefore the applicant has decided to allocate all poultry manure from the proposed development to mushroom compost production (as was identified as a secondary option in the previous application).

The proposed development will have to obtain and operate under an E.P.A. licence and, and any alternative destination for poultry manure that may arise/be considered (be that Anaerobic digestion etc.,) will be agreed with the Agency in advance, in line with applicable licence and planning conditions

Organic fertiliser / soiled water from this farm will be used as an alternative to imported artificial fertiliser. Soiled water will be utilised as an organic fertiliser by allocating it to those lands with a recognised need for additional fertiliser. All farmlands currently proposed for the receipt of organic fertiliser / soiled water from, the proposed developments, are farmed by the applicant's family and have been identified in this EIAR and NIS.

At present there is no other suitable option for the utilisation of soiled water produced within the proposed development, however the applicant will continue to examine the possibility of alternative uses for this fertiliser.

6. *A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the project as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.*

The proposed development is to be completed on a Greenfield site within and/or adjacent to the applicant's existing landholding. Therefore the baseline (or do nothing scenario) in the absence of any alternative proposed development is that the proposed development area remain predominantly in intensive agricultural/crop production, with a small proportion of scrub/immature conifers. The following section details the existing environment.

6.1 Land/Soil

The proposed poultry farm site is located in south west County Louth, in the townland of Rathesar Middle, Gunstown and Whiteriver c. 4.5km's from the border with Co. Meath. Please refer to Appendix No. 2, for a site location map.

6.1.1 Topographic Features and Solid Geology

(a) Site and immediate area.

County Louth is situated in the east of Ireland. The proposed site is located, in an area identified as the ***Land Zoning Category K1*** as contained in the Louth County Development Plan 2021-2027.

"K1 Agriculture Objective To preserve agricultural land. Guidance This zone is for the use of land for agricultural purposes and farming-related activities and to provide for the development of existing established uses. Individual dwellings for permanent occupancy for persons principally involved in agriculture will be open for consideration subject to normal site suitability considerations and compliance with the policy objectives set out in Chapter 3 of this Plan. Permitted Use Allotments, Agri-Tourism. Open for Consideration B&B/ Guest House, Community Facility, Craft Centre/Shop, Garden Centre, Home Based Economic Activities, Recreational/Sports Facility, Residential, Telecommunications Structures."

The proposed site is located south west of Dunleer, and North of Drogheda, in an area also referred to as the ***Muirhevna Plain***, (and/or on the border of same with the area classified as the uplands of Collon and Monasterboice) in the Co. Louth Landscape Character Assessment.

The Muirhevna Plain is an extensive plain located between the Carlingford/Slieve Gullion Mountain Complex and the uplands of Collon and Monasterboice. This is the largest landscape area in the County. The topography in this area is flat and undulating, and is drained by the meandering rivers of the Fane, Glyde, White and Dee. The topography of

Map 8.5: Landscape Character Areas

the site / landholding, while gently undulating, rises c. 5m from the site entrance to a high point along the access route and then subsequently falls c. 5 m to the centre of the proposed development site. The proposed development site falls in a west to east direction. The ground levels are as depicted in the site plans, sections and contour details as submitted with this application. A copy of same is contained in Appendix No. 3. The proposed development is integrated into the landscape, and, located behind higher elevations to the south of the site, to comply with Louth Co. Co. requirements.

This area contains the most fertile agricultural lands in the county, and these rich soils are conducive to a wide variety of productive agricultural practices in both animal and crop production.

The geology of County Louth exhibits a wide variety of geological formations, recording ancient environments. The environment of the time the rocks were deposited, whether on land or in the ocean, as well as the prevailing climate at the time, all contribute to the type of rock formations, and are used by geologists to unravel the earth's history through time.

This area has a relatively flat to gently undulating topography similar to a significant part of Co. Louth and surrounding areas. The site of the proposed development is integrated into the surrounding landscape, with the surrounding lands to the south of the site, and towards the public road, rising above the level of the site. The ground levels are as depicted in the site plans, sections and contour details as submitted with this application. A copy of same is contained in Appendix No. 3.

The Bedrock geology of the site is referred to as the Rathkenny Formation, which consists of Black Mudstone, siltstone, greywacke.

Bedrock Polygons 100k ITM 2018: Rathkenny Formation

New Code	RHKY
Unit Name	Rathkenny Formation
Sheet Number	13
Stratigraphic Code	RK
Lithological Code	
Description	Black mudstone, siltstone, greywacke
Label	RK
Formation	Rathkenny Formation
Definition	Vaughan (1991), Lenz and Vaughan (1994) and McConnell et al (2001)
Type Section	Drill core N1014 (Tara Mines, GR 28205/26764)
Lithological Description	Calcareous siltstones containing fossil debris, quartzo-greywackes with quartz pebble bases, numerous thin bentonites and tectonically intercalated graptolitic black shales (bs).
Lithological Summary	
Lithological Legend	Black mudstone, siltstone, greywacke

Rock Type	Mudstone, Siltstone, Greywacke
System	Ordovician
Series	Caradoc-Wenlock
Stage	
Zone	
Comments	Palaeocurrent indicators suggest that turbidites came from the south and north east (Vaughan 1991). The rocks of the Rathkenny Formation are tectonically intercalated with the Grangegeeth Block. Vaughan (1991) suggests that the Caradoc-Ashgill Broomfield
Thickness	

Please refer to;

- Appendix No. 18 for GSI Information relating to this site.
- Appendix No. 11 for details relating to the landscape character assessment as contained in the county development plan.

(b) Proposed Customer farmlands (Soiled Water).

The customer farmland areas proposed for the receipt of soiled water cover/will cover a significantly larger area (39 Ha (of which 20 ha is in tillage production) but subject to change in line with farming requirements, were the customer farmer to alter cropping rotations, rent additional lands etc.) than the site of interest, i.e. the site of the proposed development. As a result the topographic features and solid geology may be more varied. The application of fertiliser / soiled water to these farmland areas will be governed by the requirements of the SI 605 of 2017, as amended, on each individual customer farmer, i.e. the requirement not to spread on steep slopes where there is a risk of pollution, the requirement not to spread on, or within 15 m of exposed bedrock and/or other vulnerable features, not to apply excess fertilisers etc.

Some notable features that could distinguish the site from the farmland areas will be, 1) the variability in the topography across the area from flat, to gently sloping to more steeply sloping, 2) the variability in soil type from one area to another, and, 3) the transition from one River Catchment area to another etc.

6.1.2 Soil Geology

(a) Site and immediate area

The ***poultry farm site/site*** of the proposed development is located in an area where the;

- soil type is referred to as TLPSsS, and,
- subsoil TLPSsS - Till derived from Lower Palaeozoic sandstones and shales.

- ***Teagasc Soils***

Parent Material	TLPSsS
Parent Material Name	Till derived chiefly from Lower Palaeozoic rocks
Parent Material Desciption	Sandstone and shale till (Lower Palaeozoic)
Soil Group	Surface water Gleys, Ground water Gleys
IFS Soil Code	AminPD
IFS Soil Description	Derived from mainly non-calcareous parent materials
County	LOUTH
Category	Mineral poorly drained (Mainly acidic)
Legend	AminPD - Mineral poorly drained (Mainly acidic)

- ***Subsoil***

Lithology	Till derived from Lower Palaeozoic sandstones and shales
Quaternary Sediment	TLPSsS

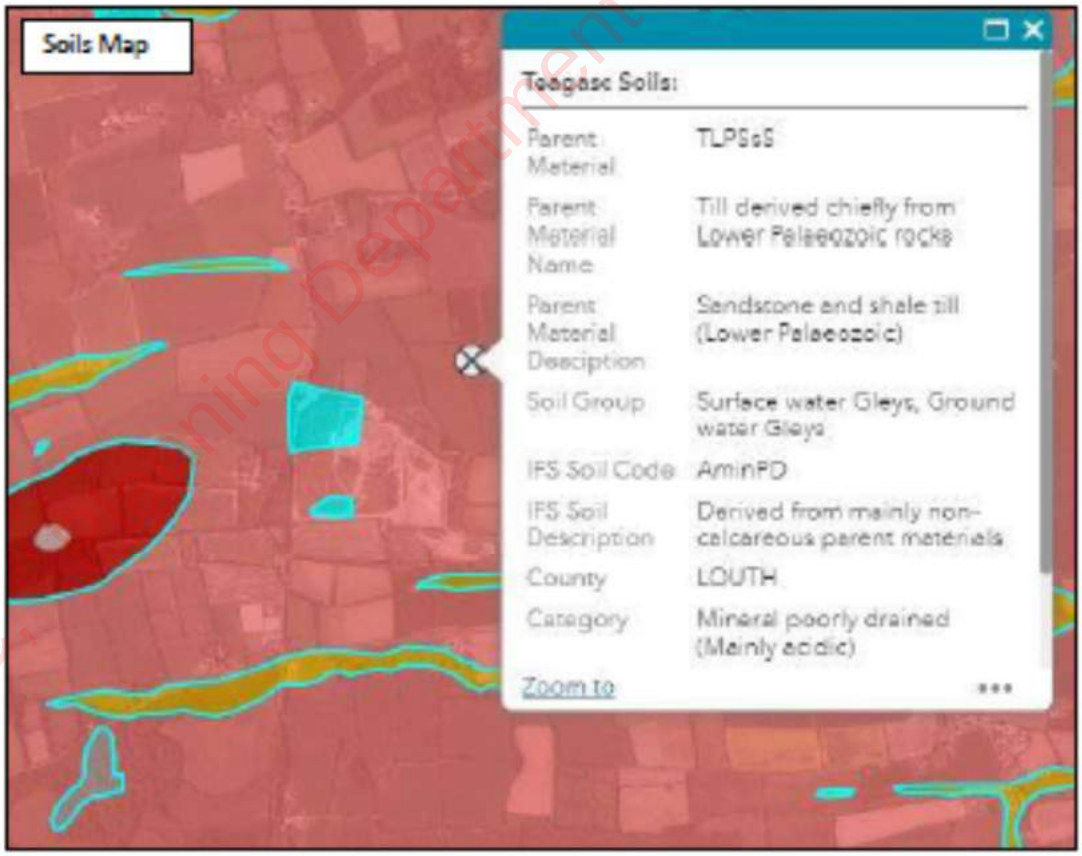


Fig 6.1.2(i) – Extract from Site Characterisation Form. (Appendix No. 15)

- **Groundwater Rock Units:**

Rock Unit Code SMV

Description Silurian Metasediments and Volcanics

Fig 6.1.2(ii) – Extract from Site Characterisation Form.

(b) Proposed customer farmlands (Soiled Water).

The customer farmland areas proposed for the receipt of soiled water cover/will cover a significantly larger area (39 Ha (of which 20 ha is located adjacent to the site and is in tillage production) but subject to change in line with farming requirements, were the customer farmer to alter cropping rotations, rent additional lands etc.) than the site of interest, i.e. the site of the proposed development. As a result the topographic features and solid geology will be more varied. Due to the nature of the activities to be carried out on these farms, (including the application of fertiliser / soiled water), the customer farmland areas will be governed by the requirements of S.I. 605 of 2017, as amended), i.e. the requirement not to spread on waterlogged, frozen, snow covered ground, not to apply excess fertilisers etc. thus protecting soils from chemical and hydraulic loading and other physical damage.

The lands adjoining the site and proposed for the receipt of soiled water have the same classifications as identified above.

Mitigation measures where applicable are discussed in Section 7.1.

Map 8.4: Sites of Geological Interest

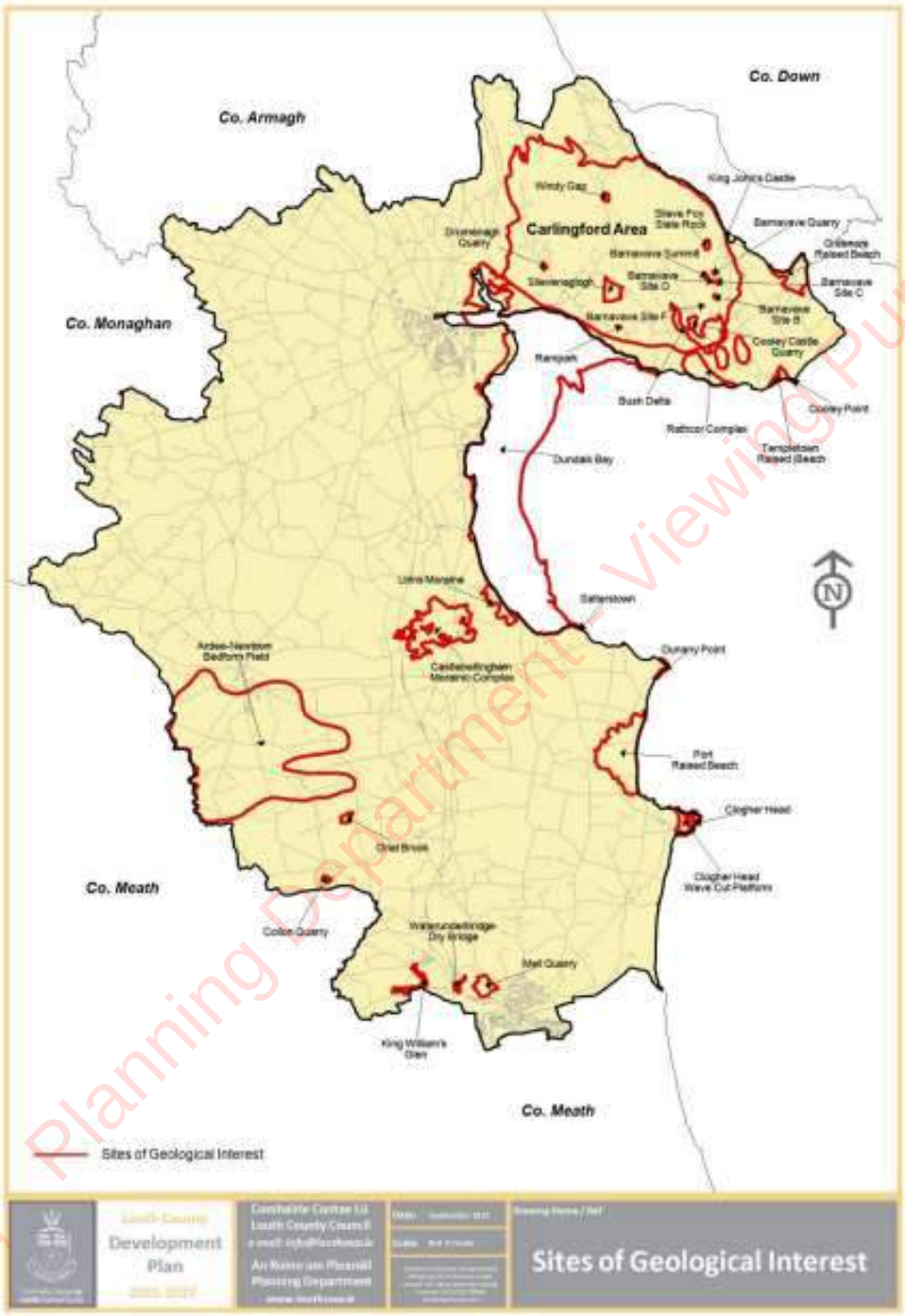


Fig 6.1.2(iii) – Sites of Geological Interest (– Source Louth CO. Development Plan 2021-2027)

6.2 Ground Water

(a) Site and immediate area

The groundwater adjacent to the site is overlain by a low permeability overburden. According to G.S.I. records the aquifer classification of the site is referred to as a Poor Aquifer Bedrock which is generally unproductive except for local zones (Pl). See Fig 6.2.1.

Aquifer Category	Pl
Category Description	Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones
Area (sq km)	247.42

The aquifer vulnerability for the area of proposed development is classed as Low. As can be seen from the soil profile for the area concerned, any ground water sources in the area are afforded considerable protection due to the nature of the soils, and their associated characteristics. The applicant has not encountered rock as part of the site/field works in the past. Given the nature of the proposed development there will be minimal excavation (for site levelling and foundation purposes only) and no underground manure storage tanks, with the exception of the soiled water storage tanks.

A site characterisation report in respect of the proposed waste water treatment system, completed in line with E.P.A. Code of practice is Contained in Appendix No. 15.

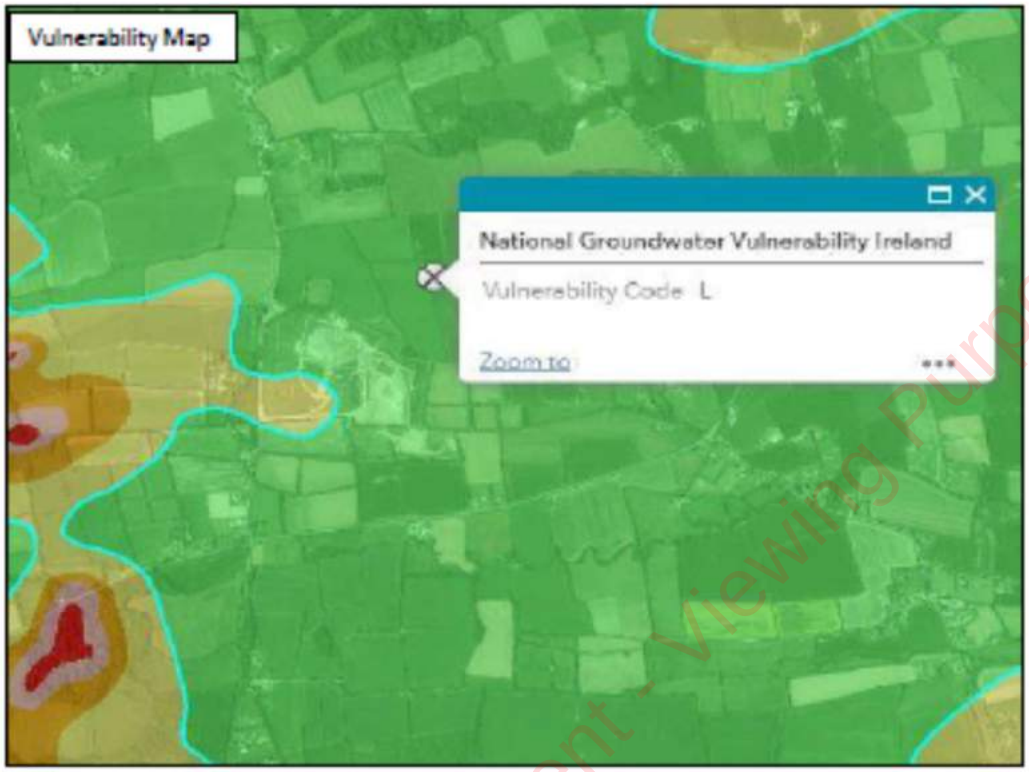
(b) Proposed customer farmlands (Soiled Water).

Soils are the basic resource for the production of commercial food crops and rearing of livestock. In order to achieve the required crop/animal yield from soils additional fertiliser, such as the organic fertiliser / poultry manure from this farm, must be applied.

As all soiled water from this farm is to be allocated for use in accordance with S.I. 605 of 2017, as amended, the groundwater resources in the relevant areas will be afforded the required protection.

The lands adjoining the site and proposed for the receipt of soiled water have the same classifications as identified above, and as detailed in Fig: 6.2.1.

Mitigation measures where applicable are discussed in Section 7.2.



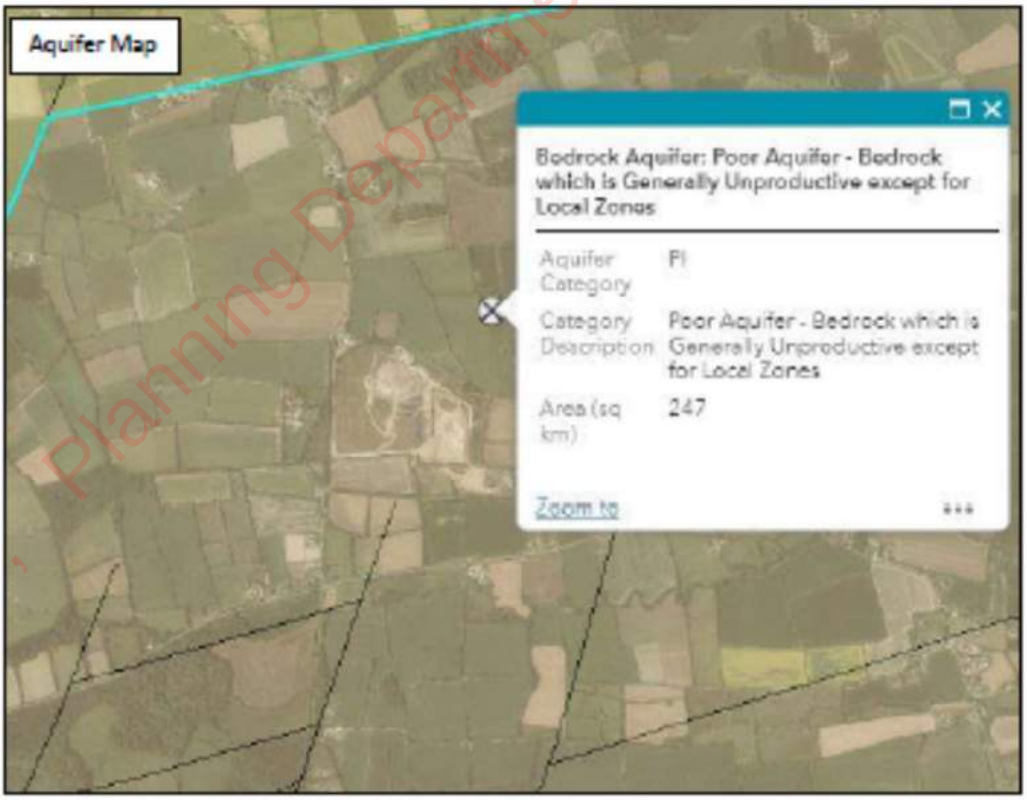


Fig. 6.2.1 Aquifer Classification of Site and Surrounding Lands.

6.3 Surface Water

(a) Site and immediate area

The application site lies within the Newry Fane Glyde and Dee Hydrometric Area and Catchment, the Dee Sub-Catchment and the White (Louth) Sub-Basin. There are open drains within the application site and clean surface water from the farm will be directed to these drains. Water in these drains is likely to flow south towards the White River, which is 728m south of the application site, via the Athclare Stream located c. 200m north of the site.

The White River flows east then north until its confluence with the River Dee, at a point approximately 6.7km north-east of the application site. This River enters the Irish Sea / Dundalk Bay SPA/SAC, at Annagassan, c. 15-17 km's downstream of the application site.

The EPA have classified the ecological status of the White River as varying from good ecological status to poor ecological status at points close to the application site. Other watercourses close to the application site have also been described as poor ecological status. Under the requirements of the Water Framework Directive, all water bodies are obliged to meet good status within the time frame of the current cycle of the Water Framework Directive (2021) .

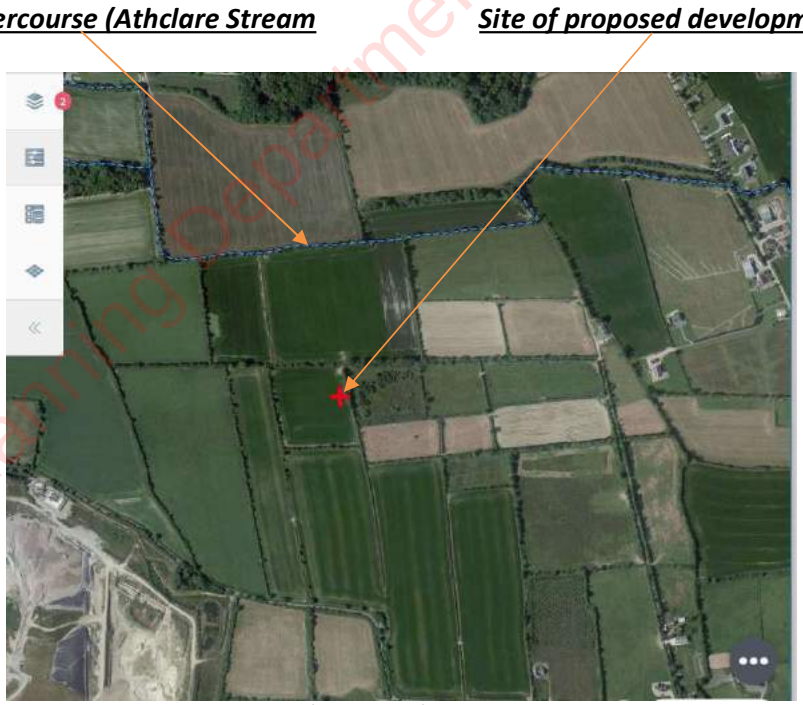


Fig 6.3.1 – Watercourses adjacent to the proposed site (www.epa.ie)

Please refer to Appendix No. 10 for details on local river water quality data and associated information.

(b) Proposed customer farmlands (Soiled Water).

Soils are the basic resource for the production of commercial food crops and rearing of livestock. In order to achieve the required crop/animal yield from soils additional fertiliser, such as the organic fertiliser / soiled water from this farm, must be applied. This organic fertiliser / soiled water will replace imported chemical fertiliser that would otherwise have to be used. As all soiled water from this farm is to be allocated for use in accordance with S.I. 605 of 2017, as amended, the surface water resources in the relevant areas will be afforded the required protection.

The protection and improvement of water quality in Ireland is to be co-ordinated on the basis of the areas known as river basin districts, established for the purposes of the EU Water Framework Directive (2000/60/EC). The Water Framework Directive, or WFD, came into force on 22 December 2000 and established a new, strengthened system for the protection and improvement of water quality and water-dependent ecosystems. It provides for co-ordinated water quality management based on natural river basins (i.e. catchments). It aims at preventing any deterioration in the status of any waters and at achieving at least "good status" for all waters.

River Basin Management Planning takes an integrated approach to the protection, improvement and sustainable management of the water environment. The planning process revolves around a six year planning cycle of action and review, so that every six years a revised river basin management plan is produced.

The status of waters will be determined by chemical and ecological criteria for surface waters and chemical and quantitative criteria for ground waters. It requires the carrying out of numerous preparatory tasks and their implementation, review and updating on a six-year cycle. This first cycle has been completed, and we are currently in cycle 2 with the preparation of plans for the 3rd Cycle underway.

- ***River Basin Management Plan 2022 – 2027***

  Ireland's third River Basin Management Plan is due to be published in December 2021. River Basin Management Plans (RBMPs) are key tools for implementation of the EU Water Framework Directive (WFD), key European legislation which requires our rivers, lakes, groundwater and coastal water to achieve a healthy state, or what's known as 'good ecological status', by 2021. Ireland's first River Basin Management Plan (RBMP) was published in 2009, the second in 2018, and the third RBMP is due to be published by the end of 2021 and will run for six years to 2027.

- *2nd Cycle River Basin Management Plans: 2015-2021*

The PUBLIC CONSULTATION ON THE RIVER BASIN MANAGEMENT PLAN FOR IRELAND (2018-2021) is/was open for submission until 31st August 2017. On April 17th 2018 the Government published the River Basin Management Plan for Ireland 2018-2021.

The Plan sets out the actions that Ireland will take to improve water quality and achieve 'good' ecological status in water bodies (rivers, lakes, estuaries and coastal waters) by 2027. Ireland is required to produce a river basin management plan under the Water Framework Directive (WFD). Water quality in Ireland has deteriorated over the past two decades. The Plan provides a more coordinated framework for improving the quality of our waters — to protect public health, the environment, water amenities and to sustain water-intensive industries, including agri-food and tourism, particularly in rural Ireland.

The River Basin Management Plan outlines the new approach that Ireland will take to protect our waters over the period to 2021. It builds on lessons learned from the first planning cycle in a number of areas:

- Stronger and more effective delivery structures have been put in place to build the foundations and momentum for long-term improvements to water quality
- A new governance structure, which brings the policy, technical and implementation actors together with public and representative organisations. This will ensure the effective and coordinated delivery of measures.
- The newly-established Local Authority Waters and Communities Office will help people to get involved in improving water quality at a local level. An Fóram Uisce, also newly established, is a forum for stakeholders, community groups and sectoral representatives. It will analyse and raise awareness of water issues.

An enhanced evidence base has been developed to guide national policies and the targeting of local measures. Technical assessments of 4,829 water bodies have been carried out, examining their status (quality) and whether they are 'at risk' of not meeting status objectives in the future. Using this information, the Plan sets out national policies and regional prioritised measures.
1st Cycle River Basin Management Plans: 2009-2014

River Basin Management Plans (RBMP) and Programmes of Measures (PoMs) were prepared for each of the eight River Basin Districts (RBDs). They were valid for a six year period and ran from 2009-2014. The plans summarised the waterbodies that may not meet the environmental objectives of the WFD by 2015 and identified which pressures are contributing to the environmental objectives not being achieved. The plans described the classification results and identified measures that can be introduced in order to safeguard waters and meet the environmental objectives of the WFD.

An overview of the status of all waterbodies is published in compliance with the requirements of the Water Framework Directive and is available in the WaterMaps section of the official Irish Water Framework website. The water maps provide details on the overall status of individual waterbodies and also the assessment results for different quality elements e.g. chemistry, macroinvertebrates, plants, fish, hydromorphology, etc. The water maps also indicate which programmes of measures have been assigned to water bodies and the timescale by which a waterbody has to achieve its target status.

Changes to River Basin Districts for the 2nd Cycle

For the 2nd Cycle, the Eastern, South Eastern, South Western, Western and Shannon River Basin Districts will be merged to form one national River Basin District. In relation to the North Western and Neagh Bann International River Basin Districts a single administrative area will be established in the Republic of Ireland portion of these two IRBDs for the purpose of coordinating their management with authorities in Northern Ireland

While this rearrangement will lead to efficiencies in relation to matters such as assessment and reporting, regionalised administrative structures will be put in place to support implementation (e.g. river basin district characterisation, the development of programmes of measures, enforcement, public consultation and awareness activities). Arrangements will also need to be put in place to facilitate the input of communities at local catchment level.

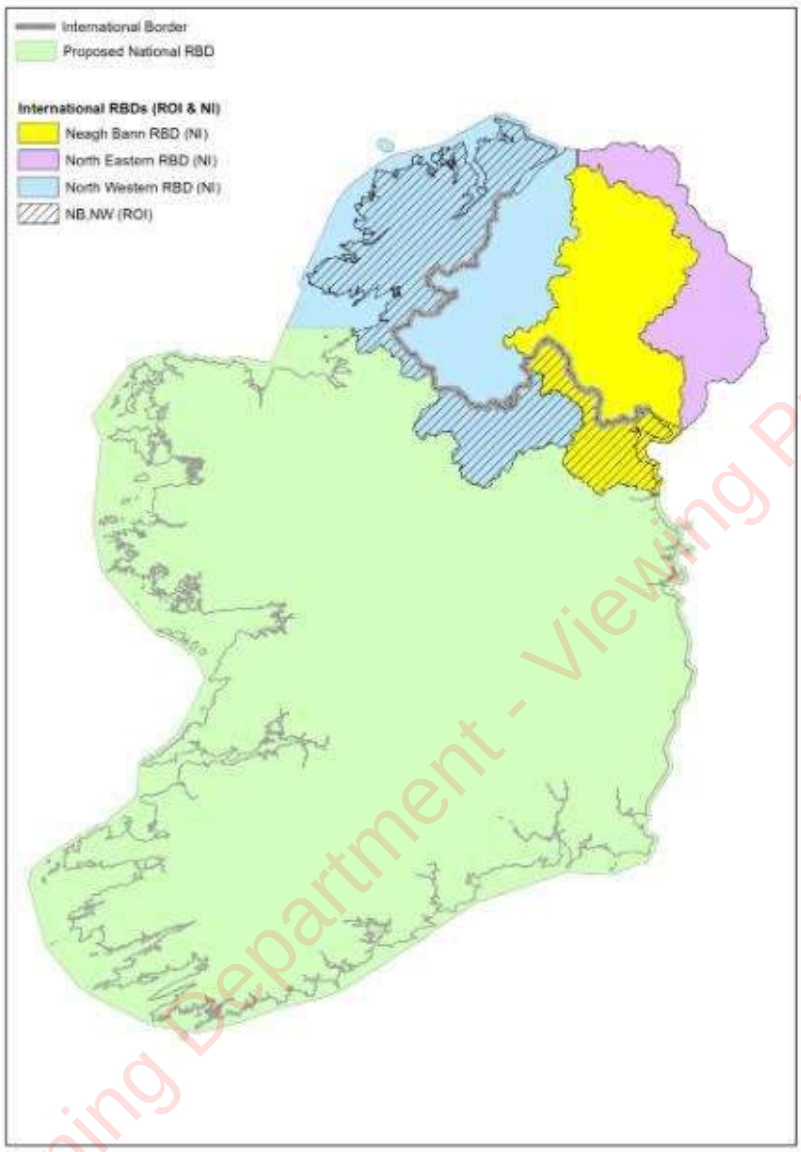


Figure 6.3b(i): River Basin Districts for the 2nd Cycle of the WFD (2015-2021)

Water Classification System and Beneficial Uses

Table 6.1.3b: System of Water Quality Classification		
Biotic Index Classification	**Quality Status**	
Q5, Q4-5, Q4	Unpolluted Waters	A
Q3-4	Slightly Polluted Waters	B
Q3, Q2-3	Moderately Polluted Waters	C
Q2, Q2-1, Q1	Seriously Polluted Waters	D

Unpolluted Waters	High quality waters suitable for supply and abstraction.
Class A	Game fisheries and high amenity value. (Satisfactory)
Slightly Polluted Waters	Usually good game fisheries. Suitable for supply. Moderate
Class B	to high amenity value. (Transitional)
Moderately Polluted Waters	Coarse fisheries. Not likely to support a healthy game
Class C	fishery. Suitable for supply after advanced treatment. (Unsatisfactory)
Seriously Polluted Waters	Fish absent or only sporadically present. May be used for
Class D	low grade industrial abstraction. Low amenity value. (Unsatisfactory)

The proposed farmlands that will utilise organic fertiliser / soiled water from this farm have been farmed well with due care to waterways, spreading rates and nutrient requirements. This will continue in line with the requirements of S.I. 605 of 2017, as amended, as amended. Please refer to Appendix 10 for details relating to water quality in the area of the proposed poultry farm development.

Surface water quality in the area of the customer farmers lands where organic fertiliser / soiled water from this poultry house will be used will not be affected as the organic fertiliser / soiled water will replace chemical fertiliser that would otherwise have to be used and all organic fertiliser / soiled water is to be allocated for use in accordance with S.I. 605 of 2017, as amended, as part of a fertiliser substitution programme. The applicant has demonstrated significant capacity within the existing family lands in accordance with S.I. 605 of 2017, as amended, to accommodate the water to be produced.

6.3.1 Lake Water Quality

As previously indicated the site of the proposed development is located in the catchment of the White River, a tributary of the River Dee. This River enters the Irish Sea / Dundalk Bay SPA/SAC, at Annagassan, c. 15-17 km's downstream of the application site.

During the course of this river from the proposed site to the point where it enters the Irish Sea / Dundalk Bay SPA/SAC, there are no significant lakes, or other similar surface water features. This is typical of this area of central and east Co. Louth.

6.3.2 Beneficial uses of surface waters in the Catchment Areas.

Beneficial uses may be defined as activities, which are dependent on the river/lake for their existence. These include,

1. Water extraction for, Drinking, Process, Irrigation
2. Fisheries
3. Recreation and Water sports
4. Receiving waters for waste water discharges.

Water may be abstracted by both public and private bodies for drinking water and industrial use. Mitigation measures where applicable are discussed in Section 7.3.

6.4 Air

6.4.1 Odour associated with poultry farming enterprises may arise from two situations:

- The poultry farm site, and,
- The soiled water spreading operation.

The poultry farm is located in an entirely agricultural hinterland where typical levels of farm odour are to be found and expected. This odour arises from farmyards and lands during the day to day operations such as silage feeding, manure agitation and manure spreading. The existing farm and proposed development, using the best available practices, will operate without a significant effect on the environment and the applicant/farm management will strive to minimise all potential environmental impacts. Well maintained, properly ventilated poultry farms with modern manure management systems will minimise any potential adverse odour impact and will be practically odour free outside the confines of the site/immediate area. Transient increases in odour emissions may be associated with manure removal from the site.

There are no noise/odour sensitive locations likely to be affected by the proposed development. This development will have no significant adverse affect on climate. The closest third party dwelling to the proposed site, is located c. 410 m east of the proposed development

This proposed poultry farm/site of the proposed development, operates in a sparsely populated rural environment and hence the farm will cause no nuisance.

A total of 8 locations have been identified with 410-750 m of the existing farm. See Appendix A from Irwin Carr Report detailed below. An odour impact assessment was completed based on the potential impact of the proposed development, as discussed further in Section 7.4.

APPENDIX A SITE LAYOUT

Figure 3: Proposed Site Layout & Nearest Sites.

Fig 6.4.1 – Appendix A - (– Source Irwin Carr Air Quality Impact Assessment Report, see Appendix. No. 21)

Table 6.4.1: Nearest Residential Properties

Location	Description	Co-ordinates	Approx. distance to nearest shed (m)*
1	Property to the NW	301554 286203	635
2	Property to the NW	301654 286266	625
3	Property to the North	302022 286335	595
4	Property to the NE	302456 286318	620
5	Property to the East	302665 285888	455
6	Property to the East	302640 285813	410
7	Property to the SE	302464 285320	430
8	Property to the SW	301316 285361	750

The applicant, Mr. Michael Callan, will advise any farmers receiving soiled warter from this farm, if and when they arise, that it should be applied to land in as accurate and uniform a manner as is practicably possible and all farmers will be advised that in order to minimise any potential adverse environmental impact and to ensure that they get maximum fertiliser benefit from the organic fertiliser/soiled water, that same must be stored, managed and applied in accordance with S.I. 605 of 2017, as amended, as amended.

This fertiliser planning will result in fertiliser substitution, not addition, and all farmers will be advised that Low Emission Spreading Systems (LESS) should be implemented, to minimise odours and ammonia emissions and maximise the fertiliser value/uptake by the crop.

The utilisation of organic fertiliser/soiled water in this way and in accordance with the Teagasc Codes of Good Practice will help them maintain a good working relationship with their neighbours. The application of organic fertiliser/soiled water in accordance with S.I. 605 of 2017, as amended, will ensure that excessive application, which could lead to extra odour due to surface soil saturation, will be avoided.

Mitigation measures where applicable are discussed in Section 7.4.

6.4.2 Ammonia and Nitrogen Emissions –

An ammonia impact assessment was completed based on the potential impact of the proposed development, as discussed further in Section 6.10.

Mitigation measures where applicable are discussed in Section 7.4 / 7.10.

6.4.3 Particulate Matter –

The Air Framework Directive deals with each EU member state in terms of "Zones" and "Agglomerations". These air quality zones have been declared for air quality management and assessment purposes. As part of the EU Framework Directive on Air Quality (1996/62/EC), four air quality zones have been defined for Ireland.

- Zone A: Dublin Conurbation
- Zone B: Cork Conurbation
- Zone C: Other cities and large towns comprising Limerick, Galway, Waterford, Drogheda, Dundalk, Bray, Navan, Ennis, Tralee, Kilkenny, Carlow, Naas, Sligo, Newbridge, Mullingar, Wexford, Letterkenny, Athlone, Celbridge, Clonmel, Balbriggan, Greystones, Leixlip and Portlaoise
- Zone D: Rural Ireland, i.e. the remainder of the country excluding Zones A, B and C

The subject site is in Zone D, Rural Ireland. Background sources of pollutants within the vicinity of the study site most likely include residential solid fuel emissions, which are a more significant source that traffic emissions.

Existing Air Quality

Environmental Protection Agency (EPA) mobile and fixed monitoring units monitor air quality at locations within Zone D. The typical baseline air quality data outlined below in Table 5 is based on a review of the Air Quality Monitoring Report 2020 (EPA, 2021[1]).

[1] *Air Quality in Ireland 2020. Key Indicators of Ambient Air Quality. Environmental Protection Agency (EPA). 2021*

Table 6.4.3: Typical Air Quality Monitoring Data Representative of EPA Zone D Monitoring Sites

Pollutant	Zone D Monitoring Stations	EPA Baseline Monitoring Data Annual Mean 2020 (µg/m³)	Average (µg/m³)	Relevant Limit Value
PM_{10}	Tipperary Town	12	**11.2**	PM_{10} annual mean limit for the protection of human health = 40 µg/m³
	Carrick-on-shannon	10		
	Enniscorthy	15		
	Birr	10		
	Askeaton	7		
	Macroom	15		
	Castlebar	14		
	Cobh	13		
	Claremorris	10		
	Kilkitt	8		
	Cavan	9		
	Roscommon Town	11		
$PM_{2.5}$	Tipperary Town	8	**7.8**	$PM_{2.5}$ annual mean limit for the protection of human health = 25 µg/m³
	Carrick-on-shannon	7		
	Mallow	10		
	Enniscorthy	12		
	Birr	6		
	Askeaton	4		
	Macroom	11		
	Longford	9		
	Cobh	8		
	Claremorris	5		
	Cavan	6		
	Roscommon Town	7		

It can be seen from the Table above that the annual mean PM_{10} and $PM_{2.5}$ concentrations for all pollutants are below the relevant limit values for the protection of human health
The background concentrations utilised within this assessment represents an average of the above values.

A particulate matter impact assessment was completed based on the potential impact of the proposed development, as discussed further in Section 7.4.

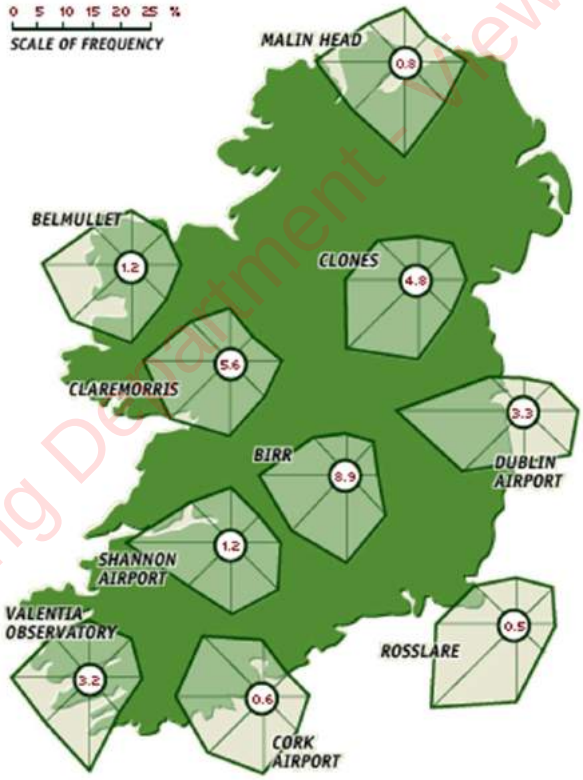
Mitigation measures where applicable are discussed in Section 7.4.

6.5. Climate / Climate Change

Climate information is useful for predicting the likely impacts that the farm operation and the application of manure in the area will have upon the residents. Details of annual rainfall and wind direction can be found in Appendix 12 and Figure 6.5. Wind direction at the site is critical to odour movements and rainfall is critical factor in the application of manure. The prevailing wind in the Louth area (Dublin Airport weather station, which is the closest to the proposed development) is from the west. Rainfall in the area of the site/Proposed customer farmlands (Soiled Water). a c. 758 mm, (1981 – 2010 average for Dublin airport).

Mitigation measures where applicable are discussed in Section 7.5.

Figure 6.5 Prevailing Wind Direction.



Large livestock populations and nitrogen inputs to soil generate one-third of all greenhouse gases in Ireland. The amount of *methane* emitted by livestock is a lot higher for ruminants such as cattle and sheep versus non-ruminants such as poultry/pigs. This is as a result of the different digestive systems.

As can be seen from the table below, the GHG emissions from mono-gastric animals such as pigs and poultry is significantly less than ruminants, albeit that a majority of the GHG from ruminant agriculture (i.e. CH4) is eventually absorbed by plants etc. to be eaten by ruminants to carry on the cycle (Carbon Cycle).

N_2O emissions can be divided into three areas,

- Direct from agricultural soils and from agricultural production systems.
- Indirect emissions which take place after nitrogen is lost from the field
- Emissions resulting from agricultural burning.

Mitigation measures where applicable are discussed in Section 7.5.

Growing concerns about climate change and policy initiatives aimed at reducing agriculture's contribution to greenhouse gas emissions have drawn increased attention to the carbon footprint of food production globally. In this section, the carbon footprint of poultry production is compared to other key meat producing sectors.

The carbon footprint of a food product is the measure of total greenhouse gas (GHG) emissions caused by production and/or consumption of the food product, expressed as carbon dioxide equivalent, which reflects its global warming potential. Carbon footprints are generally measured using Life-Cycle Assessment (LCA) which estimates the emissions and resource use, from the very beginning of the production process (e.g. growing and milling of animal feed) through to the manufacture, use and disposal of food. Globally, agriculture is directly responsible for about a quarter of all GHG emissions and these are dominated by nitrous oxide from fertilised soils and methane from farm animals. The size of the carbon foot print associated with each food type depends on the volume of methane emitted by the animal, the level of fertiliser used in the production system, and the burning of fossil fuels in the manufacture or transport of the food product.

Numerous studies have developed measures of the carbon footprint of various food stuffs. For example, the extract from Our World in Data presents estimates of the greenhouse gas emissions of various food stuffs and the sources of those emissions. The data in Figure 16 is from the largest meta-analysis of global food systems to date, collected from 38,000 commercial farms across 119 countries, Poore and Nemecek (2018).

There are significant differences in the GHG emissions of different foods. For most foods GHG emissions result from land use change, and from processes at the farm stage. Farm-stage emissions include processes such as the application of fertilizers – both organic and synthetic; and enteric fermentation (the production of methane in the stomachs of cattle). Combined, land use and farm stage emissions account for more than 80% of the footprint for most foods. For most foods, processes in the supply chain after the food leaves the farm account for a smaller share of the overall emissions profile.

Overall, animal-based foods tend to have a higher footprint than plant-based but poultry meat and eggs tend to be at the lower end of the spectrum. Global estimates of the carbon footprint of food stuffs suggest that a consumer could eat 13 times more eggs and 10 times more chicken than beef for the same carbon footprint. The lower rate of methane emissions from chicken relative to cows, the shorter life-cycle and the more efficient conversion of feed to weight gain all make poultry meat more carbon efficient than beef, sheep-meat or pork.

Poultry and pork production systems tend to be very similar internationally but production systems for beef and milk can vary substantially as can their emissions. According to Herrero et al (2013) carbon footprint values for beef and milk production in Europe can vary between 10 and 50 kg CO2 eq/kg per kilogram depending on the production system. It is therefore useful to compare the carbon footprint of poultry production and other foodstuffs on data taken from local production systems.

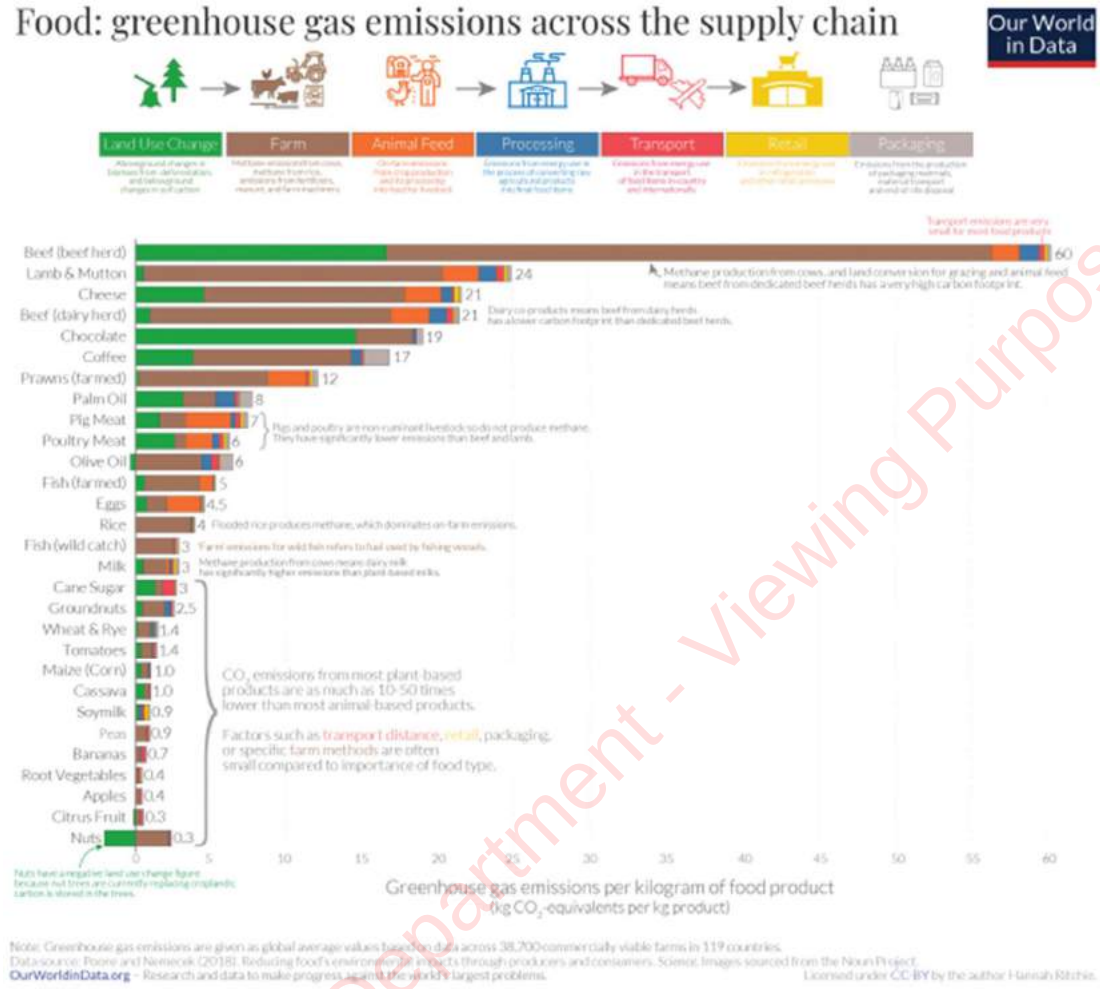
Table 6.5.1: Estimates of the Carbon Footprint of Irish Livestock Products

Livestock Product	Kg of Carbon Equivalent per Kg of product
Poultry Meat	3
Beef	20
Sheep Meat	20
Pork	4.5
Cow's Milk	1

Source: Leip et al (2010).

An assessment of the contribution of the European livestock sector to greenhouse gas emissions was conducted by Leip et al (2010). The study is one of the few studies that compares the carbon footprint of livestock products produced in Ireland. Leip et al (2010) estimate the carbon footprint of Irish poultry meat production at 3kg of carbon equivalent per kilogram of food. They estimate the carbon footprint of pork to be one and a half times that of poultry, while the carbon footprint of sheep meat and beef produced in Ireland is seven times larger than Irish poultry meat.

The Leip et al (2010) report also compares the carbon footprints across Member States. The study shows that Irish poultry has the lowest carbon footprint in the EU at 3 kg CO2-eq/kg poultry compared to the EU average of 5 kg CO2-eq/kg poultry. Importantly, Poland and France, the EU's largest poultry producers, producing almost two-thirds (32.1%) of European poultry between them, are less carbon efficient than Irish poultry production.



Note: Greenhouse gas emissions are given as global average values based on data across 38,700 commercially viable farms in 119 countries.
Data source: Poore and Nemecek (2018). Reducing food's environmental impacts through producers and consumers. Science. Images sourced from the Noun Project.
OurWorldinData.org – Research and data to make progress against the world's largest problems.
Licensed under CC BY by the author Hannah Ritchie.

Source http:// https://ourworldindata.org/food-choice-vs-eating-local

6.6. Visual Aspects and Landscape

This site of the proposed development/farm is agricultural land owned by and/or available to Mr. Michael Callan and forms part of and/or is directly adjacent to, his overall landholding, at the site of the proposed development. The area of the proposed development is a greenfield site.

This area is identified as the ***Muirhevna Plain*** in the ***landscape classification*** contained in the Louth County Development Plan, albeit that same is on, or close to the boundary with the uplands of Collon and Mnasterboice. This is an area of predominantly agricultural activity. The general area and the area immediately adjacent to the proposed site has a relatively flat to gently undulating topography similar to significant areas of this part of Co. Louth.

This area is by far the largest landscape area in the county. It extends from the top of the Boyne Valley up to the and including Dundalk. It is identified for its flat undulating features (typical of the proposed site) drained by the meandering lazy rivers of the Fane, Glyde and Dee rivers. It contains the most fertile agricultural land in the county, which gives the overall impression of good farming husbandry. In the western half the landscape horizon is limited due to the smaller field patterns with their mature hedgerows and trees.

This area is located in an area referred to as ***Land Zoning Category K1 of the Co. Louth Development Plan 2021-2027,*** which is designated *"This zone is for the use of land for agricultural purposes and farming-related activities and to* provide for the development of existing established uses*."*

The nature of the proposed site and its location integrated into the landscape will ensure that there will be no significant adverse visual impact on the local environment from the proposed development. The site is not located near to or likely to affect any Natural Heritage Areas, Special Areas of Conservation (S.A.C.), Special Protection Area (S.P.A.), and/or key views/prospects as listed in the Louth County Development Plan 2021-2027.

This site of the proposed development/farm is a greenfield site/agricultural land, owned by / available to the applicant. The existing farm, and the site of the proposed development, is adjoining a local road, on c. 4.923 Ha, in the town land of Rathescar Middle. The site is c. 1-1.5 Km's from the regional route, the R169, between Collon and Dunleer and a further c. 2 Km's from the N2 National Route, and 3.4km's from the M1 motorway. The site is to be accessed via c. 275 m of an internal farm roadway to be developed within the landholding and will be accessed by a proposed new/upgraded entrance as indicated on the plans and drawings submitted with the application.

Land use surrounding the site is predominantly agricultural and improved agricultural grassland and tillage lands are the dominant habitats locally. The site location nestled into the surrounding land topography will help screen the proposed farm from view.

The existing farm and site of the proposed development is not located close to, or likely to adversely impact on;

- Areas of Outstanding Natural Beauty,
- Areas of High Scenic Quality,
- Scenic Routes, Views and/or prospects,

as listed in the Louth Development Plan 2021-2027.

Figure 6.6(1) Areas of Outstanding natural Beauty and Areas of High Scenic Quality.

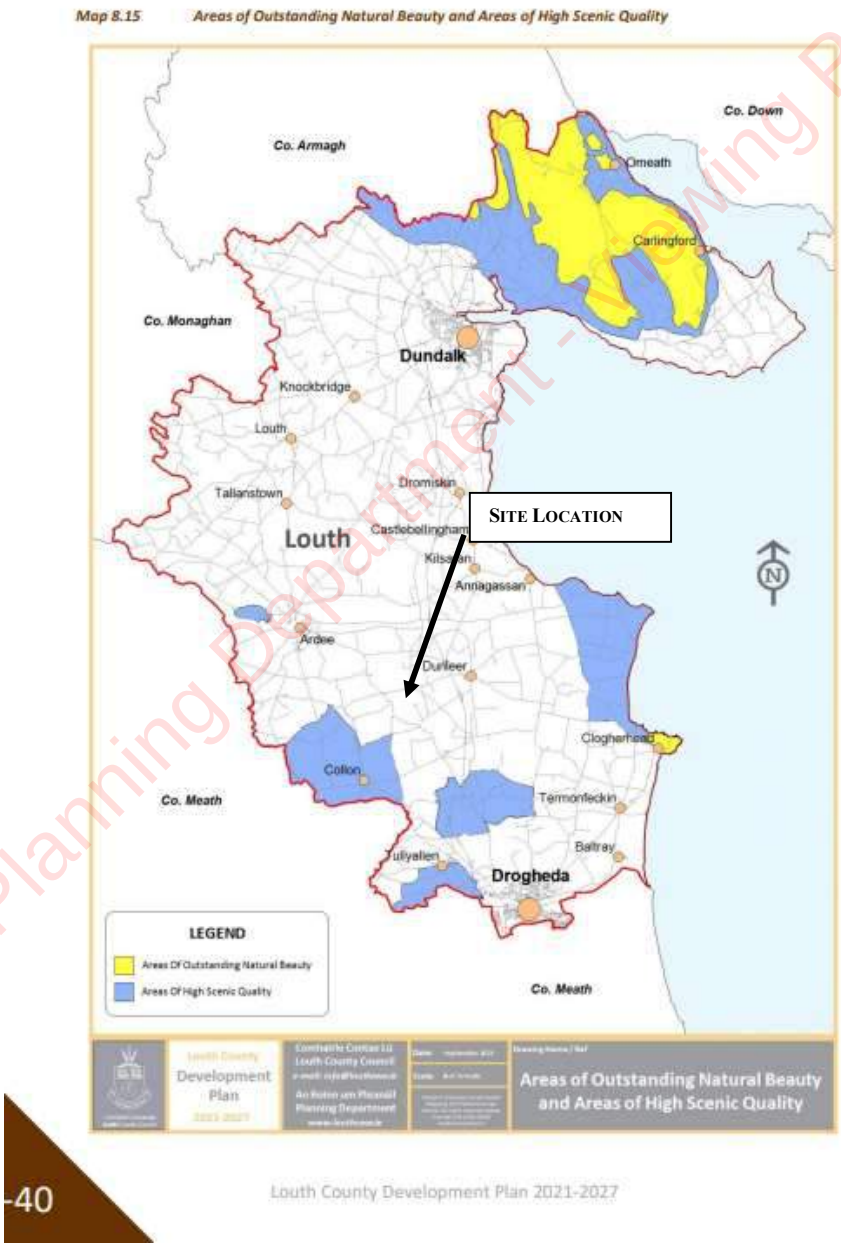


Figure 6.6(2) Views / Prospects as Detailed in the Louth County Development Plan.

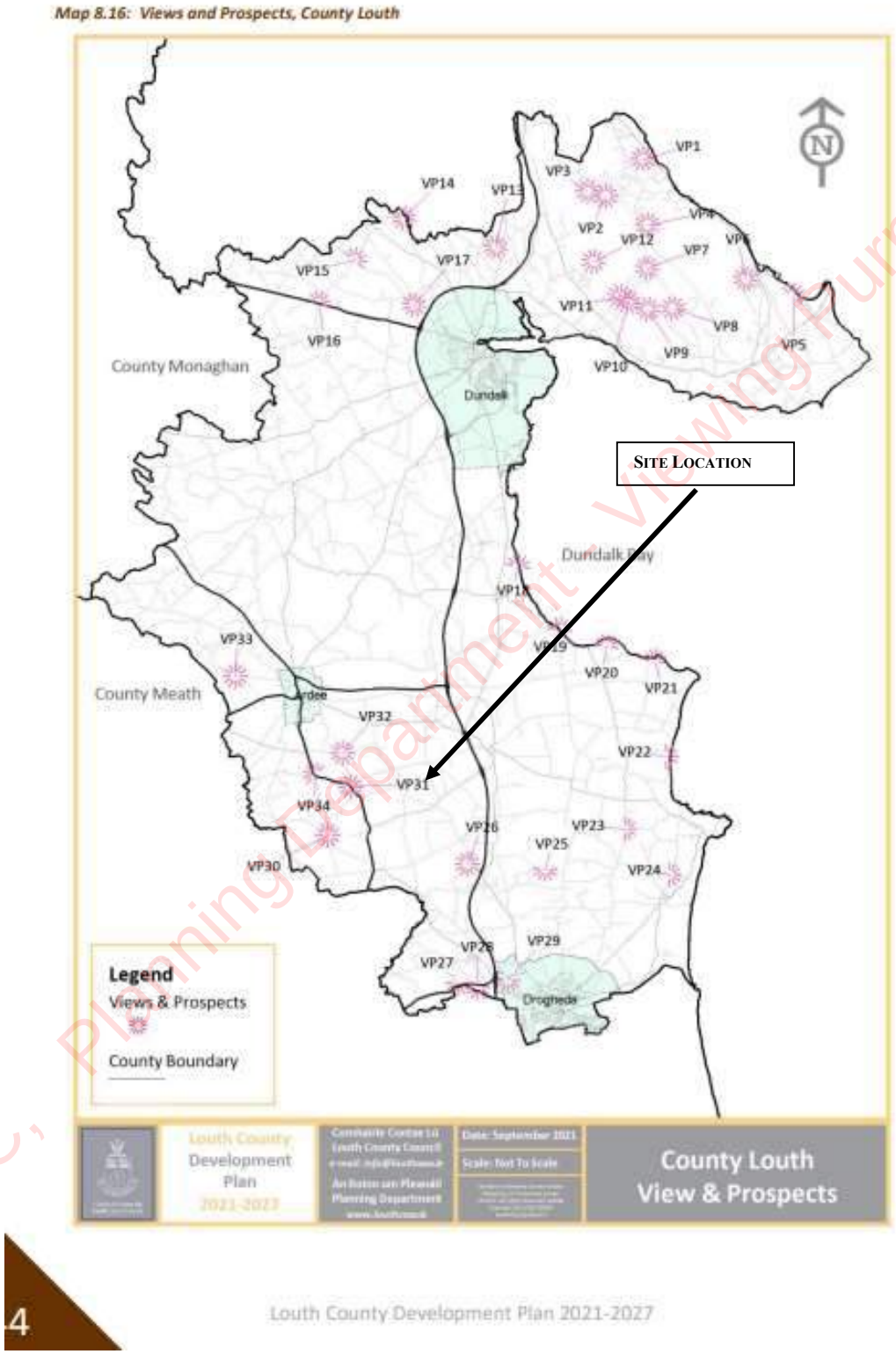
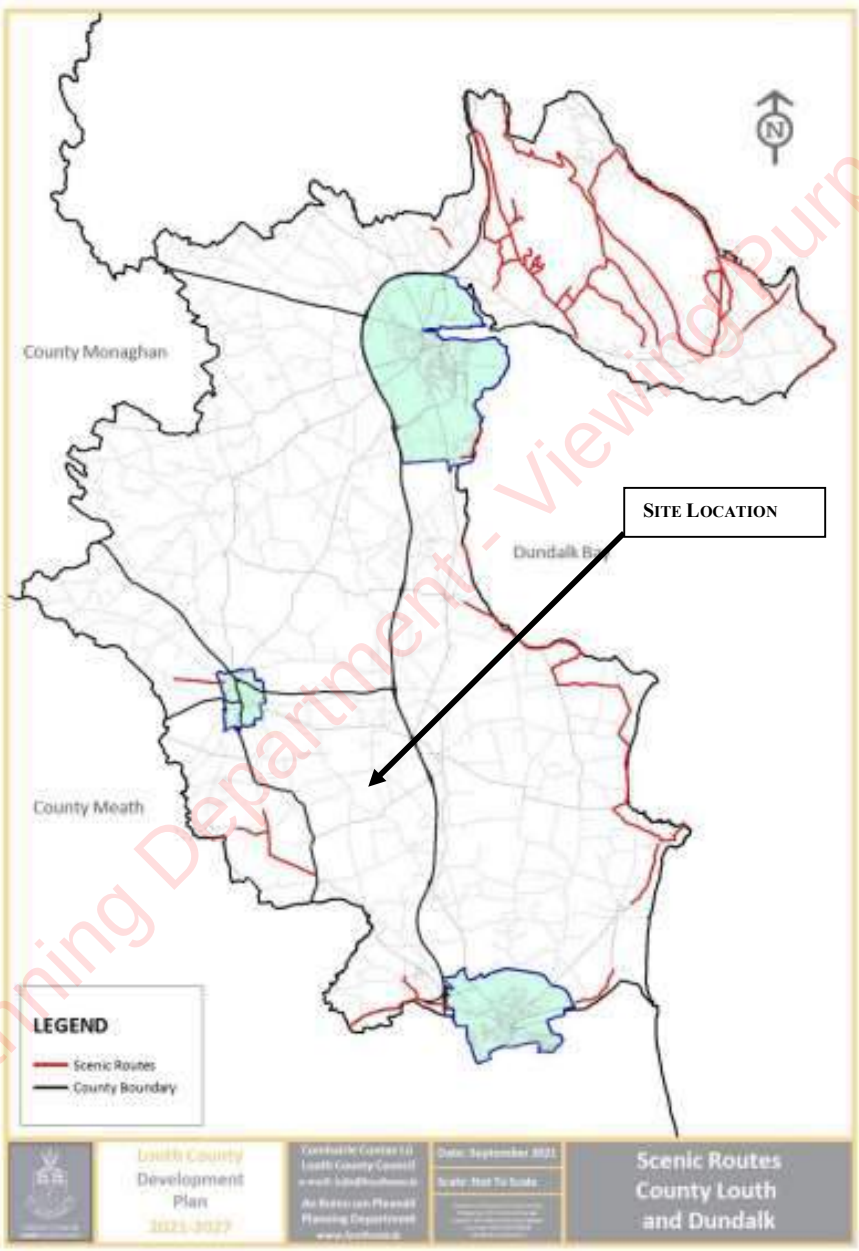


Figure 6.6(3) Scenic Routes as Detailed in the Louth County Development Plan.

Map 8.20: Scenic Routes, County Louth and Dundalk



6.7. Noise Levels

Noise levels are measured in decibels and a weighting factor (A) is applied to approximate the frequency response of the human ear. This weighted decibel scale, dB (A), correlates well with human sensations of loudness, disturbance and annoyance. Background noise levels in rural areas of Ireland are in the 45-50 dB (A) range. The peak noise periods on Poultry houses are associated with feed deliveries which will occur during the normal working day. This farm will have state of the art buildings with high insulation standards. Due to its remote location and the low population density in the area, this poultry house will not create a disturbance or annoyance to anyone. The site specific noise impact assessment (Refer to Appendix No. 22 for full report) has detailed existing noise levels in the area of the farm and closest potential sensitive locations.

In order to obtain a baseline for assessing the potential noise impact of the identified sources, an environmental noise survey was firstly conducted in order to quantify the existing noise environment in the vicinity of the development. The survey was conducted in general accordance with *ISO 1996: 2016: Acoustics - Description, measurement and assessment of environmental no*ise.

Specific details are set out in the following sections.

6.7.1 Choice of Noise Measurement Locations

Three measurement locations were selected in the vicinity of each of the residential dwelling clusters identified during our survey. Each of these is described below and shown in Figure 3 on the following page.

NML 1 is located in the vicinity of the nearest residential dwellings located to the north / northwest of the proposed development.

NML 2 is located in the vicinity of the nearest residential dwellings located to the southeast of the proposed development.

NML 3 is located in the vicinity of the nearest residential dwelling located to the southwest of the proposed development.

Note that the ambient noise level environment at all of these locations were similar with identical noise sources and could therefore be considered representative of the entire surrounding environment. Due to the Covid-19 restrictions, traffic flows were minimal which likely means that the noise levels measured were much lower than during normal periods. However, consideration of these lower ambient noise levels in our assessment would therefore represent a quieter ambient noise environment and therefore mean that a worst-case condition is being considered.

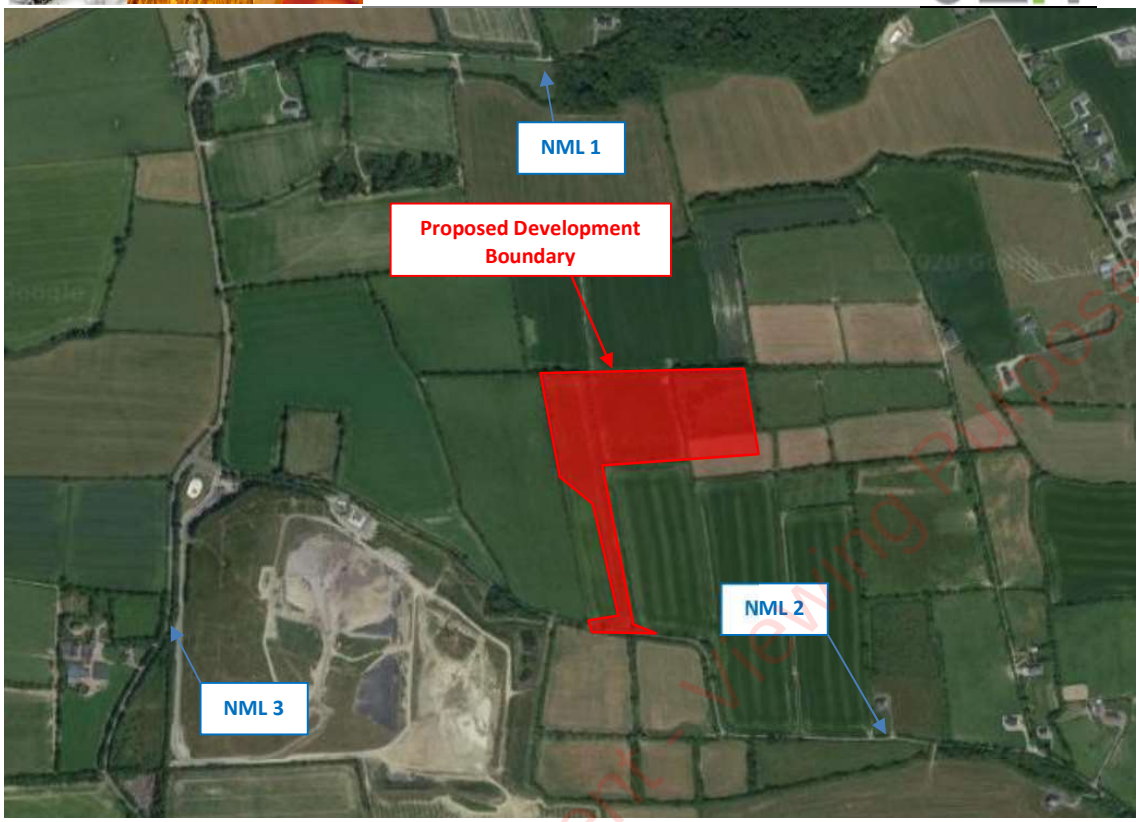


Figure 3 Site Layout Showing Approximate Positions of Measurement Locations

6.7.2 Survey Periods

Noise measurements were conducted over the course of two survey periods as follows:

- Daytime 14:50 to 17:55hrs 4 May 2020
- Night-time 23:00 to 01:55hrs 4 / 5 May 2020

The daytime measurements cover a period that was selected in order to provide a typical snapshot of the existing noise climate, with the primary purpose being to ensure that the proposed noise criteria associated with the development are commensurate with the prevailing environment.

The night-time period provides a measure of the existing background noise levels.

The weather observations made during the survey are detailed in Table 4 below.

Date	Period	Temp	Wind Speed	Precipitation	Cloud Cover
4 May 2020	Daytime	≈ 10 - 11°C	1 - 2 m/s (NE)	None.	15%
4 / 5 May 2020	Night Time	≈ 4 - 5°C	1 m/s (NW)	None.	40%

Table 4 Meteorological Data During Measurement Survey Periods

6.7.3 Measurement Results

Location 1

The survey results for Location 1 are summarised below.

Time		Measured Noise Levels (dB re. $2x10^{-5}$ Pa)				
		L_{Aeq}	L_{Amax}	L_{Amin}	L_{A10}	L_{A90}
Daytime	14:50 - 15:05	40	59	28	42	29
	16:00 - 16:15	40	51	28	39	30
	17:00 - 17:15	43	60	28	47	30
Night-time	23:00 - 23:15	33	56	22	33	23
	00:05 - 00:20	32	53	22	31	23
	01:05 - 01:20	31	56	22	32	23

Table 6.7.3 (i) Summary of Measured Noise Levels at Location 1

During daytime monitoring periods, the dominant source of background noise observed was birdsong, distant livestock noise and low-level wind generated noise. Daytime noise levels were in the range 40 to 43dB L_{Aeq} and 29 to 30dB L_{A90}.

The night-time noise measurements at this location were dominated by distant livestock noise and occasional distant traffic noise. Noise levels were in the range 31 to 33dB L_{Aeq} and of the order of 23dB L_{A90}.

Location 2

The survey results for Location 2 are summarised below.

Time		Measured Noise Levels (dB re. $2x10^{-5}$ Pa)				
		L_{Aeq}	L_{Amax}	L_{Amin}	L_{A10}	L_{A90}
Daytime	15:15 - 15:30	43	62	28	46	31
	16:25 - 16:35	43	64	28	44	30
	17:20 - 17:35	44	65	28	47	31
Night-time	23:25 - 23:40	35	61	24	35	25
	00:25 - 00:40	33	55	24	34	25
	01:25 - 01:40	32	49	22	31	24

Table 6.7.3 (ii) Summary of Measured Noise Levels at Location 2

The ambient noise environment at Location 2 was similar to that at Location 1. The dominant source of background noise observed was birdsong, distant livestock noise and wind generated noise. There were also intermittent contributions from dog barking events. Daytime noise levels were in the range 43 to 44dB L_{Aeq} and 30 to 31dB L_{A90}. The night-time noise measurements at this location were dominated by distant livestock noise, distant traffic noise and occasional dog barking. Noise levels were in the range of 32 to 35dB L_{Aeq} and 24 to 25dB L_{A90}.

Location 3

The survey results for Location 3 are summarised below

Time		Measured Noise Levels (dB re. $2x10^{-5}$ Pa)				
		L_{Aeq}	L_{Amax}	L_{Amin}	L_{A10}	L_{A90}
Daytime	15:40 - 15:55	46	83	29	50	32
	16:40 - 16:55	48	74	29	48	32
	17:40 - 17:55	46	64	29	48	32
Night-time	23:45 - 00:00	38	71	26	36	28
	00:45 - 01:00	38	70	27	38	29
	01:40 - 01:55	36	55	24	35	25

Table 6.7.3 (ii) Summary of Measured Noise Levels at Location 3

During daytime monitoring periods, the dominant source of background noise observed was birdsong, distant livestock noise, wind generated noise and some farm machinery noise. However, the biggest difference between the ambient noise environment in this location and the previous two locations were the contributions from occasional traffic events on the adjacent local road. Daytime noise levels were in the range 46 to 48dB L_{Aeq} and of the order of 32dB L_{A90}. The night-time noise measurements at this location were dominated by distant livestock noise, some low-level wind generated noise and the occasional local traffic event (first two periods only). Noise levels were in the range 36 to 38dB L_{Aeq} and 25 to 29dB L_{A90}.

Mitigation measures where applicable are discussed in Section 7.7.

6.8. Traffic

The site in question is located in a rural area within the townland of Rathesar Middle, Gunstown and Whiteriver. Access to the site will be via a private access road that is just off a local, third class road. The area of the site is 4.92 hectares. It is 4.2km south-west of Dunleer and 7.5km south-east of Ardee. The traffic flows currently associated with this existing site is limited to agricultural traffic associated with the existing farming operations. Mitigation measures where applicable are discussed in Section 7.8.

6.8.1 EXISTING TRAFFIC VOLUMES

a. Two separate 7 -day 24 hour automatic traffic counts (13/03/21 – 19/03/21 and 20/04/21- 26/04/21) were carried out along the L6270 in the vicinity of the proposed site entrance in order to determine the quantum and speed of the existing vehicular traffic travelling along the road.

b. A 12 hour ((07.00-19.00) automatic pedestrians count was also carried out on four dates (13/032/21, 16/03/21, 20/04/21 and 24/04/21). These dates cover a weekday (Tuesday) and a weekend day (Saturday)

c. The counts were carried out by Irish Traffic Surveys Ltd using standard automated count equipment and software. The full survey results are attached as Appendix 1 of Traffic Impact Assessment Report (Appendix No. 23).

d. The results of the vehicular traffic surveys can be summarised as follows:

Survey Period	***Westbound***		***Eastbound***	
	Avg. Daily Flow	***Avg. 85% Speed***	***Avg. Daily Flow***	***Avg. 85% Speed***
13/03/21-19/03/21	36	51.8	25	58.0
20/04/21-26/04/21	33	53.1	28	51.0
Average over both Surveys	34	52.5	27	54.5

e. Traffic volume along the L6270 averages 34 vehicles per day in each direction. The number of OGV vehicles counted during each period was low (2.5%) with a maximum 2 way count of 4 such vehicles in any one day. The 85% speed of 53.5km/hr is significantly less than the posted speed limit of 80km/hr.

f. The results of the pedestrian counts can be summarised as follows:

Survey Date	***No. of Pedestrians (07.00-19.00)***	
	Westbound	***Eastbound***
13/03/21 (Sat)	3	2
16/03/21 (Tue)	6	2
20/04/21 (Tue)	5	6
24/04/21 (Sat)	3	3
Average	4.25	3.25

g. All pedestrians surveyed during the four counts were identified as adults. No children or elderly persons were identified.

h. The initial survey period in March 2021 happened during a period when Covid restrictions were in place. The second survey was carried out in April 2021 following the lifting of a number of the more significant restrictions including the re-opening of all schools and allowing travel within the county area. It is noted that there is no material difference between the counts during each period.

i. Overall the surveys demonstrate that the current volume of both vehicular and pedestrian users of the L6270 is low.

6.9 Biodiversity - Flora and Fauna

(a) Site and immediate area

As previously described the proposed development will be carried out on lands owned by and/or available to the applicant. The Bio-diversity (Flora and Fauna) associated with the site and surrounding lands has developed in line with the agricultural activities and management practices carried out within this area, albeit that a small area of the site is currently in scrub / immature conifer plantation.

There are no specific unique habitats, flora and/or fauna on this site that require specific protection. See appendix 11 for details on heritage areas and important habitats as contained in the county development plan.

The proposed development will required some hedgerow removal to facilitate the site development works including on site and at the site entrance to achieve the required sight lines. The lay-by's along the public road can be facilitated at existing entrances/openings and while same will require trimming , there will be minimal hedgerow removal.

(b) Proposed customer farmlands (Soiled Water).

The Proposed customer farmlands (Soiled Water). are/will be typical Co. Louth agricultural land. Organic fertiliser / soiled water from this proposed poultry farm can only be applied to agricultural lands where a crop response, be it tillage/maize etc., is anticipated. S.I. 605 of 2017, as amended, governs fertiliser application on all Irish farms. The land for receipt of soiled from this farm will be used for tillage production. Traditionally animal manure has been applied to these lands as a source of fertiliser, and to replace energy inefficient inorganic fertiliser / poultry manure. The Bio-diversity (Flora and Fauna) associated with these areas and surrounding lands has developed in line with the agricultural activities carried out.

Mitigation measures where applicable are discussed in Section 7.9.

6.10 Biodiversity - Special Policy Areas

To provide protection to heritage items Planning Authorities have designated Special Policy Areas. These areas relate to areas of important heritage items worthy of protection and conservation. Within the special policy area it is the policy of the Planning Authorities to regulate and restrict any development that may threaten the value or integrity of the asset. Development proposals which would have an unacceptable impact on objects, items or sites included in the above lists will not be allowed. Where development is allowed the Planning Authority may include conditions to reduce or ameliorate adverse impacts.

These Special Policy Areas include:

(A) <u>Nationally Designated Environmental areas.</u>

- **Natural Heritage Areas (N.H.A.'s)**

The basic designation for wildlife is the Natural Heritage Area. This is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. To date, 75 raised bogs have been given legal protection, covering some 23,000 hectares. These raised bogs are located mainly in the midlands. A further 73 blanket bogs, covering 37,000ha, mostly in western areas are also designated as NHAs. In addition, there are 630 proposed NHAs (pNHAs), which were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated. These sites are of significance for wildlife and habitats. The pNHAs cover approximately 65,000ha and designation will proceed on a phased basis over the coming years.

Until formal statutory designation of these sites takes place proposed H.N.A.'s are subject to limited protection, one of which includes the recognition of NHA ecological values by Planning and Licensing Authorities. Under the Wildlife Amendment Act (2000) , NHAs are legally protected from damage from the date they are formally proposed for designation.

- **Special Protection Areas (S.P.A.'s)**

Ireland is a special place for wild birds. We are at the end of major flyways of waterfowl migrating south for the winter from North America, Greenland, Iceland and the Arctic. In spring and summer, Ireland provides important breeding grounds for species from the continent of Europe or Africa. Our long coastlines provide safe breeding and wintering grounds for large numbers of seabirds. In addition we have resident species which are scarce or rare in other parts of Europe.

Specific proposals to designate Special Protection Areas (SPAs) in order to safeguard certain habitats pursuant to EU Directive requirements are advertised in the local press and on local radio. These proposals are intended to safeguard the habitat of these selected sites.

Map 8.3 Proposed Natural Heritage Areas (pNHAs)

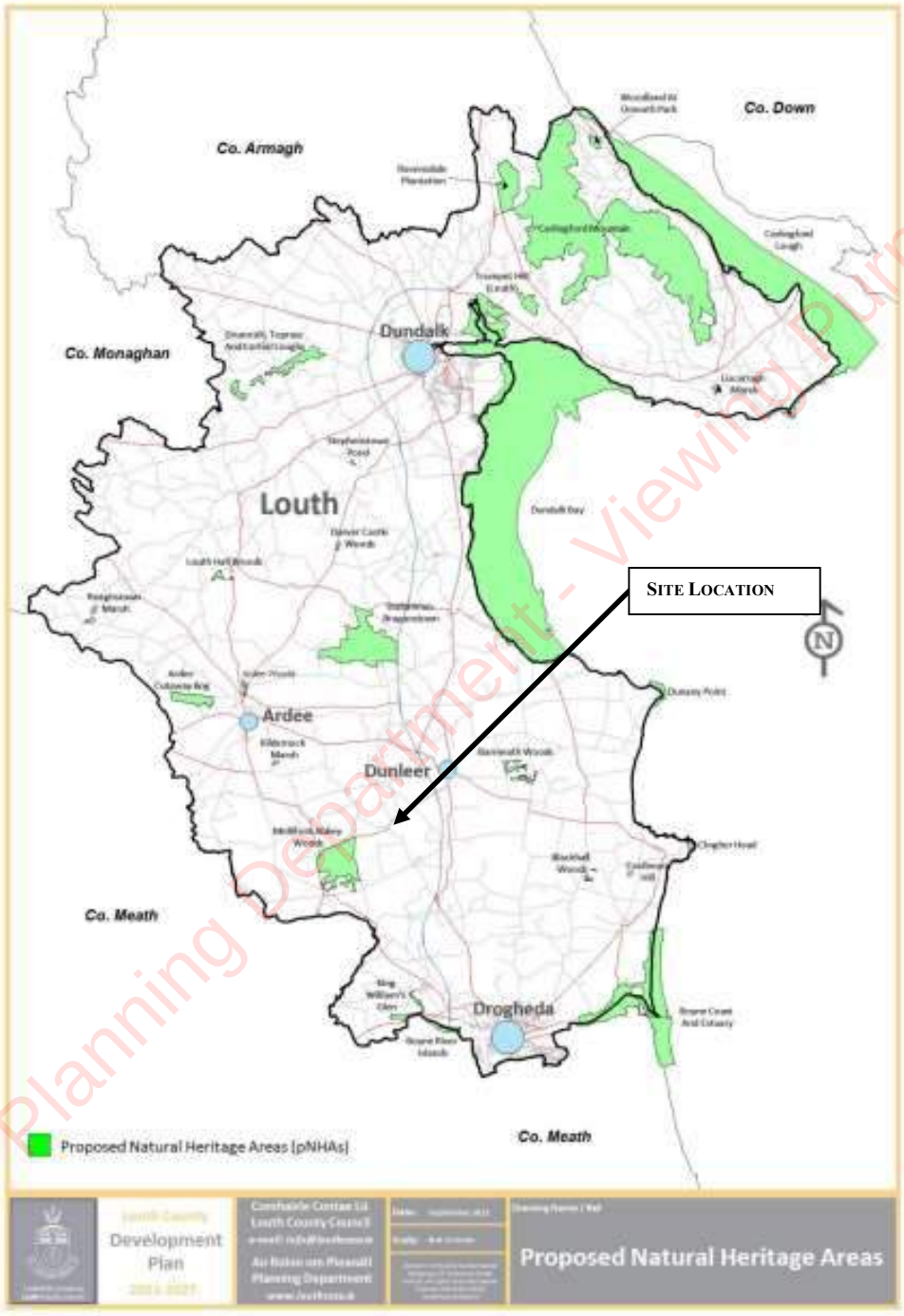


Fig 6.10.1(i) – pNHA's (– Source Louth CO. Development Plan 2021-2027)

Map 8.2: Special Protection Areas (SPAs)

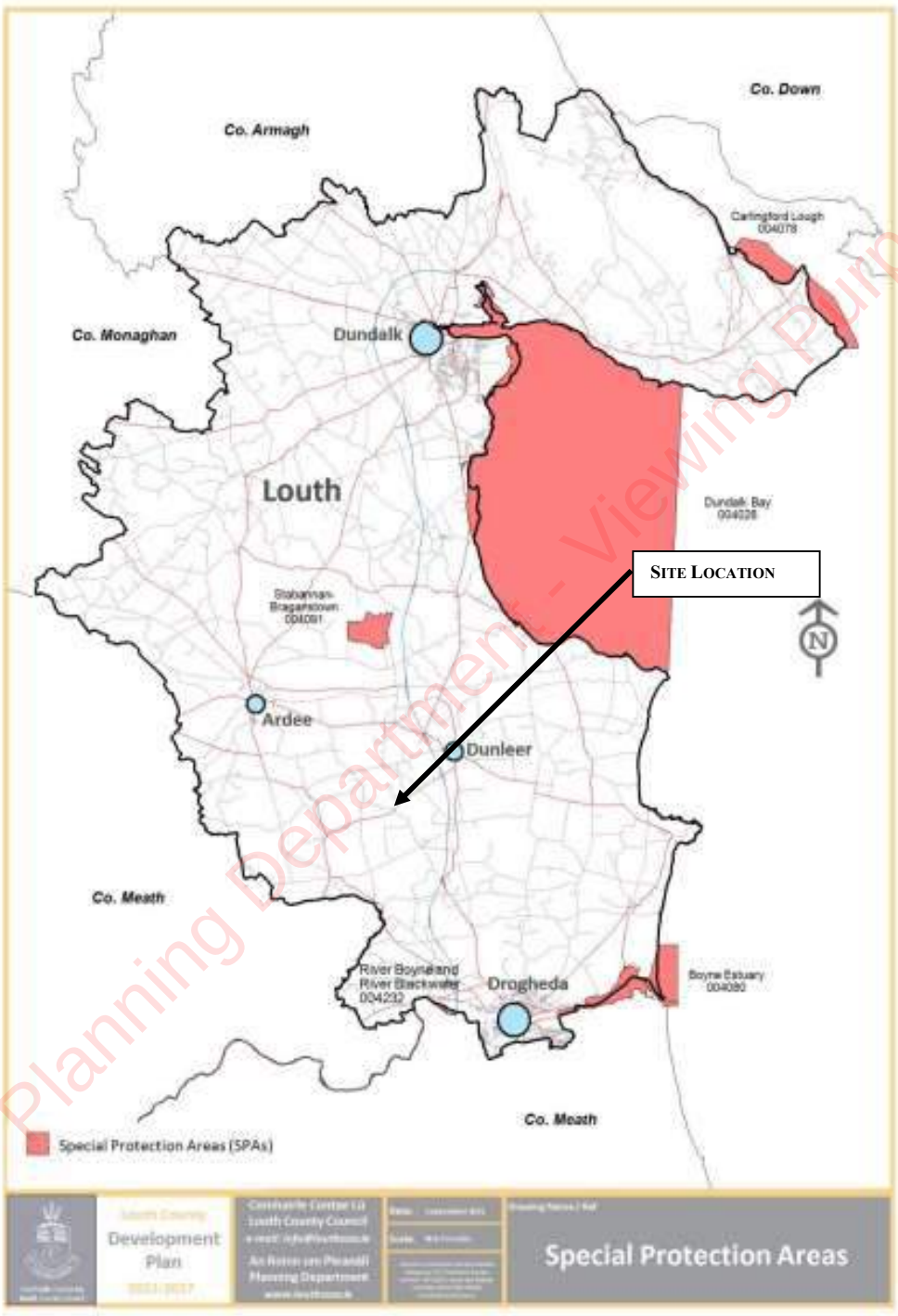


Fig 6.10.1(ii) – SPA's (– Source Louth CO. Development Plan 2021-2027)

Map 8.1: Special Areas of Conservation (SAC)

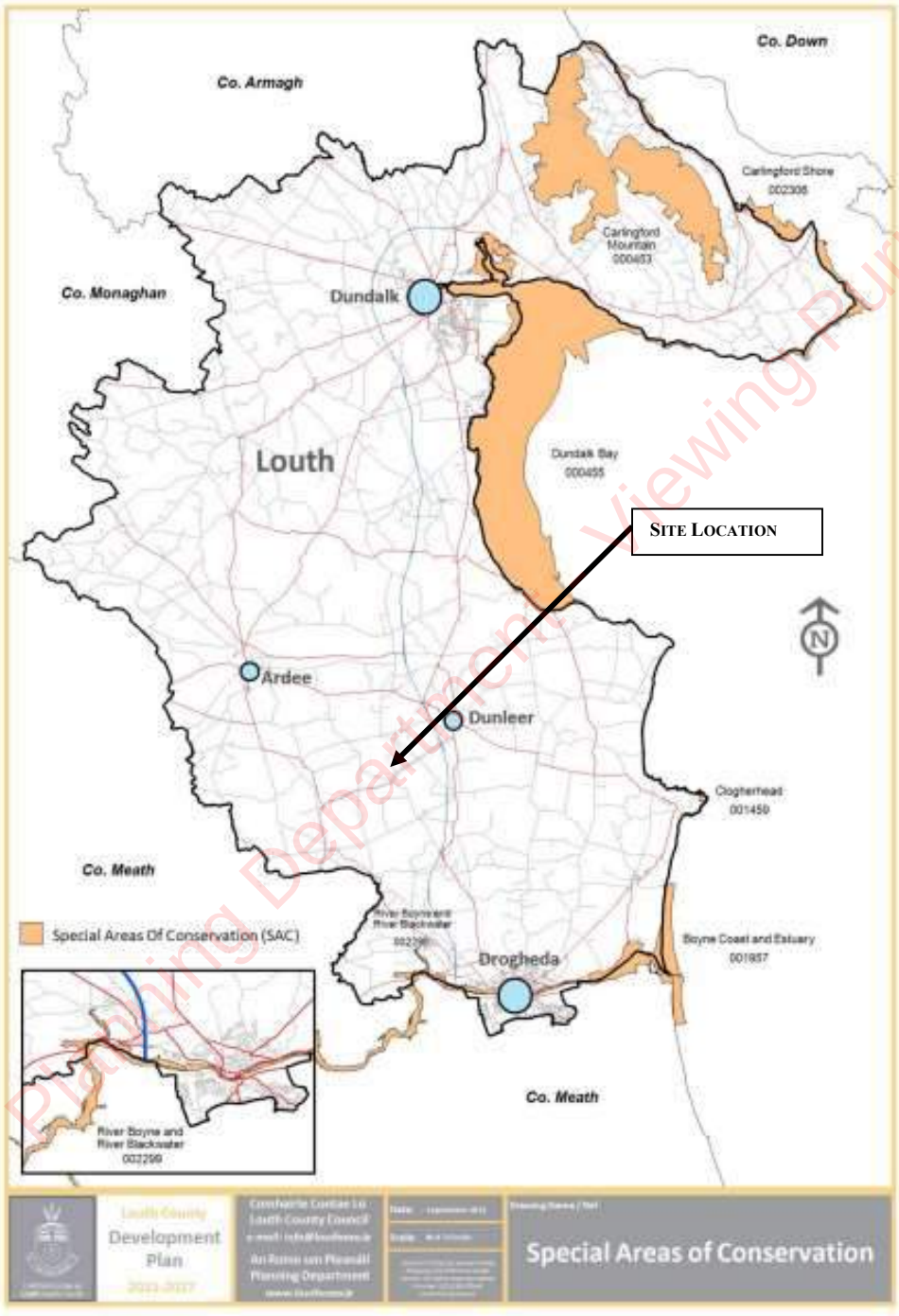


Fig 6.10.1(iii) – SAC's (– Source Louth CO. Development Plan 2021-2027)

<u>The EU Birds Directive (79/409/EEC)</u> requires designation of SPAs for:

- Listed rare and vulnerable species.
- Regularly occurring migratory species, such as ducks, geese and waders.
- Wetlands, especially those of international importance, which attract large numbers of migratory birds each year. (Internationally important means that 1% of the population of a species uses the site, or more than 20,000 birds regularly use the site.)

A significant number of SPAs have been designated since 1985. It should be noted that many existing and future SPAs overlap with SACs. The Irish SPAs join a total of around 3,000 sites across the European Union.

- **Special Areas of Conservation (S.A.C.'s)**

Special areas of conservation are prime wildlife conservation areas considered to be important on a European level as well as an Irish Level. The legal basis on which Special Areas of Conservation are selected and designated is the EU Habitats Directive (92/43/EEC), transposed into Irish law in the European Union (Natural Habitats) Regulations, 1997. These regulations have been amended twice with SI 233/1998 and SI 378/2005. The areas chosen as SAC in Ireland cover an area of approximately 13,500 square kilometers. Roughly 53% is land, the remainder being marine or large lakes. Across the EU, over 12,600 sites have been identified and proposed, covering 420,000 sq. km. of land and sea, an area the size of Germany. S.P.A.'s and S.A.C.'s collectively form part of 'Natura 2000', a network of protected areas throughout the European Union.

The poultry farm site is located in the catchment area of the White River, a tributary of the River Dee within the Newry Fane Glyde and Dee Hydrometric Area (Hydrometric Area 06). The White River flows east then north until its confluence with the River Dee, at a point approximately 6.7km north-east of the application site. The River Dee flows into the sea at Annagassan. The proposed development is located c. 7 km from the closest Natura 2000 site, Stabannan-Braganstown SPA 004091 The Natura Impact Statement has determined no potential for adverse impact on Natura 2000 sites.

As the proposed development is a significant distance from the Dundalk Bay SPA/SAC, the development is unlikely to have a significant adverse impact on these protected areas.

See Appendix No. 13 for further details in the Natura Impact Statement.

There are eight Natura 2000 designated sites within 15km of the application site. These designated areas and their closest points to the proposed development site are summarised in Table 6.10.1 and a map showing their locations relative to the application site is shown in Figure 6.10.1.(iv) A full description of these sites can be read on the websites of the National Parks and Wildlife Service (npws.ie).

Site Name & Code	Distance from Application Site	Special Conservation Interests
Stabannan-Braganstown SPA 004091	7.1km north	• Greylag Goose (*Anser anser*)
The River Boyne and River Blackwater SAC 002299	8.5km south	• River lamprey *(Lampetra fluviatilis)* • Salmon *(Salmo salar)* • Otter *(Lutra lutra)* • Alkaline fens • Alluvial forests with alder *Alnus glutinosa* and ash *Fraxinus excelsior*
River Boyne and Blackwater SPA 004232	9.6km south	• Kingfisher *Alcedo atthis*
Dundalk Bay SPA 004026	10.6km north-east (18km downstream)	• Great Crested Grebe *(Podiceps cristatus)* • Greylag Goose *(Anser anser)* • Light-bellied Brent Goose *(Branta bernicla hrota)* • Shelduck *(Tadorna tadorna)* • Teal *(Anas crecca)* • Mallard *(Anas platyrhynchos)* • Pintail *(Anas acuta)* • Common Scoter *(Melanitta nigra)* • Red-breasted Merganser *(Mergus serrator)* • Oystercatcher *(Haematopus ostralegus)* • Ringed Plover *(Charadrius hiaticula)* • Golden Plover *(Pluvialis apricaria)* • Grey Plover *(Pluvialis squatarola)* • Lapwing *(Vanellus vanellus)* • Knot *(Calidris canutus)* • Dunlin *(Calidris alpina)* • Black-tailed Godwit *(Limosa limosa)* • Bar-tailed Godwit *(Limosa lapponica)* • Curlew *(Numenius arquata)* • Redshank *(Tringa totanus)* • Black-headed Gull *(Chroicocephalus ridibundus)* • Common Gull *(Larus canus)* • Herring Gull *(Larus argentatus)* • Wetland and Waterbirds

Dundalk Bay SAC 000455	10.6km east (18km downstream)	• Estuaries • Mudflats and sandflats not covered by seawater at low tide • Perennial vegetation of stony banks • Salicornia and other annuals colonising mud and sand • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) • Mediterranean salt meadows *(Juncetalia maritimi)*
The Boyne Estuary SPA 004080	13.2km south-east	• Shelduck *(Tadorna tadorna)* • Oystercatcher *(Haematopus ostralegus)* • Golden Plover *(Pluvialis apricaria)* • Grey Plover *(Pluvialis squatarola)* • Lapwing *(Vanellus vanellus)* • Knot *(Calidris canutus)* • Sanderling *(Calidris alba)* • Black-tailed Godwit *(Limosa limosa)* • Redshank *(Tringa totanus)* • Turnstone *(Arenaria interpres)* • Little Tern *(Sterna albifrons)* • Wetlands & Waterbirds
Boyne Coast and Estuary SAC 001957	13.8km south-east	• Estuaries • Mudflats and sandflats not covered by seawater at low tide • Salicornia and other annuals colonizing mud and sand • Spartina swards (*Spartinion maritimae*) • Atlantic salt meadows (*Glauca Puccinellietalia maritimae)* • Mediterranean salt meadows (*Juncetalia maritimi)* • Embryonic shifting dunes • Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) • Fixed coastal dunes with herbaceous vegetation (grey dunes)
Clogher Head SAC 001459	14.5km east	• Vegetated sea cliffs of the Atlantic and Baltic coasts • European dry heaths

Table 6.10.1 – Natura 2000 Sites Within 15km of the Proposed Site

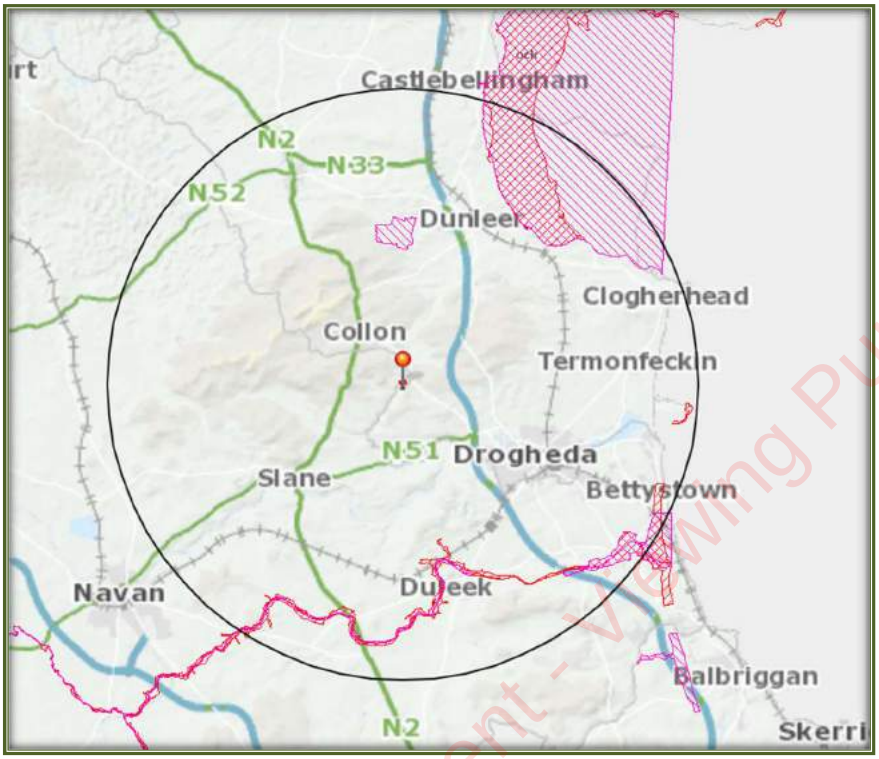


Figure 6.10.1(iv) – The Application Site in relation to the Natura 2000 site (SACs – Red Hatching, SPAs – Pink Hatching)

- ***Louth's Green Infrastructure Strategy***

A Green Infrastructure Strategy (GIS) has been incorporated into the Louth County Development Plan 2021-2027. The principles of a green infrastructure approach to land use planning have been embedded as a cross cutting theme in the policies and objectives of this Plan.

The Strategic Objectives of Louth's Green Infrastructure Strategy are outlined below:

- Flood Risk Management and Climate Change Adaptation;
- An Ecological Framework;
- A Sustainable Movement Network;
- A Sense of Place;
- River Corridor and Coastal Management;
- Support for Urban Regeneration; and
- Community, Health and Enjoyment.

Policy Objective NBG 41 To support the green infrastructure network of County Louth and ensure its implementation in the assessment of all development proposals to prevent adverse impact on the ecological connectivity of County Louth's Core Areas.

Policy Objective NBG 42 To require the use of and develop the green infrastructure network, and support re-establishing connectivity to ensure the conservation and enhancement of biodiversity and as a supplementary guide for the protection and conservation of the European Sites in County Louth.

Policy Objective NBG 43 To utilise all information available on the Louth Baseline Assessment as evidence based decision making in the Louth Core Strategy.

Policy Objective NBG 44 To protect, maintain, and enhance the natural and organic character of the watercourses in the County, including opening up to daylight where safe and feasible. The creation and/or enhancement of riparian buffer zones will be required where possible. All proposed coastal walkways will be required to comply with the Habitats, EIA and SEA Directives

Policy Objective NBG 45 To prepare specific Green Infrastructure Strategies for the Regional Growth Centres of Drogheda and Dundalk and integrate into the local area plan for each settlement.

Policy Objective NBG 46 To develop linear parks, particularly along waterways, and to link existing parks and open spaces in order to provide green chains that promote permeability for pedestrians and cyclists in the Regional Growth Centres of Drogheda and Dundalk.

Policy Objective NBG 47 To support the existing features of interest in the Level 3 and 4 Settlements of County Louth and promote and facilitate any areas identified for green infrastructure enhancement.

Policy Objective NBG 48 All future development proposals shall require within the overall design scheme the integration of environmental assets and existing biodiversity features including those identified in Table 9 of the Green Infrastructure Strategy Appendix 8, Volume 3, to enhance the quality, character and design of the proposal.

Policy Objective NBG 49 To require the integration of green infrastructure and inclusion of native planting schemes in all development proposals in landscaped areas, open spaces and areas of public space.

Policy Objective NBG 50 To incorporate all identified stone walls into development proposals. Where retention of the stone wall is not feasible there shall be a requirement to rebuild the stone wall at an alternative, suitable location.

Policy Objective NBG 51 To require the integration of climate change mitigation measures in any future spatial plans and climate change adaptation measures in proposed developments.

Policy Objective NBG 52 To develop and support the implementation of a Regional Green Infrastructure approach by working collaboratively and in partnership with the Eastern and Midland Regional Assembly, adjoining local authorities and other key stakeholders to identify, protect, enhance and manage existing green infrastructure within the County and to provide additional GI where possible.

Policy Objective NBG 53 To support and increase investment in the on-going maintenance of existing, and provision of additional green infrastructure by accessing relevant EU funding mechanisms and national funding opportunities, including tourism related funding.

Policy Objective NBG 54 To ensure the protection, enhancement and maintenance of Green Infrastructure in recognition of its health benefits in addition to the economic, social, environmental and physical value of green spaces, through the integration of Green Infrastructure planning and development in the planning process.

Policy Objective NBG 55 To create an integrated and coherent green infrastructure for County Louth by ensuring compliance with the objectives listed in the Green Infrastructure Strategy outlined in Appendix 8, Volume 3, to improve pedestrian and cycle access routes within this green infrastructure network while ensuring that ecosystem functions and existing amenity uses are not compromised and existing biodiversity and heritage is protected and enhanced.

Policy Objective NBG 56 To focus on 'greening' key streets in the Regional Growth Centres of Drogheda and Dundalk and key towns and villages by way of higher standards for planning and amenity along key routes.

Policy Objective NBG 57 To ensure that no development, including clearing or storage of materials, takes place within a minimum distance of 10m measured from each bank of any river, stream or watercourse.

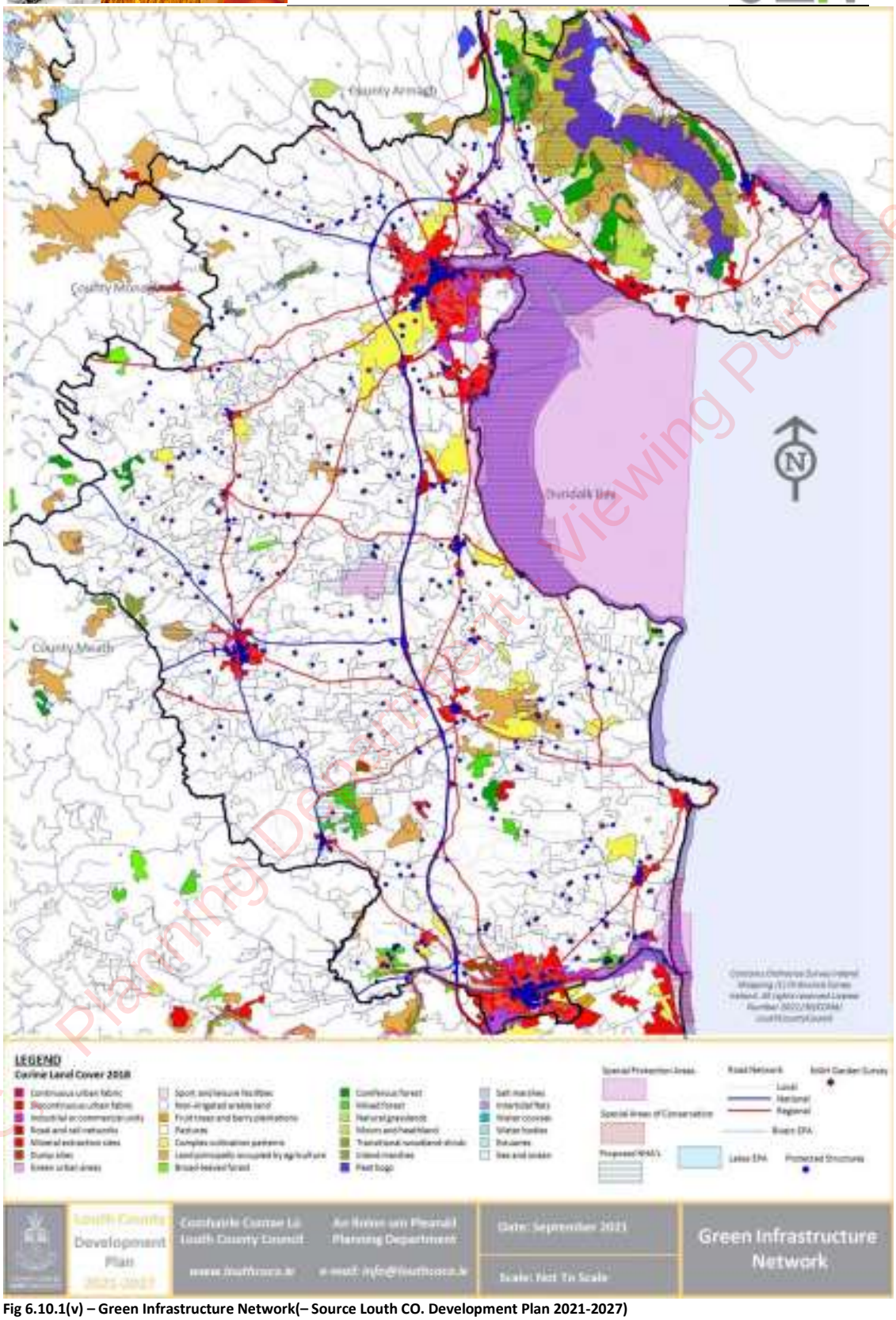


Fig 6.10.1(v) – Green Infrastructure Network(– Source Louth CO. Development Plan 2021-2027)

(B) Amenity Areas

The proposed poultry farm site is not located near any of the tourist/amenity areas as listed in the Louth Development Plan.

These areas include;

- Areas of Outstanding Natural Beauty,
- Areas of High Scenic Quality,
- Scenic Routes, Views and/or prospects,

as listed in the Louth Development Plan 2021-2027, and as referred to previously in Section 6.6.

(C) Cultural Heritage (Architectural and Archaeological Features)

There are no buildings/structures of architectural significance located on or adjacent to the proposed site or likely to be impacted by the proposed development. There is no evidence of any archaeological features at the site, and the proposed development is unlikely to adversely impact on the nearest recorded archaeological monument.

There are no previously recorded archaeological features/monuments located within the subject development area and no physical features of archaeological potential were noted by a surface reconnaissance survey of the site. Likewise, there are no previously recorded artefacts known from the subject site.

There are no previously identified sites of archaeological interest/potential located within, or in the immediate environs of, the subject development lands.

There are no recorded archaeological features within c. 0.5 km of the proposed site. The closest such feature is an enclosure located 530 m south west of the proposed development, please refer to site specific detail below. The proposed poultry houses are to be constructed predominantly on intensively managed farmland, with the site area also incorporating a small area of scrub/immature conifers. This development will not involve the construction of significant underground tanks etc. that require significant excavation.

RecordNumber:LH018-070----

Classification: Enclosure

Scheduled for Protection:1

Description:
Three sides of a rectilinear enclosure and a number of pits were identified in 2004 during archaeological monitoring of top soil stripping as part of the extension to the Whiteriver Landfill site (Excavation Licence No. 04E0601) (Bolger 2004, 270). Partial excavation (Excavation Licence No. 04E1531) uncovered a number of further pits, postholes and ditches and established that the enclosure measured c. 24m x 19m. A fragment of a lignite bracelet was recovered from an upper fill of the ditch of the rectilinear enclosure. The excavator suggested that the enclosure probably dates to the Early Christian period. The site was preserved in situ. (McConway 2007, 270) Compiled by: Claire Breen Date of upload: 11 July 2012

It is not considered likely that the development, as proposed, will cause any direct impacts to any identified archaeological monuments. Furthermore, given the locations of the extant archaeological monuments, together with the topographical situation of the site and its environs, it is considered there is no impacts will occur to the setting of any monuments.

6.11 Population / Employment / Human Health

As a county, Louth has seen unprecedented growth in its population since the early 2000's. This was significantly driven by its close proximity to Dublin and the commuter routes that have developed.

Agriculture will continue to be an important component of County Louth's economy. Advancing technology and farm consolidation will result in increased output but will also continue to reduce agriculturally based employment. Farm practices are experiencing a shift away from traditional agriculture activities such as dairying and livestock farms. Specialist beef production is now the main enterprise on some 40% of farms in County Louth which reflects a national shift to this type of farming.

Agriculture is an important source of employment and income in rural areas. The County's agricultural land bank is not only a source of value in terms of food production, but also a vital ingredient in the County's character. The 2011 Census illustrates that 2.75% of the population of County Louth is employed directly in the agricultural sector. This is equivalent to 902 persons, representing a slight increase from the 2006 census figure of 2.4% and a significant drop from 6%, as recorded in the 2002 Census.

Farming is the traditional form of economic activity in rural areas. However, traditional farming methods have undergone significant changes, through increased mechanisation and the emergence of larger commercial farm units. County Louth occupies an area of 82,613 hectares, of which 63,862 hectares is farmed. In Table 3.1 it is apparent that a significant proportion of farms in County Louth, some 46%, operate on farm holdings of less than 20 hectares. The average farm size in the county in 2010 was 36.6 hectares which is an increase from the average size of 35.1 hectares in 2006.

The agricultural sector must continue to adapt to the challenges posed by modernisation, restructuring, market development and the increasing importance of environmental issues. An economically efficient agricultural and food sector, is an essential component of the development of a sustainable rural economy.

The Council acknowledges that farming will remain an important economic activity essential for the economic prosperity and well being of rural areas and will facilitate the development of agriculture subject to ensuring the protection of the environment, particularly water resources.

The role of the rural area as a key resource for the county is vital and agricultural and amenity lands should be carefully managed to ensure that their primary use is protected from encroachment, fragmentation and urban driven development.

For the sustainability conscious consumer, chicken and eggs can be considered an excellent source of animal-based protein. Poultry meat is extremely efficient from a carbon perspective. International research shows that poultry has the lowest carbon footprint of all meats and that eggs are an even more carbon efficient source of protein than poultry meat. EU research has confirmed that Irish poultry meat is the most carbon efficient in Europe and with a carbon footprint of 3 kg of carbon equivalents per kg of meat, a consumer can eat seven times more chicken than beef or lamb for the same level of emissions. Poultry is also the most water efficient meat.

The transition to a more sustainable form of agriculture, which minimises resource (feed, water and energy) consumption per unit of production will be essential to meet the ever increasing demands on an increasing population, while at the same time helping to avoid food poverty. As the most widely consumed meat in Ireland, with the lowest Carbon Foot print, and high levels of efficiency poultry meat production is well placed to meet these societal requirements. Furthermore as developments such as the proposed development are required to meet domestic demand for poultry meat, (and to replace current imports to rebalance the supply demand balance in the Irish economy) same is intrinsically sustainable and beneficial to the Irish economy.

Mitigation measures where applicable are discussed in Section 7.11.

6.12 Material Assets

Resources that are valued and that are intrinsic to specific places are called 'material assets'. They may be of either human or natural origin and the value may arise for either economic or cultural reasons. The assessment objectives vary considerably according to the type of assets, those for economic assets being concerned primarily with ensuring equitable and sustainable use of resources. Assessments of cultural assets are more typically concerned with securing the integrity and continuity of both the asset and its necessary context.

The potential impact of the proposed development on *archaeology / cultural assets* has been discussed previously. Material Assets that may potentially be affected by the proposed development include:

- ***(A) Material Assets: Agricultural Properties including all agricultural enterprises***

The proposed development is located on existing agricultural farmlands, in a predominantly agricultural area. The proposed development is surrounded by agricultural farmland, and the proposed development will not adversely impact on any other farmland outside the confines of the site. The proposed development will have a positive interaction with the applicant's families farmlands (Soiled Water). as previously detailed. The proposed development will require a minimal amount of land to complete the proposed works, however this land requirement will not have a significant adverse impact outside of the development area.

- ***(B) Material Assets: Non-agricultural Properties including residential, commercial, recreational and non-agricultural land.***

The proposed development site is surrounded by agricultural lands and is located well away from any built up areas and/or development clusters. The closest third party residential location is > c. 400 m from the proposed development.

Table 6.12.1

Location	Description	Co-ordinates	Approx. distance to nearest shed (m)*
1	Property to the NW	301554 286203	635
2	Property to the NW	301654 286266	625
3	Property to the North	302022 286335	595
4	Property to the NE	302456 286318	620
5	Property to the East	302665 285888	455
6	Property to the East	302640 285813	410
7	Property to the SE	302464 285320	430
8	Property to the SW	301316 285361	750

- ***(C) Material Assets: Natural or other resources including mineral resources, land and energy***

The proposed development will also involve the use of a limited amount of construction materials (including quarry products and other construction materials), however the extent of the development is limited in nature and the amount of resources required in the construction of the houses, and potential adverse impact of same, is negligible when sourced from authorized sources.

The operation of the farm will require additional feed (classified as a renewable resource), energy and water. The applicant will operate modern feeding, ventilation and heating systems to minimize same. The farm does not require any major modifications to the existing electricity supplies, water or road infrastructure in the area.

6.13 Tourism

Mr. Michael Callan is very aware of the beneficial impact that tourism is having on the local economy of the Louth area. The local tourism industry in this area is based primarily around the natural landscape, including the coastlnes and rich heritage of the area.

The coastline is of high intrinsic and special amenity value and is home to a variety of natural habitats. Special Areas of Conservation (SAC) and Special Protection Areas (SPA) designations cover much of the coastline. Termonfeckin Strand, Clogherhead, Port and Templetown are superb beaches which have considerable tourism potential. The latter three beaches were awarded Blue Flag status in 2015. The coastline also contains economically significant sites which include the ports at Drogheda, Greenore, Dundalk and Clogherhead.

The proposed poultry house site itself will in no way affect the tourism industry in the area due to the fact that, it is in an agricultural area and a remote location, will be well screened from public view, and is located away from any areas frequented by tourists.

Mr. Michael Callan will ensure that any potential effects on the local environment and tourism industry are minimised. Mr. Michael Callan will inform all farmers in receipt of organic fertiliser (soiled water) from the proposed development, of the requirements of S.I. 605 of 2017, as amended in relation to spreading of animal manure's and overall good farming practice so as to at least maintain, if not improve, this balance.

Mitigation measures where applicable are discussed in Section 7.12.

6.14 Potential Effects (Cumulative, Long/Medium/Short Term, Transboundary and/or other).

This development will have a positive effect on population in the area. The poultry farm will employ c. 2 additional people directly. The farm profitability of the customer farmers receiving poultry manure is boosted by cheap fertiliser nutrients replacing imported energy demanding inorganic nutrients. This farm will have no adverse effect on tourism in the area of the site due to its remote location and comprehensive management and operational practices.

The agricultural and associated added value industries that have developed on the back of the Irish Agri-sector are of significant importance to the local and Irish economy and provide a significant source of employment. Within this, the poultry industry is a key component. The poultry sector makes a valuable contribution to the Irish agricultural economy, with output at farm level estimated at €600 million (wholesale) in 2019. The sector is a significant employer in rural Ireland with over 5,000 people employed in processing, packing and at farm level.

Nationally

The report "Irelands Inventory Report 2021" (EPA 2021), identifies agriculture as the primary contributor (99.4%) of Irish ammonia emissions in 2019, emitting a total of 124.6 kilotons (kt) of ammonia in that year. According to that report the emissions from the poultry sector in 2019 were approximately 4.61 Kt. Ammonia emission from the proposed development will equate to c. 0.0015%of the 2019 poultry sector emissions.

DAFM has published a Code of Good Agricultural Practice for reducing Ammonia Emissions from Agriculture " as required by the National Emissions Ceiling Directive and this is the appropriate manner in which to address the national ceiling.

The main sources of ammonia emissions from agriculture arise from the production and application of livestock manures and synthetic fertilisers. The good practice measures give guidance on reducing emissions from these key areas:

- Limiting ammonia emissions from the use of mineral fertilisers;
- Manure application and low-emission manure spreading techniques;
- Animal feeding strategies;
- Animal housing systems;
- Manure storage systems;

The proposed development will be operated in line with BAT reequipments (as enforced by the required E.P.A. Licence). This will ensure that the farm is operated to the highest standards, and that emissions (incl. ammonia) and resourse (energy, feed and water) consumption is minimised to ensure that the proposed development produces high quality food in a sustainable manner in line with the goals of Agri Food Strategy 2030 and the Good Agricultural Practice for reducing Ammonia Emissions from Agriculture.

Within the County;

This proposed poultry farm is located in County Louth. Intensive agricultural enterprises have not developed in Co. Louth to the same extent as counties Cavan and Monaghan. Agricultural activity in Louth includes tillage, cereals and other crops, beef and dairy and is an important part of the economic life of rural Louth helping to sustain, enhance and maintain the rural economy. Agriculture will continue to be an important component of Louth's rural economy. The agricultural sector must adapt to the challenges posed by modernisation, restructuring, market development and the increasing importance of environmental issues.

The poultry industry is a specialised farming activity and the proposed development will benefit from well established practices in place for the utilisation of poultry manure in the production of mushroom compost. The proximity of the proposed developments to the processing and feed supply services at Shercock, will be a significant competitive advantage, and will significantly reduce transport costs and emissions associated with same.

Given the mixed returns from the more traditional farming practices (including Tillage), and the concerns pertaining to future expansion of the Irish Dairy herd, productive, efficient and sustainable agricultural activities, such as the proposed development, and the rearing of poultry to meet local Irish demand (which is currently met by imported product, as previously detailed), and the jobs dependant thereon, will be critical to the Irish economy.

This existing plans for this farm represent a proposed development of up to c. 200,000 birds (4* c. 50,000 bird houses). This is a significant development in terms of poultry farm developments and the level of investment required. It will also be a significant boost to local employment in this area, and the local construction industries.

Within the Local Area;

This proposed poultry farm development will have significant integration with,

- the applicant's families, and the local agri.-sectors existing farming activities, in the areas of feed, bedding, labour etc., and,
- the Irish horticultural sector with the with the use of poultry manure in the production of mushroom compost (and potentially in peat replacement or other such uses)

and same will be a significant advantage to both enterprises, while at the same time demonstrating a more integrated, environmentally friendly and sustainable production system.

The proposed development will result in a significant increase in stock numbers on the site, to 200,000 birds. A number of measures have been provided for so as to mitigate against any adverse cumulative impact. As previously detailed there are only 5 other licensed intensive agricultural farms in the county, and none of these are located within c. 7-7.5km of the proposed development, therefore there is negligible risk of an adverse cumulative impact.

Trans-boundary;

Given the location of the proposed development well removed from any other international boundary, and the inert nature of the construction and operation of the farm and any of any materials used and/or produced on-site together with the range of processes to be carried out there is no potential for adverse trans-boundary impact.

Mitigation measures where applicable are discussed in Section 7.13.

7. Description of the aspects of the environment with potential to be significantly affected by the proposed development.

It is envisaged that no aspects of the environment will be significantly affected by this proposed development, for the reasons as outlined. The proposed development is agricultural in nature, has the potential to be well integrated into the local/agricultural and horticultural sectors, remote from 3rd party dwellings, not located in a sensitive area/landscape, does not involve practices/processes that have the potential for significant adverse impact, does not result in the use or production of materials/products with potential for significant adverse impact, and, is a widely practiced agricultural enterprise.

The potential effects on the environment required to be addressed include population and human health, bio-diversity (flora and fauna), land and soil, water, air, the landscape and material assets including archaeological heritage. These amongst other aspects of the environment are addressed hereafter.

7.1. Land and Soil

(a) Site and Immediate area

The proposed development will have a significant effect on the soil in the development area, given the nature of the site and the proposed works. At present the site is a relatively level area that facilitates the existing farming activities/management practices. The site will require excavation, and levelling in preparation for the proposed development, with a significant proportion of the excavated soil to be used for site amelioration works.

Site development activities will have no significant adverse environmental impact on the environment at large and no adverse impact outside of the site boundary, and thus there are no specific mitigation measures that can be carried out or are deemed to be required. There are no habitats, flora, fauna, protected sites and/or other notable sensitive/valuable features within the boundary of the proposed site that are deemed to require special protection.

The general topography of the site/area has been detailed in Section 6.1. The proposed development site falls in a west to east direction and the finished floor level has been detailed so as to average out the ground levels on the site and ensure that all of the soil/subsoil can be accommodated and utilised within the site, while at the same time ensuring that the proposed development is integrated into the landscape.

(b) Proposed customer farmlands (Soiled Water).

The customer farmland areas are eminently suitable for grass/crop production, and environmentally safe for the application of organic fertiliser / soiled water at the levels permitted by, and in accordance with the requirements of S.I. 605 of 2017, as amended.

All soiled water from this poultry farm is to be allocated for use in accordance with S.I. 605 of 2017, as amended. All areas that are environmentally sensitive, as detailed in S.I. 605 of 2017, as amended, will be removed and/or an adequate buffer-zone applied to them. The principal impacts on the soil arise from,

1. Hydraulic loading
2. Chemical loading
3. Soil Structure damage.

In relation to hydraulic loading, the maximum rate of application proposed at present is c. 50m^3 /ha. (Average = 16.5 m3/ha on 20 Ha tillage) It is anticipated that there will be no surface run-off due to the omission of steeply sloping lands and strict adherence to the cordon sanitaires, application rates and ground and weather conditions at the time of application, as required by S.I. 605 of 2017, as amended.

In relation to chemical loading of the soils, this development is promoting nutrient substitution rather than addition. The organic fertiliser / soiled water from this farm will satisfy the growth requirements of the tillage/other crops. All organic fertiliser / poultry manure from this proposed poultry farm will be allocated for use in the production of mushroom compost.

All farmers will also be advised that the application of organic fertiliser to farmland should not occur;

- In the period 15th Oct – 15th January, for lands in Zone B (incl. Co. Louth) Please refer to S.I. 605 of 2017, as amended, for details pertaining to other areas.
- When soils are waterlogged, and/or ground conditions are unsuitable.

These are the times of year when the majority of soil structure damage can occur, and are in line with the requirements of S.I. 605 of 2017, as amended.

7.2 Ground Water

(a) Site and Immediate area

The groundwater adjacent to the site is overlain by a low permeability overburden. According to G.S.I. records the aquifer classification of the site is referred to as a Poor Aquifer – Bedrock which is generally unproductive except for local zones(Ll). The aquifer vulnerability for the area of proposed development is classed as Low.

With any intensive agricultural enterprise one of the main areas of consideration arises from the storage and management of a relatively large volume of animal/poultry manures. In order to ensure that the proposed development does not impact on the groundwater adjacent to the poultry farm site the following measures will be implemented.

- The proposed structures will be constructed to Department of Agriculture, Food and Rural Development Standards for the construction of farm buildings.

- There is no external movement of stock between the houses this preventing the generation of soiled water outside the houses. The only soiled water will arise from the washing of houses and cleaning down of the concrete apron at the start/end of each batch. Appropriate measures for the collection and management of same have been demonstrated.

- Manure will be stored in the house on a solid concrete floor and removed off site at the end of each batch. (Max amount on site at any one time = one batch/cycle of the equivalent of c. 225 tonnes) As part of the E.P.A. Licence requirements the floors of each house are to be checked after every batch to ensure that they are appropriately maintained.

- The fact that the manure will be a dry product will eliminate any of the potential concerns that may arise with the storage of liquid manure.

- Dedicated soiled water tanks will be provided at the proposed houses which will collect any soiled water associated with the washing of same. Soiled water drainage detail as indicated on proposed plans. All soiled water will be applied to the applicant's family landholding customer farmlands in accordance with S.I. 605 of 2017, as amended.

The site characterisation report contained in Appendix 15 has confirmed that the proposed site is suitable for a packaged waster water treatment system and polishing filter as proposed.

(b) Proposed customer farmlands (Soiled Water).

All organic fertiliser / soiled water from this farm is to be allocated for use in accordance with S.I. 605 of 2017, as amended. This legislation which is applicable to all farmers in the country with regard to the application of all organic and inorganic fertiliser (incl. soiled water) places certain requirements on farmers, including the applicant / applicant's family / customer farmers, with regard to the application of fertilisers to farmland. The measures referred to in this directive include, but are not limited to the following,

- Maximum limits with regard to the application of organic and inorganic fertiliser / poultry manures, thus ensuring that there is no leaching of nutrients through the soil.

- Organic fertiliser / poultry manure shall not be applied to land within 200m, or such other distance as may be specified by the local authority, of any borehole, spring or well used for the abstraction of water for human consumption in a scheme supplying 100m^3 or more of water per day or serving 500 or more persons.

- Organic fertiliser / poultry manure shall not be applied to land within 100m, or such other distance as may be specified by the local authority, of any borehole, spring or well used for the abstraction of water for human consumption in a scheme supplying 10m^3 or more of water per day or serving 50 or more persons.

- Organic fertiliser / poultry manure shall not be applied to land within 25m, or such other distance as may be specified by the local authority, of any borehole, spring or well used for the abstraction of water for human consumption not referred to at b and c above.

- Organic fertiliser / poultry manure shall not be applied to land within 15m, of exposed cavernous of karsified limestone features (such as swallow holes and collapse features).

- Organic fertiliser / poultry manure shall not be applied to land within the prohibited periods as applicable.

Proper management on the site and on the applicant's family / customer farmlands (Soiled Water). as planned will result in little or no impact on the ground water in this area. Mr. Michael Callan will ensure that both he and any potential customer farmers are aware of the requirements of the nitrates directive with regard to the application of organic fertiliser / soiled water to their farmland.

7.3 Surface Water

Ireland is fortunate in having a relatively abundant supply of fresh water, which constitutes a key resource in economic, amenity and aesthetic terms. The principle legislation governing water quality in Ireland is the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003) (as amended), which transposed directive 2000/60/EC (the water framework Directive, WFD) into Irish Law.

(a) Site and Immediate area

The application site lies within the Newry Fane Glyde and Dee Hydrometric Area and Catchment, the Dee Sub-Catchment and the White (Louth) Sub-Basin. As previously stated, all surface water from this farm will discharge through one (proposed at present) or more storm water discharge points;

- All roof water and uncontaminated storm water from the proposed development sitewill discharge, to the local water course/storm water drainage system via the proposed swale drainage system. These discharge point(s) will be visually inspected on a weekly basis for any signs of contamination i.e. visual and or odour, in line with the anticipated requirements of the E.P.A. Licence to be applied for. A small proportion of the surface water arising from part of the access land will discharge to a soak pit at / adjacent to the site entrance.

- The proposed developments have been designed so as to minimise the amount of soiled water generated on the farm with dedicated soiled water storage tank(s) provided, thus ensuring all soiled water is collected and that there is no possibility of contaminated storm water entering the clean storm water discharge system.

- All potentially polluting liquids (fuels, disinfectants chemicals etc.) to be stored in an appropriately bunded area in line with E.P.A . Licence requirements.

- The proposed stormwater attenuation system will limit stormwater run-off to greenfield rates.

(b) Proposed customer farmlands (Soiled Water).

All organic fertiliser / soiled water from this farm is to be allocated for use in accordance with S.I. 605 of 2017, as amended. This legislation which is applicable to all farmers in the country with regard to the application of all organic and inorganic fertiliser (incl. poultry manure and soiled water) places certain requirements on farmers with regard to the application of fertilisers to farmland.

The measures referred to in this directive include, but are not limited to the following,

- Maximum limits with regard to the application of organic and inorganic fertiliser / soiled water, thus ensuring that there is no overland flow of nutrients.

- All fertiliser to be applied in a uniform manner ensuring an even spread.

- Organic fertiliser / soiled water shall not be applied to land that is waterlogged, flooded or likely to flood, snow covered or frozen, when heavy rain is forecast within 48 hours, or, where the ground slopes steeply and taking into account factors such as proximity to waters, soil condition, ground cover and rainfall, there is a significant risk of causing water pollution.

- Organic fertiliser / soiled water shall not be applied by the use of an upward facing splash plate or a rain gun.

- Organic fertiliser / soiled water shall not be applied within 20 m of a lake shoreline.

- Organic fertiliser / soiled water shall not be applied within 5 m of a surface watercourse.

- Organic fertiliser / soiled water shall not be applied to land within the prohibited periods as applicable.

Proper manure management (poultry manure and soiled water) on the site and proper management of soiled water on the lands identified/farmed by the applicant's family farmlands will result in little or no impact on the surface water in this area. Mr. Michael Callan will ensure that all customer farmers are aware of the requirements of the nitrates directive with regard to the application of organic fertiliser (soiled water) to their farmland.

Independent water monitoring in this catchment is and it is envisaged will be conducted on an on-going basis by Louth Council, the E.P.A. and the Regional Fisheries Board(s). Results relating to surface water quality for the relevant watercourses associated with the proposed poultry farm site are detailed in Appendix 10.

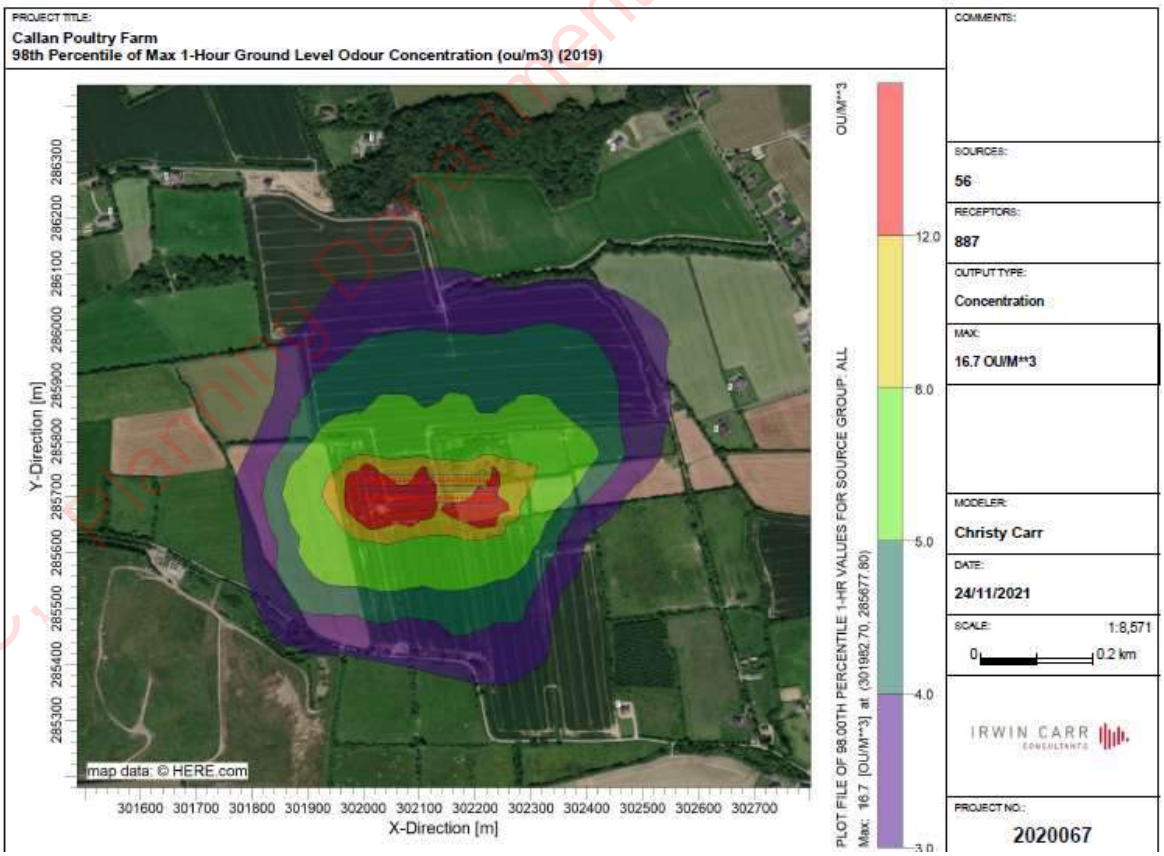
7.4. Air

The proposed customer farmlands (Soiled Water) and poultry farm are non-urban based, the rural residents are accustomed to agricultural smells such as animal manure spreading, silage and silage effluent spreading. The rural location of the site of the proposed development, well isolated from neighbouring dwellings and potential odour sensitive locations makes this an ideal site for the purposes of the proposed development.

All practicable steps, such as landscaping, management routines etc., have been/will be planned for and will be taken so as to minimise odour from the site. Its rural setting and location distant from local residences will ensure no effect on Human Health/Population. This development will have no significant adverse affect on climate. Low Emission Spreading Systems (LESS) will be recommended for the application of all soiled water arising from the proposed development.

The closest third party dwelling to the proposed site, is located > c. 400m east of the proposed development. The site specific;

- **Air Quality (Odour and Particulate Matter) Impact Assessment contained in Appendix No. 21**



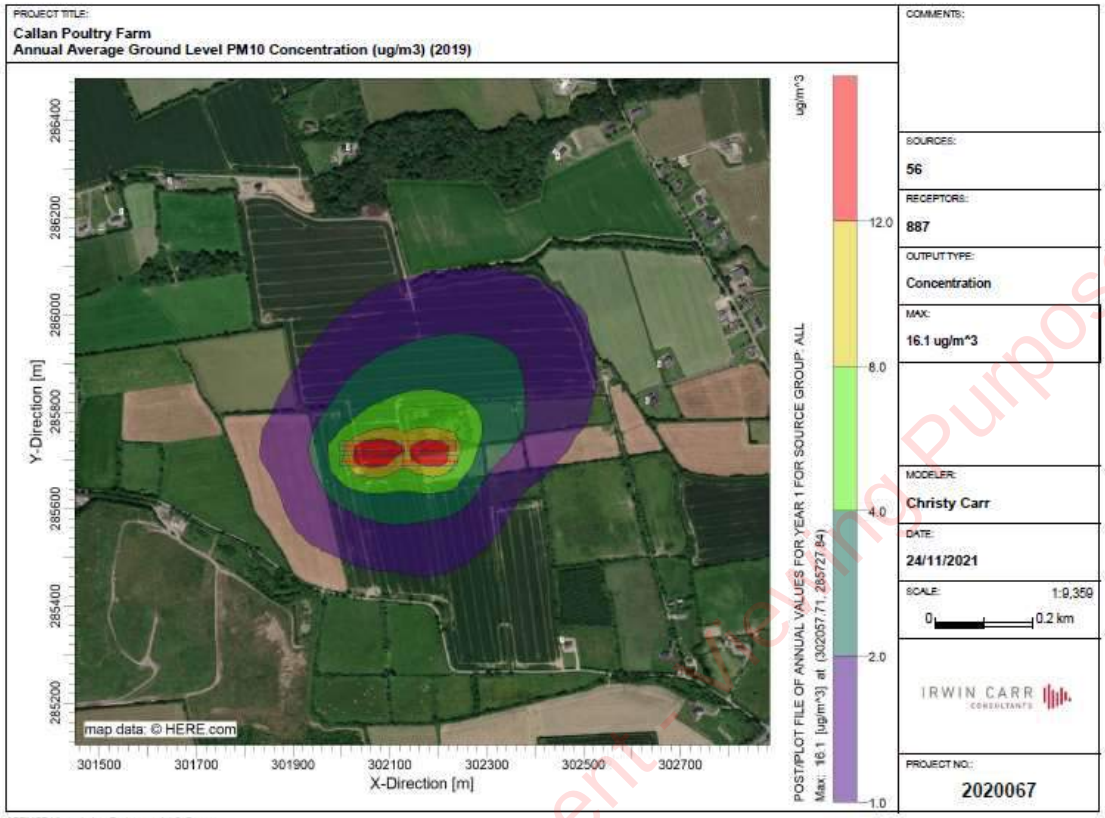


Fig 7.4(I & ii) – Extract from Air Quality Impact Assessment

And

- **Noise impact Assessment, Contained in Appendix No. 22**

Have confirmed that the proposed development will not cause an adverse impact at the closest sensitive receptors and potential impacts will be imperceptible, and/or ithin applicable criteria at these locations**.**

The standard of management required for the proposed farm is high, and the operation of the proposed development, and its integration with the existing farming activities will benefit from the experience gained , coupled with the significant expertise and experience from Manor Farm.

The houses will be continuously cleaned, the manure removed on a regular basis, stocked at optimum levels and adequately ventilated, ensuring minimal odour emissions. Should technical advances be made in any area of operation within the farm Mr. Michael Callan will adopt any economically viable practices. Potential odour emissions from the proposed development will be minimised due to the high standard of design, construction and operation of the proposed farm.

All lands currently identified for the receipt of soiled water from the proposed development are tillage lands, be they Wheat, Barley, Beans etc., and all farmers will be

advised that in order to minimise any potential adverse environmental impact and to ensure that they get maximum fertiliser benefit from the organic fertiliser (soiled water), that all organic fertiliser from this farm should be stored, managed and utilised/applied in accordance with S.I. 605 of 2017, as amended. Odour nuisance will be minimised and surface and ground waters protected by, using the correct application rates, even application, spreading at the correct times under suitable conditions and strict adherence to cordon sanitaires and Good Practice for manure spreading, as outlined in S.I. 605 of 2017, as amended. This fertiliser planning will result in fertiliser substitution.

In addition to the mitigation measures previously referred to Mr. Michael Callan will recommend to all farmers that organic fertiliser / soiled water from this farm should not be applied to lands adjacent to neighbouring dwellings/potential odour sensitive locations. A recommended set back distance of 100 meters from an isolated dwelling and/or 200 meters from a potential odour sensitive area/group of dwellings will be recommended. Please refer to Appendix No. 12 for additional Met. Data.

7.4.1 Odour - The proposed poultry farm and adjoining lands identified for the receipt of soiled water are non-urban based, the rural residents are accustomed to agricultural smells such as animal manure spreading, silage and silage effluent spreading. The rural location of the site of the proposed development and the nature of currently proposed activities on the farm, well isolated from neighbouring dwellings and potential odour sensitive locations makes this an ideal site for the purposes of the proposed development. All practicable steps, such as landscaping, management routines etc., have/will be planned for and will be taken so as to minimise odour from the site. Its rural setting and location distant from local residences will ensure no effect on Human Health/Population. This development will have no significant adverse affect on climate. The closest third party dwelling to the proposed site, is located c. 410m east of the proposed development.

The standard of management required for the proposed farm is high, and the operation of the proposed development, and its integration with the existing farming activities will benefit from the experience gained in the existing farming activities. The houses will be continuously cleaned, the manure removed on a regular basis, stocked at optimum levels and adequately ventilated, ensuring minimal odour emissions.

Odour nuisance will be minimised and surface and ground waters protected by, using the correct application rates, even application, spreading at the correct times under suitable conditions and strict adherence to cordon sanitaires and Good Practice for manure spreading. This fertiliser planning will result in fertiliser substitution, not addition, and all farmers will be advised that Low Emission Spreading Systems (LESS) should be implemented, to minimise odour emissions and maximise the fertiliser value/uptake by the crop.

Site specific ammonia, odour and particulate matter impact assessments were completed as part of the report. Please refer to Appendix No. 21.

As part of these assessments, a total of 8 third party residences have been identified with 410 -750 m of the proposed development.

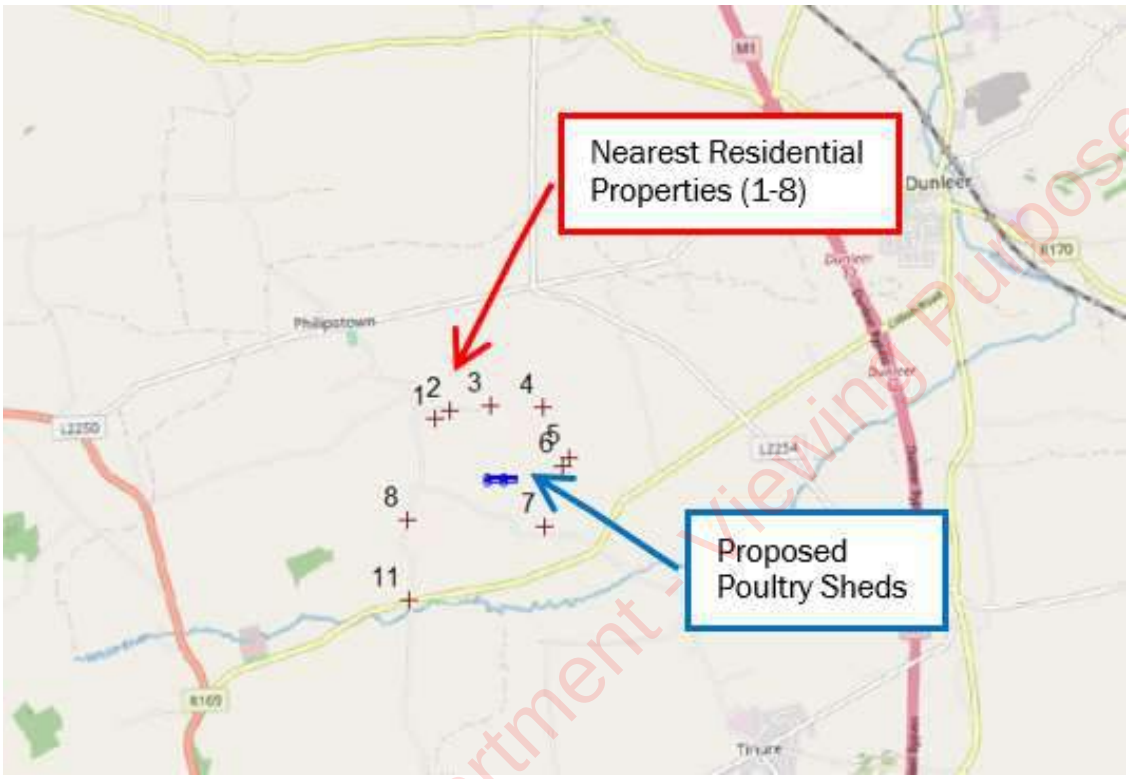


Fig 7.4.1 location of third party residences closest to the existing/proposed pig farm site.

Table 7.4.1: Nearest Residential Properties

Location	Description	Co-ordinates	Approx. distance to nearest shed (m)*
1	Property to the NW	301554 286203	635
2	Property to the NW	301654 286266	625
3	Property to the North	302022 286335	595
4	Property to the NE	302456 286318	620
5	Property to the East	302665 285888	455
6	Property to the East	302640 285813	410
7	Property to the SE	302464 285320	430
8	Property to the SW	301316 285361	750

Odour modelling was carried out for each individual year with the results at the nearest sensitive locations presented in 7.4.2

All results are the odour concentration in (ou/m^3).

Table 7.4.2: 98th Percentile of Max 1-hr odour levels at nearest residential properties

Location	2015	2016	2017	2018	2019	Average
1	0.53	0.41	0.28	0.54	0.54	**0.46**
2	0.56	0.57	0.48	0.55	0.72	**0.58**
3	1.15	1.00	0.95	0.85	1.13	**1.02**
4	1.40	1.61	1.57	1.55	1.26	**1.48**
5	1.43	1.28	1.88	1.22	1.64	**1.49**
6	1.47	1.27	1.98	1.17	1.76	**1.53**
7	0.96	1.08	1.11	0.92	0.88	**0.99**
8	0.28	0.65	0.20	0.57	0.37	**0.41**

For the site layout all third party dwellings are significantly below the 3ou/m^3 when considered as individual years and as a 5-year average of the 98th percentile.

➢ ***CONCLUSIONS (From Odour Impact Assessment Report)***

- An air quality impact assessment has been undertaken for a proposed poultry farm at Rathescar Middle, Dunlerr, Co. Louth
- Odour modelling has been undertaken to detail the impacts from the poultry houses.
- Under the site layout, the maximum 98th percentile of 1-hour ground level odour concentration at the worst effected residential properties with no interest in the operation of the poultry farm, in the vicinity of the site is in accordance with the target limit value for of ≤3ou_E/m^3 when taken as an average of the 5-year period or within any individual 1-year period.

7.4.2 Ammonia (& Nitrogen) Emissions

An ammonia impact assessment was completed based on the potential impact of the proposed development, as discussed further in Section 7.10.

7.4.3 Particulate Matter –

PM_{10}

PM_{10} modelling was carried out for each individual year with the results at the nearest sensitive locations presented in Table below. All results are the concentration in µg/m^3. Please refer to Appendix No. 21 for complete report.

Table 7.4.3.1: Annual Average PM_{10} concentrations at nearest residential locations

	2015	2016	2017	2018	2019	Average
H1	0.20	0.19	0.12	0.19	0.22	**0.18**
H2	0.22	0.23	0.19	0.22	0.23	**0.22**
H3	0.35	0.31	0.29	0.30	0.34	**0.32**
H4	0.54	0.62	0.62	0.64	0.49	**0.58**
H5	0.58	0.50	0.75	0.51	0.62	**0.59**
H6	0.60	0.53	0.75	0.48	0.62	**0.60**
H7	0.35	0.36	0.34	0.36	0.35	**0.35**
H8	0.17	0.21	0.09	0.17	0.14	**0.16**
Limit	**40**	**40**	**40**	**40**	**40**	**40**

The predicted pollutant PM_{10} level concentrations in each year, as well as the 5-year average are significantly below the limit values.

Table 7.4.3.2 below details the 90.4% of the max 24-hour PM_{10} concentrations at each of the sensitive receptors for the MET Data 2015 – 2019.

Table 7.4.3.2: Short Term PM_{10} concentrations at nearest residential locations

	90.4% of Max 24-Hour
H1	0.64
H2	0.77
H3	1.06
H4	1.63
H5	1.68
H6	1.76
H7	1.19
H8	0.60
Limit	**50**

7.5. Climate / Climate Change

The wind direction is from the west/south west. The rainfall levels are low, the annual rainfall for Dublin Airport Station is on average 730mm. The applicant will ensure that manure is allocated for use only at times that is acceptable to the regulatory authorities, i.e. Local Authority, E.P.A. and the Department of Agriculture.

Large livestock populations and nitrogen inputs to soil generate one-third of all greenhouse gases in Ireland. The amount of *methane* emitted by livestock is a lot higher for ruminants such as cattle and sheep versus non-ruminants such as poultry/pigs. This is as a result of the different digestive systems.

N_2O emissions can be divided into three areas,

- Direct from agricultural soils and from agricultural production systems.
- Indirect emissions which take place after nitrogen is lost from the field
- Emissions resulting from agricultural burning.

As the birds will be maintained in a controlled environment within the proposed development, the operation of the farm is not directly significantly susceptible to climate change, however climate change may impact on energy use associated with heating/ventilation systems to maintain a controlled environment within the houses relative to outside climatic conditions, and, may have implications for feed supply to feed the birds, due to impact on crop yields etc.

The fact that the farmers in the proposed customer farmer list are allocating organic fertiliser in accordance with the provisions of S.I. 605 of 2017, as amended, particularly with regard to amounts applied, weather and ground conditions at the time of spreading, and even application, etc., will ensure that emissions are kept to an absolute minimum.

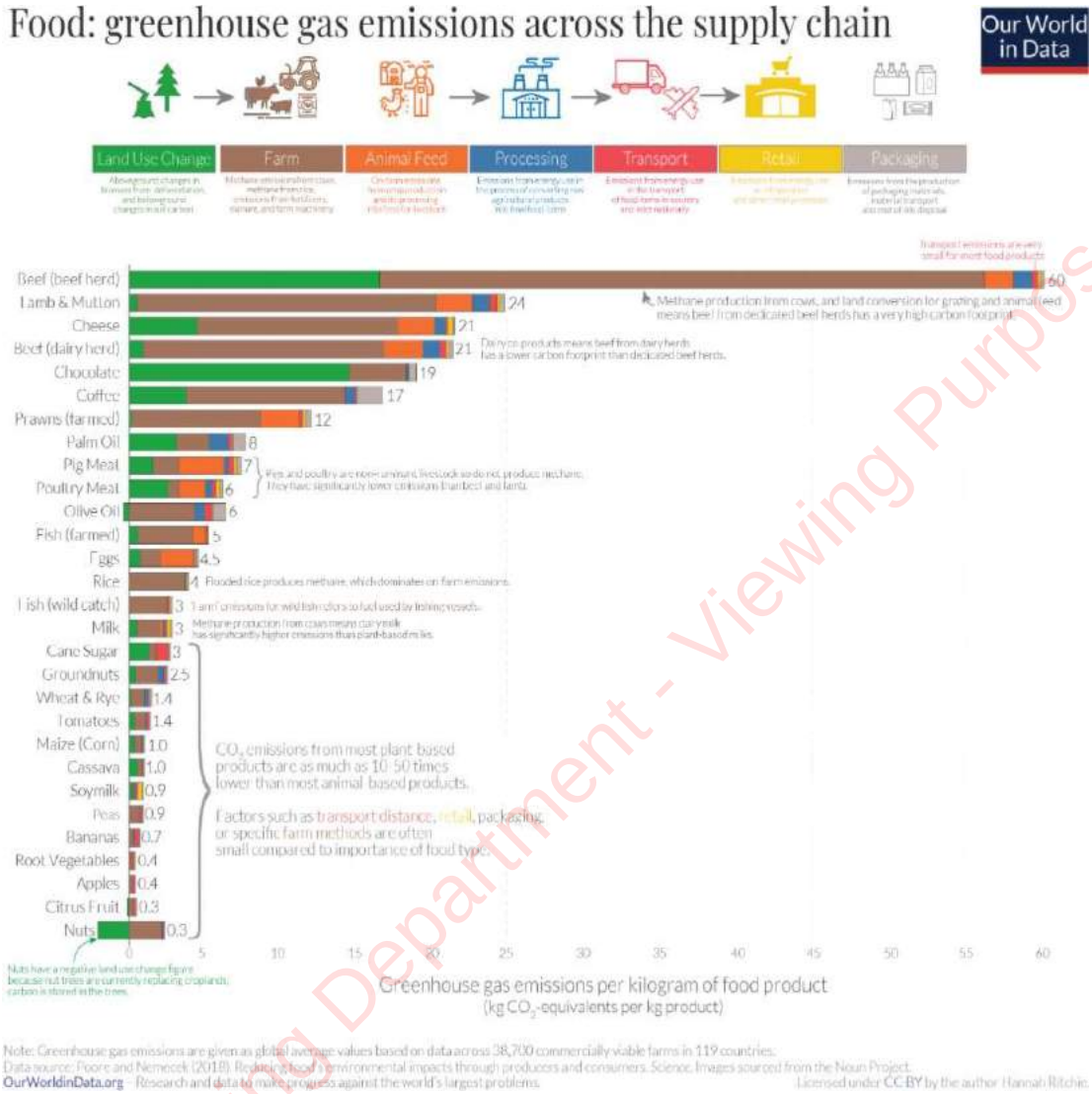


Fig. 7.5.1 Source http:// https://ourworldindata.org/food-choice-vs-eating-local

Please refer to Appendix No. 12 for additional met. data.

Poultry meat is extremely efficient from a carbon perspective. International research shows that poultry has the lowest carbon footprint of all meats and that eggs are an even more carbon efficient source of protein than poultry meat. EU research has confirmed that Irish poultry meat is the most carbon efficient in Europe and with a carbon footprint of 3 kg of carbon equivalents per kg of meat, a consumer can eat seven times more chicken than beef or lamb for the same level of emissions. Poultry is also the most water efficient meat.

7.6 Landscape and Visual Impacts

The site of the proposed development/farm is agricultural land, owned by / available to the applicant. The existing farm, and the site of the proposed development, is adjoining a local road, on c. 4.923 Ha, in the town land of Rathescar Middle. The site is c. 1-1.5 Km's from the regional route, the R169, between Collon and Dunleer and a further c. 2 Km's from the N2 National Route, and 3.4km's from the M1 motorway..

The site is to be accessed via c. 275 m of an internal farm roadway to be developed within the landholding. This proposed development will be situated in an agricultural area c. 4.25 km's south west of Dunleer and c. 7.5 km's south east of Ardee and will be carried out on a greenfield site currently predominantly used for tillage production, with a small area of scrub / immature conifers.

This poultry farm will be located in an agricultural area. The site location nestled into the surrounding land topography and set low in the landscape will help screen the proposed development from view and integrate it into the local area. The proposed development will be bounded on 3 sides by the existing hedgerows, with additional landscaping to be provided where required.

The existing farm and site of the proposed development is not located close to, or likely to adversely impact on;

- Areas of Outstanding Natural Beauty,
- Areas of High Scenic Quality,
- Scenic Routes, Views and/or prospects,

as listed in the Louth Development Plan 2021-2027.

The proposed farm will be developed on a site that is nestled into the surrounding lands and is not intrusive on the landscape. The poultry house will be dark/green in colour with dark/green coloured roofs and approximately 6-6.5 metres in height. The circular feed silos will be c. 10 metres high and are green or grey in colour. While the proposed development will change the appearance of the application site, it is not anticipated that this development will have any significant impact upon the setting of the surrounding countryside, for the following reasons;

- The location selected for the proposed development, integrated into the surrounding landscape, and the selected finished floor level ensures that the proposed development will not have a significant adverse visual impact.

- The location of the site, bounded by the existing hedgerows and with the benefit of additional landscaping will screen the farm from view from the adjoining road.

- The buildings will be clad in Juniper Green cladding (or similar), thus integrating the proposed buildings into the local environment. Should the planning authority request more suitable colours for the buildings, Mr. Michael Callan will be happy to oblige.

As a result of the;

- nature of the proposed development (low overall height, green finish to buildings),
- set back distance from the public road,
- Removed from any sensitive locations (dwelling houses etc.)
- Nature of the site (low set in the landscape)
- Existing hedgerows bounding the site,
- Proposed landscaping

And /or other mitigation measures as outlined, this farm will have no impact on the landscape or visual/scenic characteristics of this area.

7.7 Noise

As detailed previously the proposed development is well removed from any sensitive locations, as detailed in section 7.7. Notwithstanding that Single one off-dwellings are not described in BAT as sensitive locations, (i.e. Area which need special protection from nuisance, such as: Residential Areas & areas where human activities are carried out (e.g. schools, day care centres, recreational areas, hospitals or nursing homes) a Noise impact assessment was completed for the proposed development. Same is contained in Appendix No. 22.

Table 7.7

Location	Description	Co-ordinates	Approx. distance to nearest shed (m)*
1	Property to the NW	301554 286203	635
2	Property to the NW	301654 286266	625
3	Property to the North	302022 286335	595
4	Property to the NE	302456 286318	620
5	Property to the East	302665 285888	455
6	Property to the East	302640 285813	410
7	Property to the SE	302464 285320	430
8	Property to the SW	301316 285361	750

7.7.1 OPERATIONAL NOISE IMPACT ASSESSMENT

As detailed in the Noise Impact Assessment Report (Appendix No. 22) , there were four identified operational noise emission sources of significance associated with the proposed development. These were as follows:

- **Poultry House Livestock (Poultry) Emissions**

The four houses are to house a total of 50,000 birds each with approximately 200,000 birds in total. Although this is a large number of animals, noise emissions from chickens are typically very low and all livestock will be contained internally. However, in order to provide sufficient supporting validation for our assessment, we conducted noise measurements at an existing and similar chicken farm; Barry's Poultry Farm in Lismore, Co. Waterford.

Barry's Poultry Farm has two large houses that are similar to those of the proposed development with approximately 14,000 chickens in one and 18,000 chickens in the other. Noise level measurements were conducted for approximately 30-minute periods at a distance of around 3m from the façade of the chicken house containing 18,000. However, at no time during these measurements was livestock noise audible. Noise levels measured were controlled by the ventilation system along with contributions from wind noise and birdsong and were only in the range of 37 - 41dB L_{Aeq}.

Given the relative inaudibility of livestock noise and the fact that the measured noise levels in the vicinity of the houses are already below the night time criteria (even without correcting for the additional 430 - 750m distances), livestock noise emissions are expected to be inaudible and well below criteria at both adjacent NSLs. No further mitigation measures are therefore recommended.

No further mitigation measures are therefore required in respect of poultry house livestock emissions.

- **Feed Delivery Truck Events**

We understand that feed trucks will only make deliveries four times per week and that they will last for about an hour on average. This will mean that a 'worst case' scenario would only see delivery truck noise occurring 4 - 5 hours per week.

The noise level at a distance of 3m from a feed truck during a typical delivery is of the order of 87dB $L_{Aeq,30min}$. Noise level emission predictions based on a noise level of this order to each of these nearby noise sensitive locations are as follows:

Noise Sensitive Receptor	Daytime Level	Night Time Level
Dwelling to East	34dB L_{Aeq}	N/A
Dwellings to Southeast	34dB L_{Aeq}	N/A
Dwellings to North / Northwest	31dB L_{Aeq}	N/A
Dwelling to Southwest	29dB L_{Aeq}	N/A

The predicted noise emission level of delivery truck activity is in the range of 29 - 34dB L_{Aeq} at the nearest noise sensitive locations during a typical delivery event. Levels of this order would only be less than both the daytime ambient noise criteria and ambient noise levels at all nearby NSLs. In addition, given that these noise emissions would only occur 4 - 5 hours per week, it would be considered even less significant on a time consideration basis.

In summary, the predicted noise levels associated with delivery truck events would have an imperceptible impact on the adjacent noise sensitive locations.

No mitigation measures would therefore be required in respect of feed delivery truck events apart from restricting their occurrences to daytime periods only.

- **Poultry House Ventilation Fans**

The poultry houses are to be served by ventilation fans that will locate on the roof of each building. Noise level data received from the unit manufacturer for selected fans for a similar, previous assessment (Ziehl-Abegg) have sound power levels ranging between 78 - 85dB L_w.

The current design calls for fourteen of these fans to be installed on the rooftop of the building and for four supplemental fans to be provided on the gable end of each poultry house. In order to consider a reasonable worst-case situation, we have considered that the gable fans will locate on the outer facing sides of each building as shown in Figure 4 below.

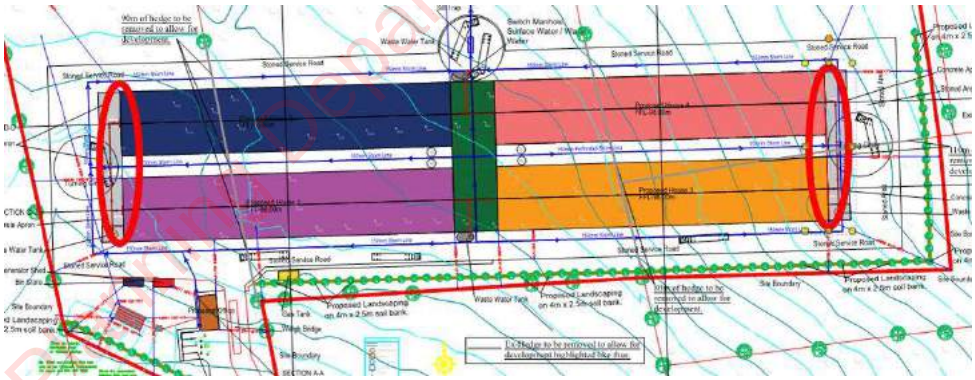


Figure 7.7.1 Poultry House Gable Fan Locations

Furthermore, although the gable end fans will only operate during emergency situations / extreme weather events, in order to consider an extreme worst case condition, we have also assumed that all of the relevant fans will be operating at their full (i.e. loudest) capacity of 72dB L_{Aeq} at 3m and that the fans are running continuously throughout both daytime and night time periods.

Noise level emission predictions based on the provision of fans with noise levels of this order to each of these nearby noise sensitive locations are as follows:

Noise Sensitive Receptor	Daytime Level	Night Time Level
Dwelling to East	30dB $L_{Aeq,16hr}$	30dB $L_{Aeq,8hr}$
Dwellings to Southeast	30dB $L_{Aeq,16hr}$	30dB $L_{Aeq,8hr}$
Dwellings to North / Northwest	27dB $L_{Aeq,16hr}$	27dB $L_{Aeq,8hr}$
Dwelling to Southwest	25dB $L_{Aeq,16hr}$	25dB $L_{Aeq,8hr}$

The predicted noise emission levels of these fans are in the range of 25 - 30dB $L_{Aeq,T}$ at the nearest noise sensitive locations. Noise levels of this order would be below both the relevant criteria as well as the average ambient noise levels at each location during both daytime and night time periods. In addition, it is important to note that our assessment considers a worst-case condition. It is likely that all fans will not be operating at maximum capacity during night time periods and some may not even be operating at all. This will likely reduce poultry house ventilation fan noise emissions even lower than those predicted.

No further mitigation measures are therefore required for the poultry house ventilation fans apart from ensuring they are selected at a maximum noise emission level of 85dB L_w.

- **Emergency Generator**

We understand that the generator that will be provided is emergency use only and therefore need not be considered as part of this assessment. However, we would still recommend selection of a low noise generator (i.e. ≤85dB(A) at 3m) in order to minimise any potential nuisance to the adjacent noise sensitive locations in the event of a local power outage.

Cumulative Noise Levels

The total level of combined noise emissions from the proposed development noise sources can be determined by summing together all of the individual contributions. The total levels of each are summarised and totalled in Tables below. Note that, again, this would be considered a worst-case condition as it assumes feed delivery truck events are occurring constantly over the full 16-hr daytime period and constant operation of the ventilation fans.

Noise Source	Noise Level Emission (dB $L_{Aeq,16hr}$)			
	Dwellings to East	Dwellings to Southeast	Dwellings to North / Northwest	Dwelling to Southwest
Poultry House Livestock Emissions	Negligible.	Negligible.	Negligible.	Negligible.
Feed Delivery Truck Events	34	34	31	29
Poultry House Ventilation Fans	30	30	27	25
Cumulative Noise Level	36	36	33	31

Table 7.7.1A Proposed Development Cumulative Noise Levels - Daytime Period Summary

Noise Source	Noise Level Emission (dB $L_{Aeq,8hr}$)			
	Dwellings to East	Dwellings to Southeast	Dwellings to North / Northwest	Dwelling to Southwest
Poultry House Livestock Emissions	Negligible.	Negligible.	Negligible.	Negligible.
Feed Delivery Truck Events	N/A	N/A	N/A	N/A
Poultry House Ventilation Fans	30	30	27	25
Cumulative Noise Level	30	30	27	25

Table 7.7.1B Proposed Development Cumulative Noise Levels - Night Time Period Summary

These cumulative noise levels are compared with the established project noise emission criteria in Tables C & D below.

Location	Predicted Noise Level	Noise Emission Criteria	Compliant?
Dwelling to East	36dB $L_{Aeq,16hr}$	50dB $L_{Aeq,16hr}$	Yes
Dwellings to Southeast	36dB $L_{Aeq,16hr}$		Yes
Dwellings to North / Northwest	33dB $L_{Aeq,16hr}$		Yes
Dwellings to Southwest	31dB $L_{Aeq,16hr}$		Yes

Table 7.7.1C Proposed Development Daytime Noise Emission Level Comparison with Established Criteria

Location	Predicted Noise Level	Noise Emission Criteria	Compliant?
Dwelling to East	30dB $L_{Aeq,8hr}$	45dB $L_{Aeq,8hr}$	Yes
Dwellings to Southeast	30dB $L_{Aeq,8hr}$		Yes
Dwellings to North / Northwest	27dB $L_{Aeq,8hr}$		Yes
Dwellings to Southwest	25dB $L_{Aeq,8hr}$		Yes

Table 7.7.1D Proposed Development Night Time Noise Emission Level Comparison with Established Criteria

As can be seen in the tables above, the expected levels of noise emissions from the proposed development are within the established criteria at all nearby noise sensitive receptors as well as being below the existing ambient noise level at each. It should also be reiterated that the noise level conditions that were assessed for each aspect of the development would be considered worst case in each instance.

There is therefore no significant noise impact that would be expected from the proposed poultry farm development on any of the identified nearby noise sensitive receptors.

7.7.2 CONSTRUCTION NOISE IMPACT ASSESSMENT

A variety of items of plant will be in use for the construction of the poultry farm development, such as excavators, lifting equipment and dumper trucks. There will also be vehicular movements to and from the site that will make use of existing roads.

Due to the fact that the construction programme has not been established, it is difficult to calculate the actual magnitude of noise emissions to the local environment. However, it is possible to predict typical noise levels using guidance set out in *BS 5228-1: 2009: Code of practice for noise and vibration control on construction and open sites - Part 1: Noise*.

As discussed previously, the nearest noise sensitive receptors are detached residential dwellings located to the southeast, north / northwest and southwest at distances of 410m, 430m, 595m and 750m from the proposed development boundary respectively.

It must be stated that for the majority of the time, plant and equipment will be at a slightly greater distance than that used for the calculations and consequently will have lesser impact. Our assessment would therefore be representative of a "worst-case" scenario.

Note that a utilisation of equipment of 75% over a working day was assumed in the preparation of these construction noise predictions.

Phase	Plant Item (BS 5228 Ref.)	Plant Noise Level at 10m Distance[2] (dB L_{Aeq})	Predicted Noise Level at Dwelling to East (dB $L_{Aeq,1hr}$)	Predicted Noise Level at Dwellings to Southeast (dB $L_{Aeq,1hr}$)	Predicted Noise Level at Dwellings to North/Northwest (dB $L_{Aeq,1hr}$)	Predicted Noise Level Dwelling to Southwest (dB $L_{Aeq,1hr}$)
Demolition & Site Preparation	Tracked excavator (C2.22)	72	35	35	32	30
	Dumper (C4.2)	78				
Foundation Laying	Compressor (D7 6)	77	38	38	35	33
	Poker Vibrator (C4 33)	78				
	Cement Mixers (C4.22)	76				
Steel Erection	Wheeled Mobile Crane (C4.38)	78	37	37	34	32
	Articulated Lorry (C11.10)	77				
General Construction	Compressor (D7 6)	77	38	38	35	33
	Diesel Hoist (C7.98)	76				

[2] All plant noise levels are derived from BS 5228: Part 1.

Phase	Plant Item (BS 5228 Ref.)	Plant Noise Level at 10m Distance[2] (dB L_{Aeq})	Predicted Noise Level at Dwelling to East (dB $L_{Aeq,1hr}$)	Predicted Noise Level at Dwellings to Southeast (dB $L_{Aeq,1hr}$)	Predicted Noise Level at Dwellings to North/Northwest (dB $L_{Aeq,1hr}$)	Predicted Noise Level Dwelling to Southwest (dB $L_{Aeq,1hr}$)
	Pneumatic Circular Saw (D7.79)	75				
	Generator (C4.84)	74				
	Internal Fit-out	70				
Roadworks	Surfacing & Rolling (D.8.26)	80	36	36	33	31

Table 7.7.2A Predicted Noise Emission Levels at Nearest NSLs During Construction Phases

The predicted construction noise levels at the nearest residential dwellings in the vicinity of the proposed development are all well within the maximum criteria for construction activities during daytime, evening and weekend periods in accordance with the criteria in Table 1. They are also below the daytime background noise levels at each and therefore will likely be inaudible for most of the time.

Nevertheless, in order to ensure that the Poultry Farm construction noise is reduced as far as practicable, we would recommend that the following measures be employed:

- ✓ Restrict the hours of construction activities to weekday daytime periods only (due to predicted noise emissions likely being slightly audible during quieter, night time periods).
- ✓ Establish channels of communication between the contractor/developer, Local Authority and residents, etc.
- ✓ Appoint a site representative responsible for matters relating to noise emissions.
- ✓ Selection of plant with low inherent potential for generation of noise.

CONCLUSIONS

A comprehensive assessment of noise emissions from the proposed Rathescar Poultry Farm was conducted in relation to its planning permission submission. An ambient environmental noise survey was conducted in order to quantify the existing noise sources and levels in the area. The results of this survey were used in conjunction with applicable noise criteria to determine the relative noise impact of the development on adjacent noise sensitive locations and required noise mitigation measures to protect the amenity of the adjacent dwellings.

The results of the assessment confirmed that potential noise emissions from the proposed poultry farm noise sources are expected to be very low and should have an imperceptible impact on all of the residential dwellings located in the vicinity. It should also be noted that the ambient noise levels measured during the survey were atypically low due to the virtually non-existent traffic flows under the Covid-19 restrictions which means that the development noise emissions will likely be even further below the ambient noise levels in this report once these restrictions are lifted.

The only mitigation measures that were deemed as being required in relation to this assessment (apart from general guidance for the construction phase) consisted of the following:

- ✓ Selection of low noise emergency generator (≤85dB(A) at 3m).
- ✓ Selection of poultry house ventilation fans with maximum sound power levels of 85dB L_w.
- ✓ Restricting feed delivery truck events to daytime periods only.

Provided these measures are appropriately incorporated into the design of the development, we would not expect there to be a risk of a noise impact occurring from any of the identified sources of the proposed poultry house development.

7.8 Traffic

While the proposed development will increase the traffic volume to and from the proposed site, this will be achieved without any significant adverse impact on the local road network in the area. A revised provisional agreement has been reached with Louth Co. Co. for the provision of lay-by's on the public road to facilitate the proposed development and improve traffic safety, in line with the previous comments of An Bord Pleanala. Please refer to Traffic Impact Assessment contained in Appendix No. 23.

7.8.1 Operational Traffic:

The average traffic flow currently anticipated with the proposed development include;

1. c. 1 load of organic fertiliser / poultry manure per week on average per annum.
2. 4 feed deliveries/week.
3. 5 bird deliveries/collections/week.
4. c. 4 staff movements per day
5. and additional traffic due to veterinary inspections, farm maintenance, waste collection etc.

Transport of dead birds will occur on a weekly/fortnightly basis in line with Louth Co. Co. and E.P.A. requirements, and is integrated into the waste collectors collection schedule for this area. All other wastes such as fluorescent tubes, general waste etc. will be stored appropriately and will be removed from the farm by approved contractors and/or to approved sites in line with E.P.A. and Louth Co. Co. requirements.

There will be a temporary increase in traffic due to the construction of the proposed development, however this will cease upon completion of the development. This will involve deliveries of steel, concrete, building materials, equipment etc. While there will be new traffic movements to and from the site due to feed deliveries, manure transport and other associated traffic, this will be minimised by optimising load sizes, and co-ordinating collections/deliveries with the existing facilities so as to minimise this traffic.

The applicant appreciates that the proposed development will result in additional traffic at the site entrance. However specific measures, including the;

- use of a new/upgraded agricultural entrance
- provision of adequate sight lines,
- trimming back of hedgerows,
- relocation of entrance gate away from the public road so as to ensure that all traffic has moved off the road before it has to stop,
- and the provision of a proper bellmouth entrance, with the provision to only turn right on exit. etc.
- provision of lay-bys on the approach to the entrance.

have been provided for so as to ensure that same does not pose any risk to road safety at this juncture.

A site specific Traffic Impact Assessment (See Appendix. No. 23) was completed to assess any potential impacts arising from the propose development.

GENERATED TRAFFIC VOLUMES

a. The proposed poultry farm facility shall operate on a 7 week cycle. Young chicks shall be brought to the facility at the start of each cycle, fed and housed for between 5 – 6 weeks before being transported off site as an adult bird. The buildings shall then be washed down and left to dry for between 1 – 2 weeks before a new cycle commences.

b. The process shall generate traffic movements at different stages of the cycle as follows:

Stage	***Process***	***Total No. of Vehicles***	***Max. Vehicles per Day***
Day 1, Day 2	Young chicks moved to the farm	3	2
Day2 – Day 34	Feed delivered	25	1
Day 35-42	Birds removed from the farm (3 day period)	25	10
Day 42-45	Organic bird waste /manure removed from the facility	8	4
Day 46-50	Houses washed down, allowed dry & bedding put in place for new batch of birds	1	1
Day 1 – Day 50	Staff members accessing site	150	3
Day 1 – Day 50	Visitors, Vet Inspections. Farm Maintenance	50	1
Total		262	

c. The proposed facility shall generate a total of 262 vehicles over a typical 7 week cycle equating an average of 5.25 vehicles per day. The volume of generated traffic shall rise to 14 vehicles during the bird removal process

d. Traffic shall not be generated on a consistent basis throughout the period and the daily traffic volumes would vary as follows:

Period	*Total Daily Volume generated*
Day 1, Day 2	6
Day 2 – Day 34	5
Day 35-Day 42	14
Day 42-Day 45	8
Day 46-Day 50	5

In general, the daily traffic generated shall amount to only 5 in/out trips per day for most of the cycle with short bursts of increased traffic activity at both the start and end of the cycle. The heaviest traffic shall be generated during the process of removing the adult birds from the site, with up to 14 trips per day during this period.

e. The vehicles used for the transfer of birds into and out of the site and for the delivery of feed material shall be 46 tonne vehicles in order to maximise the payload and minimise the number of vehicles. The vehicles shall have 6 axles ensuring that the axle loading of 7.67 tonne/axle remains below the limit of 11.5tonne/axle permitted on public roads.

f. 61 or 23% of the traffic generated during each cycle shall be the 46 tonne vehicles with the remainder being standard cars or light vehicles.

g. The total volume of general heavy traffic (427 per year) equates to 1.2 milk tankers per day and cannot be considered to be atypical for a rural road.

7.8.2 Construction Traffic

The completion of the proposed development is expected to be completed on a phased basis, over a 18-36 month period. Due to the level nature of the site it is not expected that there will be any excess soil to be removed off-site. Any topsoil moved from the site of the proposed development will be used for landscaping works as previously identified.

HGV Construction traffic to and from the site will involve the movement of,

- plant and machinery to the site,
- Stone for roadway and site development /levelling
- Concrete (Ready Mix)
- Pre- Cast concrete wall panels.
- Insulated wall panels.
- Roofing materials
- Feeding, Drinking , Ventilation Systems.

This will equate to c. 3-4 loads/day over the construction period, with an additional 2 – 4 journeys daily associated with labour to and from the site. Approximately 80% of the HGV construction traffic will be associated with concrete and stone which can be supplied locally.

(b) Site and immediate area

As previously described the site and adjoining area is predominantly agricultural lands that have been intensively managed over a long number of years, albeit that the site area also incorporates a small area of scrub/immature conifers. The area of the proposed site forms part of the existing landholding owned/farmed by Mr. Michael Callan, and/or is available to the applicant. The area of the proposed site is currently intensively managed agricultural lands, and/or a small area of scrub/immature conifers, and as such the flora and fauna associated with this site has developed in this context.

The proposed development will required some hedgerow removal to facilitate the site development works including on site and at the site entrance to achieve the required sight lines, however no significant habitats will be impacted and the length of hedgerow proposed as part of the proposed development will exceed that to be removed. The lay-by's along the public road can be facilitated at existing entrances/openings and while same will require trimming , there will be minimal if any hedgerow removal. Notwithstanding same the proposed development will have no significant adverse impact on flora and fauna outside of the proposed site.

The majority of the land in the surrounding area is used for grass/arable based agricultural production. The flora and fauna associated with this site has developed accordingly as the site has been managed over the years. There are no specific unique habitats on, or adjacent to this site that require specific protection, and/or are likely to be adversely impacted by the proposed development. This proposed development is not anticipated to adversely impact, either directly or indirectly on any NHA, SAC, and/or SPA.

(b) Proposed customer farmlands (Soiled Water).

All organic fertiliser / soiled water from this farm will be allocated for use in accordance with S.I. 605 of 2017, as amended. This legislation which is applicable to all farmers in the country with regard to the application of organic and inorganic fertiliser places certain requirements on farmers with regard to the application of organic fertiliser / poultry manures. In order to prevent any adverse impact on flora and fauna in the area the following practices are to be implemented,

- Organic fertiliser / soiled water from this farm is not to be allocated to areas of woodland/scrubland habitat.
- Organic fertiliser / soiled water from this farm is not to be allocated within 10m of hedgerows.
- Organic fertiliser / soiled water from this farm is not to be allocated within 5m of a watercourse or 20 m of a lake shoreline
- Organic fertiliser / soiled water from this farm is not to be applied to areas where it is likely to adversely impact on a N.H.A., S.A.C. and/or S.P.A, or other such sensitive area.

- Organic fertiliser / soiled water from this farm is not to be applied within 10 m of an archaeological feature.

There should be no negative impact on the flora and fauna of the area from activities associated with this development. It will be advised that organic fertiliser (soiled water) spreading operations be carried out in accordance with Codes of Good Practice.

7.10. Biodiversity - Special Policy Areas

(A) Nationally Designated Environmental Areas

The proposed development is located a significant distance from the closest Natura 2000 site (Stabannan-Braganstown SPA) and a significant distance (>15 Km's upsteam) from Dundalk Bay SPA / SAC. It is not expected to have any adverse affect on the conservation of these areas and the flora and fauna contained therein for the following reasons,

- The proposed poultry houses are located a significant distance away from any such areas, as identified in the County Development Plan, and farming activities have been carried out on this site to date without any adverse impact on the designated areas.
- All organic fertiliser / poultry manure arising from this farm is to be allocated to lands in accordance with S.I. 605 of 2017, as amended.
- Given that the manure will be in a dry/solid form there is none of the perceived risks associated with liquid manures.

Due to the location of the proposed poultry farm site, located away from such areas it will not have an adverse environmental impact on same. All farmlands proposed for the receipt of soiled water from this farm will allocate same in accordance with S.I. 605 of 2017, as amended, so as to ensure that there is no significant adverse impact on any of these areas.

Significant atmospheric emissions arising from agricultural developments can have negative impacts upon designated sites and their sensitive vegetation communities. Some vegetation communities are most sensitive to the effects of ammonia and nitrogen deposition than others. In general, communities containing notable bryophyte communities are the most sensitive and have a lower critical load for ammonia of 1 µg/m^3. Less sensitive habitats have a critical load of 3 µg/m^3.

The proposed development will also lead to atmospheric emissions, mainly in the form of ammonia and nitrogen. In order to predict atmospheric emissions (ammonia and nitrogen) from the development of this facility, a SCAIL model (Simple Calculation of Atmospheric Impact Limits) was run by CLW Environmental Planners to determine/screen the potential impacts on the Natura 2000 sites within 15km. In this instance a number of factors were taken into account, such as the use of natural ventilation (i.e., no fans used which, will/would reduce the potential impacts at receptor sites), in line with EPA guidelines (May 2021).

Ammonia

The results of the SCAIL outputs for ammonia are presented in Table 8. This SCAIL model was ran for the full number of birds on the farm, i.e., 200,000.

Stabannan-Braganstown SPA 004091				
Background NH3	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL Range**
2.92 µg/m^3	0.052 µg/m^3	2.97 µg/m^3	1 -3 µg/m^3	5.1% - 1.7%
The River Boyne and River Blackwater SAC 002299				
Background NH3	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL Range**
2.84 µg/m^3	0.039 µg/m^3	2.87 µg/m^3	1 -3 µg/m^3	3.8% - 1.28%
River Boyne and Blackwater SPA 004232				
Background NH3	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL Range**
2.97 µg/m^3	0.033 µg/m^3	3 µg/m^3	1 -3 µg/m^3	3.2% - 1.08%
Dundalk Bay SPA 004026				
Background NH3	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL Range**
2.52 µg/m^3	0.030 µg/m^3	2.55 µg/m^3	1 -3 µg/m^3	2.9% - 0.98%
Dundalk Bay SAC 000455				
Background NH3	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL Range**
2.52 µg/m^3	0.030 µg/m^3	2.55 µg/m^3	1 -3 µg/m^3	2.9% - 0.98%

The Boyne Estuary SPA 004080				
Background NH3	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL Range**
2.43 µg/m^3	0.021 µg/m^3	2.45 µg/m^3	1 -3 µg/m^3	2.07% - 0.69%
Boyne Coast and Estuary SAC 001957				
Background NH3	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL Range**
2.4 µg/m^3	0.020 µg/m^3	2.42 µg/m^3	1 -3 µg/m^3	1.9% - 0.65%
Clogher Head SAC 001459				
Background NH3	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL Range**
2.4 µg/m^3	0.018 µg/m^3	2.41 µg/m^3	1 -3 µg/m^3	1.8% - 0.60%

Table 7.4.1 – Ammonia Loadings Arising from Proposed Development on Natura 2000 Sites

It should be also be noted that the SCAIL model that is normally run for the prediction of emissions is very conservative, and the actual ammonia emissions from the facility are likely to be much lower. In addition, the prevailing winds will largely carry most of the emissions from the site away from these designated areas and their sensitive ecological receptors. Therefore, it can be concluded that the actual impact from ammonia is predicted to be at the lower end of the range as detailed above in Table 8.

Nitrogen Levels

The SCAIL results for the predicted deposition of nitrogen are presented in Table 9. For the SACs, either the SCAIL critical loads or those defined by APIS (Air Pollution Information System) were used. For the SPAs, the SCAIL model cannot generate critical loads as SPAs are designated for species rather than habitats and therefore no critical loads are available. In some SACs, the habitat qualifying interests are listed as not being sensitive to nitrogen deposition.

Stabannan-Braganstown SPA 004091				
Background N	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL**
7.4 kg N/ha/yr	0.27 kg N/ha/yr	7.6 kg N/ha/yr	No Sensitive N Receptors in this SPA	-
The River Boyne and River Blackwater SAC 002299				
Background N	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL**
7.9 kg N/ha/yr	0.2 kg N/ha/yr	8.1 kg N/ha/yr	15 kg N/ha/yr (alkaline fen)	1.3%
			Alluvial Forests are Not Considered as Nitrogen Sensitive	-
River Boyne and Blackwater SPA 004232				
Background N	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL**
7.7 kg N/ha/yr	0.17 kg N/ha/yr	7.9 kg N/ha/yr	No Sensitive N Receptors in this SPA	-
Dundalk Bay SPA 004026				
Background N	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL**
6.9 kg N/ha/yr	0.15 kg N/ha/yr	7 kg N/ha/yr	No Sensitive N Receptors in this SPA	-
Dundalk Bay SAC 000455				
Background N	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL**
6.9 kg N/ha/yr	0.15 kg N/ha/yr	7 kg N/ha/yr	8 kg N/ha/yr Perennial Vegetation of Stony Banks	1.87%
			Remaining Habitats are not Listed as being N sensitive	-

The Boyne Estuary SPA 004080				
Background N	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL**
3 kg N/ha/yr	0.11 kg N/ha/yr	3.1 kg N/ha/yr	No Sensitive N Receptors in this SPA	-
Boyne Coast and Estuary SAC 001957				
Background N	**Process Contribution**	**Total Conc.**	**Critical Load**	**% of CL**
6 kg N/ha/yr	0.1 kg N/ha/yr	6.1 kg N/ha/yr	8 kg N/ha/yr Fixed dunes with herbaceous vegetation	1.25%
			Remaining Habitats are not Listed as being N sensitive	-
Clogher Head SAC 001459				
Background N	Process Contribution	**Total Conc.**	**Critical Load**	**% of CL**
6 kg N/ha/yr	0.1 kg N/ha/yr	6.1 kg N/ha/yr	10 kg N/ha/yr European dry heaths	1 %
			Vegetated Sea Cliffs are not Considered N Sensitive	-

Table 7.4.2 – Nitrogen Loadings Arising from Proposed Development on Natura 2000 Sites

In order to correctly assess and to correctly mitigate against the potential impacts of the operation of the farm on the Natura 2000 sites, detailed atmospheric modelling of the proposed development was undertaken by Irwin Carr Consulting in November 2021. The overall purpose of this report was to quantify the ammonia and nitrogen levels at the ecologically sensitive areas in the vicinity of the proposed poultry farm. The predicted impacts can then be compared to an appropriate criterion and graphically illustrated in the form of "contours of equal concentration" or isopleths which are superimposed on base maps.

The site specific Ammonia Assessment has confirmed that the proposed development will not adversely impact on any Natura 2000 site.

Using an AERMOD Dispersion Modelling Package, the projected ammonia and nitrogen emissions from the proposed development at Ratheskar Middle were modelled using details such as animals per house and the ventilation proposed for each house. Other factors taken into consideration as part of the model included, meteorological data, building downwash and digital terrain data. Fans have been considered as mitigation for the purpose of this NIS.

For the purposes of this Ammonia Impact Assessment report, and based on the earlier results of the SCAIL screening assessment, all Natura 2000 sites over 7.5km were screened out from detailed assessment (Using Scail and In line with E.P.A. Guidance) , therefore the report only included a detailed assessment for the Stabannon-Braganstown SPA. Apart from this site, the SCAIL model generated a CL limit of less than 4%, for ammonia and N for all remaining sites.

The report provided the annual average ammonia concentrations at this SPA and other proposed Natura Heritage Areas within 7.5km. The results for ammonia are presented in Table 10, whilst Table 11 provides an assessment of the process contribution for ammonia on the Natura 2000 sites arising from the proposed development.

Natura 2000 Site	2015	2016	2017	2018	2019	Average
Stabannon-Braganstown SPA	0.008	0. 008	0. 006	0. 008	0. 008	0. 008

Table 7.10.1 – Ammonia Concentrations (µg/m3) at the Stabannon-Braganstown SPA (Taken from Table 16 Of Ammonia Impact Assessment Report)

Natura 2000 Site	Critical Load Guideline	Background	Highest PC	PEC	PC / Guideline Level (%)	PEC / Guideline Level (%)
Stabannon-Braganstown SPA	3	2.6	0.008	2.608	0.3	87

Table 7.10.2 – Ammonia Concentrations (µg/m3) at the Stabannon-Braganstown SPA – Predicted Impacts from the Proposed Development (Taken from Table 17 Of Ammonia Impact Assessment Report)

The AERMOD modelling report also provided an estimate of nitrogen arising from the proposed poultry farm. A summary is provided in Table 12.

Natura 2000 Site	Guideline	Background	Highest PC	PEC	PC / Guideline Level (%)	PEC / Guideline Level (%)
Stabannon-Braganstown SPA	20	7.41	0.04	7.45	0.21	37

Table 12 – Nitrogen Concentrations (kg/N/ha/yr) at the Stabannon-Braganstown SPA – Predicted Impacts from the Proposed Development (Taken from Table 19 Of Ammonia Impact Assessment Report)

It was concluded that the nitrogen concentrations at this SPA is dominated by the background concentrations which is 76% of the guidance level for the site. The critical load at this SPA will not be exceeded due to emissions from the proposed development.

Overall, the Ammonia Impact Assessment report concluded that with mitigation, the proposed development will have no impact upon the Stabannon-Braganstown SPA, which is 7.1km from the application site. The critical loads for this site as outlined in the guidelines will not be exceeded. It can also be reasonably concluded that other Natura 2000 sites beyond 7.5km but not included in the detailed assessment will not be impacted due to deposition of ammonia or nitrogen. These sites that are further away would receive a deposition less than 0.008 µg/m3 for ammonia and less than 0.04 kg/N/ha/yr for nitrogen, and have been screened out using scail modelling (in line with E.P.A Guidance (May 2021)).. These levels can be considered as *de-minimus.*

- ***Conclusions (From ammonia Impact Assessment Report)***

- An air quality impact assessment has been undertaken for a proposed poultry farm at Rathescar Middle, Dunleer, Co. Louth.
- Modelling has been undertaken to assess the predicted impact of the proposed development.
- The predicted results of the ammonia modelling process show that the limits for the protection of vegetation are not exceeded at the designated habitats within the vicinity of the poultry farm. Thus, any areas of ecological interest will not be adversely affected from the ammonia emissions for the operation of the farm.

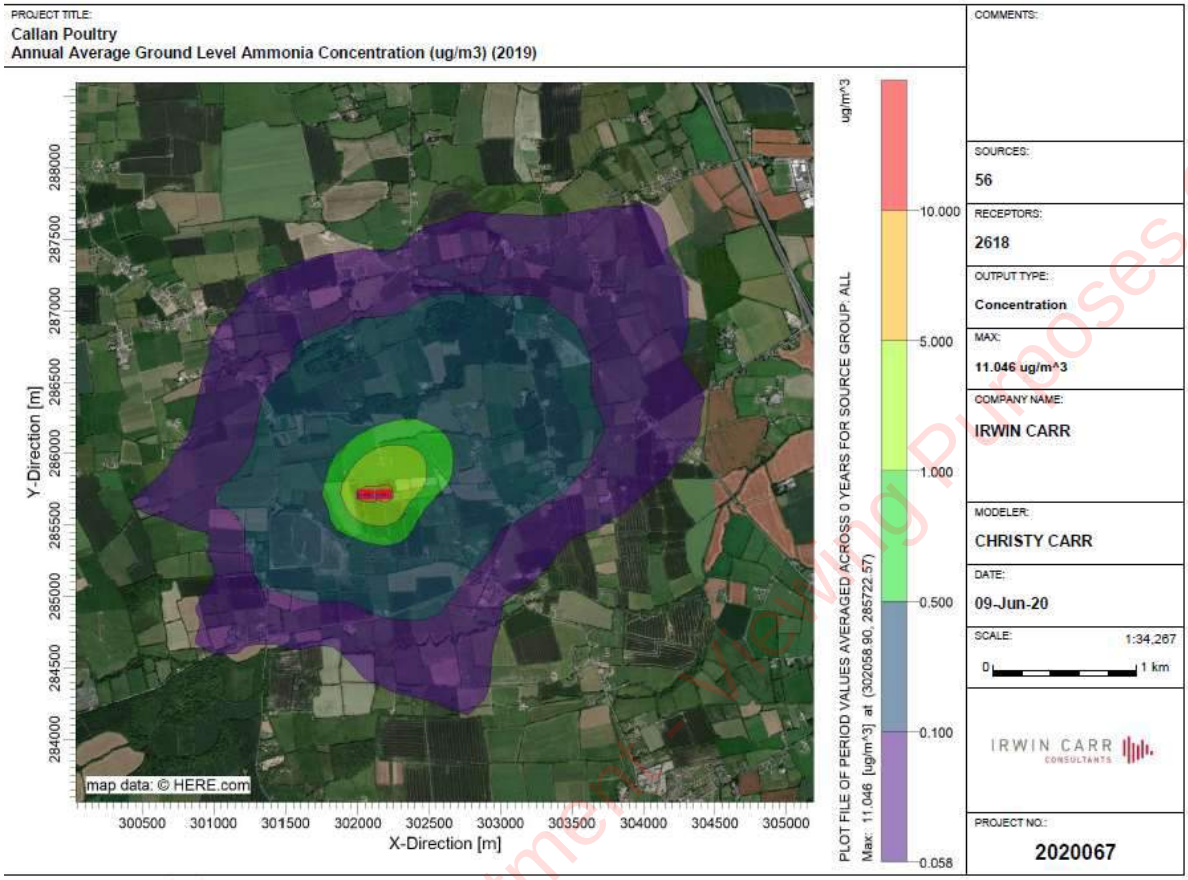


Fig 7.10 Ammonia Dispersion Plume

The proposed development will result in a significant increase in stock numbers on the site, to 200,000 birds. A number of measures have been provided for so as to mitigate against any adverse cumulative impact. As previously detailed there are only 5 other licensed intensive agricultural farms in the county, and none of these are located within c. 7-7.5km of the proposed development, therefore there is negligible risk of an adverse cumulative impact. Furthermore only one of these sites has been granted permission and/or developed since the last Ammonia/Nitrogen background measurements (2018), and planning permission was only granted for one other sub-Epa licence threshold poultry farm in this area (and same related to a re-development of an existing site) therefore there is negligible risk of cumulative impact associated with the proposed development.

- ***Application of Soiled Water***

This NIS has identified the locations of lands for the receipt of the soiled water and the location of the farmlands relative to the Natura 2000 sites are provided in Appendix 1.

Inappropriate application of fertiliser (organic or inorganic) can lead to deleterious impacts upon the receiving waters in local catchments and it can result in eutrophication, algal blooms, fish kills and loss of biodiversity. Impacts can affect both surface water and groundwater. In response to this, specific regulations, known as EUROPEAN COMMUNITIES (GOOD AGRICULTURAL PRACTICE FOR PROTECTION OF WATERS) REGULATIONS (currently SI 605 of 2017, as amended, as amended) have been implemented over the last c. 15+ years, to address these risks.

These regulations apply to all customer farmers, and make specific provision to the manner, amount, timing and conditions associated with the application of fertiliser to land and all associated requirements pertaining to same. These requirements are routinely updated (at least every 4 years) to respond directly to trends in water quality, and advances in agricultural practices, and the requirements therein are the appropriate measures that govern the customer farmers when applying organic fertiliser from this farm (existing and proposed) to their lands as an alternative to other/chemical fertiliser. The re-distribution of organic fertiliser nutrients from farms such as this to farms lacking in fertiliser nutrients is an important part of the Agricultural cyclical economy and the local redistribution of nutrients should be should be prioritised and encouraged in preference to imported chemical nutrients.

The applicant's family will use the soiled water from this development on their agricultural lands as an organic fertiliser to replace existing fertiliser sources, ***as part of a fertiliser substitution programme (organic for inorganic/chemical) with no increase in the overall level of nutrients applied*** and in line with fertiliser application limits prescribed by S.I. 605 of 2017, as amended. These lands are identified to DAFM on an annual basis for agricultural purposes. Low Emission Spreading Systems (LESS) should be implemented, to minimise odours and ammonia emissions and maximise the fertiliser value/uptake by the crop.

(B) Amenity areas

This proposed farm will not be located near to any Highly Sensitive Landscapes, Special Amenity Areas, or other such areas as listed in the Louth County Development Plan. All farmers will be informed that spreading of organic fertiliser / soiled water from this farm should not occur near such areas, especially at weekends or holiday periods.

(C) Cultural Heritage (Architectural and Archaeological Features)

There are no buildings/structures of architectural significance located on or adjacent to the proposed site or likely to be impacted by the proposed development. There is no evidence of any archaeological features at the site. The site of the proposed development is not located near, and/or likely to impact on any monuments or sites of archaeological interest.

Notwithstanding the above, and based on the footprint of the proposed development the following mitigation measures have been recommended and are proposed to be integrated into the development;

1. All topsoil stripping/general ground reduction works onto the underlying archaeologically sterile geological subsoils associated with the development shall be completed in line with archaeologists recommendations.

2. In the event of archaeological material being uncovered during the course of such monitoring, the archaeologist shall be empowered to have works stopped in the vicinity of such material pending receipt of advice from the National Monuments Service, Department of Arts, Culture and the Gaeltacht. Likewise should archaeological/historical artefactual material be recovered during such works, then the requirements of the National Museum of Ireland with regard to such items should be implemented.

3. Following completion of the monitoring and any other possible archaeological investigations, the archaeologist shall prepare a full and final report for submission to the Planning Authority and the Department of Arts, Culture and the Gaeltacht and National Museum of Ireland.

It is not considered likely that the development, as proposed, will cause any direct impacts to any structures of architectural heritage interest. Consequently, no further mitigation measures are considered necessary.

7.11. Human Health / Population / Employment

As previously stated agriculture is important to the ecomomy of Co. Louth. It is anticipated that employment in the traditional agriculture sectors will continue to decline, resulting in opportunities in farm diversification and off farm employment becoming critical to the survival of many rural communities. The proposed development will create additional agricultural employment on the farm and will secure the existing jobs already employed.

The proposed development will create additional agricultural employment for c. 1 - 2 people directly on a full time basis. Outside service employment for building contractors, repairmen, nutritionists, veterinarians, hauliers and sales personnel are a spinoff of this development.

The proposed site is located well away from any of the larger settlement areas in the county The wellbeing of the agricultural industry in the county, and in more rural areas, is essential in halting the decline in rural employment. This activity will contribute to the employment in rural communities and will therefore help stabilise the rural population.

The proposed development and existing activities have been planned and will be operated to the benefit of the applicant, the local community in terms of direct and indirect employment, supporting the local / national agricultural and horticultural economy and construction industry.

The Louth Co. Development Plan 2021-2027 encourages the development of appropriate agricultural enterprises; however appropriate activities will be required to have a minimal negative impact on the landscape and physical environment. It is felt by the applicant that the proposed development satisfies the requirements of Louth Co. Co. as per the objectives on Agriculture as outlined in the County Development Plan, as detailed below;

Development Plan Objectives

It is felt by the applicant that the proposed development satisfies the requirements of Louth Co. Co. as per ***the obectives on Agriculture*** as outlined in the Louth County Development Plan 2021-2027, detailed below;

"K1 Agriculture Objective To preserve agricultural land. Guidance This zone is for the use of land for agricultural purposes and farming-related activities and to provide for the development of existing established uses. Individual dwellings for permanent occupancy for persons principally involved in agriculture will be open for consideration subject to normal site suitability considerations and compliance with the policy objectives set out in Chapter 3 of this Plan. Permitted Use Allotments, Agri-Tourism. Open for Consideration B&B/ Guest House, Community Facility, Craft Centre/Shop, Garden Centre, Home Based Economic Activities, Recreational/Sports Facility, Residential, Telecommunications Structures."

Agricultural Buildings : Good quality, purpose built agricultural buildings are important for efficient and sustainable agricultural production. Agricultural buildings should be integrated into the countryside and in this respect the palette of materials used is important. Site selection, setting, landscape features and the maintenance of existing native hedgerows or the planting of new hedgerows is important in terms of screening farm buildings and thus blending these into the landscape in the least obtrusive manner.

This proposed development is located in a rural agricultural area, where such developments are to be facilitated by the local authority, and it is not located near any scenic walks or viewing points. The location of the proposed site, integrated into the surrounding landscape, obscured by its location and integrated where possible with the land topography and the existing landscaping, will ensure that this proposed development is incorporated into the local environment, with no adverse visual impact, while at the same time complying with Department of Agriculture, Food and The Marine and Bord Bia requirements.

These agricultural and rural development plan policies recognise the important and varied role of agriculture within the economy of Co. Louth. These policies serve to recognise and support development proposals that will enable farming to become more competitive, sustainable, environmentally and welfare friendly; adapt to new and changing markets; diversify into new agricultural opportunities; and broaden their operations to "add value" to their primary produce, while at the same time protecting the environmental and cultural heritage of the County.

The proposed development of poultry housing, will modify the existing farming activities and will provide for a sustainable farm diversification for Mr. Michael Callan in line with supermarket and consumer requirements. The proposed development will be located;

1. in a rural agricultural area,
2. significantly removed from any population centres,
3. located away from any designated areas and/or tourist attractions.
4. well integrated into the local environment with sympathetic design and layout,
5. with proper measures in place for the storage and removal of wastes off site,
6. with all poultry manure from the proposed developments to be utilised in the production of mushroom compost and all soiled water to be used as organic fertiliser on lands in accordance with S.I. 605 of 2017, as amended,

will help to ensure that the proposed development will be in accordance with the stated plans and objectives of Louth Co. Co. as outlined in the county development plan.

While requiring a certain amount of land upon which the development will be completed this is minor in terms of the applicant's overall landholding and given the setback from the local road and third party dwellings will have no adverse impact on the landscape, character and/or environment of the local area. The development has been designed to ensure the proper access and egress from the site and is located remote from third party residences and/or sensitive receptors.

The potential risk to human health / cultural heritage and/or the environment due to accidents and/or disasters is limited due to the innate nature of the production system and activities on-site. There are no significant high risk/hazardous products used, produced and/or released by the proposed development which would pose a risk to human health, cultural heritage and/or the environment outside of the site boundary as a result of any accident/disaster.

7.12. Material Assets

Resources that are valued and that are intrinsic to specific places are called 'material assets'. They may be of either human or natural origin and the value may arise for either economic or cultural reasons. The potential impact of the proposed development on *archaeology / cultural assets* has been discussed previously.

Material Assets that may potentially be affected by the proposed development include:

- ***(A) Material Assets: Agricultural Properties including all agricultural enterprises***

The proposed development is located on an existing agricultural lands owned by / available to the applicant and are in a predominantly agricultural area. The proposed development is surrounded by agricultural farmland, and the proposed development will not adversely impact on any other farmland outside the confines of the site. The proposed development will have a positive interaction with the rest of the applicant's / applicant's families land as previously detailed.

The proposed development will require a minimal amount of land to complete the proposed works, however the land requirement will not have a significant adverse impact outside of the development area.

Bio- Security is an important concern for all developing poultry (and any agricultural livestock system). As with all agri-livestock systems (and as with any animal population wild or domestic) and was we have seen recently, even the human population, disease transmission is an important factor. The proposed development is well removed from any other poultry farm so as not to be considered a bio security risk to other such farms. An additional consideration with broiler farms is Botulism. Same typically comes from spreading poultry manure as an organic fertiliser, however as all manure is to be allocated for composting and all soiled water to the applicants families tillage lands, this risk is eliminated, and / or reduced to a negligible level.

The operation of the poultry houses has minimal, if any, Botulism risk to adjoining livestock. As one can see the poultry industry is concentrated in Monaghan, and area where there is no tillage and surrounded by grassland / livestock farms and botulism from operating activities is not an issue. While there may be a theoretical risk of disease spread when cleaning out the houses, the botulism toxin is easily denatured when exposed to sunlight, thus resulting in a negligible risk.

- ***(B) Material Assets: Non-agricultural Properties including residential, commercial, recreational and non-agricultural land.***

The proposed development site is surrounded by agricultural lands and is located well away from any built up areas and/or development clusters. There are no third party residential dwellings within c. 400 m of the proposed development site.

- ***(C) Material Assets: Natural or other resources including mineral resources, land and energy***

The proposed development will also involve the use of a limited amount of construction materials (including quarry products and other construction materials), however the extent of the development is limited in nature and the amount of resources required in the construction of the houses, and potential adverse impact of same, is negligible when sourced from authorized sources.

The operation of the farm will require additional feed (classified as a renewable resource), energy and water. The applicant will operate modern feeding, ventilation and heating systems to minimize same.

The farm does not require any major modifications to the existing electricity supplies, water or road infrastructure in the area.

7.13 Tourism

Agriculture and tourism are two significant industries important to the economy of this area. A significant proportion of rest of the economy of the area has arisen as ancillary services/businesses to these two industries. It is of extreme importance therefore that these two industries can coexist and develop together for the good of everyone in the area.

Agriculture is an all year round industry whereas tourism is mainly a seasonal one with the majority of the trade occurring in late spring, through the summer and into early autumn. The poultry farm site itself will have no impact on tourism in the area. The applicant's family will prioritise lands that are away from areas frequented by tourists or areas with a higher population density for the application of organic fertiliser (soiled water).

7.14. Potential Effects (Cumulative, Long/Medium/Short Term, Transboundary / other).

Nationally

The report "Irelands Inventory Report 2021" (EPA 2021), identifies agriculture as the primary contributor (99.4%) of Irish ammonia emissions in 2019, emitting a total of 124.6 kilotons (kt) of ammonia in that year. According to that report the emissions from the poultry sector in 2019 were approximately 4.61 Kt. Ammonia emission from the proposed development will equate to c. 0.0015%of the 2019 poultry sector emissions.

DAFM has published a Code of Good Agricultural Practice for reducing Ammonia Emissions from Agriculture " as required by the National Emissions Ceiling Directive and this is the appropriate manner in which to address the national ceiling. The proposed development will have negligible impact on the National Ammonia emissions.

As detailed previously Poultry Meat results in one of the, if not the lowest, emissions of Green House Gases, and meeting any increase in consumer meat demand with poultry meat will result in lower Greenhouse gas emissions than other meats.

The existing farming activities operating adjacent to, and including, the proposed site, have been managed by the applicant / applicant's family and activities at this site have not had an adverse affect on the local environment, either independently, or, when assessed cumulatively with other activities in the area.

A number of measures have been instigated to mitigate against adverse cumulative impact.

- The site was selected so as to screen the poultry farm from view and mitigate against any adverse visual impact.

- The proposed development is planned so as to organise the allocation of organic fertiliser (soiled water) to the tillage lands in accordance with S.I. 605 of 2017, as amended. The proposed development will not have an adverse cumulative impact as all of the organic fertiliser (soiled water) is proposed to be used to replace chemical fertiliser.

- All poultry manure will be used to as a resource ingredient in the production of mushroom compost.

- A proper stormwater/soiled water, separation, collection and drainage system is to be installed so as to prevent any potential adverse impact on surface water quality in the area of the farm.

This in conjunction with any requirements placed on the proposed development by Louth Co. Co. and/or the E.P.A. as a result of planning permission and/or E.P.A. Licence conditions will ensure that this proposed development has no adverse environmental impact on the immediate/wider area.

Within the County;

This proposed poultry farm is located in County Louth. Intensive agricultural enterprises have not developed in Co. Louth to the same extent as counties Cavan and Monaghan. Agricultural activity in Louth includes tillage, cereals and other crops, beef and dairy and is an important part of the economic life of rural Louth helping to sustain, enhance and maintain the rural economy. Agriculture will continue to be an important component of Louth's rural economy. The agricultural sector must adapt to the challenges posed by modernisation, restructuring, market development and the increasing importance of environmental issues.

The poultry industry is a specialised farming activity and the proposed development will benefit from well established practices in place for the utilisation of poultry manure in the production of mushroom compost. The proximity of the proposed developments to the processing and feed supply services at Shercock, will be a significant competitive advantage, and will significantly reduce transport costs and emissions associated with same. Bio-security risks (as previously discussed) are minimised by utilising all manure in compost production.

Given the mixed returns from the more traditional farming practices (including Tillage), and the concerns pertaining to future expansion of the Irish Dairy herd, productive, efficient and sustainable agricultural activities, such as the proposed development, and the rearing of poultry to meet local Irish demand (and to replace imported product), and the jobs dependant thereon, will be critical to the Irish economy.

This existing plans for this farm represent a proposed development of up to c. 200,000 birds (4* c. 50,000 bird houses). This is a significant development in terms of poultry farm developments and the level of investment required. It will also be a significant boost to local employment in this area, and the local construction industries.

Within the Local Area;

It has been demonstrated that the proposed development will have little or no adverse cumulative impact within the county. This proposed poultry farm development will have significant integration with,

- the applicant's families, and the local agri.-sectors existing farming activities, in the areas of feed, bedding, labour etc., and,

- the Irish horticultural sector with the with the use of poultry manure in the production of mushroom compost (and potentially in peat replacement or other such uses)

and same will be a significant advantage to both enterprises, while at the same time demonstrating a more integrated, environmentally friendly and sustainable production system.

The proposed development will result in a significant increase in stock numbers on the site, to 200,000 birds. A number of measures have been provided for so as to mitigate against any adverse cumulative impact. This in conjunction with any requirements placed on the proposed development by Louth Co. Co. and/or the E.P.A. as a result of planning permission and/or E.P.A. Licence conditions will ensure that this proposed development will have no adverse environmental impact on the immediate area.

It is anticipated that the proposed development will not lead to a negative cumulative impact on the local environment due to the array of mitigation measures proposed and/or to be implemented, together with the low level of poultry farming in the area. The area of the proposed development is an agricultural area. While the site is located close to the White river tip head, same is now closed.

Transboundary

The proposed development is significant in nature and will result in 4 No. houses with capacity for c. 50,000 birds each on this site, resulting in the overall site capacity of c. 200,000 birds. Poultry farming activities are less well established in Louth when compared to other counties such as Monaghan and Cavan. There has been a long tradition of supplying the organic fertiliser / poultry manure produced on these farms in Monaghan and Cavan to tillage lands in Meath, / Louth to optimize the use of the organic fertiliser / poultry manure and nutrients contained therein. The proposed development is ocated well away from any international boundary and will have no adverse transboundary impact.

8. Interaction of Effects

Human Health, bio-diversity (flora, fauna), land and soil, water, air, climatic factors, landscape, material assets, population and cultural heritage.

8.1 Inter-relationships

As a requirement of the European Communities (Environmental Impact Assessment) Amendment Regulations, (as amended) not only are the individual significant impacts required to be considered, but so must the inter-relationship between these factors be identified and assessed. Part II (Second Schedule) of the Regulations requires that the interactions between Human Health, bio-diversity (flora, fauna), land and soil, water, air, climatic factors, landscape, material assets, population and cultural heritage (incl. architectural and archaeological) be assessed.

The aspects of the environment likely to be significantly affected by the proposed development on this poultry farm have been considered in detail in the relevant Chapters of the E.I.A.R.. In order to demonstrate the areas in which significant interactions occur a matrix has been prepared, see figure 8.1 below.

Where any environmental element in the top row of the matrix (the receptor) is likely to be affected in any way by any element in the left most column (the impactor), which contains the list of aspects of the environment likely to be significantly affected by the proposed development, these have been indicated. A distinction has been made between positive, negative and neutral impacts in this matrix.

Figure 8.1 Matrix Indication Inter-relationships between EIA Factors

	Land and Soil	Water	Air & Climate	Landscape & Visual	Noise	Traffic	Bio-diversity (Flora & Fauna)	Human Healt / Population	Cultural Heritage	Material Assets
Land and Soil		N	N/a	N	N/a	N/a	N	Pos	N/a	N/a
Water	N/a		N/a	N/a	N/a	N/a	N	N/a	N/a	N/a
Air & Climate	N/a	N/a		N/a	N/a	N/a	N	N	N/a	N/a
Landscape & Visual	N/a	N/a	N/a		N/a	N/a	N/a	N/a	N/a	N/a
Noise	N/a	N/a	N/a	N/a		N/a	N/a	N/a	N/a	N/a
Traffic	N/a	N/a	N	N/a	N		N/a	N	N/a	N/a
Bio-diversity Flora & Fauna	N/a	N/a	N/a	N	N/a	N/a		N/a	N/a	N/a
Human Health / Population	Pos	Pos	Pos	Pos	N/a	N	Pos		Pos	Pos
Cultural Heritage	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a		Pos
Material Assets	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a	

Neutral	N
Positive	Pos
Negative	Neg
Not Applicable	N/a

8.1.1 Discussion – Positive Impacts

The following details the rationale for concluding that there is a net positive impact as a result of the inter-relationship between the factors listed below.

- **Impacts of soil on Human Health / Population –** the proposed development will provide for a modern poultry farm fully contained within the proposed site, thus maximising performance and minimizing bio-security risks.

- **Impacts of Human Health and Population on other factors -** The increase in wealth as a result of the proposed project would mean that there will be funds available to facilitate improvements through human endeavor in factors land & soil, water, air & climate, landscape & visual, bio-diversity (flora & fauna) and cultural heritage. Improvements in soil can be achieved through the addition of organic fertilizer, improvements in water through improved management and separation of storm and soiled waters, improvements in air through better manure management processes, improvement in bio-diversity (flora & fauna) through the provision of additional site landscaping and maintenance and improvement in cultural heritage by the availability of time and money for the enjoyment of heritage.

8.1.2 Discussion – Neutral Impacts

The following details the rationale for concluding that there is a neutral impact as a result of the inter-relationship between the factors listed below.

- **Impacts of Land/Soil on Water, Landscape & Visual and Bio-diversity (Flora & Fauna) –** The organic fertilizer (poultry manure and soiled water) will have a positive overall impact in the wider agricultural and horticultural sectors, providing additional nutrients, and/or a resource ingredient in compost production.

  All poultry manure is to be used on the production of mushroom compost (or other such similar products as may be agreed) and all soiled water manure is to be allocated to customer farmers for use in accordance with S.I. 605 of 2017, as amended, and excessive application of this organic fertilizer will not occur. The area of customer farmland identified is more than sufficient to utilize the resource that is the volume of soiled water generated. The positive impact on soils will potentially see a change in landscape through the improvement in field pastures, this may be viewed as a slightly positive impact overall and any changes will be minimal through compliance with S.I. 605 of 2017, as amended. The changes in soil may result in a reduction in diversity of flora & fauna in receiving spreadlands. However all lands proposed for receipt of soiled water will comprise productive agricultural lands for the production of crops and soiled water will not be applied to areas of scrub or other habitats.

- **Impacts of Water on Bio-diversity (Flora & Fauna)–** The organic manure generated together with any soiled water on site has the potential to negatively impact on water. A reduction in water quality in the area would have an effect on both local bio-diversity (flora & fauna) and bio-diversity (flora & fauna) in the wider river catchment area. This potential threat has been mitigated through, the management of all organic fertilizer on site in accordance with S.I. 605 of 2017, as amended. This is further mitigated through the provision of appropriate on site storm water drainage system, separation of clean and soiled water and the provision of sufficient soiled water storage. These mitigating measures are sufficient to ensure that there is no negative impact on Flora & Fauna as a result of its relationship with water. All soiled water to be applied to the applicant's family lands in accordance with S.I. 605 of 2017, as amended, with all poultry manure destined for composting (or similar).

- **Impacts of Air & Climate on Bio-diversity (Flora & Fauna) and Human Health/Population–** There is a potential threat to Bio-diversity (Flora & Fauna) and Human Health/Population as a result of any impact on air due to the proposed project. The generation of mal-odour on site may have a slight negative impact on Bio-diversity (Flora & Fauna) and in particular on Human Health/Population, however this is mitigated by the fact that the proposed developments are to be completed to the highest standards of construction and operation. Based on previous experience with other farms of a similar scale, and on the site specific reports completed as part of this assessment, odour, ammonia and /or particulate matter (dust) are not anticipated to be an issue on this farm.

Adequate mitigating measures have been described in this E.I.A.R. to ensure that this threat does not materialise and thereby ensuring the potential impact is neutral.

- **Impacts of Traffic on Air & Climate, Noise and Human Health/Population –** The traffic generated as a result of the proposal will have some impact on Air & Climate, Noise and Human Health/Population. However the change in traffic will not cause an adverse impact. The proposed site is located in close proximity to good road infrastructure and it is not anticipated that the proposal will generate levels of additional traffic that would adversely impact on the environment and therefore the impact is considered neutral, as supported by the traffic Impact Assessment.

- **Impacts of Bio-diversity (Flora & Fauna) on Landscape & Visual –** A reduction in Flora & Fauna as a result of the proposed development could impact on Landscape & Visual characteristics of the area. Many habitat areas such as stands of trees, scrub or hedgerow are important landscape features. These enclose and form our landscape and are critical to retain the unique characteristics of the local landscape. The mitigating measures provided for in this E.I.A.R. will ensure that no significant landscape features will be altered or removed unnecessarily as a result of this proposal. While some hedgerow will be removed to facilitate the proposed development this sill be offset by the proposed landscaping to be completed.

- **Impacts of Human Health/Population on Traffic –** an increase in prosperity as a result of the proposed development could see some small increase in traffic. This is slight in nature. The overall impact of Human Health/Population on Traffic is considered neutral.

8.2 Potential Impacts and Mitigation Measures

This section presents the significance of potential impacts following the implementation of mitigation measures. The E.P.A. classifies impacts as follows:

Impact		***Description***
Quality of Effects	***Positive Effects***	A change which improves the quality of the environment
	Neutral Effects	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	Negative Effects	A change which reduces the quality of the environment
Describing the Significance of Effects	***Imperceptible***	An effect capable of measurement but without significant consequences.
	Not significant	An effect which causes noticeable changes in the character of the environment but without significant 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 baseline 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 most of a sensitive aspect of the environment.
	Profound Effects	An effect which obliterates sensitive characteristics
Describing the Duration and Frequency of Effects	***Momentary Effects***	Effects lasting from seconds to minutes
	Brief Effects	Effects lasting less than a day
	Temporary Effects	Effects lasting less than a year
	Short-term Effects	Effects lasting one to seven years.
	Medium-term Effects	Effects lasting seven to fifteen years.
	Long-term Effects	Effects lasting fifteen to sixty years
	Permanent Effects	Effects lasting over sixty years
	Reversible Effects	Effects that can be undone, for example through remediation or restoration
	Frequency of Effects	Describe how often the effect will occur. ((once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually))
Describing the Extent and Context of Effects	***Extent***	Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.
	Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
	Likely Effects	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.

Describing the Probability of Effects	***Unlikely Effects***	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.

Interactions between the above environmental factors show the potential effect of the poultry farm on the community and its environs. Human Health/Population are the main impact receptor, Bio-diversity (Flora and Fauna) being the other. The poultry farm and its production processes will minimally impact upon the landscape, archaeology, terrestrial, water quality and climate described under the heading natural environment.

Traffic, air quality, noise, tourism and material assets are the factors that affect the community directly. This poultry farm with its planned integration into the existing farming activities, and wider agri.- horticultural activities will have no significant impact on the rural community. There are a number of positive features associated with this proposed farm:

- It will serve to create additional employment and secure existing employment.
- It will serve to ensure that there is a consistent supply of chickens to Carton Brothers / Manor Farm. to supply the main supermarkets, and meet the demand for fresh Irish chicken.
- It will integrated with and supply a resource ingredient (poultry manure for mushroom compost) to the wider Agri./Horticultural sector.

9. ENVIRONMENTAL MANAGEMENT PROGRAMME

9.1. Introduction

The applicant will implement and maintain a comprehensive monitoring programme on site to provide maximum protection for the environment. This plan will in effect be governed by the requirements of the E.P.A., as detailed in any Licence issued to this farm, and by the applicant's requirements under environmental legislation such as S.I. 605 of 2017, as amended. This management plan will involve, but is not limited to, maintaining an organic fertiliser / poultry manure register and visual inspection of all storm water outlets.

Implementing this programme will ensure that there are no negative environmental impacts from the activities associated with the operation of the poultry farm. Any recommendations of the planning authority will be complied with in relation to this Environment Management Programme.

9.2. Organic fertiliser / poultry manure Management Programme

The applicant will implement and manage a programme for the allocation of organic fertiliser / soiled water in each particular year. The main aspects of the Organic fertiliser / poultry manure Management Programme are to ensure that the requirements of S.I. 605 of 2017, as amended, are met in full by the applicant. This will include;

- The allocation of poultry manure to a registered specialist contractor for use in mushroom compost production with the requirements of S.I. 605 of 2017, as amended,.

- Proper separation of all clean water on site, and the collection of all soiled water in the soiled water storage tanks. The allocation of soiled water for use as an organic fertiliser in line with the requirements of S.I. 605 of 2017, as amended.

- Continuous recording of all organic fertiliser / poultry manure / soiled water transfers off the farm, as per the record 3 form (for compliance with S.I. 605 of 2017, as amended) or commercial documents (for compliance with Animal By-products regulations) developed by The Department of Agriculture, Food and The Marine, and submission of all records to The Department of Agriculture, Food and The Marine as required.

9.3. Environmental Monitoring Programme

(i) ***Work schedule for fixed structures.***

- A maintenance programme for all structures and systems to be implemented to ensure that same are operating to maximum efficiency

(ii) ***Monitoring fixed structures for the following:***

- checking soiled water and clean water drainage systems for deterioration, leaks and blockages.

(iv) ***Monitoring and analysis***.

- Storm water emission points to be visually inspected and recorded on a weekly basis.

- Soiled Water Storage Tanks – To be monitored and recorded as required for remaining storage capacity, and certified in line with E.P.A. requirements or at least every 5 years.

- Noise, Odour and Dust emissions not to exceed EPA Licence thresholds. Such thresholds may be revised as per any licence issued to this farm. As per previous licences issued by the Agency this license will have specific requirements/conditions pertaining to odour/noise and dust to be complied with.

- Remaining monitoring and analysis as may be determined by the requirements of any E.P.A. licence issued to this farm.

10. Summary

Summary

The proposal as outlined will make a significant positive contribution to the rural economy of this area and will serve to increase employment and secure the viability and competitiveness of the applicant's existing farm.

The proposed development is the ideal scenario/model whereby;

1. ***the manure produced by the birds housed in the proposed developments, is used as a resource ingredient in the production of mushroom compost,***

2. ***it can integrate with the local tillage sector in terms of feed supply and bedding (straw) to be used by the animal feed industry to supply farms such as this.***

The new farm buildings and ancillary structures will integrate successfully within the existing landscape and its surroundings, as well as successfully integrating with the applicant's / applicant's families existing farming activities to the benefit of both the existing and proposed enterprises and will not give rise to any significant environmental effects.

It is envisaged that no aspects of the environment will be significantly affected by this proposed development, for the reasons as outlined. The proposed development is agricultural in nature, has the potential to be well integrated into the local farming activities (with some of the associated activities i.e. spreading of organic fertiliser / soiled water on land, already occurring), remote from 3rd party dwellings, not located in a sensitive area/landscape, does not involve practices/processes that have the potential for significant adverse impact, does not result in the use or production of materials/products with potential for significant adverse impact, and, is a widely practiced agricultural enterprise.

The granting of permission to the proposed development would strongly accord with the provisions of the County Development Plan, as previously detailed, and will provide a significant boost to the economy of Co. Louth. The proposed development would not seriously injure the amenities of the area or of property in the vicinity, would be acceptable in terms of traffic safety and convenience of road users and would not be prejudicial to public health or pose a threat of environmental pollution and will operate under the conditions imposed as part of any grant of planning permission and E.P.A. Licence for this farm.

The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area, and will provide for an efficient and sustainable development which will help to meet the dietary (i.e. meat) requirements of Irish Consumers in an efficient manner, well below the environmental footprint of other comparable foodstuffs, and replacing current imports (which is has been detailed may have a higher environmental footprint).

The diversification into a farming system that seeks to produce high quality, nutritious food with a lower carbon footprint than existing farming systems, and with a focus on producing food primarily destined for domestic consumption, and increasing demand for poultry meat has to be considered both pragmatic and sustainable for the applicant and the local Agri food sector.

Signed:

Paraic Fay BAgrSc — **Date** 09/12/2021

C.L.W. Environmental Planners Ltd.
The Mews,
23 Farnham St.,
Cavan Town,
Co. Cavan.

Tel: 049-4371451
Fax: 049-4371447
Email: info@clw.ie

Appendixes

Appendix No. 1	~	***Customer Farmland Details (Soiled water)***
Appendix No. 2	~	***Site Location Map***
Appendix No. 3	~	***Site Layout (Not to scale)***
Appendix No. 4	~	***Engineers Drawings (Not to scale)***
Appendix No. 5	~	***Environmental Protection Agency – Draft Advice Notes on EIS – Project Type 13***
Appendix No. 6	~	***Location of Farmland Areas for the receipt of Soiled Water***
Appendix No. 7	~	**Litter Contractor & Compost Yard Confirmation**
Appendix No. 8	~	**Feed Details**
Appendix No. 9	~	**Animal Tissue Disposal**
Appendix No. 10	~	***Local Water Quality Data***
Appendix No. 11	~	***Extracts from Louth Co. Development Plan***
Appendix No. 12	~	***Met Data***

Appendix No. 13	~	**Natura Impact Statement**
Appendix No. 14	~	***Extract from General Soil Map of Ireland. Profile of Soil***
Appendix No. 15	~	***Site Characterisation Form***
Appendix No. 16	~	**European Communities (Welfare of Farmed Animals) Regulations 2010 – S.I. 311 of 2010**
Appendix No. 17	~	**Copy of Nitrates Directive – S.I. 605 of 2017**
Appendix No. 18	~	**Copy of GSI Data**
Appendix No. 19	~	**Construction Waste management Plan**
Appendix No. 20	~	**Swale Attenuation Calculations**
Appendix No. 21	~	**Air Quality Impact Assessment**
Appendix No. 22	~	**Noise Impact Assessment**
Appendix No. 23	~	**Traffic Impact Assessment**

Appendix No. 1

Customer Farmland Details (Soiled Water)

Appendix No. 2

Site Location Map

Appendix No. 3

Site Layout
(Not to scale)

Appendix No. 4

Engineers Drawings
(Not to scale)

Appendix No. 5

Environmental Protection Agency – Draft Advice Notes on EIS – Project Type 13

Appendix No. 6

Location of Farmland Areas for the receipt of soiled water

Appendix No. 7

Litter Contractor & Compost Yard Confirmation

Appendix No. 8

Feed Details

Appendix No. 9

Animal Tissue Disposal

Appendix No. 10

Local Water Quality Survey

Appendix No. 11

Extracts from Louth Co. Development Plan

Appendix No. 12

Met Data

Appendix No. 13

Natura Impact Statement

Appendix No. 14

Extract from General Soil Map of Ireland.

Appendix No. 15

Site Characterisation Form

Appendix No. 16

European Communities (Welfare of Farmed Animals) Regulations 2010 – S.I. 311 of 2010

Appendix No. 17

Copy of Nitrates Directive – S.I. 605 of 2017

Appendix No. 18

Copy of GSI Data

Appendix No. 19

Construction Waste Management Plan

Appendix No. 20

Swale Attenuation Calculations

Appendix No. 21

Air Quality Impact Assessment

Appendix No. 22

Noise Impact Assessment

Appendix No. 23

Traffic Impact Assessment