



**ENVIRONMENTAL IMPACT ASSESSMENT REPORT
(E.I.A.R.)**

RELATING TO

**PROPOSED PIG FARM
AT
ROSSMAKAY, KNOCKBRIDGE, CO. LOUTH.**



FOR

MR. JOHN LAMBE, ROSSMAKAY, KNOCKBRIDGE, CO. LOUTH.

**C.L.W. Environmental Planners Ltd.
MARCH 2020**



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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, 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 existing and proposed development in accordance with the Planning and Development Acts 2000, as amended, Planning & Development Regulations 2001, as amended and the Protection of Environment Act 2003, to comply with a request from An Bord Pleanala dated 23/01/2020. This request relates the proposed development of 1 No. pig House together with all ancillary structures, (to include meal storage bin(s)), and all site works associated with the above development Rossmakay, Knockbridge, Co. Louth, which has been referred to An Bord Pleanala under third party appeal, following a grant of permission by Louth Co. Co.

EIA requirements derive from Council Directive 85/337/EEC (as amended by Directives 97/11/EC, 2003/35/EC and 2009/31/EC) and as codified and replaced by Directive 2011/92/EU of the European Parliament and the Council on the assessment of the effects of certain public and private projects on the environment and as amended in turn by Directive 2014/52/EU.

This E.I.A.R. has been requested by An Bord Pleanala in accordance with Section 132 of the Planning and Development Act 2000, (As amended) and relates to a planning application approved by Louth Council (subsequently referred on third party appeal to An Bord Pleanala) on behalf of **Mr. John Lambe, Rossmakay, Knockbridge, Co. Louth**, for permission 1 No. pig House together with all ancillary structures, (to include meal storage bin(s)), and all site works associated with the above development Rossmakay, Knockbridge, Co. Louth (National Grid Reference: E 302507 N 301287). The operation of the proposed pig house will be integrated with the operation of the applicant's existing farming activities.

At 1,800 production pig places, the proposed developments are below the threshold as detailed in Schedule 5 Part 2 of the Planning and Development Regulations 2001, as amended, i.e. Class 1(e) (ii) activity, "Installations for intensive rearing of pigs not included in Part 1 of this Schedule which would have:

- **more than 2000 places for production pigs (over 30 Kilograms)** in a finishing unit,
- more than 400 places for sows in a breeding unit, or,
- more that 200 places for sows in an integrated unit.

However An Bord Pleanala have determined under Article 109 (2)(b) of the Planning and Development regulations that an E.I.A.R. is required, for the reasons as outlined below;



Having regard to;

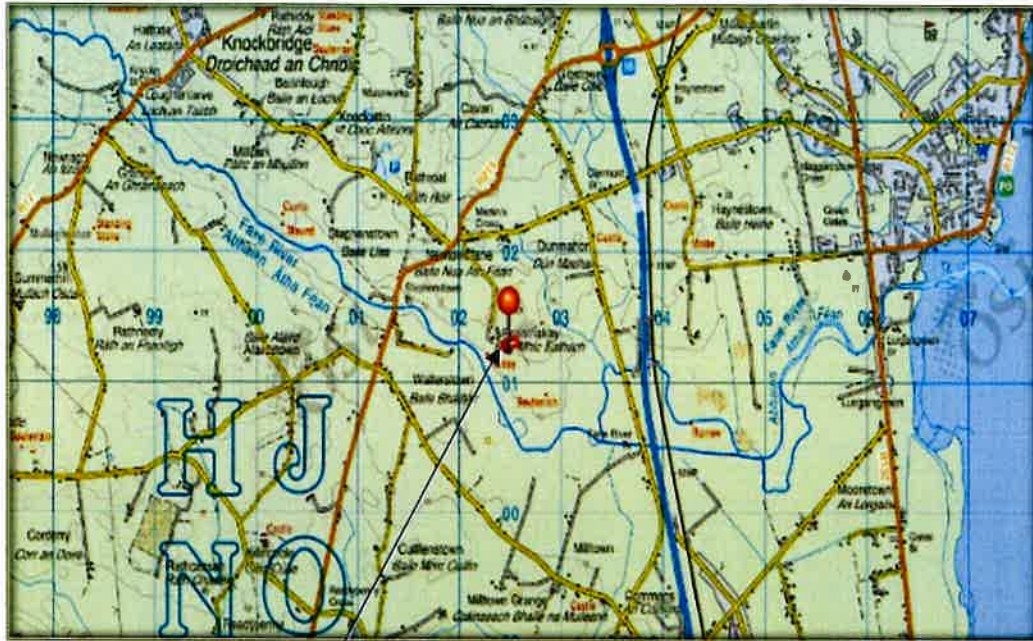
- a) the nature and scale of the proposed development, which is just below the threshold in respect Class 1 (e)(ii) (Agriculture, Silviculture and Aquaculture) of Part 2 of Schedule 5 of the Planning and Development Regulations, 2001, (as amended),
- b) the scale and capacity of existing and permitted animal housing within the adjoining farm complex and the potential for cumulative effects with the proposed development,
- c) groundwater vulnerability in the vicinity of the site and across the wider landholding and the proximity of the site and landholding to the River Fane which discharges to Dundalk Bay, designated as a Special Area of Conservation and Special Protection Area, and the potential for impacts on water quality,
- d) the guidance set out in the "Environmental Impact Assessment (EIA) Guidance for Consent Authorities regarding Sub-Threshold Development", issued by the Department of the Environment, Heritage and Local Government (2003),
- e) the criteria set out in Schedule 7 of the Planning and Development Regulations, (as amended), and
- f) notwithstanding the features and measures proposed by the applicant envisaged to avoid or prevent what might otherwise have been significant effects on the environment,

It is considered that the proposed development would be likely to have significant effects on the environment and that the preparation and submission of an Environmental Impact Assessment Report is therefore required.

1.2 Site Location

This site of the proposed development/farm is a greenfield site/agricultural land, owned by the applicant. The site of the proposed development, is well set back from the public road, on c. 0.9207 Ha, in the town land of Rossmakay, and accessed via the existing internal laneway used to access the existing farmyard and applicant's dwelling. The site is c. 0.8 Km's from the regional route, the R215, between Dundalk and Ardee and a further c. 2 Km's from the M1 motorway.

The site is to be accessed via c. 900 m of an existing internal farm roadway 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. 3.7 km's southeast of Knockbridge and c. 7 km's south of Dundalk.



SITE LOCATION





1.3 Description of Development

The E.I.A.R. relates to an application seeking planning permission for the erection of 1 No. pig house with the capacity for c. 1,800 pigs 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. 1,800 pigs.

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 pig house to comply with the above mentioned regulations, and,
- all ancillary structures (meal storage bins etc.) and associated site works necessary for the construction, operation and management of the proposed farm development.

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, AS AMENDED commonly known as the Nitrates Directive.

The applicant, Mr. John Lambe will operate and manage the proposed development. This proposed development will be modern and efficient, and will be fully compliant with the requirements of animal welfare, bio-security and environmental legislation, and D.A.F.M. Specifications for Livestock buildings and associated organic fertiliser storage. The daily management practices on-site will involve the feeding, management and husbandry of pigs, automated feeding and ventilation systems and general site management. Once the proposed development has been completed there will be an average of 1,800 pigs on site. Pigs are transported to the farm as weaners (c. 30 – 35 kg's) from a specialised pig breeding farm, and remain until they reach sale weight of c. 110-120 Kg live-weight c. 12 – 14 weeks later at which time they are moved off the farm to an appropriate processing facility. Additional space has been proposed to be provided to allow for the washing and drying routines to be carried out, and to provide a number of isolation/recovery pens for any sick/injured animals.

In order to ensure that the maximum performance is achieved from this farm with the minimal amount of inputs significant attention will be paid to the genetics of the pigs produced. The programme carried out on the breeding farm will ensure that only pigs with the top performance in terms of growth rate and feed efficiency are produced.

This Environmental Impact Assessment Report has been completed in respect of a planning application for the proposed development, and/or as requested by An Bord Pleanála in line with the planning and development regulations, as amended, in relation to same.

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 as 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 pig 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. John Lambe *proposes* to construct the following:

- 1 No. pig house ~ Floor Area c. 1,963 m²,
- All ancillary structures and site works associated with the construction and operation of this proposed pig farm.

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

1.4 Organic Fertiliser Production

The management of organic fertiliser and the efficient use of the nutrients contained therein is a significant factor in developing pig enterprises. Organic manure production from the proposed development will equal c. 2,246.4 m³ per annum, based on the average occupancy rate of c. 1,800 pigs. **All manure produced on the farm will be utilised on the applicant's agricultural lands as an organic fertiliser to replace/substitute for existing organic/chemical fertiliser use.** These lands have an agronomic requirement for this organic fertiliser.

The net organic manure storage capacity on the farm will be c. 4,318 m³ on completion of the proposed developments (c. 23-24 months manure production). This storage capacity will ensure that organic fertiliser produced on the farm is spread only under favourable soil and climatic conditions, and is well in excess of the 6 months storage as required by S.I. 605 of 2017 as amended. This storage capacity will significantly facilitate the integration of the proposed development (or more specifically the organic fertiliser to be produced therein) into the existing tillage farming activities, by ensuring that the organic fertiliser is



stored in accordance with DAFM requirements (and S.I. 605 of 2017 stipulations) in purposely designed manure storage structures, until such time as the weather and ground conditions are appropriate, and at the opportune time for the applicant to utilise the nutrients contained therein, to best effect for his tillage farming activities. Organic Fertiliser can be applied directly from the manure storage tank to farmland thus minimising any loading/handling.

Due to the mitigation measures to be implemented, the organic fertiliser 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. These mitigation measures include, but are not limited to the significant demand for organic fertiliser from within the applicant's existing farming activities. It is anticipated that the manure from this proposed development will replace imported inorganic chemical and/or organic fertiliser that is currently being used to satisfy crop agronomic requirements on the applicant's farm.

1.5 Utilisation of Organic Fertiliser

The applicant is an experienced tillage farmer. He currently utilises organic fertiliser (such as that produced on existing pig & poultry farms elsewhere), along with additional chemical fertiliser to meet the agronomic requirements of his crops. This fertiliser will be replaced (in part as the proposed development is not of sufficient scale to replace all of the applicant's fertiliser requirements) by organic fertiliser to be produced on the applicant's farm as a result of the proposed development. This experience will be of significant advantage with regard to the management and utilization of organic fertiliser from the proposed development. **The applicant has the capacity to utilise all of the organic fertiliser from this proposed development in accordance with S.I. 605 of 2017, as amended,** and will replace/reduce organic/chemical fertiliser currently imported onto his farm.

The lands currently farmed by the applicant are primarily tillage lands, utilised to produce wheat and barley (along with other crops such as beans, Oil Seed Rape) that is used by the animal feed industry, to supply farms such as the proposed development. In turn these lands will be supplied with manure from this development to be used as a fertiliser on these lands. As can be seen from the information provided, referred to as a customer list in keeping with standard terminology for this type of development, the applicant farms in excess of 347 Ha, and these lands will require in excess of 400 % of the fertiliser that would be produced on this site upon completion of the proposed development.

The applicant farms c. 347 hectares (>300 Ha of which is tillage) available for the application of organic fertiliser. 211 Ha of this is located in close proximity to the development site. **Out of an abundance of caution, and irrespective of the fact that these lands are already receiving organic fertiliser and the proposed development is in effect seeking to replace the fertiliser source (i.e. replacing imported organic fertiliser with on farm generated organic fertiliser, as opposed to new practices on the farm) with no increase in nutrients applied, the applicant has** identified an area (within the total farmed area) for receipt of pig manure of c. 123 Ha, resulting in an application rate on this area of c. 75 kg Organic N/Ha still well below the 170 kg organic N/Ha Limit, well within permitted levels.



Notwithstanding that the applicant can utilise all organic fertiliser to be produced in the proposed development on his own lands to replace existing imported organic or chemical fertiliser use, this customer list may be complimented with additional customer farmers (if required) who are in a position to utilise organic fertiliser to meet their fertiliser needs in line with the provisions of S.I. 605 of 2017, as amended. The feed to be used on this farm will be sourced from specialised pig feed suppliers such as Kiernan Milling, P&V Feeds etc..

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.

1.6 Application of Organic Fertiliser

Notwithstanding that the applicant has sufficient capacity to utilise all of the organic fertiliser, any additional farmers (referred to as customer farmers) who may seek a supply of organic fertiliser from this farm upon completion of the proposed development will be advised as to their legal requirements to be complied with when applying organic fertilisers to land. In addition to this Mr. John Lambe, will ensure that all information required to be forwarded to the customer farmers (should they arise), upon receipt by them of organic fertiliser from this proposed farm, is forwarded to them as soon as practicable thereafter. These requirements including the requirements pertaining to the application of animal manures to land are as outlined in S.I. 605 of 2017, as amended.

All lands currently identified for the receipt of manure from the proposed development are primarily tillage lands, be they Wheat, Barley, Oats, Beans, Oil Seed Rape etc. In order to minimise any potential adverse environmental impact, and to ensure that they get maximum fertiliser benefit from the organic fertiliser, all manure from this farm should be stored, managed and applied in accordance with S.I. 605 of 2017, as amended and incorporated/ploughed into the soil as soon as practicable after application.

As previously detailed the storage capacity to be provided will afford the applicant the capacity to integrate the utilisation of this organic fertiliser into his tillage farming activities under optimum conditions, ensuring that same is only spread when weather and ground condition are appropriate and at the optimum time when same is required by the crop.

Odour nuisance will be minimised and surface and ground waters protected by, using the correct application rates, spreading at the correct times under suitable conditions and strict adherence to cordon sanitaires and the Codes of Good Practice for manure spreading, as outlined in S.I. 605 of 2017, as amended. This fertiliser planning will result in fertiliser substitution.



1.7 Soil

The allocation and utilisation of all fertiliser produced on this farm in accordance with S.I. 605 of 2017, as amended, to replace existing organic/chemical fertiliser currently imported onto, and used on, the farm as part of the proposed fertiliser substitution programme, will ensure that this proposed development has no negative impacts on the farmland. The applicant will ensure that organic fertiliser is spread only under the most favourable 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 is to be applied in accordance with S.I. 605 of 2017, as amended thus preventing nutrient accumulation. As part of this Mr. John Lambe 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. The return of as much of the manure as practicable to the land that was used to grow the grain used in the Irish animal feed industry is the ideal cycle for the utilisation of the nutrients contained therein.

1.8 Surface and Ground Water

The pig farm will be located in the catchment area of the River Fane, 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 manure storage facilities, which will provide 22-24 months storage capacity (net of the 200mm freeboard required) is significantly in excess of 6 months capacity required. This storage capacity will give the applicant the provision to optimise the utilisation of this organic fertiliser into his tillage farming activities.

All roof water and uncontaminated storm water from the hard standing areas on site will discharge, to a Storm water drainage system / soak-pit. The application site is within the Newry Fane Glyde and Dee Hydrometric Area and Catchment, and the Fane Sub-Catchment and Sub-Basin. There are no drains or streams within or adjacent to the application site. The closest watercourse to the site is the River Fane itself and this is 220m south-west of the application site. This River flows eastwards for approximately 6km until it flows into Dundalk Bay just south of Blackrock. The EPA have not defined the ecological status of the River Fane or its tributaries within this particular sub-basin. However, water quality upstream of the application site and in the upper reaches of the River Fane has been classed as good. Under the requirements of the Water Framework Directive, all waterbodies must achieve good status by the end of current cycle of the WFD, i.e., 2021.

The proposed Storm water drainage system / soak-pit has been designed to ensure that the proposed discharge from the site does not exceed 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.

Mr. John Lambe will 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 from washing within the house will be collected directly in the manure storage tank, any soiled water arising from loading activities will be directed into the proposed soiled water storage tanks. All proposed soiled water storage facilities will be constructed and monitored in line with An Bord Pleanála, Louth Co. Co. and/or Department of Agriculture requirements.

The applicant as well as any potential customer 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 utilised by applicant/customer farmers from the proposed development, or that produced on their own/other farms. This will have a long-term benefit, and will ensure that there is no adverse impact on water quality in these areas. The E.P.A., Louth Co. Co., and/or the local fisheries board carry out water quality monitoring on an ongoing basis in the area. Based on the experience gained by the applicant with the existing tillage farming activities, including the existing use of organic fertiliser thereon, and the mitigation measures to be implemented as part of the proposed development, it is expected that the operation of the proposed activities will not have any ongoing adverse impact on water quality in the area.

The application site is within the Newry Fane Glyde and Dee Hydrometric Area and Catchment, and the Fane Sub-Catchment and Sub-Basin. There are no drains or streams within or adjacent to the application site. The closest watercourse to the site is the River Fane itself and this is 220m south-west of the application site. This River flows eastwards for approximately 6km until it flows into Dundalk Bay just south of Blackrock. The EPA have not defined the ecological status of the River Fane or its tributaries within this particular sub-basin. However, water quality upstream of the application site and in the upper reaches of the River Fane has been classed as good. Under the requirements of the Water Framework Directive, all waterbodies must achieve good status by the end of current cycle of the WFD, i.e., 2021. The proposed development is located c. 3.5-3.8 km from the closest Natura 2000 site, Dundalk Bay SAC 000455 / SPA 004026 The Natura Impact Statement (N.I.S.) 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 inhabited third party dwelling to the proposed site, is located c. 750m north of the proposed development, (with a currently unoccupied dwelling located c. 550m west of the proposed site.

As the pigs 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 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 pigs, 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. 347 Ha, farmed by the applicant. The area of the proposed development is currently a tillage field(s). This area is located in an area referred to as **Development Zone 4 of the Co. Louth Development Plan 2015-2021**, which is designated “*To provide for a greenbelt area around the urban centres of Dundalk, Drogheda, and Ardee.*”

It is an objective of the Council to preserve a clear distinction between the built up Areas of settlements and the surrounding countryside. In this regard, greenbelt areas are proposed surrounding the main urban settlements of Dundalk, Drogheda, and Ardee.

The existing farmyard, and the site of the proposed development is well set back from the public road and located in the town land of Rossmakay. The site, measuring c. 0.9207 Ha is c. 0.8 Km’s from the regional route, the R215, between Dundalk and Ardee and a further c. 2 Km’s from the M1 motorway.. The site is to be accessed via c. 900 m of an existing internal farm roadway 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. 3.7 km’s southeast of Knockbridge and c. 7 km’s south of Dundalk.

In the Louth County Development Plan 2015 – 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 associated longstanding farmyard/dwelling complex, and integrated 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 2015 – 2021, 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. 500m) to the proposed pig house to be affected by the proposed development. The potential noise emissions from the pig house are low and should have an imperceptible impact on the closest dwelling(s). Previous surveys on existing pig farm(s) similar in nature/construction but larger in size would concur with this conclusion. As previously detailed the proposed development seeks to complete a sustainable farm diversification from tillage/grassland to pig farming, and integration of same with the existing farming activities, 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 and integrating traffic movements with exiting activities in the farmyard, however there will be a minor net increase in traffic associated with this development. The proposed development will result in a net increase in traffic of on average 2-4 journeys/week associated with pig transport, feed deliveries, waste collection and inspections/audits, etc. This increase will be insignificant in the context of the existing traffic flow to/from the existing farmyard/dwelling.

Transport of fallen stock will occur on a fortnightly basis in line with requirements, and will be integrated into the collectors regular collection schedule. All other wastes/by-products will be stored appropriately and will be removed from the farm by approved contractors and/or to approved sites in line with An Bord Pleanala and Louth Co. Co. requirements, and the collection of all such materials will be co-ordinated with existing activities to optimise/minimise 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.

1.12 Bio Diversity - Flora and Fauna / Special Policy Areas

The organic fertiliser produced on this farm will be allocated, exclusively as is currently proposed, to the applicant for use as an organic fertiliser on lands that have traditionally and/or are currently receiving chemical fertilisers some organic fertilisers (be they bovine, ovine, porcine and/or avian in origin) to maintain soil fertility and ensure satisfactory grass/crop production. The organic fertiliser produced on this farm will be used to replace a portion of the imported organic/chemical fertiliser that would otherwise have to be, and



is currently being, used to meet the farms agronomic requirements, as part of a fertiliser substitution programme.

All habitats within these lands such as wooded areas, scrubland etc. would be excluded from receiving organic fertiliser 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 Pigmeat Quality Assurance Scheme (PQAS). This will be devised, completed and maintained in line with Bord Bia requirements.

As this proposed development is planned on an predominantly agriculturally managed area which has been part of an intensively managed agricultural enterprise, and located adjacent to an existing agricultural farmyard, for a significant number of years, the ecological value of the site reflects these previous management practices. This area 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 application site is within the Newry Fane Glyde and Dee Hydrometric Area and Catchment, and the Fane Sub-Catchment and Sub-Basin. There are no drains or streams within or adjacent to the application site. The closest watercourse to the site is the River Fane itself and this is 220m south-west of the application site. This River flows eastwards for approximately 6km until it flows into Dundalk Bay just south of Blackrock. The EPA have not defined the ecological status of the River Fane or its tributaries within this particular sub-basin. However, water quality upstream of the application site and in the upper reaches of the River Fane has been classed as good. Under the requirements of the Water Framework Directive, all waterbodies must achieve good status by the end of current cycle of the WFD, i.e., 2021.

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 pig house is located a significant distance (c.3.8km) 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 organic fertiliser arising from this farm is to be allocated to lands farmed by the applicant in accordance with S.I. 605 of 2017, as amended, and will be utilised in a fertiliser substitution programme to replace existing organic/chemical fertiliser use, thus resulting in no increase in the amount of nutrients applied to the applicant's lands.



1.13 Amenity Areas

The proposed pig 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 2015 - 2021.

The proposed development will be integrated into the surrounding land topography, existing farmyard complex and nestled into the existing landscape.

1.14 Cultural Heritage (Architectural and Archaeological Features)

There are no buildings/structures of architectural significance located on the proposed site or likely to be impacted by the proposed development. Rossmakay House, a Protected Structure (LHS 12-049, NIAH 13901214), belonging to the applicant is located within the established farmyard complex to the North of the proposed development. A Visual Impact Assessment was carried out in relation to the potential impact of the proposed development on same and it was concluded that the proposed development would not adversely impact on this protected structure.

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. 0.2 km of the proposed site. The closest such feature is a Religious house located 200 m south west of the proposed development. The proposed pig house is to be constructed on intensively managed farmland. This development will involve the construction of an underground manure storage tanks (typical of any slatted based housing system) that will require limited excavation. Given the contours of the site and the proposed slat level, excavation requirements have been significantly reduced.

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.



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

All wastes generated on site, such as dead pigs, general packaging etc., will be stored and disposed of/recovered in accordance with applicable regulations and in accordance with Louth Council and An Bord Pleanala requirements.

The potential of the proposed pig 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 in the house from washing etc., will be collected in the manure storage tank and any soiled water arising from the loading /unloading of pigs will be collected in the proposed soiled water collection tanks, pending transfer to the manure storage tank and/or 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.

Pig manure is the main by-product produced on the site. This manure is a valuable organic fertiliser, and is keenly sought by tillage farmers, such as the applicant. All manure from the proposed development will be removed off site for use on the lands farmed by the applicant as an inexpensive organic fertiliser to replace purchased expensive inorganic/chemical fertiliser.

Teagasc have recently (2017) put a value of €5.20 per m³ on this fertiliser based on a comparison with chemical fertiliser prices. This naturally produced organic fertiliser provides significant benefits with regard to improvements in soil organic matter and trace element content, when compared to inorganic imported chemical fertilisers.

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 house, 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 2 people (including the applicant) on a part-time basis, and will support additional jobs in the pig 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 farm profitability of the applicant will be boosted by cheap fertiliser nutrients replacing imported energy demanding inorganic nutrients, and/or organic fertiliser from off farm sources. 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 pig (production, packaging, marketing and sales) industry is a key component of this. The pig sector makes a valuable contribution to the Irish agricultural economy, with output at farm level estimated at €458.6 million in 2018. The sector is a significant employer in rural Ireland with over 7,000 people employed in pig processing, ancillary services and at farm level.

An investment/development of the nature proposed will guarantee new jobs, and will secure a significant number of existing jobs, 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 pig house is located in Co. Louth. County Louth does not have as intensive an agriculture sector as counties such as Cavan, Monaghan, Tipperary, Cork etc., and farming in the county is based more around the traditional enterprises such as tillage, dairy and beef. There are currently only two licensed pig farms in Co. Louth, with 3 licensed poultry farm sites. This is a relatively low density of Intensive Agriculture relative to the tillage farming sector in the county which has significant capacity to utilise organic fertiliser from such developments. As has been detailed in this report the applicant has the capacity to utilise all organic fertiliser to be produced in the proposed development (in addition to any by his existing bovine herd) on his lands to replace, in part, his existing (organic and chemical) fertiliser purchases/imports, as part of the fertiliser substitution programme.

The existing tillage and arable sectors in Co. Louth have relied heavily over the years on a consistent reliable supply of organic fertiliser 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 1 No. pig house with the capacity for 1,800 pigs in line with modern housing and animal welfare standards. The recent poor returns from the more traditional farming practices, including tillage, and the reduction in employment in other sectors of the economy have had a significant adverse impact on the Irish economy. Productive, efficient and sustainable agricultural activities, such as the proposed development, and the jobs dependant thereon, will be critical to the local and wider 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. 1,800 pigs. While this may be perceived, by some, as a significant development, it is significantly below the current average scale of existing pig farm developments, elsewhere in the country, and is relatively limited in scale, and below the threshold requiring mandatory EIA and /or an E.P.A. Licence.

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 organic fertiliser in accordance with S.I. 605 of 2017, as amended, as part of a fertiliser substitution programme to replace existing fertiliser use. 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/An Bord Pleanála as a result of planning permission 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.



As has been detailed the organic fertiliser arising from the proposed development will be used to replace imported organic /chemical fertiliser as part of a fertiliser substitution programme. Contrary to the concerns raised, bovine livestock numbers are reducing and c. 30% of the organic N to be produced in the proposed development can be offset by current reductions in the bovine enterprise, over recent years (notwithstanding that 100% will be offset by a reduction in fertiliser imports. Specific concern was raised about the potential cumulative impact of the applicant's proposed bovine development (previously approved but not completed). It has been detailed that same was to house, 100 cows and 100 weanlings. This would equate to a stocking density equivalent to 25.64 Kg Organic N /Ha/Annum, comparable to the recent 3-5 year average for the farm, (range 22-30), and represents an improvement in facilities (if completed), rather than any intensification of activities, and as such will have no additional cumulative impact with the proposed development.

As previously detailed any increase in nutrients from organic fertiliser produced on the farm (be that resulting from the proposed pig house development and/or existing bovine enterprise), will be offset by a commensurate reduction in fertiliser (principally organic) imports to the farm.

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 / soak-pit.
- Collection and appropriate management of all soiled water.
- Management of all organic fertiliser in line with requirements of S.I. 605 of 2017, as amended, and the utilisation of same by the applicant in a fertiliser substitution programme.
- 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 pig farm developments, and well understood. In addition the principles are already in practice within a large number of existing pig farms elsewhere in the country.

The principles with regard to the feeding and management of the pigs, the operation of the feeding, water and ventilation systems, the treatment, storage and management of wastes produced, and the storage, management, distribution and utilisation of the organic fertiliser produced on this farm is similar to existing pig farm operations. In this regard the proposed development will employ the highest construction and welfare standards and will include high insulation standards, and construction in line with DAFM Specifications.

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 pig farming, feed production using Irish grain, use of pig manure on tillage lands as part of an overall fertiliser plan) have been widely practiced country wide. Same will;

- Improve both the economic and environmental sustainability of the existing farm.
- Minimise transport costs and emissions by being able to return the organic fertiliser back to the land, in the local area used to grow the cereals, rather than the applicant having to source same from further away.
- 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 pig farming areas will also help to maximise bio-security on the 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.



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 farming activities carried out by the applicant 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 for this farm.

Signed:

Paraic Fay
BAgrSc

Date

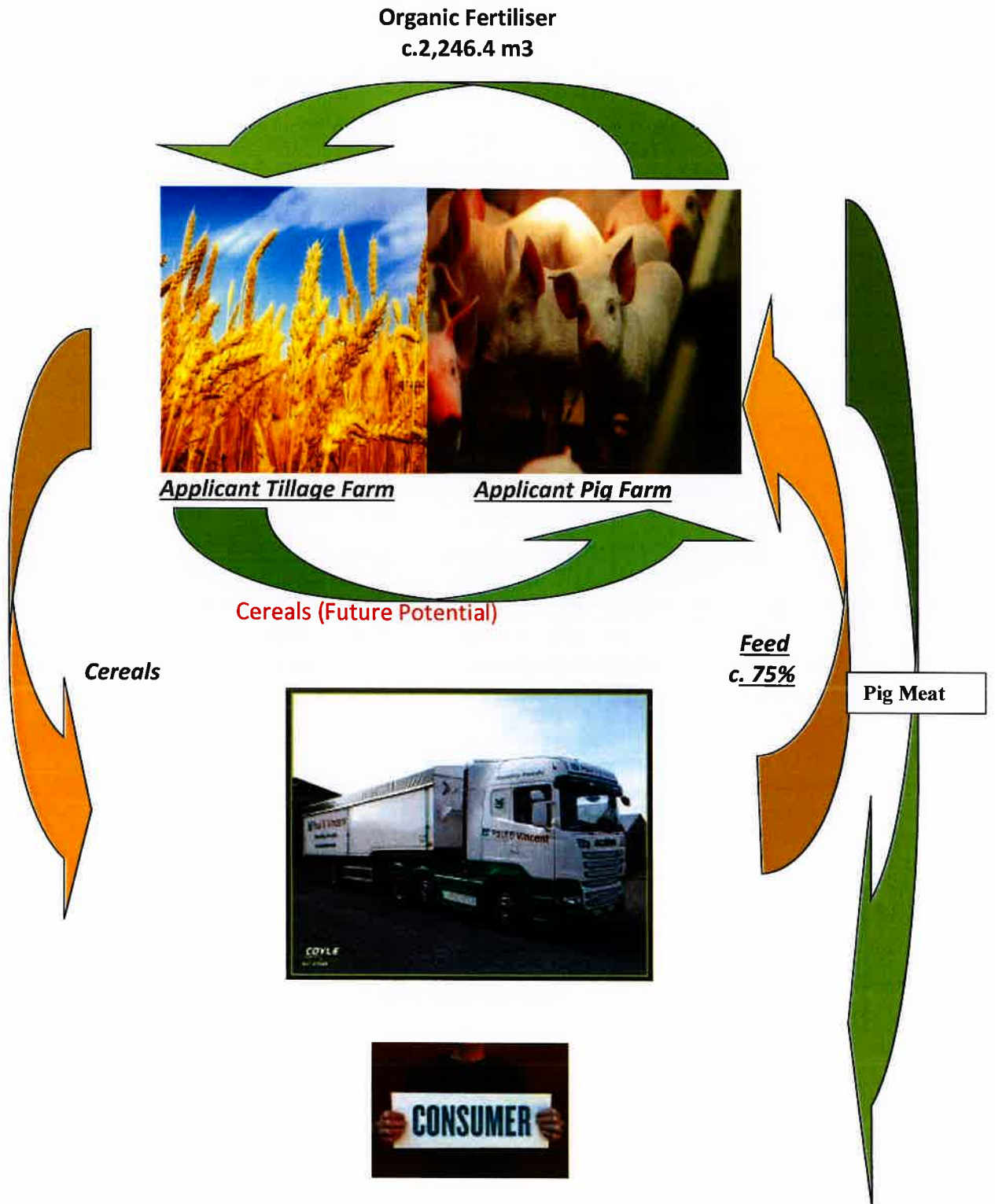
24/3/20

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Process Flow Diagram





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 estimated turnover of €26 billion, and exports of €13.7 billion (2018) and providing 173,000 jobs or 7.7% (2018) 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 most recently 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.

Agri-Food Strategy 2030: Food Wise built on a successful lineage of ten year strategies for the agri-food sector going back to Agri-Food 2010 which was published in 2000. Preparations are now underway for the development of the next strategy. The Department has launched a public consultation to ascertain the views of all stakeholders on the direction of the sector to 2030 and what strategic actions are required to ensure it lives up to its potential, as well as seeking to address societal expectations.

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.

2.1 Pig Industry

➤ **National Basis**

The development of the pig meat industry is supported by government policy aimed at increasing the value of the export market. The Irish pig meat industry has achieved major success from the mid 1980's onwards in the development of an internationally competitive export orientated pig meat industry. This progress was achieved with major rationalisation of the Irish Pig Industry with a reduced number of farmers with a larger number of animals, resulting in the pig industry becoming the most market led industry in Irish Agriculture.

The Irish pigmeat industry accounted for c. 10% (excluding forage) of the output value of the agri-food sector in 2016 and is the third most important sector after dairy and beef.



Retail sales of pork products in Ireland (2018) amounted to c.€650 million, and on top of this, exports amounted to some €666 million in 2018 (increasing to €941 million in 2019). Ireland represents less than 1% of EU (27) production (2016). This enterprise conforms to Irish national policy on the pig industry based on the Development Plan for the Irish Pig Industry announced by the Minister for Agriculture and Food on the 10th of July 1987, the Pig Production Group Report of 1988 and the Pig Industry in Ireland, Strategic Study, 2000. The pig industry in Ireland has been through a number of tough economic years. On an island basis it is essential that the present level of production is at least maintained, as a critical mass of circa. three million pigs per annum is essential for the efficiency of the few processing plants remaining. Ireland's island status has long-term importance for the European project in terms of disease transfer and sustainable pig breeding.

According to the Food Harvest 2020 report, and Food Wise 2025, pig meat consumption worldwide is expected to grow steadily between in the coming years. The Food Harvest report details that it is government policy to target a 50% increase in the value of pig meat production/exports. It is envisaged that a significant proportion of this expansion in the pig industry will occur on existing pig farm sites. This report also confirms that while the number of farmers producing pigs is expected to decrease over this period, the farm size is likely to increase. An intensive agricultural sector has not developed in County Louth to the same extent as some adjoining counties. Notwithstanding same, Agriculture is the mainstay of the local economy, and the county has a well organised agri-business sector, focused around the more mainstream farming sectors, tillage, dairy and beef.

On a national scale there in excess of c. 7,000 jobs directly dependant on the pig industry. This industry also provides a source of organic fertilisers for farmers in this area. Due to the ever increasing costs associated with chemical fertiliser, organic manures such as pig manure are becoming ever more sought after by tillage/livestock farmers in order to reduce their fertiliser costs. The goal of the development is to establish a modern purpose designed pig farming activity that will comply with all environmental and welfare standards while at the same time providing a reasonable return for the applicant, and integrate successfully with the applicant's existing farming activities. This proposed development will ensure that the pig farm operates in accordance with Bord Bia quality assurance standards and animal welfare regulations. It will also ensure appropriate manure storage capacity on the farm, and represents a significant capital investment.

Within the pig industry, the trend is towards larger scale pig farms reflecting, 1) The concentration of resources in terms of skilled labour and capital, 2) Domestic and more increasingly international welfare standards, and, 3) Economies of scale.

Due to rising input costs, additional environmental and welfare requirements and the reduction in pig prices (in real terms) Irish pig farmers need to improve efficiencies wherever possible. Irish producers are amongst the top producers in the E.U. in terms of pig numbers per sow, but carcass weight is still lower than most of our competitors. There is room to increase efficiencies in this area, through small improvements in genetics, quality and quantity of housing, and slaughter weights etc. The proposed development has the added advantage of integrating successfully with the applicant's existing tillage farming activities.



➤ **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 two E.P.A. licensed Pig farms in Co. Louth, and 3 E.P.A. licensed poultry farms, reflecting a limited scale of intensive agricultural development.

However the agriculture and tillage sector in particular in Co. Louth has relied heavily on the supply of organic fertilisers such as pig and 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 pig industry, not to mention the local tillage farmers in the area producing grain to feed Ireland's livestock sector.

The pig industry also provides a significantly valuable source of organic fertilisers for farmers and in particular the tillage farmers. Due to the ever increasing costs associated with chemical fertiliser, organic manures such as pig manure are becoming ever more sought after by tillage/livestock farmers in order to reduce their fertiliser costs, and for this reason the proposed developments will integrate seamlessly with the tillage farming activities carried out by the applicant, and provide cost savings to both enterprises.

2.2 Context

This Environmental Impact Assessment Report was prepared in conjunction with a planning application to construct 1 No. pig house (and associated works) at Rossmakay, Knockbridge, Co. Louth, which has been referred under third party appeal to An Bord Pleanála, following on from a grant of permission by Louth Co. Co. This proposed development is to be completed on a greenfield site and will have an overall capacity of c. 1,800 pigs.

EIA requirements derive from Council Directive 85/337/EEC (as amended by Directives 97/11/EC, 2003/35/EC and 2009/31/EC) and as codified and replaced by Directive 2011/92/EU of the European Parliament and the Council on the assessment of the effects of certain public and private projects on the environment and as amended in turn by Directive 2014/52/EU.

At 1,800 production pig places, the proposed development is below the threshold as detailed in Schedule 5 Part 2 of the Planning and Development Regulations 2001, as amended, i.e. Class 1(e) (ii) activity, "Installations for intensive rearing of pigs not included in Part 1 of this Schedule which would have:

- **more than 2000 places for production pigs (over 30 Kilograms)** in a finishing unit,
- more than 400 places for sows in a breeding unit, or,
- more than 200 places for sows in an integrated unit.



However An Bord Pleanála have determined under Article 109 (2)(b) of the Planning and Development regulations that an E.I.A.R. is required, for the reasons as outlined below;

Having regard to;

- a) the nature and scale of the proposed development, which is just below the threshold in respect Class 1 (e)(ii) (Agriculture, Silviculture and Aquaculture) of Part 2 of Schedule 5 of the Planning and Development Regulations, 2001, (as amended),**
- b) the scale and capacity of existing and permitted animal housing within the adjoining farm complex and the potential for cumulative effects with the proposed development,**
- c) groundwater vulnerability in the vicinity of the site and across the wider landholding and the proximity of the site and landholding to the River Fane which discharges to Dundalk Bay, designated as a Special Area of Conservation and Special Protection Area, and the potential for impacts on water quality,**
- d) the guidance set out in the “Environmental Impact Assessment (EIA) Guidance for Consent Authorities regarding Sub-Threshold Development”, issued by the Department of the Environment, Heritage and Local Government (2003),**
- e) the criteria set out in Schedule 7 of the Planning and Development Regulations, (as amended), and**
- f) notwithstanding the features and measures proposed by the applicant envisaged to avoid or prevent what might otherwise have been significant effects on the environment,**

it is considered that the proposed development would be likely to have significant effects on the environment and that the preparation and submission of an Environmental Impact Assessment Report is therefore required.

This farm will operate under the threshold requiring an E.P.A. Licence (Class 6 - Intensive Agriculture), as required for all pig farms over the relevant thresholds. This Environmental Impact Assessment Report (E.I.A.R.) has been prepared in connection with European Communities Directive 85/337/EC, European Communities (E.I.A.) (Amendment) Regulations, the Local Government Planning and Development Act 2000, as amended, Planning and Development Regulations 2001, as amended, and the Protection of the Environment Bill 2003.

Mr. John Lambe *proposes* to construct the following:

- 1 No. pig house ~ Floor Area c. 1,963 m², and,
- All ancillary structures and site works associated with the construction and operation of this proposed pig house.

The proposed buildings are of a form, design, colour and materials that are similar to existing agricultural/pig 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., 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 pig farm is classed under *Project Type 13 Pig Rearing Installations and Pig 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. 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 Rossmakay, Knockbridge, Co. Louth, located adjacent to the applicant's dwelling and farmyard complex. The area of the proposed site is currently in tillage production. The applicant has extensive agricultural interests in the area mainly in tillage and cattle (bovine livestock), however the proposed diversification will be the first venture into pig 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 applicant in the area of feed supply and organic fertiliser, with cumulative benefits to both enterprises.

This application represents a proposed development for c. 1,800 pigs. This is a limited scale development in terms of pig farm developments and the level of investment required. It will also be a boost to local employment in this area, and the local construction industries, and will have a significant positive impact on the viability of the applicant's farming activities. The proposed development 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 applicant's tillage enterprise.



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 building resulting in, an improvement in animal performance and feed conversion efficiencies, i.e. less feed will be required to produce each pig, and improved energy efficiency.
- efficient use of labour, due to an optimum layout, and optimum technical efficiency.
- Integrating with existing farming activities
- Economies of scale with regard to input costs, etc.

The integration of this proposed development into the applicant's tillage farming enterprise will be mutually beneficial to both activities as;

- The organic fertiliser produced on the farm (c. 2,246.4 m³) represents a fertiliser value of c. €11-12,000 available to the applicant, thus returning the nutrients to the lands used to grow the crops. Same also represents additional traffic saving associated with the existing transport of organic fertiliser to the farm, as this volume of organic fertiliser will not have to be transported to the applicant from the traditional Intensive farming areas.

In addition the operation of this farm will enhance the symbiotic relationship between the tillage farmers (incl. the applicant) supplying grain to the Irish animal and pig feed industry, by returning the pig manure/organic fertiliser to these lands for use as organic fertiliser.

At present all lands identified for the receipt of organic fertiliser from this development are farmed by the applicant, and this proposed source of additional organic fertiliser will have a positive impact on the economics of his tillage farming activities.

The net organic manure storage capacity proposed on the farm will be c. 4,318 m³ on completion of the proposed developments (c. 23-24 months manure production). This storage capacity will ensure that organic fertiliser produced on the farm is spread only under favourable soil and climatic conditions, and is well in excess of the 6 months storage as required by S.I. 605 of 2017 as amended. This storage capacity will significantly facilitate the integration of the proposed development (or more specifically the organic fertiliser to be produced therein) into the existing tillage farming activities, by ensuring that the organic fertiliser is stored in accordance with DAFM requirements (and S.I. 605 of 2017 stipulations) in purposely designed manure storage structures, until such time as the weather and ground conditions are appropriate, and at the opportune time for the applicant to utilise the nutrients contained therein, to best effect for his tillage farming activities. Organic Fertiliser can be applied directly from the manure storage tank to farmland thus minimising any loading/handling.



Mr. John Lambe will manage and operate the pig farm in a manner that is,

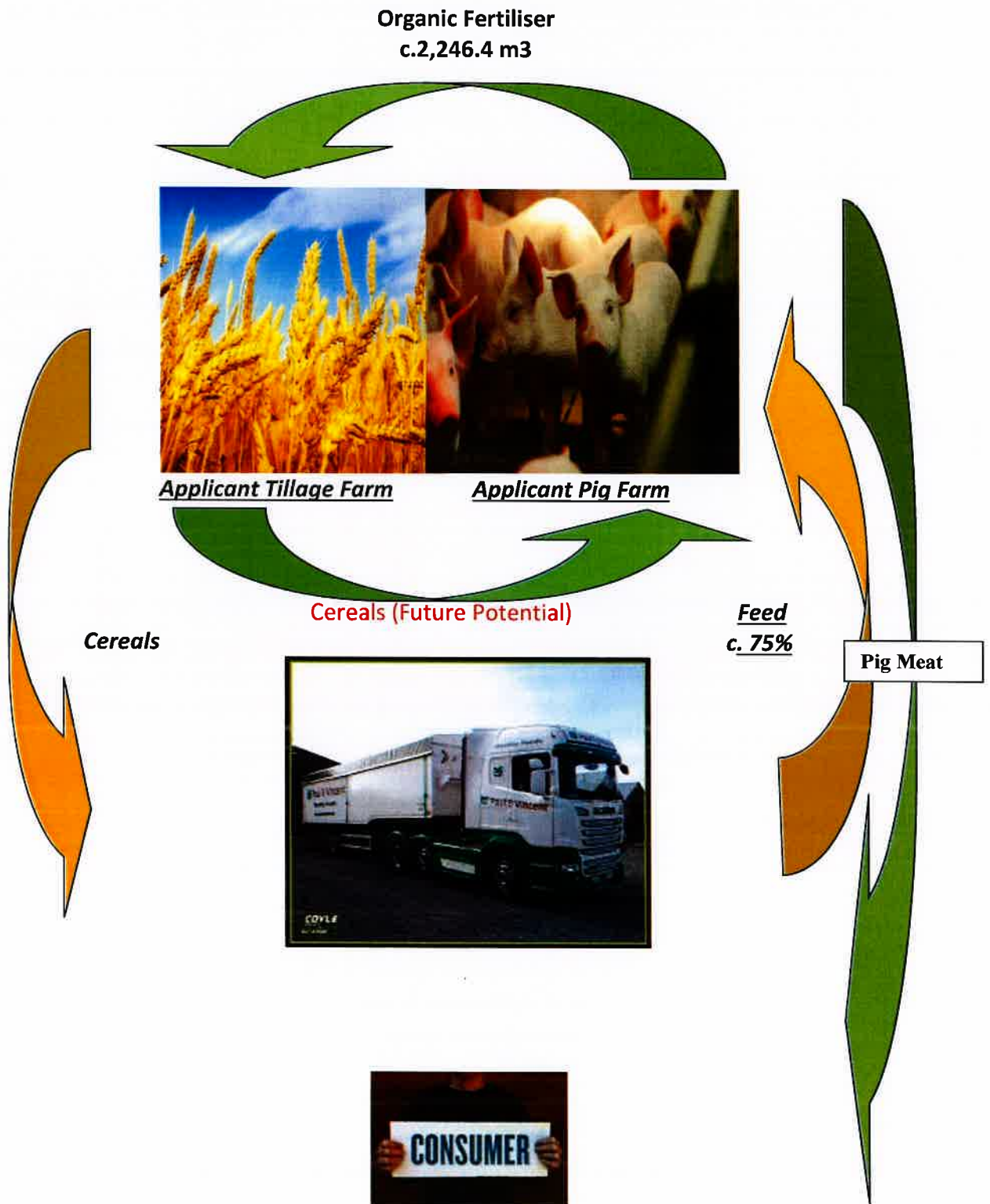
1. Compliant with E.U. and Irish animal welfare standards,
2. Beneficial to the local community in terms of direct employment (Pig farm staff, advisors and consultants) and indirect employment (animal feed and processing industries, agricultural contractors, haulage contractors), (farmers also benefit from fertiliser nutrients), and,
3. Compliant with Louth Co. Co. & D.A.F.M. environmental standards/requirements and without adverse impact on the local environment.

The development of the new pig house will be operated and managed in a similar way to existing pig 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 pig meat 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





2.6 Louth Development Plan, 2015 - 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.

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.

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.

The changing pattern of employment in agriculture in the recent past necessitates a new approach to the sustainable use of our countryside. Farm diversification is promoted in both national and regional policy as a means of expanding the rural economy. Teagasc have identified a number of areas where opportunities may exist for farmers to generate supplementary income. Some of these include wind farms, production of dairy products (such as cheese and yoghurt), soft fruit production, forestry, horse livery and adventure tourism. Others would include micro enterprises, rural tourism, biomass production, organic food production, horticulture, specialist farming practices such as poultry, mushroom growing, and specialised animal breeding.

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.

It is felt by the applicant that the proposed development satisfies the requirements of Louth Co. Co. as per the policies on Agriculture as outlined in the County Development Plan 2015 - 2021, detailed below;



- **Policy RD 7** To maintain a vibrant and healthy agricultural sector based on the principles of sustainable agriculture and associated activities as a cornerstone of rural development and prosperity.
- **RD 8** To facilitate the development of agriculture while ensuring that natural waters, wildlife habitats and conservation areas are protected from pollution.
- **RD 9** To encourage and facilitate agricultural development whilst ensuring that such development does not result in a negative effect on the scenic amenity of the countryside.
- **RD 10** To encourage and facilitate agricultural diversification into related agri-businesses subject to the retention of the holding for primarily agricultural use and the proper planning and development of the area.
- **RD 11** To consider farm-based diversification which is complementary to the farm and is operated as part of the holding.
- **RD 12** To encourage rural diversification intended to supplement farm incomes such as production of dairy products, soft fruit production, forestry, horse livery, food production, agri-tourism and specialist farming practices.

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. Proposals for larger more intensive agricultural practices may require more stringent consideration, for example, mushroom and Poultry units, or Piggeries which may have a greater impact on the local roads and the environment. Such applications will be assessed on their merit subject to proper planning and sustainable development criteria.

- **RD 13** To ensure that agricultural buildings are designed and appropriately sited to integrate into the landscape. Where new agricultural developments or extensions to existing authorised agricultural developments are proposed, it will be a requirement that the development is well screened by trees and hedgerows and of a palette which permits the structure to satisfactorily blend into its surroundings.
- **RD 14** To ensure that agricultural developments provide adequate waste collection and storage facilities and adhere to all legislation on water quality including the Water Framework Directive, Nitrates Directive and Phosphorus Regulations.
- **RD 15** To ensure that agricultural developments are designed and constructed in a manner that will ensure that watercourses and sources of potable water are protected from the threat of pollution.



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 pig housing, will modify the existing farming activities and will provide for a sustainable farm diversification for Mr. John Lambe 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 from the proposed developments to be utilised as organic fertiliser on the applicant’s lands to replace existing organic/chemical fertiliser use as part of a fertiliser substitution programme 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.



2.7 Organisations and Bodies Consulted

The scoping exercise for this E.I.A.R. was carried out in consultation with C.L.W. Environmental Planners Ltd., Teagasc and the applicant Mr. John Lambe.

Other organisations and bodies consulted directly/indirectly and/or specialist expertise include:

- Big Dutchman (Equipment Suppliers)
- Bord Bia
- Department of Agriculture,
- Department of Environment.
- Duchas - The Heritage Service
- Environmental Protection Agency.
- 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 Johnston MIOA CLV Consulting (C/o N.V.M. Ireland Ltd.) (Noise Survey re: Comparable development)
- Noreen McLoughlin, MSc, MCIEEM, Whitehill Environmental (Ecology)
- PE Services, Crubany, Co. Cavan (Ventilation/equipment)
- Michael Fitzpatrick B.A. Arch., Dip. Arch., MRIAI RIAI Grade III Conservation Architect Michael Fitzpatrick Architects Ltd. Visual Impact Assessment
- Nevin Traynor Storm Water Attenuation Proposals. B.Sc. Env, H.Dip I.T Cert SHWW, EPA/FAS Cert.



2.8 References / Publications Consulted

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

- Advice Notes on Current Practice in the preparation of Environmental Impact Assessment Reports
- Advice Notes for preparing Environmental Impact Assessment Reports, Draft September 2015 – E.P.A.
- Agri-Environmental Specifications for R.E.P.S. 2000, *Department of Agriculture, Food and Rural Development*.
- Annual Review and Outlook for Agriculture, Food and the Marine 2019 , DAFM 2019
- 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.
- Louth Development Plan (2015 - 2021)
- Guidelines on information to be contained in Environmental Impact Assessment Report - EPA Draft August 2017
- 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 Wise 2025 – A 10 year vision for the Irish Agri-Food Industry– Department of Agriculture, Food and the Marine.
- 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
- 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.
- River basin Management Plan for Ireland 2018-2021
- Suitable Development, A Strategy for Ireland, *Department of Environment*
- *Teagasc, Major and Macro Nutrient Advice for Productive Agricultural Crops - 4th Edition 2016*.
- Pigmeat Quality Assurance Scheme, Bord Bia
- 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

SI No. 296 of 2018 (EUROPEAN UNION (PLANNING AND DEVELOPMENT) (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2018 (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	≈	x	≈
Fauna	≈	x	≈
Soil	≈	≈	✓✓
Water	≈	x	xx
Air	≈	≈	x
Climate	≈	≈	≈
Ambient Noise	≈	x	≈
Cultural Heritage	≈	≈	≈
Landscape	≈	xx	x
Material Assets			
▪ Traffic	≈	x	x
▪ Land Use	≈	≈	✓
▪ Employment	x	✓✓	✓

Key:

- | | | | |
|-----|---------------------------------------|-----|---------------------------------------|
| ≈ | No Impact | | |
| x | Slight Negative Potential Impact | ✓ | Slight Positive Potential Impact |
| xx | Moderate Negative Potential Impact | ✓✓ | Moderate Positive Potential Impact |
| xxx | 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 and integrated with the existing farmyard complex, is well situated to screen the pig farm from view.

3.1 Site Location

This site of the proposed development/farm is a predominantly a greenfield site / agricultural land located adjacent to the applicant's farmyard/dwelling, on lands farmed by the applicant. The existing farm, and the site of the proposed development, is well set back from the public road, on c. 0.9207 Ha, located in the town land of Rossmakay. The site is c. 0.8 Km's from the regional route, the R215, between Dundalk and Ardee and a further c. 2 Km's from the M1 motorway.

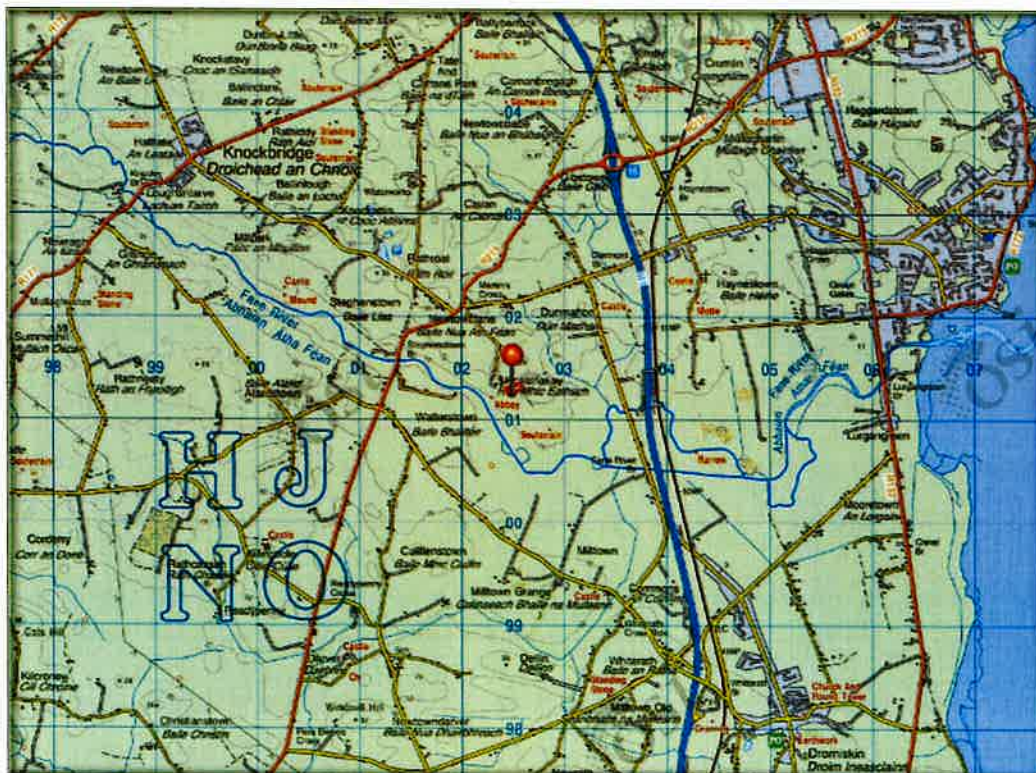


Figure 3.1 – Map showing the Location of the Proposed Development Site (Site Outlined in Red)



Figure 3.2 – The Application Site at Rossmakay (Outlined in Red) and its Surrounding Habitats. The River Fane is Highlighted in Blue.

The site is to be accessed via c. 900 m of an existing internal farm roadway 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. 3.7 km's southeast of Knockbridge and c. 7 km's south of Dundalk.

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. Pig farming is seen as the ideal enterprise;

1. For the proposed site in question and,
2. To integrate with the existing applicant's 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 pigs to be housed in the proposed development),
 - organic fertiliser (which can be used on the farm to grow the grain (barley, wheat etc.) to feed the pigs.

Upon completion of the proposed development this pig farm, will only provide <c. 25 % of the organic fertiliser requirements of the lands farmed by the applicant.



This proposed development will operate to the highest standards of animal welfare, environmental protection, animal/pig 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 of 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 capacity anticipated to be required by the pig breeding farm in order to make the proposed development a viable proposition.
- The applicant's requirement for organic fertiliser to replace imported inorganic fertiliser, thus increasing the efficiencies within his existing tillage farming activities.

The location of the proposed development is a significant advantage to the operation of this farm as it is located centrally within a significant tillage farming area, thus maximising the area of available and suitable land, while minimising manure transport distances. The organic fertiliser from this farm is to be applied to the land farmed by the applicant to produce wheat and barley (and other crops) for the Irish animal feed industry, to be used to feed farms such as the proposed development.

This is the ideal agricultural production/ nutrient cycle, and will result in fertiliser substitution where existing organic and chemical fertilisers currently imported by the applicant onto the farm will be replaced (in part) by organic fertilisers to be generated on the farm. In the assessment of the proposed development it is important to note that the proposed development will not increase the amount of nutrients to be applied to the applicant's landholding, but will seek to replace imported organic and chemical fertiliser with organic fertiliser produced on the farm, while at the same time providing the applicant with the storage facilities to utilise this organic fertiliser at the optimum time and under optimum conditions, and thirdly securing an additional income stream on the farm.

At a time in the Irish pig and tillage industries when margins are extremely tight it is essential that every farm is run and managed as efficiently as possible. This is achieved with the efficient use of inputs and optimising animal/pig/crop performance, maximising the value obtained from locally produced sources of organic fertiliser.

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, including, not alone the applicant's bovine enterprise, but the integration of same with the larger tillage enterprise and associated activities. 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. 347 hectares (predominantly tillage with a limited



bovine enterprise) farmed by the applicant, 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 (1:2,500 + 1:1,800). 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.

Pig rearing design principles are relatively simple and have not changed significantly over recent years. The type of pig housing proposed on this farm is designed for pig rearing and comprises a simple closed building of block and steel construction on an impervious mass concrete manure storage tank, thermally insulated with a forced computer controlled ventilation system and artificial lighting. Wet/Dry feeders are to be used in the house as this is the most efficient type of drinking system and it ensures minimal wastage.

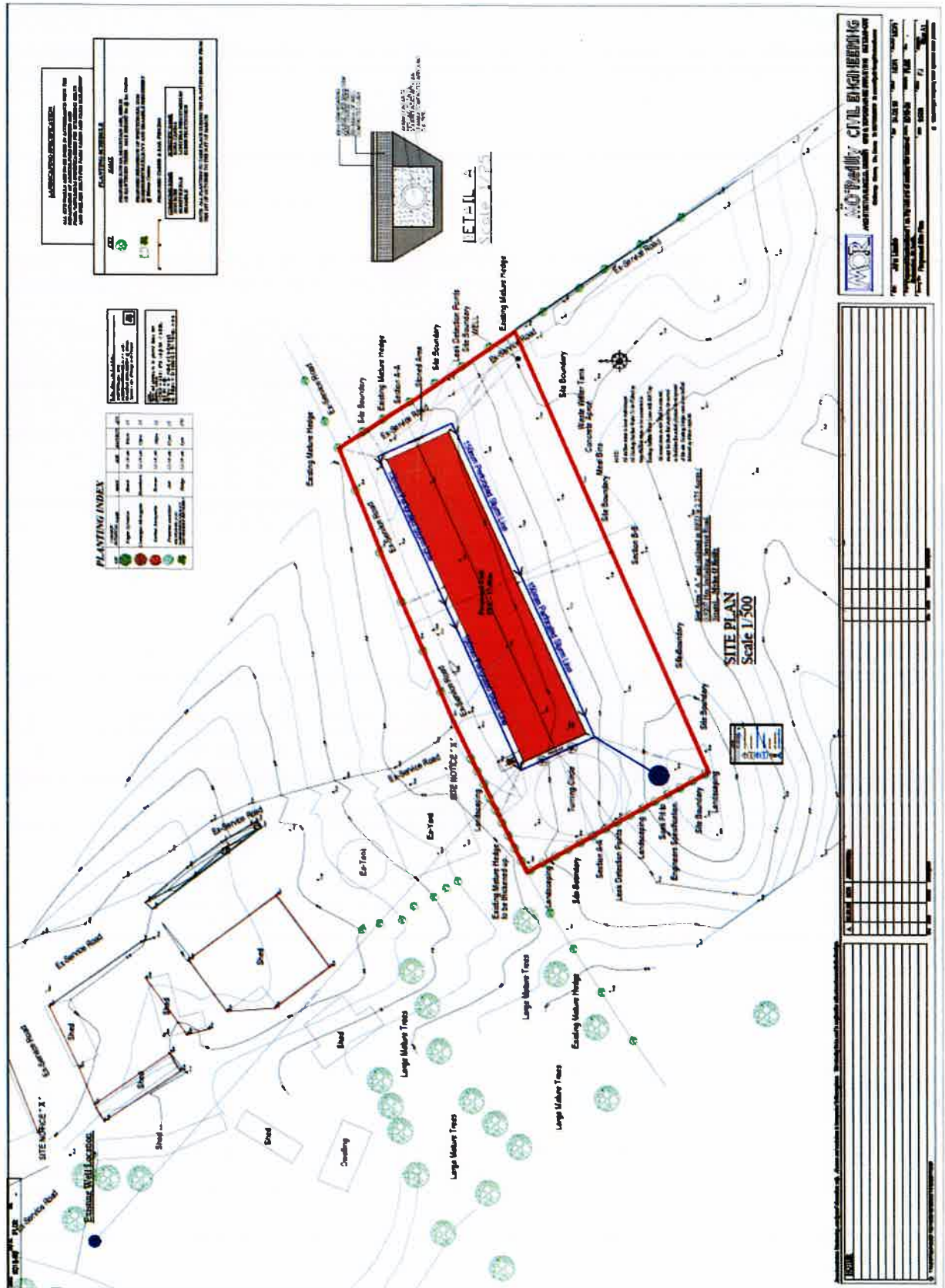
Mr. John Lambe *proposes* to construct the following:

- 1 No. pig house ~ Floor Area c. 1,963 m²,
- All ancillary structures and site works associated with the construction and operation of this proposed pig house.

The proposed development of 1 No. pig rearing house will be of similar design to the existing houses located elsewhere within the country. The proposed pig house will be of a steel portal frame construction on a mass concrete manure storage tank. Walls will be concrete, with a pre-fabricated panel / Block and plaster construction. The roof cladding will be box profile juniper green (or similar) cladding. The proposed pig house will be c. 100.675m long by 20.625 m wide with a height of c. 5.5 m above slat level.



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 pig farms in the county, and will be integrated with the workload of the existing farmyard. 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 ½ labour units, in addition to farm management.

Mr. Lambe, and/or other designated person(s) will be available at all times should any emergency arise regarding this farm. In addition Mr. John Lambe 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 1 No. purposely designed pig house, with a capacity for c. 1,800 pigs. Once the proposed development has been completed there will be an average of 1,800 pigs on site. Pigs are transported to the farm as weaners (c. 30 – 35 kg's) from a specialised pig breeding farm, and remain until they reach sale weight of c. 110-120 Kg live-weight c. 12 – 14 weeks later. Additional space has been proposed to be provided to allow for the washing and drying routines to be carried out, and to provide a number of isolation/recovery pens for any sick/injured animals.

In order to ensure that the maximum performance is achieved in pig farming with the minimal amount of inputs significant attention is paid to the genetics of the pigs produced. The programme carried out on the breeding farm will ensure that only pigs with the top performance in terms of growth rate and feed efficiency are produced.

3.4.2 Use of Natural Resources

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. There are no processes involved that have a high requirement for fuel energy no ancillary heating will be required.

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 pig feed, which is classifiable as a natural resource that is a renewable resource, and water



Feeding

Pigs on this farm will be fed with a dry feeding system. Feed will be supplied to the farm from a specialist feed supplier (such as P&V Feeds, Kiernan Milling etc.

Ad libitum water is supplied to the pigs via water nipples as per welfare legislation. Feed to be used is calculated on an industry standard average feed consumption on the farm on an annual basis divided by the number of pigs on the farm giving an estimated figure of c.

- 0.25 tonnes per pig reared to market weight.

Water supply and use.

Water is to be supplied from a private well located/to be located on site, and/or adjacent to the site. Water is to be stored in an over-ground water storage tank(s) with a capacity of @ least 24 hours supply. The estimated water used per annum will be c. 4,000-4,500 m³. All animal drinking appliances are regularly maintained to ensure that there is no leakage to the slurry storage structures. Water on this pig farm is used for the following:

- (a) **Drinking water for livestock.**
- (b) **High pressure wash down systems (3,000 psi)**

The finisher house is proposed to be washed after each batch, as the pigs are moved in an "all in / all out" system through their growth cycle. The pressure of the power washer is c. 3,000 psi. Water throughput per hour = c. 1.08 m³. The power washer will be in use for 4-8 hours per week. A weekly total of c.5-10 m³ of water will be required.

Heating and Ventilation

Energy supply to the farm will be an electric single phase supply. A standby generator is to be provided in the event of a disruption to the power supply.

- (a) **Heating**
 - **Pig Grower House:** - This house will receive no artificial heating. The new house is to be totally slatted.
- (b) **Ventilation**
 - All ventilation on this farm is/will be Computer controlled mechanical ventilation, or Automatically Controlled Natural Ventilation.



3.3.5 Housing

The proposed house is of A-roof design with a maximum height of c. 5.5 meters above floor/slat level. Plans of the proposed building are contained in Appendix No.'s 3 & 4 of this E.I.A.R. The pigs are to be housed in the proposed purposely designed and constructed pig house as detailed on the site plan.

The currently proposed development of pig accommodation will result in the construction of 1 No. purposely designed pig rearing house, so as to ensure that the proposed pigs can be accommodated in welfare compliant animal housing until they reach market weight.

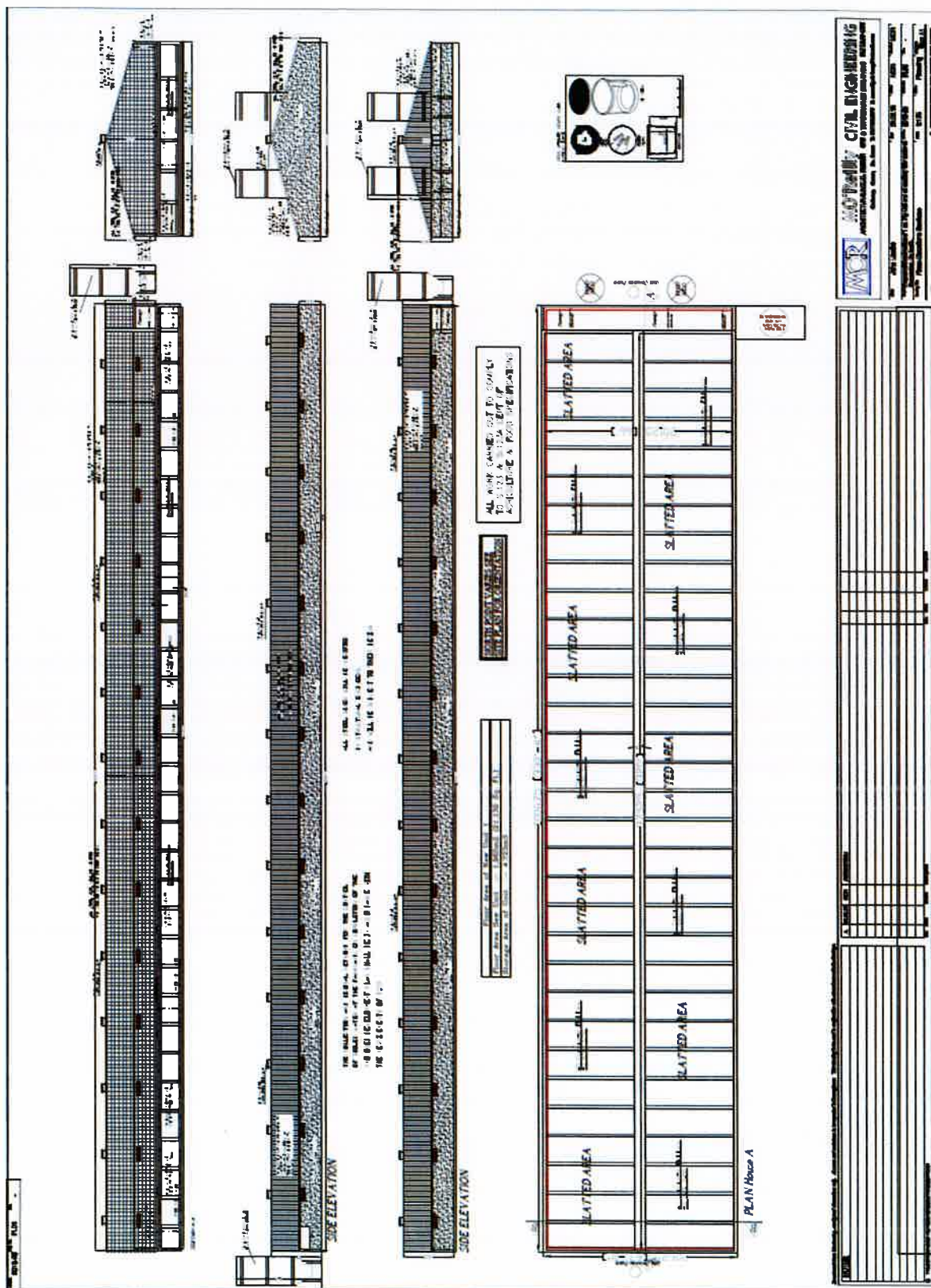
The proposed pig house is a steel portal frame structure, with green/dark coloured roofing and insulated block walls (or prefabricated insulated wall panels) constructed on a mass concrete manure storage tank. The roof cladding will be box profile juniper green (or similar) cladding. The proposed pig house is c. 100.675 m long and 20.625m wide with a tank depth of c. 2.4 m and an overall height of c. 5.5m above slat level.

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 1 No. pig rearing house will be of similar design to existing houses elsewhere in the country, will be of similar scale.



Figure 3.5 – Drawing of Proposed House





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 Bord Bia, the D.A.F.M., Louth Co. Co. and/or other relevant regulatory authorities.

All pigs 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 house. There may be a number of diets feed to the pigs with each diet tailored to meet the pigs nutritional requirements for protein/amino acids, energy, minerals and vitamins at that stage of production and to minimise nutrient excretion. This will ensure that pigs are healthy and contented and are reared properly so as to produce healthy efficient pigs which achieve set target food conversion efficiencies. Total Feed Consumption/annum is expected to be c. 1,300-1,400t. All feed to be used on this farm will be supplied from a specialist feed supplier such as Kiernan Milling, P & V, etc..

The production process involves rearing pigs to a proposed live weight of c. 110-120 kg for slaughter. The pigs will be transported from the breeding accommodation to this farm at circa 30-35kgs. They remain here until reaching c. 110-120 kg at which time they are transported to the abattoir. An average of 1 load of pigs is to be moved to and from the farm on a weekly basis.

The production process on this farm will be in line with the requirements of the Department of Agriculture, Food & Marine and Bord Bia Certification. The operation of this farm will be along similar lines to other specialised pig finisher/grower farms in the country. While production on the site will be continuous, the presence of staff and deliveries / collections are normally between 07.00 and 20.00 hours. Ventilation and feeding operations are continuous on site. This farm will be operated in such a way that only essential activities are carried out outside of these hours.

Once the proposed development has been completed there will be an average of 1,800 pigs on site. Pigs are transported to the farm as weaners (c. 30 – 35 kg's) from a specialised pig breeding farm, and remain until they reach sale weight of c. 110-120 Kg live-weight c. 12 – 14 weeks later. Additional space has been proposed to be provided to allow for the washing and drying routines to be carried out, and to provide a number of isolation/recovery pens for any sick/injured animals.

In order to ensure that the maximum performance is achieved from this farm with the minimal amount of inputs significant attention will be paid to the genetics of the pigs produced. The programme carried out on the breeding farm will ensure that only pigs with the top performance in terms of growth rate and feed efficiency are produced.



➤ **Fertiliser Substitution Programme:**

The pig manure from this farm will be removed direct to the applicant lands by or on behalf of the applicant. The estimated manure production as a result of the proposed development will be c. 2,246.4 m³/annum, and will supply,

- <c. 20% of the applicant's existing Phosphorus requirements
- < 20% permitted Organic N allocations and
- < 15% of total N fertiliser requirements on the farm.

after the applicants on-farm organic manure arising from on-farm livestock has been accounted for. Soiled water from the proposed development where applicable will arise from washing of the house and will be collected in the slurry storage tank.

The applicant farms c. 347 hectares (>300 Ha of which is tillage) available for the application of organic fertiliser. (As detailed hereafter, 211 Ha of this is located in close proximity to the development site. **Out of an abundance of caution, and irrespective of the fact that these lands are already receiving organic fertiliser and the proposed development is in effect seeking to replace the fertiliser source (i.e. replacing imported organic fertiliser with on farm generated organic fertiliser, as opposed to new practices on the farm) with no increase in nutrients applied, the applicant has;**

- Considered only the lands in close proximity to the proposed development (as these are the most likely to receive organic fertiliser from this source, albeit that this remaining c. 136Ha remains available to the applicant for consideration, if required)
- Excluded lands within the boundary of Dundalk Bay SPA / SAC (c. 31ha)
- Excluded lands classed in excess of High vulnerability (c.57Ha)

thus restricting the area for receipt of pig manure to c. 123 Ha, resulting in an application rate on this area of c. 75 kg Organic N/Ha still well below the 170 kg organic N/Ha Limit , well within permitted levels.

At present the applicant satisfies all of his farm fertiliser P requirements from imported manures, predominantly poultry manure. The net effect of the proposed development will be to adjust the applicants fertiliser plan to; **replace**

- C. 300 Tonnes of poultry manure and 11.5 tonnes of CAN Fertiliser (out of the total currently used) with a total available N content of 4,755 kg and a total P content of 1,800kg, with
- 2,246.4 m³ of pig manure with an available N content of 4,717.44KgN and total P content of 1,797 Kg P.

(Alternatively the applicant could replace 858 Tonnes of poultry manure to match the N supplied by the pig manure, however, there would be a shortfall of 3,350kg of P that would have to be made up from imported chemical fertiliser.)

The substitution of 300 tonnes of poultry manure (with pig manure) represents a substitution of c. 20-25% of the farms existing annual poultry manure use with on farm produced organic fertiliser. The remaining c. 75-80% of imported organic fertiliser and that arising from the applicant's existing bovine livestock will continue to be utilised.



➤ **Manure Storage Structures and capacities**

All pigs will be housed in the proposed slatted house with an under house manure storage tank. The slurry is collected directly through these slatted floors and stored in the tank located below slat level. The manure storage facilities associated with the proposed house is of mass concrete to a specification that ensures a watertight seal, i.e. Department of Agriculture, Food and The Marine, S123, Minimum Specification for Bovine Livestock Units and Reinforced Tanks.

Appendix No. 3 contains a site layout, and Appendix No. 7 contains a table indicating proposed manure storage capacity on the farm. It also includes information showing the total manure storage capacity in the house and the net manure storage capacity after the required freeboard allowance has been removed. A freeboard allowance of 200mm has been allowed on all covered underground manure storage tanks, and 300mm on all uncovered tanks, in accordance with S.I. 605 of 2017 as amended, (See Appendix No. 17)

The net organic manure storage capacity on the farm will be c. 4,318 m³ on completion of the proposed developments (c. 23-24 months manure production). This storage capacity will ensure that organic fertiliser produced on the farm is spread only under favourable soil and climatic conditions, and is well in excess of the 6 months storage as required by S.I. 605 of 2017 as amended. This storage capacity will significantly facilitate the integration of the proposed development (or more specifically the organic fertiliser to be produced therein) into the existing tillage farming activities, by ensuring that the organic fertiliser is stored in accordance with DAFM requirements (and S.I. 605 of 2017 stipulations) in purposely designed manure storage structures, until such time as the weather and ground conditions are appropriate, and at the opportune time for the applicant to utilise the nutrients contained therein, to best effect for his tillage farming activities. Organic Fertiliser can be applied directly from the manure storage tank to farmland thus minimising any loading/handling.

3.7 Procedures of Production

The applicant will seek approval under the Bord Bia approval system and other industry quality assurance programme(s). The daily procedure follows / will follow the Bord Bia Code of Practice for pig welfare and consists / will consist of the following procedures:

Grower / Finisher House.

- * ensure all pigs have adequate feed and water
- * check the health status of this area.
- * check temperature and ventilation rates
- * check for water wastage via drinkers

It is also important to take note of appropriate withdrawal periods of all medicines used and keeping accurate records of all pigs treated.



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 pig farm operation will result in the production of 2 saleable products, 1) pigs for the processing sector and 2) organic fertiliser (principally destined for the applicant's farmland). In addition, the proposed development will require a significant amount of feed/grain with the organic fertiliser from the proposed development to be returned to the applicant's tillage lands, to produce grain and other crops.

It is intended that the pigs reared on this farm would be supplied to local pork processing sector and that all organic fertiliser would be utilised by, the applicant as a source of local organic fertiliser for his crops. Alternatively, and if required organic fertiliser may be utilised by other customer farmers for tillage production, in line with the requirements of S.I. 605 of 2017, as amended (Appendix 17). This will reduce the requirement for chemical fertiliser on these farms.

In addition a number of waste streams will also be generated, and these may/will include, fallen stock, 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 emissions, of potential note, from this farm are gaseous emissions as addressed in the N.I.S. and clean storm water from roofs and yards which will be, discharged via a proposed Storm water drainage system / soak-pit.

4.1 Organic Fertiliser/Manure Production

The annual estimated production of organic fertiliser/manure from the farm is calculated in Figure 4.1.1. While this is a significant amount of additional fertiliser, and the nutrients contained therein, it is significantly below that, currently used by the applicant and required by the applicant's farmlands identified for the receipt of this fertiliser. In line with standard terminology for this type of development the farms/farmlands identified for the receipt of organic fertiliser are referred to as customer farm/farmlands. The customer list contained within Appendix 1, indicates a requirement of c. 400 % of the proposed manure to be produced. While all manure from this proposed development will be allocated to the applicant lands, additional customer farmers may be supplied if, and when, they arise if deemed appropriate.



Figure 4.1.1 Organic Fertiliser/Manure Production

Estimated Annual Manure Production.				
Animal Type Proposed	Number	Manure Production M3 /week /hd	Weeks	Total m3
Pigs	1,800	0.024	52	2,246.4

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 4.2 Kg N and 0.8 kg P / m3.

4.2 Manure Management

All manure will be moved off-site directly to the lands farmed by the applicant. The net organic manure storage capacity on the farm will be c. 4,318 m³ on completion of the proposed developments (c. 23-24 months manure production). This storage capacity will ensure that organic fertiliser produced on the farm is spread only under favourable soil and climatic conditions, and is well in excess of the 6 months storage as required by S.I. 605 of 2017 as amended. This storage capacity will significantly facilitate the integration of the proposed development (or more specifically the organic fertiliser to be produced therein) into the existing tillage farming activities, by ensuring that the organic fertiliser is stored in accordance with DAFM requirements (and S.I. 605 of 2017 stipulations) in purposely designed manure storage structures, until such time as the weather and ground conditions are appropriate, and at the opportune time for the applicant to utilise the nutrients contained therein, to best effect for his tillage farming activities. Organic Fertiliser can be applied directly from the manure storage tank to farmland thus minimising any loading/handling.

4.3 Allocation of Organic Fertiliser/ Manure

The practice of applying animal manure to agricultural farmland as a valuable source of fertiliser is a well-established practice in farming and currently widely practised by the applicant. Traditionally, a large number of farms had small numbers of poultry/pigs and all of the organic fertiliser was returned to farmland. Due to economics and specialisation of production in order to survive, pig farming has evolved to a small number of farms with a large number of pigs, however the principle of returning organic fertiliser from these pigs to farmland in order to utilise the nutrients contained therein still prevails.

The proposed development will be integrated into the existing farming activities. All farmlands currently identified for the receipt of manure from this site are farmed by the applicant. However there is also the potential for other customer farmers in the area to utilise organic fertiliser from this development. As present this is not required as the proposed development once completed can only supply < c.25 % of the applicant’s existing fertiliser P required and significantly less of the fertiliser N required, even after allowing for any on farm organic fertiliser arising from the existing bovine herd.



The operation of this farm will enhance the symbiotic relationship between the tillage farmers including the applicant, supplying grain to the Irish animal and pig feed industry, by returning the manure to these lands for use as organic fertiliser. It is intended that organic fertiliser from this farm will be recycled onto land, upon which grain/tillage crops are grown in order to utilise the nutrients contained therein for efficient crop production.

This organic fertiliser will replace chemical fertiliser that would otherwise have to be used and/or is currently being used, by the applicant. Due to the ever increasing costs associated with chemical fertiliser, organic manures such as pig manure are becoming ever more sought after by tillage/livestock farmers in order to reduce their fertiliser costs. In this regard tillage farmers, such as the applicant, are keen to secure a sustainable source of organic fertiliser to fertilise their lands. This customer list will be revised on an ongoing basis. This will ensure that the applicant receives a cheaper source of fertiliser, while at the same time ensuring that there is a stable and consistent market for the organic fertiliser produced in the proposed development.

The fertiliser from the farm will be allocated to lands that have a recognised agronomic need for additional fertiliser. Manure production from the proposed development is to be allocated directly to the applicant's / customer farmers lands.

Manure from the site would be supplied for use in accordance with the Nitrates directive. 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) i.e The Nitrates Directive, all relevant information pertaining to any potential customer farmers (incl. the applicant) and all other information as required by this directive will be maintained on-site and will be made available for inspection as required. Upon completion of the proposed development the proposed customer list will be revised to take into account, new customer farmlands as they arise, updated information provided by the existing applicant and any changes to relevant legislation. Please refer to Appendix No. 1 for further details with regard to the current customer list, and general location of the currently proposed lands for the receipt of organic fertiliser from this farm.

At present this proposed development can only supply;

- <c. 25% of the calculated phosphorous requirements, and,
- significantly less of the Nitrogen requirements, (The organic N available from the proposed development equates to c. 27 Kg Organic N/Ha averaged over the applicant's farmlands, well below the 170 kg Organic N/Ha limit, even after allowing for the existing bovine herd, which currently contributes 22 Kg Organic N/Ha).

of the applicant's farmlands when this proposed farm is at full operational capacity. A significant amount of existing organic/chemical fertilisers will have to be continue to be applied to these lands to achieve optimum crop yields, as the proposed development is not of a sufficient scale to satisfy the existing fertiliser requirements on the farm.

The applicant is entitled to supply organic fertiliser to his potential customer farmers who want it and are not prohibited from using it. The use of animal manure to fertilise farmland is subject to statutory control under S.I. 605 of 2017, as amended, and all records as required by same will be maintained by the applicant.



As detailed in section 3.6 Fertiliser Substitution Programme the applicant farms c. 347 hectares (>300 Ha of which is tillage) available for the application of organic fertiliser, of which 211 Ha of this is located in close proximity to the development site. Out of an abundance of caution, and irrespective of the fact that these lands are already receiving organic fertiliser and the proposed development is in effect seeking to replace the fertiliser source (i.e. replacing imported organic fertiliser with on farm generated organic fertiliser, as opposed to new practices on the farm) with no increase in nutrients applied, the applicant has selected identified the area for receipt of pig manure to c. 123 Ha, resulting in an application rate on this area of c. 75 kg Organic N/Ha still well below the 170 kg organic N/Ha Limit, well within permitted levels.

Application to land is the one practical economic means of utilising the nutrients in pig manure. Organic fertiliser from this farm will be used as an alternative to imported artificial and /or organic fertiliser currently used. Manure will be utilised as an organic fertiliser by allocating it to those lands with a recognised need for additional fertiliser. The machinery to be used for this activity has been changed and modernised over the years to make this process more environmentally friendly.

To this end all farmers are advised that manure from this development should be applied to land in as accurate and uniform a manner as is practicably possible. All lands currently identified for the receipt of manure from the proposed development are predominantly tillage lands, be they wheat, barley, Beans, Oil Seed Rape 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, that all manure from this farm should be stored, managed and applied in accordance with S.I. 605 of 2017, as amended and incorporated into the soil as soon as practicable after application.

The annual fertiliser value of pig manure is significant. Previously the tendency may have been to undervalue these products. However it is considered that significant benefit would arise in developing procedures whereby encouragement would be provided to fully utilise the nutrient value of animal manures as a substitute for commercial fertiliser. This is currently being driven by high/volatile commercial fertiliser prices and the realisation by farmers that locally produced organic fertilisers can provide a sustainable, valuable fertiliser source that will provide a greater range of macro and micro nutrients than that found in chemical fertilisers and provides improvements in overall soil structure / health.

The proposed development actively supports this philosophy by actively encouraging farmers, including the applicant, to substitute imported chemical fertilisers with organic fertilisers. The ideal situation is where organic fertiliser can be returned to tillage lands, upon which the crops to feed the pig (and other agricultural) industry were grown, such as the current proposal. Pig (and other) manures can reduce tillage production costs and improve soil structure, soil organic matter and soil organic status. The fertiliser value of 1 m³ of pig manure has been estimated at €5.20, based on 2017 fertiliser prices (Teagasc 2017). This would mean that the total fertiliser value to the applicant from the c. 2,246.4 m³ manure produced in the proposed development is in the region of €11-12,000 pig manure is a very well balanced fertiliser source with good levels of available N, P, K, S, Mg, Ca and minor nutrients.



4.4. Location of Customer (Incl. Applicant) farmlands

Due to the nature and location of this pig farm, and its integration into the applicant's tillage farming activities, **all potential farmlands currently identified for the receipt of manure from this proposed development are** located in County Louth.

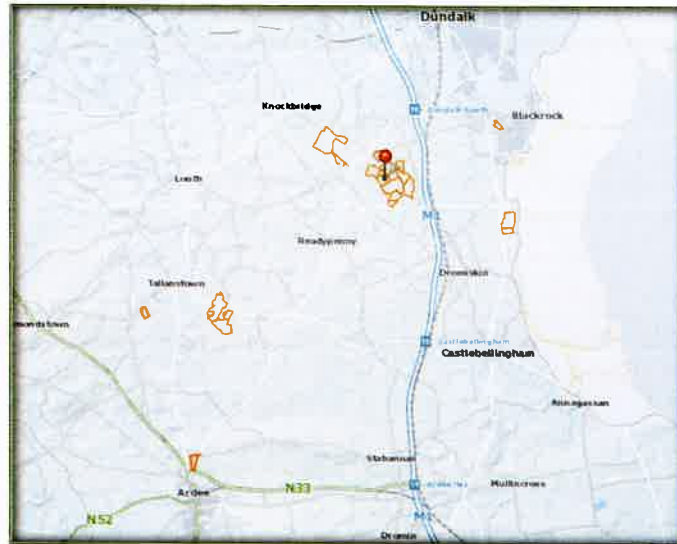


Figure 4.4.1 – The Application Site (Pinned) and Lands Owned or Leased by the Applicant (Outlined in Orange)

The applicant and any additional customer farmers that may arise in the future, will utilise the pig manure for efficient tillage production and to reduce the amount of imported organic chemical fertiliser required. These areas will be primarily agricultural areas with low population densities. Please refer to Appendix No. 1 for details pertaining to the general location of the applicant's existing farmlands. It is anticipated that any other customer farmers that arise in this area, or within a reasonable distance from this proposed farm can be supplied with organic fertiliser for use in accordance with S.I. 605 of 2017, as amended.

4.5. Farmlands identified for the receipt of organic fertiliser.

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) i.e The Nitrates Directive, all information pertaining to the potential applicant, if and when they arise 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 organic fertiliser from this farm (i.e. the applicant). 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, regulatory requirements and for the addition of other potential customers as they arise.



4.6. Organic Fertiliser/Manure Application Rates

Organic fertiliser 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 pig manure, which is as follows:

Nitrogen*	4.2 kg/tonne (m3)
Phosphorous*	0.8 kg/tonne (m3)

*(S.I. 605 of 2017, as amended).

The lands farmed by the applicant will greatly benefit from receiving organic fertilisers and this will reduce the amount of imported energy in-efficient 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 drainage system / soak-pit. The applicant and/or other appointed person will inspect these emission point(s) on a regular basis.

4.8 Animal Carcasses

Animal 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 pigs. All such waste 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 (est. c. 0.5-0.75 tonnes/month) will be transported by College Proteins Ltd. and/or other approved contractor from this farm on average on a fortnightly basis. 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/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 not required

General wastes such as packaging, paper, disposable clothing etc. will be collected regularly by a local contractor and delivered to the Landfill and/or appropriate waste sorting facility. It is intended that the frequency of collection of all wastes produced on site will be in line with local authority and/or legislative requirements in this regard.

Dead animals and animal tissues will be accumulated in a sealed leak proof container on site for collection by College Proteins at c. 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 / An Bord Pleanála requirements in this regard. See correspondence which is included in Appendix No 9.

The organic fertiliser / pig manure from this farm is/will be managed as previously detailed i.e. utilised on the applicant's farmland as an organic fertiliser. This organic fertiliser is not considered a waste product and is to be utilised as an organic fertiliser in line with S.I. 605 of 2017, as amended. As previously outlined the organic fertiliser will be applied in optimum conditions so as to utilise the nutrients contained therein as part of the fertiliser substitution programme previously detailed.

Noise generated in the proposed/existing development in the site will not exceed legal limits at the site boundary. As detailed later in this E.I.A.R. 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.

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.



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).

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 existing, as well as the proposed, development.

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./ An Bord Pleanala 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 (c. 0.1 tonnes/month) will be managed and integrated with the existing farming activities, so as to ensure that, where possible, all waste collection activities are optimised, thus minimising additional traffic as a result of the proposed development.

Mitigation measures are to be implemented to prevent any significant effect of the proposed 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 where all of the organic fertiliser can be used by the applicant, 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 drainage system / soak-pit to properly collect and discharge all clean rainwater from roofs and clean surfaces, as described in Appendix No. 15.
- (iv) Provision of soiled water drains to properly collect any effluent or soiled water and divert it to the nearest manure storage / soiled water tank.
- (v) The collection and the removal from the site of all organic fertiliser. All soiled waters to be collected, stored with/as organic fertiliser 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 pigs 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. 9. 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 storage, and ventilation systems are working to maximum efficiency.
- (xi) The applicant will receive technical advice, support and guidance from the breeding farm supplying the pigs, as well as veterinary support from the designated Vet 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. 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 pig housing and outside yards
- Power for water pumps and showers.

Proposed Annual electricity usage is estimated at 30-50 kWh/pig 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.

Fuel – No ancillary heating required. A small amount of ancillary fuel may be required to run a back-up generator.

4.11.2. Water

Water supply will come from a well located on the site. Water is to be stored in an on-site water storage tank. Water usage will be minimised by using nipple drinkers in the house. This will ensure that the dry manure management system is not compromised.

Proposed Average daily water usage = c. 10-20 m³/day

4.12. Fly and Pest Control

Flies, rats and mice are carriers of some of the infections that are detrimental to animal 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 pig 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 pig farms, currently operating countrywide. 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.



5. DESCRIPTION OF REASONABLE ALTERNATIVES

5.1. Alternative Sites Considered

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. John Lambe** at various locations in the surrounding area. While additional potential sites were looked at, on lands owned by 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, failure to integrate with existing farmyard, and/or closer to Dundalk Bay SCA /SPA 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 pig farm 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, and would by its nature have to be remote from the existing farmyard site. This would place the proposed development under significant additional financial strain, and notwithstanding same it was felt that the proposed site was the most suitable to integrate with the existing farming activities.

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 into the applicant's existing land parcel and farmyard complex,
- Location of the proposed site in close proximity to the existing farmyard to satisfy applicant and County Development Plan requirements and close to the lands proposed for the receipt of organic fertiliser 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.

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 Teagasc, commercial pig house designers, the architect and commercial pig 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, and adjacent to the existing farmyard 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. The topography of the site / landholding, while gently undulating, rises c. 3m across the site, rising in a north – south direction. The proposed development has been laid out to integrate with the existing ground contours which run in a south west to north east direction, similar to the adjoining hedgerow. 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.

Existing landscaping will be maintained where possible, and strengthened where necessary, as detailed in the Visual Impact Assessment contained in Appendix 18, 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.

The exterior finish, where practicable will be green or similar in colour, similar in nature, design and finish to a large number of agricultural buildings completed county and county wide and will be sympathetic to the local environment. All roofing materials will be green or dark in colour. 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.
- Will be well integrated into the landscape with the use of similar 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 1 No. pig house has been designed and scaled to take into account the;

- The resources available to the applicant in terms of the site, labour and capital.
- The capacity anticipated to be required by the pig breeding farm in order to make the proposed development a viable proposition.
- The applicant's requirement for organic fertiliser to replace imported inorganic fertiliser, thus increasing the efficiencies within his existing tillage farming activities.

The scale of the proposed development is in below the scale of other existing farms throughout Ireland which are operating without adverse environmental impact, and is 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. This primarily focused on intensive rather than land based activities so as not to adversely impact on his existing tillage farming activities, therefore the main alternative , i.e. dairy farming, and/or expansion of the existing beef enterprise was excluded at an early stage. Furthermore beef farming was excluded on the basis of the poor economic returns and outlook for same. The alternative processes considered included 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/Chicken**– 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 existing farming activities) The market for same is small and already well supplied, and from an environmental perspective the production of free range chickens/eggs would actually consume more resources (Feed, water, energy etc. per bird/egg produced).
3. **Pig breeding**– The main alternative to the contract rearing of grower/finisher pigs is Pig breeding i.e. breeding pigs to be reared elsewhere. The applicant considered same, and while same would also be suitable for the proposed site, the applicant considered that the operation of a breeding farm required more specialised labour / stockman ship not currently available to him, required significantly higher capital investment and that the currently proposed development 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.



5.5. Alternative Management of By-products

Application to land is the main practical economic means of utilising the nutrients in pig manure. Organic fertiliser from this farm will be used as an alternative to imported organic/artificial chemical fertiliser. Manure 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 from, the proposed development, are farmed by the applicant. The machinery used for this activity has been changed and modernised over the years to make this process more environmentally friendly. To this end all farmers are advised that manure from this development should be applied to land in as accurate and uniform a manner as is practicably possible.

The lands currently identified for the receipt of manure from the proposed development are predominantly tillage lands, be they Wheat, Barley, Beans, Oil Seed Rape etc., with a small proportion of grassland, and any new customer farmer 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, that all manure from this farm should be stored, managed and applied in accordance with S.I. 605 of 2017, as amended and incorporated/ploughed into the soil as soon as practicable after application. All organic fertiliser from the proposed development will be utilised by the applicant, direct from the manure storage tank in the proposed house to his lands to replace existing organic/chemical fertiliser use as part of a fertiliser substitution programme, under optimum soil and weather conditions.

In any event this proposed development can only supply;

- <c. 25 % of the Phosphorous requirements, and,
- significantly less of the Nitrogen requirements,

of the identified Customer (Incl. Applicant) farmlands when this proposed farm is at full operational capacity. Therefore a significant amount of additional organic/chemical fertilisers will have continue to be applied also.

At present there is no other suitable option for the utilisation of organic fertiliser 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/farmyard. 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. The following section details the existing environment.

6.1 Land/Soil

The proposed pig house site is located in north central County Louth, in the townland of Rossmakay c. 12 km's from the border with Northern Ireland. Please refer to Appendix No. 2, for a 1:10,560 map indicating the general location of the proposed pig house site, and a 1:2,500 scale 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 north east of Ardee, and south west of Dundalk, in an area identified as the **Development Zone 4** as contained in the Louth County Development Plan 2015-2021, and also referred to as the **Muirhevna Plain**, 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 Dundalk 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 the site / landholding, while gently undulating, rises c. 3m across the site, rising in a north – south direction. The proposed development has been laid out to integrate with the existing ground contours which run in a south west to north east direction, similar to the adjoining hedgerow. 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, and the existing farmyard complex to the north 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, and with the ground contours. 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 Clontail Formation.

New Code	CLTL
Unit Name	Clontail Formation
Sheet Number	13
Stratigraphic Code	CL
Lithological Code	
Description	Calcareous red-mica greywacke
Label	CL
Formation	Clontail Formation
Definition	Vaughan (1991)
Type Section	Near the village of Syddan (GR287550/284700)
Lithological Description	Green-grey, medium to thickly bedded, coarse and very fine grained Tae greywackes, with dark grey, thinly bedded, poorly graded, quartzose fine sandstone to siltstone units. Both lithologies contain distinctive brown-red coloured biotite.
Lithological Summary	
Lithological Legend	Calcareous red mica greywacke
Rock Type	Greywacke
System	Silurian
Series	Llandovery
Stage	
Zone	
Comments	The formation is interpreted as proximal and distal turbidites, with a small set of palaeocurrent indicators suggesting a source to the northeast or east
Thickness	



Please refer to;

- Appendix No. 11 for details relating to the landscape character assessment as contained in the county development plan.

(b) Proposed Customer (Incl. Applicant) farmlands.

The Customer farmland areas (currently limited to the applicant's lands) cover/will cover a significantly larger area 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 and are deemed to be beyond both the scope and requirement of this E.I.A.R. The application of organic and inorganic fertilisers to these Customer farmland areas (currently limited to the applicant's lands) will be governed by the requirements of the nitrates directive 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 Customer farmland areas (currently limited to the applicant's lands) 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

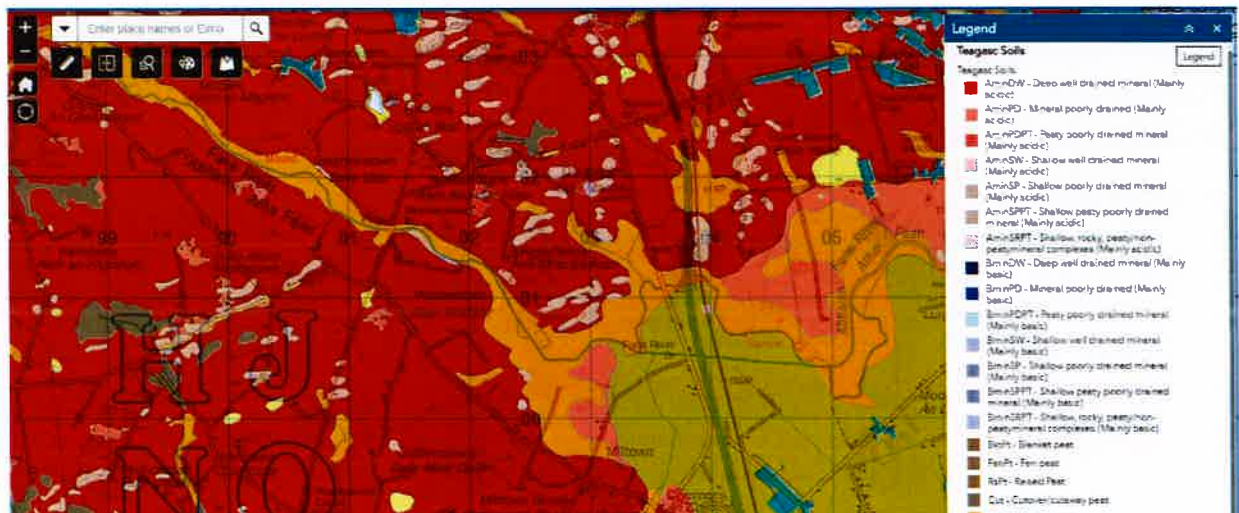
(a) Site and immediate area

The **pig 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 Description	Sandstone and shale till (Lower Palaeozoic)
Soil Group	Acid Brown Earths, Brown Podzolics
IFS Soil Code	AminDW
IFS Soil Description	Derived from mainly non-calcareous parent materials
County	LOUTH
Category	Deep well drained mineral (Mainly acidic)
Legend	AminDW - Deep well drained mineral (Mainly acidic)



(b) Proposed Customer (Incl. Applicant) farmlands.

The Customer farmland areas (currently limited to the applicant's lands) cover/will cover a significantly larger area than the site of interest, i.e. the site of the proposed development. As a result the soil geology will be more varied and are deemed to be beyond both the scope and requirement of this E.I.A.R. Due to the nature of the activities to be carried out on these lands, i.e. the application of organic fertilisers (from the proposed developments and other farms) and inorganic fertilisers (from the local co-op), the Customer farmland areas (currently limited to the applicant's lands) will be governed by the requirements of the nitrates directive (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. Mitigation measures where applicable are discussed in Section 7.1.



6.2 Ground Water

(a) Site and immediate area

The groundwater adjacent to the site is overlain by a low permeability, predominantly Acid Brown Earth and Gley type, 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 (PI).

Aquifer Category	PI
Category Description	Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones
Area (sq km)	3,019

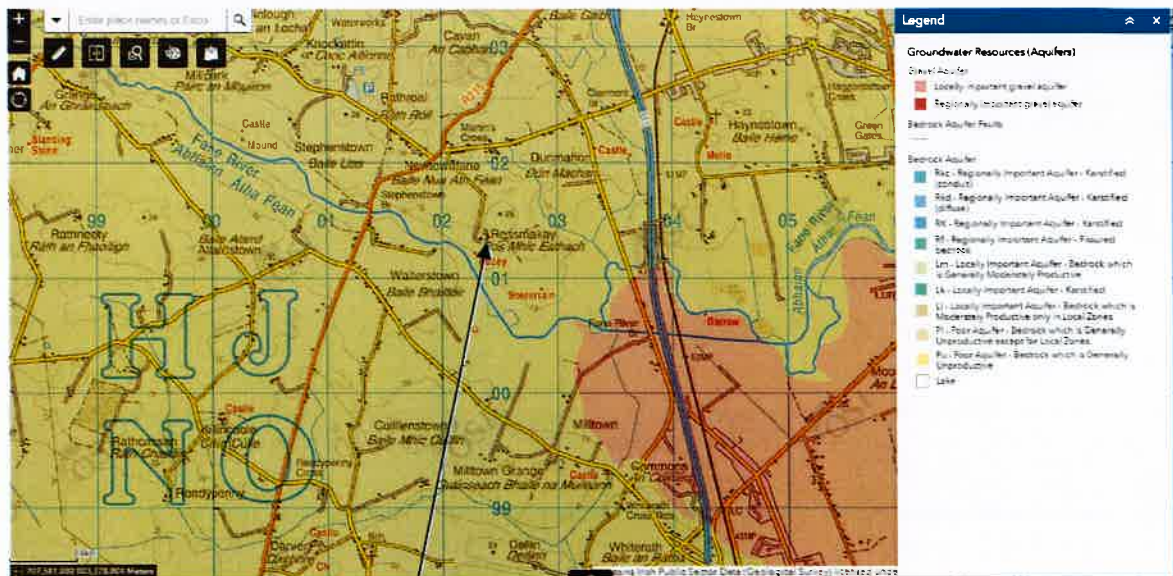
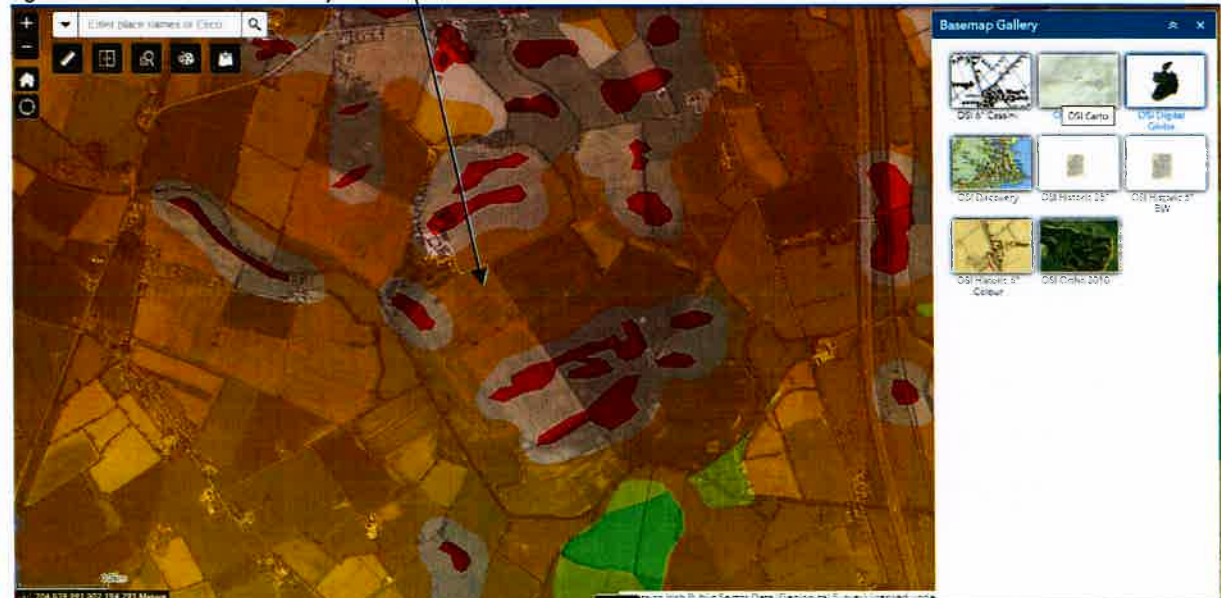


Fig 6.2 a Ground Water Classification

SITE

Fig 6.2 b Ground Water Vulnerability





The aquifer vulnerability for the area of proposed development is classed as High. 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 installation of the partially underground manure storage tanks.

(b) Proposed Customer (Incl. Applicant) farmlands.

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 from this farm, must be applied.

As all fertiliser 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. It is envisaged that the organic fertiliser generated in the proposed development will be utilised on the lands closest to the proposed site (as same makes most economic and practical sense), and these will be discussed further below.

Mitigation measures where applicable are discussed in Section 7.2.

Of the total 347 Ha farmed c. 211 Ha as identified on the maps below is in close proximity to the site of the proposed development. These lands occur in the townlands of Mooretown (31.5 Ha to be excluded as discussed hereafter) , Milltown Grange, Dunmahon, Stephenstown and Rossmakay (180 ha), and will be discussed further hereafter.



Figure 6.2 – The Application Site (Pinned) and Applicants Lands outlined



Aquifer Type: As can be seen below the majority of the applicants lands are underlain by a Poor Aquifer. The lands close to the east coast are underlain by a Locally Important Aquifer, however as will be detailed later in the E.I.A.R., these lands are not required to facilitate the proposed development and out of an abundance of caution will be excluded from the receipt of organic fertiliser from same. Existing farming practices will continue on same unaltered.

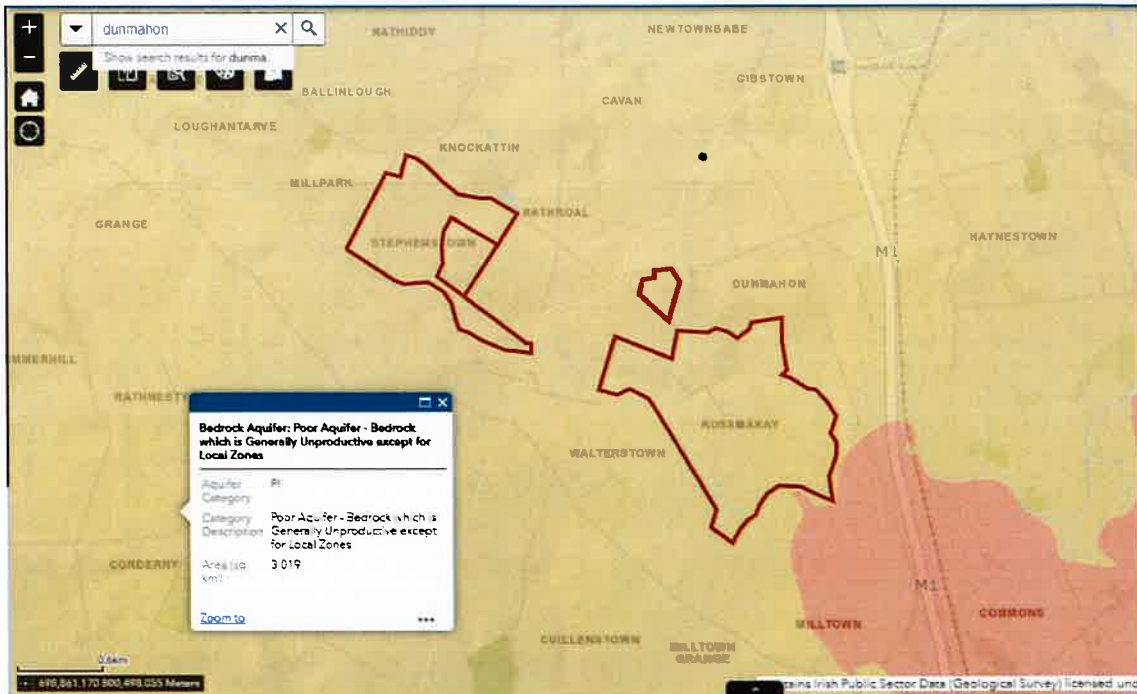
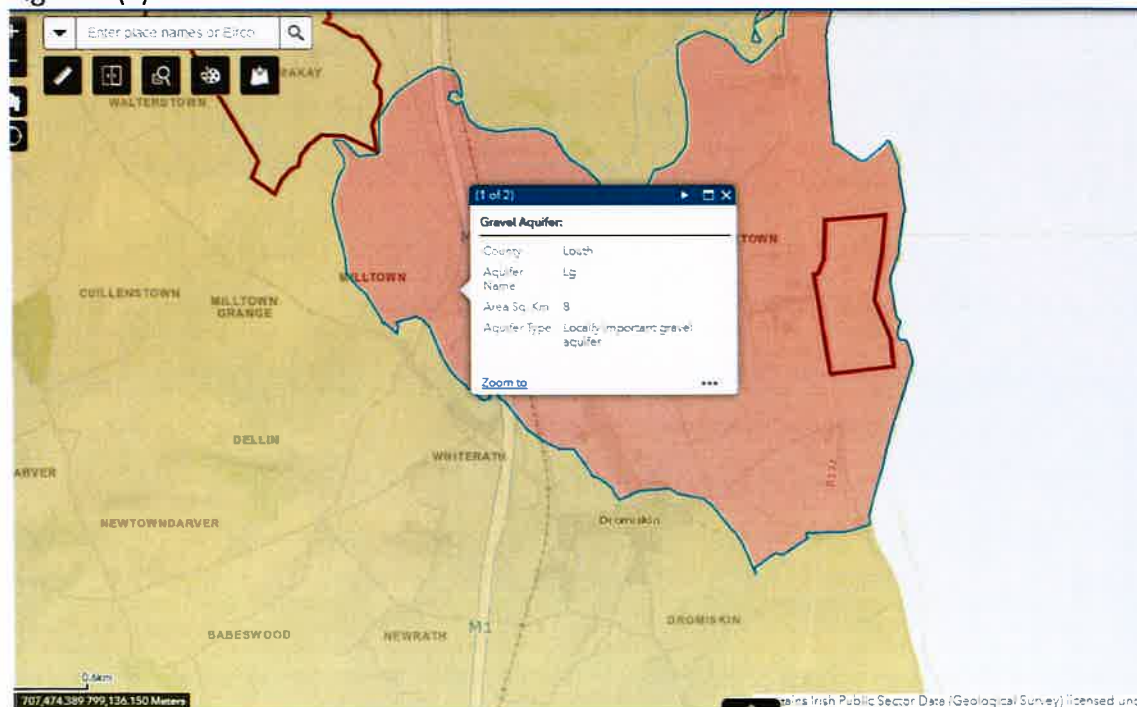


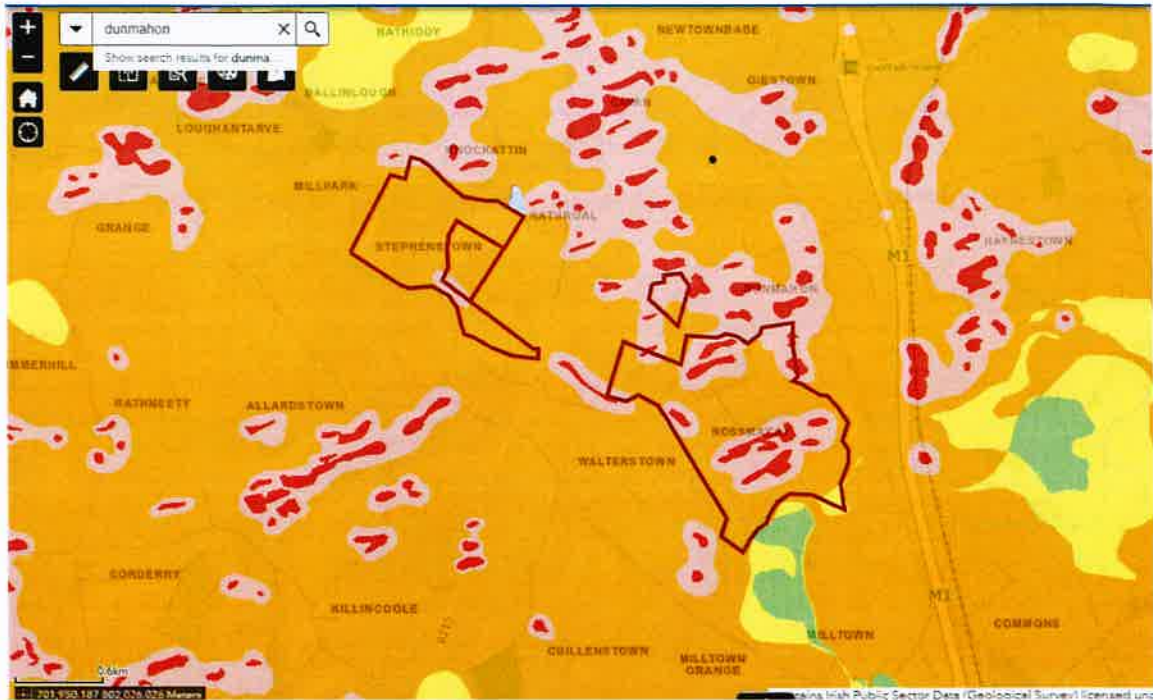
Fig 6.2 b(i)

Fig 6.2 b(ii)





Aquifer Vulnerability: As can be seen below the majority of the applicants lands (incl. the site of the proposed development) are classed as high vulnerability (mid point on the scale of Low – Moderate-High-Extreme – Karst/outcrop), although . This is typical of a significant portion of North Co. Louth.



6.3 Surface Water

(a) Site and immediate area

The application site is within the Newry Fane Glyde and Dee Hydrometric Area and Catchment, and the Fane Sub-Catchment and Sub-Basin. There are no drains or streams within or adjacent to the application site. The closest watercourse to the site is the River Fane itself and this is 220m south-west of the application site. This River flows eastwards for approximately 6km until it flows into Dundalk Bay just south of Blackrock.

The EPA have not defined the ecological status of the River Fane or its tributaries within this particular sub-basin. However, water quality upstream of the application site and in the upper reaches of the River Fane has been classed as good. Under the requirements of the Water Framework Directive, all waterbodies must achieve good status by the end of current cycle of the WFD, i.e., 2021.



Watercourse (Fane River)

Site of proposed developments



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

(b) Customer (Incl. Applicant) farmlands.

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 from this farm, must be applied. This organic fertiliser will replace imported chemical and/or organic fertiliser that is currently being utilised by the applicant (and/or customer farmers) on their lands. As all fertiliser 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 by 2015.

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 now been completed with the 2nd Cycle underway.

2nd Cycle River Basin Management Plans: 2015-2021

Preparation of the 2nd Cycle RBMPs is now underway. **2nd Cycle Timetable:**

- **July 2014:** DECLG publish the draft timetable and consultation arrangements for development of the second cycle RBMPs. This consultation presents a draft timetable and work programme for the production of the second cycle plans and also seeks views on how the process of developing and implementing the plans could be improved.
- **July 2015-December 2015:** Significant water management issues (SWMIs) consultation for second cycle RBMPs, led by the Local Authorities at regional level. In this stage of development, an interim overview of the significant water management issues for each of the RBDs will be presented and you will be asked for your views on what you think are the most significant issues to be addressed in the River Basin Management Plan.
- **December 2016 - June 2017:** Draft second cycle River Basin Management Plan consultation, led by the local authorities at regional level. The draft second cycle RBMPs setting out the status of waters in the RBD; the proposed environmental objectives and the draft programme of measures to achieve those objectives by 2021, will be issued for your views and comments at this stage.

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.



River Basin Districts of Ireland



Figure 6.3b: River Basin Districts (Source River basin Management Plan for Ireland 2018--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
Class A

High quality waters suitable for supply and abstraction. Game fisheries and high amenity value. (Satisfactory)

Slightly Polluted Waters
Class B

Usually good game fisheries. Suitable for supply. Moderate to high amenity value. (Transitional)

Moderately Polluted Waters
Class C

Coarse fisheries. Not likely to support a healthy game fishery. Suitable for supply after advanced treatment. (Unsatisfactory)

Seriously Polluted Waters
Class D

Fish absent or only sporadically present. May be used for low grade industrial abstraction. Low amenity value. (Unsatisfactory)



The applicant/customer farmlands that will potentially utilise organic fertiliser 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. Please refer to Appendix 10 for details relating to water quality in the area of the proposed pig house development.

Surface water quality in the area of the applicant/customer farmer lands where organic fertiliser from this pig house will be used, (be that in County Louth and/or further afield) will not be affected as the organic fertiliser will replace imported organic and chemical fertiliser that would otherwise have to be used and all organic fertiliser is to be allocated for use in accordance with the Nitrates directive, S.I. 605 of 2017, as amended. While the proposed development will provide for a sustainable increase in organic fertiliser production on the farm the applicant has demonstrated significant capacity within the currently farmed lands in accordance with S.I. 605 of 2017, as amended, to accommodate the organic fertiliser to be produced, and at the same time same will replace existing organic/chemical fertiliser use in accordance with the fertiliser substitution programme.

6.3.1 Lake Water Quality

As previously indicated the site of the proposed development is located within the Newry Fane Glyde and Dee Hydrometric Area and Catchment, and the Fane Sub-Catchment and Sub-Basin. There are no drains or streams within or adjacent to the application site. The closest watercourse to the site is the River Fane itself and this is 220m south-west of the application site. This River flows eastwards for approximately 6km until it flows into Dundalk Bay just south of Blackrock.

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

Odour associated with pig farming enterprises may arise from two situations:

- The pig farm site, and,
- The manure spreading operation.

The pig 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 pig 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 inhabited third party dwelling to the proposed site, is located > c. 750m north of the proposed development, with a currently uninhabited dwelling located c. 550 m to the west of the site. This site of the proposed development, operates in a sparsely populated rural environment and hence the farm will cause no nuisance.

Mr. John Lambe will advise any future customer farmers receiving organic fertiliser 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. All lands currently identified for the receipt of manure from the proposed development are predominantly tillage lands (farmed by the applicant), be they Wheat, Barley, Beans, Oil Seed Rape 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, that all manure from this farm must be stored, managed and applied in accordance with S.I. 605 of 2017, as amended. It should also be incorporated/ploughed into the soil as soon as practicable after application.

The utilisation of organic fertiliser 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 in accordance with S.I. 605 of 2017, as amended, and as part of the fertiliser substitution programme to replace existing organic / chemical fertiliser currently used, will ensure that excessive application of manure, which could lead to extra odour due to surface soil saturation, will be avoided.

Mitigation measures where applicable are discussed in Section 7.4.

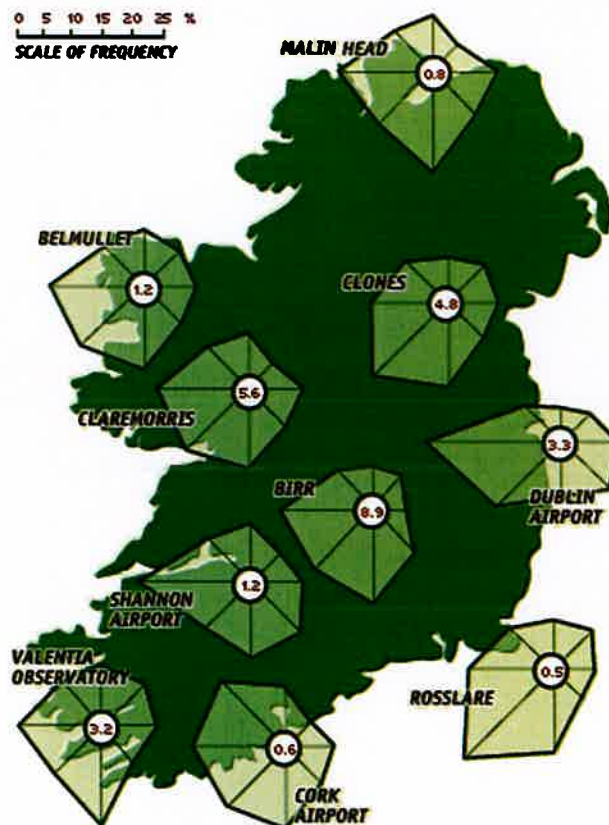


6.5. Climate / Climate Change

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/Customer (Incl. Applicant) farmlands 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.





6.6. Visual Aspects and Landscape

This site of the proposed development/farm is agricultural land owned by and/or available to Mr. John Lambe and forms part of his overall landholding, and is adjacent to his existing dwelling/farmyard complex. 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. 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 also located in an area referred to as ***Development Zone 4*** in the Co. Louth Development Plan (Development Zones) and is deemed suitable for Agricultural development.

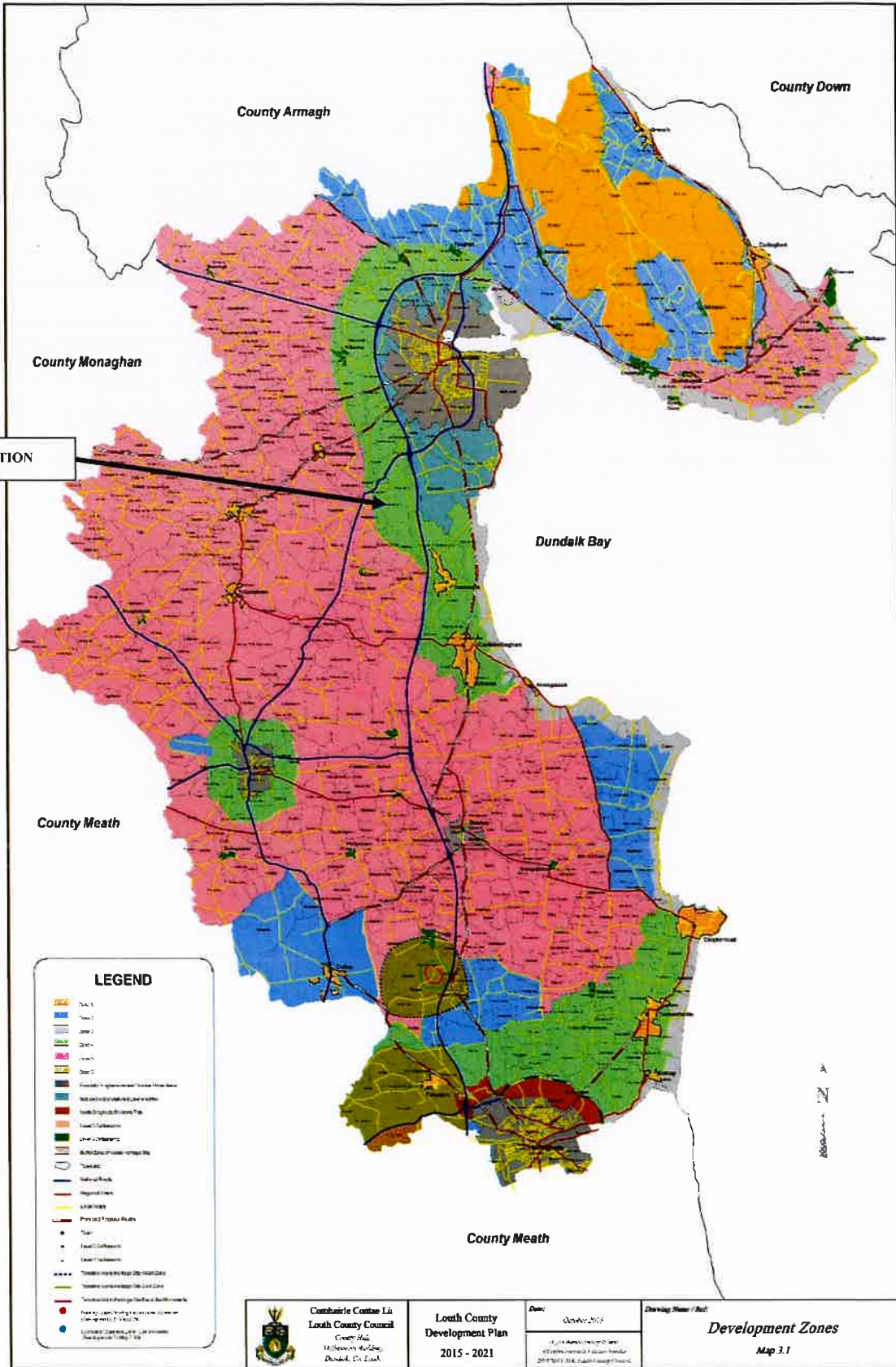
"Development Zone 4 - To provide for a greenbelt area around the urban centres of Dundalk, Drogheda, and Ardee.

It is an objective of the Council to preserve a clear distinction between the built up areas of settlements and the surrounding countryside.

In this regard, greenbelt areas are proposed surrounding the main urban settlements of Dundalk, Drogheda, and Ardee.

Policy RD 37 To permit limited one-off housing*, agricultural developments, extensions to existing authorised uses and farms, appropriate farm diversification projects, tourism related projects (excluding holiday homes), institutional and educational facilities, leisure and recreation related projects and renewable energy schemes.

RD 38 Multi-unit residential, large scale industrial and commercial developments, or other developments of similar scale or nature, would not be considered appropriate within this zone."





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 2015 - 2021.

This site of the proposed development/farm is a greenfield site/agricultural land, owned by and available to the applicant. The existing farm, and the site of the proposed development, is well set back from the public road, on c. 0.9207 Ha, in the town land of Rossmakay. The site is c. 0.8 Km's from the regional route, the R215, between Dundalk and Ardee and a further c. 2 Km's from the M1 motorway. The site is to be accessed via c. 900 m of an existing internal farm roadway within the landholding and will be accessed by an existing 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 and integrated with the existing farmyard, 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 2015 - 2021.



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

Map 5.16: Areas of Outstanding Natural Beauty and Areas of High Scenic Quality

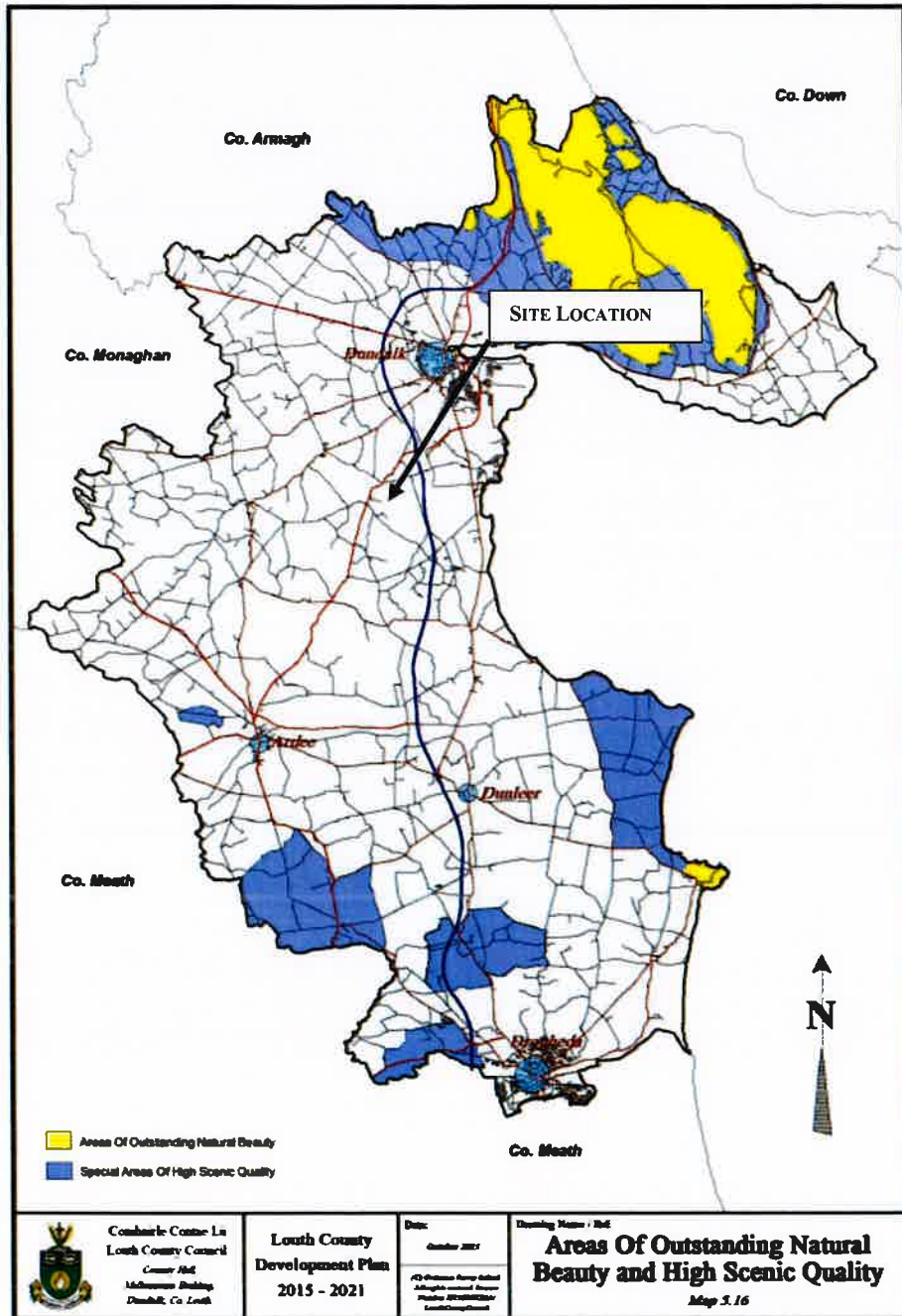
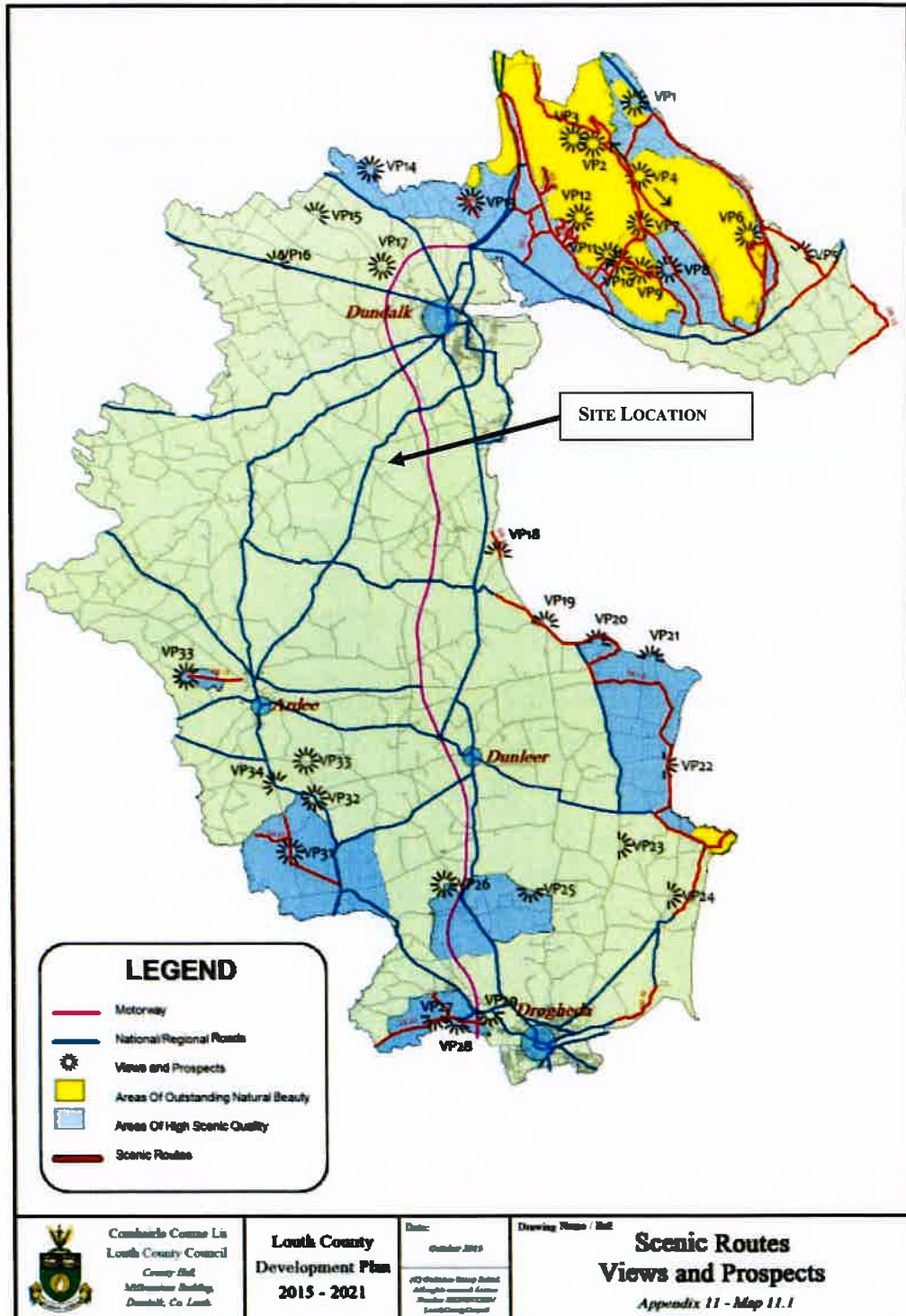




Figure 6.6(2) Views / Prospects as Detailed in the Louth County Development Plan.

Appendix 11
Views & Prospects





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 pig house 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 pig house will not create a disturbance or annoyance to anyone. 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 Rossmakay. Access to the site will be via a private access road that is just off a regional class road. The area of the site is 0.92 hectares. It is 3.7km south-east of Knockbridge and 7 km south of Dundalk. The traffic flows currently associated with this existing site is associated with agricultural traffic associated with the existing farming operations, and the applicant's existing dwelling. Given the scale of the existing farming activities, and the fact that this farmyard as the main farm hub, existing traffic levels are typical of this scale of farming activity and includes a significant amount of HGV traffic associated with grain and straw transport and deliveries of organic fertiliser, chemical fertiliser and other inputs. Mitigation measures where applicable are discussed in Section 7.8.

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 the applicant and adjacent to the existing dwelling/farmyard complex. 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. There are no specific unique habitats, flora and/or fauna on this site that require specific protection.

(b) Customer (Incl. Applicant) farmlands

The Customer (Incl. Applicant) farmlands are/will be typical Co. Louth agricultural land. Organic fertiliser from this proposed pig house can only be applied to agricultural lands where a crop response, be it grassland/tillage/maize etc., is anticipated. The Nitrates directive (S.I. 605 of 2017, as amended) governs fertiliser application on all Irish farms. The land for receipt of organic fertiliser from this farm will predominantly be used for tillage production. Traditionally, and as significant proportion of the existing farming practices, animal manure has been applied to these lands as a source of fertiliser, and to replace energy inefficient inorganic fertiliser. 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) Nationally Designated Environmental areas.

- **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.



The EU Birds Directive (79/409/EEC) 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 application site is within the Newry Fane Glyde and Dee Hydrometric Area and Catchment, and the Fane Sub-Catchment and Sub-Basin. There are no drains or streams within or adjacent to the application site. The closest watercourse to the site is the River Fane itself and this is 220m south-west of the application site. This River flows eastwards for approximately 6km until it flows into Dundalk Bay just south of Blackrock. The EPA have not defined the ecological status of the River Fane or its tributaries within this particular sub-basin. However, water quality upstream of the application site and in the upper reaches of the River Fane has been classed as good. Under the requirements of the Water Framework Directive, all waterbodies must achieve good status by the end of current cycle of the WFD, i.e., 2021.

The proposed development is located c. 3.5-3.8 km from the closest Natura 2000 site, Dundalk Bay SAC 000455 / SPA 004026 The Natura Impact Statement (N.I.S.) 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 (N.I.S.).



There are four 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 2 and a map showing their locations relative to the application site is shown in Figure 6.10.1. A full description of these sites can be read on the websites of the National Parks and Wildlife Service (npws.ie).

Table 1 – Natura 2000 Sites of Relevance to the Proposed Development

Site Name & Code	Distance	Qualifying Interests
Dundalk Bay SAC 000455	3.8km east / Land-Spreading upstream and adjacent to SAC.	<ul style="list-style-type: none"> • 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 (<i>Glauco-Puccinellietalia maritimae</i>) • Mediterranean salt meadows (<i>Juncetalia answer8787</i>)
Dundalk Bay SPA 004026	3.5km east / Land-spreading upstream and within SPA.	<ul style="list-style-type: none"> • Great Crested Grebe (<i>Podiceps cristatus</i>) • Greylag Goose (<i>answer answer</i>) • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) • Shelduck (<i>Tadorna tadorna</i>) • Teal (<i>Anas crecca</i>) • Mallard (<i>Anas platyrhynchos</i>) • Pintail (<i>Anas acuta</i>) • Common Scoter (<i>Melanitta nigra</i>) • Red-breasted Merganser (<i>Mergus serrator</i>) • Oystercatcher (<i>Haematopus ostralegus</i>) • Ringed Plover (<i>Charadrius hiaticula</i>) • Golden Plover (<i>Pluvialis apricaria</i>)



		<ul style="list-style-type: none"> • Grey Plover (<i>Pluvialis squatarola</i>) • Lapwing (<i>Vanellus vanellus</i>) • Knot (<i>Calidris canutus</i>) • Dunlin (<i>Calidris answer</i>) • Black-tailed Godwit (<i>Limosa limosa</i>) • Bar-tailed Godwit (<i>Limosa lapponica</i>) • Curlew (<i>Numenius arquata</i>) • Redshank (<i>Tringa answer88</i>) • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) • Common Gull (<i>Larus canus</i>) • Herring Gull (<i>Larus argentatus</i>) • Wetland and Waterbirds
Stabannan-Braganstown SPA 004091	6.7km south	<ul style="list-style-type: none"> • Greylag Goose (<i>answer answer</i>)
Carlingford Mountain SAC 000453	12.4km north-east	<ul style="list-style-type: none"> • Northern Atlantic wet heaths with <i>Erica tetralix</i> • European dry heath • Alpine and Boreal heaths • Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) • Transition mires and quaking bogs • Alkaline fens • Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) • Calcareous rocky slopes with chasmophytic vegetation • Siliceous rocky slopes with chasmophytic vegetation

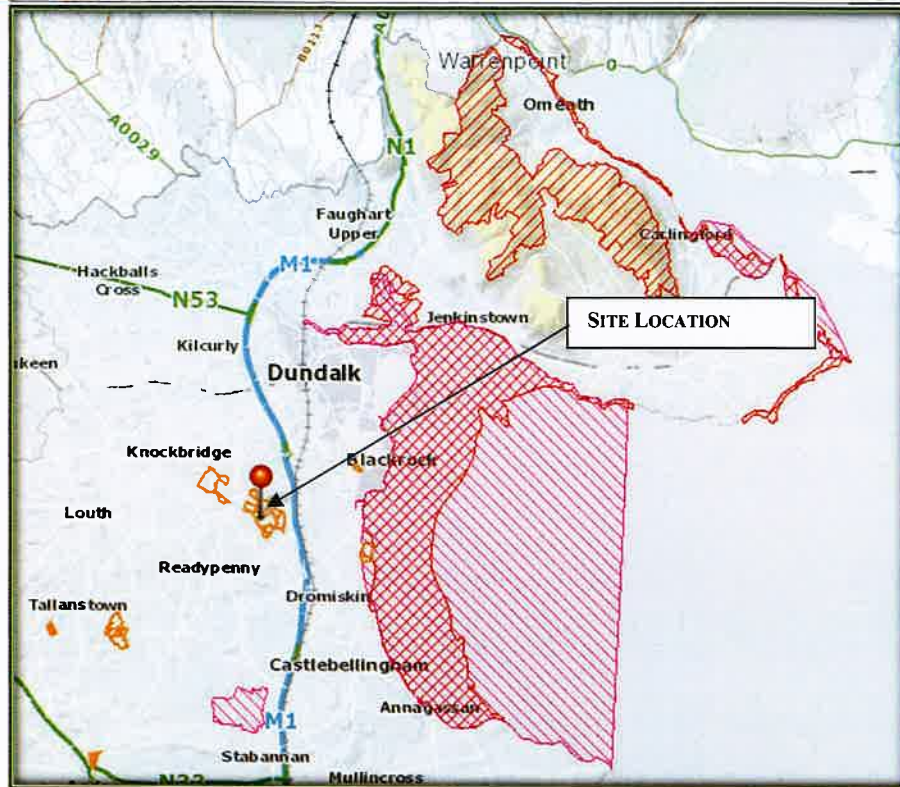


Figure 6.10.1 – The Application Site in relation to the Natura 2000 site (SACs – Red Hatching, SPAs – Pink Hatching)

(B) Amenity Areas

The proposed pig house 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 2015 - 2021.



(C) Cultural Heritage (Architectural and Archaeological Features)

There are no buildings/structures of architectural significance located on the proposed site or likely to be impacted by the proposed development. Rossmakay House, a Protected Structure (LHS 12-049, NIAH 13901214), belonging to the applicant is located within the established farmyard complex to the North of the proposed development.

Appraisal : Rossmakay is a fine building with a handsome façade enlivened by its decorative moulded window headings and elaborate classical porch to main entrance. It retains sash windows, c. 1900, and though not the original timber sliding sash they continue to add to the interest of the dwelling. The attractive stained glass seen at the entrance and also to the north elevation adds artistic significance to the house. The outbuildings are also significant structures, adding to the original site context of the house.

Description: Detached five-bay two-storey house, built c. 1830. Rectangular-plan, open entrance porch to south elevation, lean-to extension to east of north elevation, two-storey canted bay to north of west elevation. Pitched slated roofs, clay crested ridge tiles, red brick corbelled chimneystacks, moulded cast-iron gutters fixed to painted timber eaves board, circular cast-iron downpipes, painted timber bargeboards, truss design, needle finials to gables of west elevation. Painted roughcast-rendered walling, slightly projecting painted smooth rendered plinth, painted smooth rendered block-and-start quoins, painted smooth rendered sill course to first floor windows. Square-headed window openings, painted smooth rendered reveals, painted stone sills, painted smooth rendered decorative frieze and cornice to window openings on south and west elevations; continuous cornice to canted bay windows; painted timber one-over-one sliding sash windows, c. 1900; square-headed stair-light to north elevation, leaded stained-glass fixed window. Square-headed door opening to open porch, finely tooled Doric columns support frieze, cornice and fluted limestone parapet surmounted by ball finials; tiled entrance platform, painted stone pilasters flanking door; stained glass overlight and flanking sidelights, varnished timber double doors with six raised-and-fielded panels; square-headed door opening to west elevation, painted roll-moulded cornice and pediment supported by decorative console brackets, timber and glazed panelled door,. House set in own grounds, single-storey coursed rubble stone wash house and coal house to north, slate roof, cast-iron gutters, red brick block-and-start door and window surrounds, painted timber two-over-two sliding sash windows, painted timber vertically-sheeted half-doors; similar design to outbuildings; outbuildings bounded by ashlar stone walls, accessed through painted wrought-iron gates; garden to south, field to west; painted smooth rendered channelled gate piers, gabled caps, decorative wrought-iron gate give access to house.

A Visual Impact Assessment was carried out in relation to the potential impact of the proposed development on same and it was concluded that the proposed development would not adversely impact on this protected structure. As can be seen in view 5 below a significant amount of the existing farm structures are visible at elevations significantly higher than the proposed development.



View 5
After Development



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.

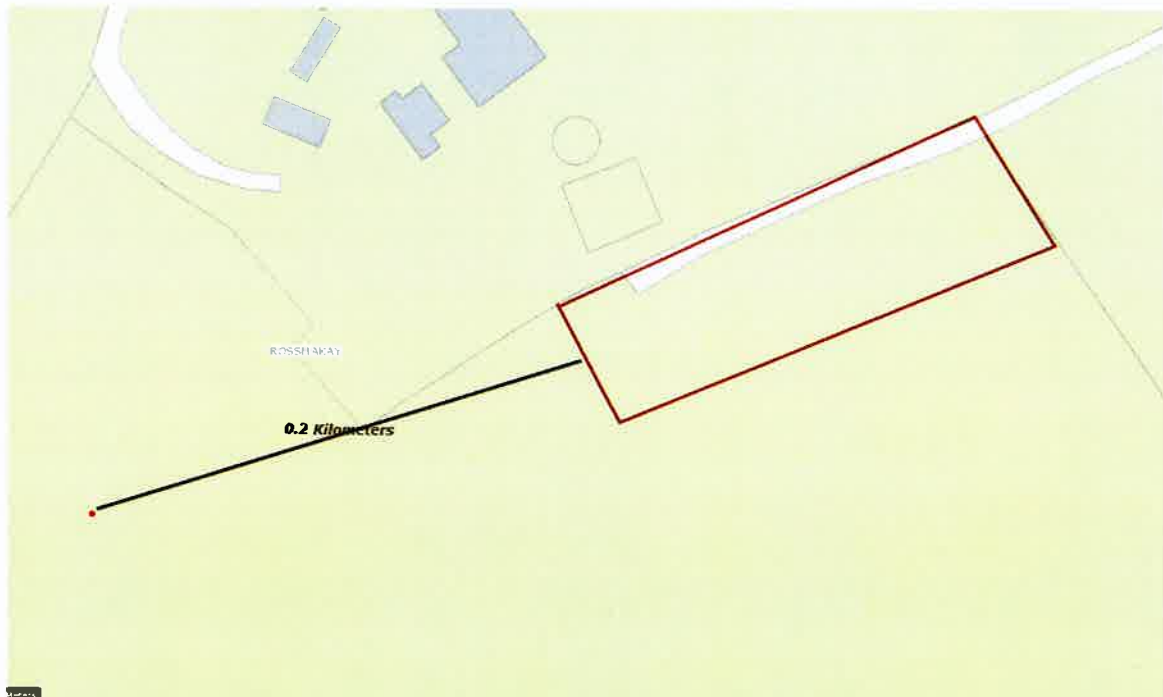
There are no previously identified sites of archaeological interest/potential located within, or in the immediate environs of the subject development lands. There are no recorded archaeological features within c. 0.2 km of the proposed site. The closest such feature is a religious house located 200 m south west of the proposed development, please refer to site specific detail below. The proposed pig house is to be constructed predominantly on intensively managed farmland.

Record Number: LH012-021----

Classification: Religious house - Franciscan friars

Scheduled for Protection: 1

Description: The following description is derived from both the published 'Archaeological Inventory of County Louth' (Dublin: Stationery Office, 1986) and the 'Archaeological Survey of County Louth' (Dublin: Stationery Office, 1991). In certain instances the entries have been revised and updated in the light of recent research. Date of upload/revision: 17 July 2007 Rectangular featureless structure (max. dims. 22m by 5.8m) aligned E-W; only S and E walls remain. Part of seventeenth-century chimney survives in S wall. (JRSAI 1897, 110-11; CLAJ 1911, 356)



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 over the last 10-15 years. 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 components 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.

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, and adjacent to a long established farmyard 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 / customer farmlands 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 inhabited third party residential location is > c. 750 m (with an uninhabited residential location @ c. 550 m) from the proposed development. As previously detailed the proposed development is located adjacent to the existing farmyard complex, which contains Rossmakay House. The proposed development has been subject to A Visual Impact Assessment and same is discussed further in Section 7.12

- **(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 house, 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. John Lambe 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 coastlines 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 pig 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, integrated with the existing farmyard, and is located away from any areas frequented by tourists.

Mr. John Lambe will ensure that any potential effects on the local environment and tourism industry are minimised. Mr. John Lambe will inform all customer farmers (if and when they arise) in receipt of organic fertiliser from the proposed development, of the requirements of the Nitrates directive (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 pig farm will employ c. 1 additional person on a part-time basis. The farm profitability of the applicant / customer farmers receiving pig manure is boosted by cheap fertiliser nutrients replacing imported organic and/or 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 provides a significant source of employment. Within this, the pig industry is a key component. The pig sector makes a valuable contribution to the Irish agricultural economy, with output at farm level estimated at €458.6 million in 2018. The sector is a significant employer in rural Ireland with over 7,000 people employed in processing, packing and at farm level.

**Within the County;**

This proposed pig house 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 pig industry is a specialised farming activity and the proposed development will benefit from well established practices in place for the utilisation of organic fertiliser (pig manure) on the customer farmer landholdings. The proximity of the proposed developments to the tillage lands farmed by the applicant, will be a significant competitive advantage to both enterprises, and will significantly reduce transport costs and emissions associated with same. Given the poor returns from the more traditional farming practices (including Tillage), and the reduction in employment in other sectors of the economy, productive, efficient and sustainable agricultural activities, such as the proposed developments, 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. 1,800 pigs. This is a limited development in terms of pig 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 pig house development will have significant integration with the applicant's existing farming activities, in the areas of feed, organic fertiliser, labour etc., 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 an increase in stock numbers on the site, to 1,800 pigs, in addition to the applicants existing cattle enterprise. While the existing livestock enterprise will operate on the overall farm, and notwithstanding that same may operate in the adjacent yard, same will have little interaction (if any) with the proposed pig farming enterprise, although both of them may interact with the tillage enterprise.

The existing cattle enterprise will result in the production of a certain amount of organic fertiliser, which will predominantly be returned (directly during grazing activities and/or in the form of slurry generated when stock are housed, to the applicants grassland, c. 12% of the farmed area). Any excess may be allocated to the remaining 88% tillage lands, however as the existing bovine enterprise equates to only 22kg Organic N/Ha for 2019 and same has decreased from 29-30 kg Organic N/Ha over the 2015-2017 period, a reduction of >c. 25%,



the potential for any excess is limited. Furthermore is additional organic fertiliser from the bovine enterprise is allocated to the applicant's tillage lands, it will create a deficit on the grassland which will have to be made up from alternative sources.

The pig manure from the proposed development will equate to c. 27 kg organic N/Ha over the farmed area, resulting in a total Organic N from combined livestock activities on the farm = 49kg organic N/Ha, well below the 170 Kg organic N / Ha Limit.

As previously detailed any increase in nutrients from organic fertiliser produced on the farm (be that resulting from the proposed pig house development and/or existing bovine enterprise), will be offset by a commensurate reduction in fertiliser (principally organic) imports to the farm.

Contrary to the concerns raised, bovine livestock numbers are reducing, as demonstrated above and c. 30% of the organic N to be produced in the proposed development can be offset by current reductions in the bovine enterprise, over recent years (notwithstanding that, in any event, 100% will be offset by a reduction in fertiliser imports.

Concern was raised about the potential cumulative impact of the applicant's proposed bovine development (previously approved but not completed). It has been detailed that same was to house, 100 cows and 100 weanlings as referred to in the An Bord Pleanala correspondence. The 100 cows (65 kg organic N/Hd/annum) and 100 weanlings (0-1 yr old @ 24kg organic N/Hd/annum) would equate to a stocking density equivalent to 25.64 Kg Organic N /Ha/Annum, comparable to the recent 3-5 year average for the farm, (range 22-30), and represents an improvement in facilities (if completed), rather than any intensification of activities, and as such will have no additional cumulative impact with the proposed development.

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 An Bord Pleanala as a result of planning permission 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. The area of the proposed development is an agricultural area with no other significant activities occurring there in.

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 existing farming activities (with some of the associated activities i.e. spreading of organic fertiliser 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 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 topography of the site / landholding, while gently undulating, rises c. 3m across the site, rising in a north – south direction. The proposed development has been laid out to integrate with the existing ground contours which run in a south west to north east direction, similar to the adjoining hedgerow. 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 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) Customer (Incl. Applicant) farmlands**

The Customer farmland areas (currently limited to the applicant's lands) are eminently suitable for grass/crop production, and environmentally safe for the application of organic fertilisers at the levels permitted by, and in accordance with the requirements of S.I. 605 of 2017, as amended.

All fertiliser from this pig 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. 40m³ /ha. This rate is minimal in relation to capacity of the soils, and 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 from this farm will satisfy the growth requirements of the tillage/other crops, and will replace the existing imported chemical/organic fertiliser as part of a fertiliser substitution programme. All organic fertiliser from this proposed pig house will be allocated for use in accordance with S.I. 605 of 2017, as amended, thus avoiding over enrichment of the farmland areas with nutrients.

As part of the assessment of the requirement for organic fertiliser from the proposed development, it was determined that, not alone is the applicant in a position to fully utilise all organic fertiliser produced, same will provide <25% of his annual fertiliser requirement. The applicant farms a net area of c. 347 Ha of predominantly tillage lands (wheat, barley, Beans etc.) and can utilise c. 400 % of the organic fertiliser proposed to be produced on this farm. This list will be updated on a continuous basis with new customers.

All specific details in this regard will be completed and are maintained on site for inspection by authorised person(s) in line with the requirements of S.I. 605 of 2017, as amended. These details will be updated on a regular basis to include any additional customers.

Applicant 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(PI). The aquifer vulnerability for the area of proposed development is classed as High.

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/pig manures. In order to ensure that the proposed development does not impact on the groundwater adjacent to the pig 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 house this preventing the generation of soiled water outside the house. The only soiled water will arise from the washing of house (collected directly in the manure storage tank) and the loading area (dedicated soiled water tank). Appropriate measures for the collection and management of same have been demonstrated, and all soiled water will be collected, stored with and treated as organic fertiliser.
- A dedicated area with ancillary soiled water storage is to be provided for the loading and unloading of pigs and/or manure thus preventing any potential surface water contamination. All organic fertiliser will be applied to the customer farmers / applicant's landholding in accordance with S.I. 605 of 2017, as amended.
- The net organic manure storage capacity on the farm will be c. 4,318 m³ on completion of the proposed developments (c. 23-24 months manure production). This storage capacity will ensure that organic fertiliser produced on the farm is spread only under favourable soil and climatic conditions, and is well in excess of the 6 months storage as required by S.I. 605 of 2017 as amended. This storage capacity will significantly facilitate the integration of the proposed development (or more specifically the organic fertiliser to be produced therein) into the existing tillage farming activities, by ensuring that the organic fertiliser is stored in accordance with DAFM requirements (and S.I. 605 of 2017 stipulations) in purposely designed manure storage structures, until such time as the weather and ground conditions are appropriate, and at the opportune time for the applicant to utilise the nutrients contained therein, to best effect for his tillage farming activities. Organic Fertiliser can be applied directly from the manure storage tank to farmland thus minimising any loading/handling.

(b) Customer (Incl. Applicant) farmlands

All organic fertiliser from this farm is to be allocated for use in accordance with the Nitrates directive, 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 fertilisers places certain requirements on farmers, including the applicant / 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 fertilisers, thus ensuring that there is no leaching of nutrients through the soil.
- Organic fertiliser 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 100m³ or more of water per day or serving 500 or more persons.
- Organic fertiliser 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 10m³ or more of water per day or serving 50 or more persons.
- Organic fertiliser 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 shall not be applied to land within 15m, of exposed cavernous or karstified limestone features (such as swallow holes and collapse features).
- Organic fertiliser shall not be applied to land within the prohibited periods as applicable.

Proper manure management on the site and on the Customer (Incl. Applicant) farmlands as planned will result in little or no impact on the ground water in this area. Mr. John Lambe 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 to their farmland.

As detailed previously in this E.I.A.R., organic fertiliser generated in the proposed development will be used as part of a fertiliser substitution programme to replace existing organic and chemical fertiliser sources, with no increase in the amount of nutrients applied on the farm. The proposed development will allow for the appropriate storage and utilisation of this organic fertiliser on this farm and will ensure that this practice is carried out in optimum conditions and at the optimum time for both environmental protection, and nutrient utilisation (uptake) by the agricultural crop, as supported by the excess storage capacity to be provided. Notwithstanding that this will significantly enhance the existing organic fertiliser management practices on the farm and ensure optimum utilisation, the applicant appreciates that some of his landholding is classified as extreme vulnerability of greater. It is recommended that these areas be excluded and given the capacity within the applicant's landholding for organic fertiliser, organic fertiliser from the proposed development should not be allocated to such areas, reducing the available area in close proximity to the site to c. 123Ha, from 180 Ha. The application of the organic fertiliser from the proposed development to this areas would result on an application rate of 75 kg Organic N/Ha still well below the 170 kg organic N/Ha Limit.

In summary the applicant farms c. 347 hectares (>300 Ha of which is tillage) available for the application of organic fertiliser, of which 211 Ha of this is located in close proximity to the development site. Out of an abundance of caution, and irrespective of the fact that these lands are already receiving organic fertiliser and the proposed development is in effect seeking to replace the fertiliser source (i.e. replacing imported organic fertiliser with



on farm generated organic fertiliser, as opposed to new practices on the farm) with no increase in nutrients applied, the applicant has;

- Considered only the lands in close proximity to the proposed development (as these are the most likely to receive organic fertiliser from this source, albeit that this remaining c. 136Ha remains available to the applicant for consideration, if required)
- Excluded lands within the boundary of Dundalk Bay SPA / SAC (c. 31ha)
- Excluded lands classed in excess of High vulnerability (c.57Ha)

This has restricted the area for receipt of pig manure to c. 123 Ha, resulting in an application rate on this area of c. 75 kg Organic N/Ha still well below the 170 kg organic N/Ha Limit, well within permitted levels, and, to be applied under appropriate weather and ground conditions, in accordance with the restrictions detailed in S.I. 605 of 2017 as amended, and to partially satisfy crop requirements (in lieu of existing organic fertiliser imports), and will ensure no adverse impact on ground water as a result of the proposed development.

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 is within the Newry Fane Glyde and Dee Hydrometric Area and Catchment, and the Fane Sub-Catchment and Sub-Basin. There are no drains or streams within or adjacent to the application site. The closest watercourse to the site is the River Fane itself and this is 220m south-west of the application site. This River flows eastwards for approximately 6km until it flows into Dundalk Bay just south of Blackrock. The EPA have not defined the ecological status of the River Fane or its tributaries within this particular sub-basin. However, water quality upstream of the application site and in the upper reaches of the River Fane has been classed as good. Under the requirements of the Water Framework Directive, all waterbodies must achieve good status by the end of current cycle of the WFD, i.e., 2021. 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 will discharge, to the storm water drainage system / soak-pit. These discharge point(s) will be visually inspected on a weekly basis for any signs of contamination i.e. visual and or odour.
- The proposed developments have been designed so as to minimise the amount of soiled water generated on the farm. The area associated with the loading and unloading of pigs and loading of manure leaving the proposed farm will be concreted with a dedicated soiled water storage tank 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. Same will be collected with and treated as organic fertiliser.



- All potentially polluting liquids (fuels, disinfectants chemicals etc.) to be stored in an appropriately bunded area.
- The proposed stormwater management system / soak pit will limit stormwater run-off, ensuring no direct discharge to the Fane River thus ensuring no adverse impact as a result of same.

(b) Customer (Incl. Applicant) farmlands

All organic fertiliser from this farm is to be allocated for use in accordance with the Nitrates directive, 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 fertilisers 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 fertilisers, 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 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 shall not be applied by the use of an upward facing splash plate or a rain gun.
- Organic fertiliser shall not be applied within 20 m of a lake shoreline.
- Organic fertiliser shall not be applied within 5 m of a surface watercourse.
- Organic fertiliser shall not be applied to land within the prohibited periods as applicable.

Proper manure management on the site and on the applicant/customer farmlands as planned will result in little or no impact on the surface water in this area. Mr. John Lambe will ensure that both he and all potential customer farmers are aware of the requirements of the nitrates directive with regard to the application of organic fertiliser to their farmland.

As has been detailed in this report the applicant has the capacity to utilise all organic fertiliser to be produced in the proposed development (in addition to any produced by his existing bovine herd) on his lands to replace, in part, his existing (organic and chemical) fertiliser purchases/imports, as part of the planned fertiliser substitution programme. Same will result in no additional nutrients applied on the farm. Same will be stored, managed and applied in line with the requirements of S.I. 605 of 2017.

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 site are detailed in Appendix 10.

**Air**

The proposed Customer (currently only the applicant) farmlands and pig 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. The closest inhabited third party dwelling to the proposed site, is located c. 750m north 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, coupled with the significant expertise and experience from Teagasc (both pig and tillage advisory services).

The house will be continuously cleaned after each batch of pigs, 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. John Lambe 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.

The lands currently identified for the receipt of manure from the proposed development are predominantly tillage lands, be they Wheat, Barley, Beans etc., and all farmers (in this case currently limited to the applicant) 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, that all manure from this farm should be stored, managed and applied in accordance with S.I. 605 of 2017, as amended and incorporated/ploughed into the soil as soon as practicable after application. It is important to note that the proposed development will result is fertiliser substitution programme whereby imported organic fertiliser (currently spread on the farm) will be replaced (in part as the proposed development is not of sufficient scale to replace all of the applicant's fertiliser requirements) by organic fertiliser produced on the applicant's farm.

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. John Lambe will recommend to all customer farmers that organic fertiliser 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.

7.5. 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.

The fact that the farmers in the proposed customer farmer list (currently only the applicant) 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., should ensure that emissions generated are kept to an absolute minimum.

Any additional customer farmers will be advised that in order to minimise any potential adverse environmental impact including odour/emissions, and to ensure that they get maximum fertiliser benefit from the organic fertiliser, that all manure from this farm should be stored, managed and applied in accordance with S.I. 605 of 2017, as amended and incorporated/ploughed into the soil as soon as practicable after application. As a result this farm will have no significant effect on the climate in the area.

As the pigs 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 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 pigs, due to impact on crop yields etc.

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



7.6 Landscape and Visual Impacts

The site of the proposed development/farm is agricultural land, owned by the applicant, and located adjacent to the existing farmyard/dwelling complex. The existing farm, and the site of the proposed development, is well set back from the public road, on c. 0.9207 Ha, in the town land of Rossmakay. The site is c. 0.8 Km's from the regional route, the R215, between Dundalk and Ardee and a further c. 2 Km's from the M1 motorway.

The site is to be accessed via c. 900 m of an existing internal farm roadway within the landholding. This proposed development will be situated in an agricultural area c. 3.7 km's southeast of Knockbridge and c. 7 km's south of Dundalk and will be carried out on a greenfield site currently predominantly used for tillage production .

This pig farm will be located in an agricultural area. The site location nestled into the surrounding land topography and integrated into the landscape, and with the existing farmyard complex will help screen the proposed development from view and integrate it into the local area. The proposed development will well integrated with the local landscape, existing farmyard complex and 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 2015 - 2021.

The proposed farm will be developed on a site that is nestled into the surrounding lands and is not intrusive on the landscape. The pig house will be dark/green in colour with dark/green coloured roofs and approximately 5.5 metres in height above slat level. 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, is integrated in 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 farmyard 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. John Lambe 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,
- Remove from any any sensitive locations (dwelling houses etc.)
- Nature of the site (integrated 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

The noise from the development will be limited to that arising from the operation of ventilation systems, feed augers, blowers on feed delivery trucks etc. Any potential noise generated by the pigs etc. will not be detectable outside the site boundary due to high insulation standards. The landscaping around the boundary of the site will also help to absorb potential noise emissions from the farm.

Environmental noise resulting from activities at the site should not exceed 55dB (A) Leq during daytime (07.00 to 19.00hrs), 50dB (A) Leq during evening time (19.00 to 23.00hrs) and 45dB(A) Leq during night-time (23.00 to 07.00hrs).

7.7.1 OPERATIONAL NOISE IMPACT ASSESSMENT

While no baseline survey was completed in respect of this farm same was deemed not to be required based on the scale of activities to be carried out, the location of the closest sensitive receptor, the remote location of the site, its location adjacent to and existing farmyard site and critically based on previous reports for this type of development.

Based on previous reports for a similar development there were four identified operational noise emission sources of significance associated with the proposed development. These were as follows:

- Livestock (pig) emissions
- Delivery truck events
- Pig house ventilation fans
- Generator

Each of these sources are discussed individually in the following sections.



7.7.1a Livestock (Pig) Emissions

The pig house is to contain a total of 1,800 pigs. Although this is a large number of animals, noise emissions from pigs 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 type (but larger overall scale) pig farm in Derryarkin, Co. Offaly.

This pig farm has a house that is similar to that of the proposed development with approximately the same number of pigs in it. Noise level measurements had to be conducted internally as noise level emissions were below the ambient noise level on the outside of the building. Noise levels measured were in the range of 54 - 56dB L_{Aeq} .

Given the relative inaudibility of livestock noise and the fact that the proposed development is c. 750m from the closest inhabited dwelling and c. 550 meters from the closest, currently uninhabited dwelling, livestock noise emissions are expected to be inaudible and well below criteria at the closest noise sensitive locations (NSLs). No further mitigation measures are therefore recommended.

7.7.1b Delivery Truck Events

Delivery trucks will only make appearances c. 2 times per week and that they will last for no more than 60 minutes. This will mean that a 'worst case' scenario would only consist of a single delivery occurring during a given daytime period (deliveries will be during daytime periods only) with a maximum 60 minute duration. The noise level at a distance of 3m from a delivery truck during a typical delivery is of the order of 74dB $L_{Aeq,30min}$. Taking account of attenuation due to distance, the predicted noise emission level at 500m presented in Table 7.7.1b.

Period	Predicted Delivery Truck Event Noise Level ($L_{Aeq,30min}$)
	NSL 1
Day Time	42

Table 7.7.1b Predicted Delivery Event Noise Levels

The predicted noise emission level of delivery activity is in the range of 39 - 42dB $L_{Aeq,30min}$ at the nearest noise sensitive locations during a typical delivery event. Levels of this order would be below the typical ambient noise level during the daytime period. These contributions would therefore be considered to have an imperceptible impact on an absolute basis alone. However, given that the criteria is time averaged over the full 16 hour daytime period, the low exposure time will mean that the time averaged level will be even lower.

In summary, the predicted noise levels associated with delivery events would have an imperceptible impact on the adjacent noise sensitive locations. The only mitigation measure that would therefore be recommended would be to restrict deliveries to within daytime periods only.



7.7.1c Pig House Ventilation Fans

The pig house is to be served by ventilation fans that will locate on the roof of the building. Noise level data received from the manufacturer via Jetwash International confirm that these fans will have a sound pressure level of 77dB(A) at a distance of one meter. The current design calls for eight of these fans to be installed on the rooftop of the building.

In order to consider an extreme worst case situation, we have considered that all eight fans would have direct and unobstructed line of sight with all adjacent residences. We have also assumed that each of these fans will be operating at the full (i.e. loudest) capacity at 85dB L_w and that the fans will be running continuously throughout both daytime and night time periods.

Applying a standard distance correction for the 500 distance from each of the relevant fans, the total predicted noise levels are presented in Table 8.

Period	Predicted Pig House Ventilation Fan Noise Level ($L_{Aeq,T}$)
	NSL 1
24 Hour	23

Table 8 Predicted Pig House Ventilation Fan Noise Levels

The predicted noise emission level of these fans is less than, or equal to 23dB $L_{Aeq,T}$ at the nearest potential noise sensitive locations. Noise levels of this order would be well below the applicable criteria during both the daytime period and night time period.

In addition, it is important to note that our assessment considers a worst case condition. It is likely during night time periods that all fans will not be operating at maximum capacity and some may not even be operating at all. This will likely reduce pig house ventilation fan noise emissions down to levels even lower than those predicted.

No further mitigation measures are therefore recommended for the pig house ventilation fans.

7.7.1d Generator

A generator will be provided for 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. ≤ 65 dB(A) at 3m) in order to minimise any potential nuisance to the adjacent noise sensitive locations in the event of a power outage.

Due to its rural location and the low population density in the area, this pig house will not create a disturbance or annoyance to anyone. All traffic and movements into and out from the site will occur during the normal working day.



7.7.2 Construction Noise Impact Assessment

Notwithstanding that this is an existing active farmyard, a variety of items of plant will be in use for the construction of the pig 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*.

The NSL 1 (uninhabited) dwelling is located at a distance of approximately 500m from the pig house. It must be stated that for the majority of the time, plant and equipment will be at a greater distance from these buildings 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 ¹ (dB L _{Aeq})	Noise Level at NSL 1 (dB L _{Aeq,1hr})
Demolition & Site Preparation	Tracked excavator (C2.22)	72	51
	Dumper (C4.2)	78	
Foundation Laying	Compressor (D7 6)	77	54
	Poker Vibrator (C4 33)	78	
	Cement Mixers (C4.22)	76	
Steel Erection	Wheeled Mobile Crane (C4.38)	78	53
	Articulated Lorry (C11.10)	77	
General Construction	Compressor (D7 6)	77	54
	Diesel Hoist (C7.98)	76	
	Pneumatic Circular Saw (D7.79)	75	
	Generator (C4.84)	74	
	Internal Fit-out	70	

Table 6 Predicted Noise Emission Levels at Nearest NSLs During Construction Phases

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



The predicted construction noise levels at the nearest residential dwellings are all within the maximum criterion of 65dB L_{Aeq} for construction activities during daytime and Saturday periods in accordance with the criteria in Table 1. However, in order to further ensure that the pig farm construction noise is reduced as far as practicable for these house, we would also recommend that the following measures be employed:

- ✓ Limiting the hours during which site activities likely to create high levels of noise are permitted;
- ✓ Appointing a site representative responsible for matters relating to noise emissions;
- ✓ Maintaining all site access roads so as to mitigate the potential for noise emissions from lorries.
- ✓ Selection of plant with low inherent potential for generation of noise;
- ✓ Erection of barriers as necessary around noisy processes and items such as generators heavy mechanical plant or high duty compressors;
- ✓ Placing of noisy / vibratory plant as far away from sensitive properties as permitted by site constraints.



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.

7.8.1 Operational Traffic:

Additional traffic will arise as a result of the proposed development, however same will not be significant and/or have any significant adverse impact. Excluding traffic associated with the construction of the proposed development (which will be temporary), traffic will arise due to;

- Feed deliveries to the farm would consist of c. 1 load/week.
- Pig Movement would consist of an average of 1 load in and out/week.
- Staff movement - No significant additional traffic, as applicant will be continuously accessing the existing adjoining farmyard.
- Average traffic associated with the transport of organic fertiliser may range from;
 - 0 (during the closed period 15th October to 15th January and/or where the umbilical spreading system is used), to,
 - 4 loads per week (during 16th January – 14th October if all organic fertiliser is transported by road (tractor and 13.63 m³ tanker)). Given that the proposed development is located centrally within the farm, there is capacity to utilise all organic fertiliser on this landholding, resulting in minimal if any such traffic on the public road.

and additional traffic due to veterinary inspections, farm maintenance, waste collection etc. Transport of fallen stock will occur on a weekly/fortnightly basis in line with Louth Co. Co. and An Bord Pleanala 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 An Bord Pleanala / 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 some additional traffic at the site entrance however same is not significant in the context of existing traffic movements and will not pose any risk to road safety at this juncture.



7.8.2 Construction Traffic

The completion of the proposed development is expected to be completed over a 4-6 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)
- Construction Materials
- 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.

7.9 Biodiversity - Flora and Fauna

(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. The area of the proposed site forms part of the existing landholding owned by Mr. John Lambe. The area of the proposed site is currently intensively managed agricultural lands, and as such the flora and fauna associated with this site has developed in this context. Notwithstanding same the proposed development will have no 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.

**(c) Customer (Incl. Applicant) farmlands**

All organic fertiliser from this farm will be allocated for use in accordance with the Nitrates directive, 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 fertilisers places certain requirements on farmers with regard to the application of organic fertilisers.

In order to prevent any adverse impact on flora and fauna in the area the following practices are to be implemented,

- Organic Fertiliser from this farm is not to be allocated to areas of woodland/scrubland habitat.
- Organic Fertiliser from this farm is not to be allocated within 10m of hedgerows.
- Organic Fertiliser from this farm is not to be allocated within 5m of a watercourse or 20 m of a lake shoreline
- Organic fertiliser 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 from this farm is not to be applied within 10 m of an archaeological feature.
- All organic fertiliser from the proposed development will be utilised by the applicant, direct from the manure storage tank in the proposed house to his lands to replace existing organic/chemical fertiliser use as part of a fertiliser substitution programme, under optimum soil and weather conditions.

There should be no negative impact on the flora and fauna of the area from activities associated with this development. It will be advised to the applicant that organic fertiliser 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 Dundalk Bay SPA / SAC and a significant distance upstream from same. 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 pig house is 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 arising from this farm is to be allocated to lands in accordance with S.I. 605 of 2017, as amended.
- All organic fertiliser from the proposed development will be utilised by the applicant, direct from the manure storage tank in the proposed house to his lands to replace existing organic/chemical fertiliser use as part of a fertiliser substitution programme, under optimum soil and weather conditions.



Due to the location of the proposed pig house site, located away from such areas it will not have an adverse environmental impact on same. All Customer (Incl. Applicant) farmlands proposed for the receipt of manure from this farm will receive organic fertiliser 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, and to replace existing imported fertiliser sources with on farm produced organic fertiliser.

(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 Development Plan. All farmers will be informed that spreading of manure 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. As previously detailed the Visual Impact Assessment has confirmed that there will be no adverse impact on Rossmakay House.

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.

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 economy 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 while at the same time improving the economics of the existing tillage farming activities.

The proposed development will create additional agricultural employment for c. 1 person on a part 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/pig industry in the county, and specifically in this area, is essential in halting the decline in rural employment. This activity contributes to the employment in rural communities and will therefore help stabilise the rural population.

The applicant, and/or any other customer farmers utilising organic fertiliser from this farm, will benefit from low cost fertiliser and the application of same will be in accordance with a Fertiliser Management Programme, to replace existing fertiliser sources. 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, agricultural economy and construction industry.

The Louth Development Plan 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 policies on Agriculture as outlined in the County Development Plan, as detailed below;

It is recognised that there is a need for diversification from traditional agricultural practices. The Council will encourage farming practices and production methods that have regard to conservation, landscape protection, the protection of wildlife habitats, endangered species, flora and fauna and water quality. Sustainable agricultural practices will be encouraged to ensure that development does not impinge on the visual amenity of the countryside or on the architectural heritage of the County and that watercourses and areas of ecological importance are protected from the threat of pollution.

The Council will continue to support and facilitate agriculture and new agricultural initiatives.

Development Plan Policies

It is felt by the applicant that the proposed development satisfies the requirements of Louth Co. Co. as per **the policies on Agriculture** as outlined in the County Development Plan 2015 - 2021, detailed below;

**Policy**

- **RD 7** To maintain a vibrant and healthy agricultural sector based on the principles of sustainable agriculture and associated activities as a cornerstone of rural development and prosperity.
- **RD 8** To facilitate the development of agriculture while ensuring that natural waters, wildlife habitats and conservation areas are protected from pollution.
- **RD 9** To encourage and facilitate agricultural development whilst ensuring that such development does not result in a negative effect on the scenic amenity of the countryside.
- **RD 10** To encourage and facilitate agricultural diversification into related agri-businesses subject to the retention of the holding for primarily agricultural use and the proper planning and development of the area.
- **RD 11** To consider farm-based diversification which is complementary to the farm and is operated as part of the holding.
- **RD 12** To encourage rural diversification intended to supplement farm incomes such as production of dairy products, soft fruit production, forestry, horse livery, food production, agri-tourism and specialist farming practices.

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. Proposals for larger more intensive agricultural practices may require more stringent consideration, for example, mushroom and Poultry units, or Piggeries which may have a greater impact on the local roads and the environment. Such applications will be assessed on their merit subject to proper planning and sustainable development criteria.

Policy

- **RD 13** To ensure that agricultural buildings are designed and appropriately sited to integrate into the landscape. Where new agricultural developments or extensions to existing authorised agricultural developments are proposed, it will be a requirement that the development is well screened by trees and hedgerows and of a palette which permits the structure to satisfactorily blend into its surroundings.
- **RD 14** To ensure that agricultural developments provide adequate waste collection and storage facilities and adhere to all legislation on water quality including the Water Framework Directive, Nitrates Directive and Phosphorus Regulations.



- **RD 15** To ensure that agricultural developments are designed and constructed in a manner that will ensure that watercourses and sources of potable water are protected from the threat of pollution.

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 farmyard complex, 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 pig housing, will diversify, and sustainably integrate with, the existing farming activities and will provide for a sustainable farm diversification for Mr. John Lambe 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 from the proposed developments to be utilised 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, located remote from third party residences.

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 the applicant and is in a predominantly agricultural area. The proposed development is surrounded by agricultural farmland, adjacent to the applicants existing farmyard complex, 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 applicants farming activities 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.

- **(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 inhabited third party residential dwellings within c. 750 m of the proposed development site. A visual impact Assessment (See Appendix No. 19) was completed in respect of Rossmakay House (Protected structure and has confirmed no adverse impact.

- **(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 house, 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 coincide and develop together for the good of everyone in the area.

Once manure spreading activities are carried out in accordance with;

- the Codes of Good Practice,
- S.I. 605 of 2017, as amended, and,
- as part of a fertiliser substitution programme replacing existing organic/chemical fertiliser sources,

will ensure that there will be no adverse environmental impact.

Application of animal manures to farmland is a standard farming practice, as old as farming itself. The odour impact associated with the application of animal manures is a transient one that only lasts for 2-3 days. Customer farmers will be advised that there should be no allocation of organic fertiliser from this farm to Customer (Incl. Applicant) farmlands in close proximity to areas frequented by tourists.

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 pig farm site itself will have no impact on tourism in the area, however, the activity of manure/organic fertiliser spreading needs to be planned and properly carried out according to all the Codes of Good Practice. The applicant will prioritise lands are away from areas frequented by tourists or areas with a higher population density for the application of organic fertiliser.



7.14. Potential Effects (Cumulative, Long/Medium/Short Term, Transboundary / other).

The proposed development is significant in nature and will result in 1 No. house with capacity for c. 1,800 pigs on this site. Pig 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 produced on these farms in Monaghan and Cavan to tillage lands in Meath, / Louth to optimize the use of the organic fertiliser and nutrients contained therein.

It is envisaged that the proposed development will integrate successfully with the applicant's existing farming activities. As the organic fertiliser from the proposed development is to be utilized by the applicant in line with the requirements of the Nitrates Directive (S.I. 605 of 2017, as amended) it will reduce the use of imported organic and chemical fertilisers on these lands. Therefore it is anticipated that the cumulative impact within the county as a whole will be neutral.

The existing farming activities operating adjacent to, and including, the proposed site, have been managed by the applicant 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 pig farm from view and mitigate against any adverse visual impact.
- The proposed development is planned so as to organise the allocation of organic fertiliser 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 is proposed to be used by the applicant to replace existing organic and chemical fertiliser currently used. Due to the significant increases in fertiliser price, and resulting demand in the local area, it is envisaged additional customers as they arise, may be supplied with fertiliser from the proposed development. In any event all fertiliser allocations will be in line with S.I. 605 of 2017, as amended, whereby organic fertiliser will be used to replace chemical fertiliser, thus eliminating the potential for an adverse cumulative impact.
- 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. Same will discharge to a purposely designed soak-pit.
- **The organic fertisier from the proposed development and the existing bovine enterprise (as detailed in section 6.14) will be integrated into an fertiliser management plan for the entire farm, devised in line with the requirements of S.I. 605 of 2017 as amended, and will have the net impact of replacing imported organic and chemical fertiliser, with on-farm produced organic fertiliser, resulting in no net increase in the amount if nutrients applied to the applicant's landholding.**



This in conjunction with any requirements placed on the proposed development by Louth Co. Co. and/or An Bord Pleanala as a result of planning permission conditions will ensure that this proposed development has no adverse environmental impact on the immediate/wider area.



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 pig 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 Health / 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 pig house fully contained within the proposed site, thus maximising performance and minimizing bio-security risks. This proposed development will provide a supply of pig manure which is a valuable fertiliser used by applicant to offset the cost of purchasing organic or chemical fertiliser. The supply of organic manure will result in a financial gain to the applicant or recipient farmers and therefore a net positive impact of the development.
- 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 will have a positive overall impact on soil adding additional nutrients. However there is potential for leaching of these nutrients to water. This threat has been mitigated as all organic manure is to be allocated to applicant 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 organic manure generated. All organic fertiliser from the proposed development will be utilised by the applicant, direct from the manure storage tank in the proposed house to his lands to replace existing organic/chemical fertiliser use as part of a fertiliser substitution programme, under optimum soil and weather conditions. All lands proposed for receipt of organic fertilizer will comprise productive agricultural lands for the production of crops or improved grassland and organic manure 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 allocation of all organic fertilizer for use in accordance with S.I. 605 of 2017, as amended, in accordance with a fertiliser substitution programme. This is further mitigated through the provision of appropriate on site Storm water drainage system / soak-pit, 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.
- **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 odour is 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, and, in a wider sense any increase due to the proposed development will be partly off-set in the wider area as a result of more efficient logistic practices (associated with the integration of the proposed development and the existing farming activities as previously outlined) resulting in no significant adverse impact due to the projected traffic volume. 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.
- **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.
- **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:

<u>Impact</u>		<u>Description</u>
<u>Quality of Effects</u>	<u>Positive Effects</u>	A change which improves the quality of the environment
	<u>Neutral Effects</u>	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	<u>Negative Effects</u>	A change which reduces the quality of the environment
<u>Describing the Significance of Effects</u>	<u>Imperceptible</u>	An effect capable of measurement but without significant consequences.
	<u>Not significant</u>	An effect which causes noticeable changes in the character of the environment but without significant consequences.
	<u>Slight Effects</u>	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	<u>Moderate Effects</u>	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
	<u>Significant Effects</u>	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
	<u>Very Significant Effects</u>	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
	<u>Profound Effects</u>	An effect which obliterates sensitive characteristics
<u>Describing the Duration and Frequency of Effects</u>	<u>Momentary Effects</u>	Effects lasting from seconds to minutes
	<u>Brief Effects</u>	Effects lasting less than a day
	<u>Temporary Effects</u>	Effects lasting less than a year
	<u>Short-term Effects</u>	Effects lasting one to seven years.
	<u>Medium-term Effects</u>	Effects lasting seven to fifteen years.
	<u>Long-term Effects</u>	Effects lasting fifteen to sixty years
	<u>Permanent Effects</u>	Effects lasting over sixty years
	<u>Reversible Effects</u>	Effects that can be undone, for example through remediation or restoration
	<u>Frequency of Effects</u>	Describe how often the effect will occur. ((once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually))
<u>Describing the Extent and Context of Effects</u>	<u>Extent</u>	Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.
	<u>Context</u>	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)



<u>Describing the Probability of Effects</u>	<u>Likely Effects</u>	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
	<u>Unlikely Effects</u>	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 pig farm on the community and its environs. Human Health/Population are the main impact receptor, Bio-diversity (Flora and Fauna) being the other. The pig 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 pig farm with its planned integration into the existing farming activities, and the associated fertiliser substitution programme 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.
- Encourages applicant to utilise a locally produced source of organic fertiliser as opposed to energy inefficient chemical fertiliser.
- Cheap fertiliser for these farmers.
- Ensures a guaranteed market for a significant amount of Irish grain, potentially including that produced on his farm.
- It will help to ensure that there is a consistent supply of pigs to the pork processing sector to supply the main supermarkets, and meet the demand for fresh Irish pork products.



Category	Potential Environmental Issues/Effects	Potential Impact ~ Site	Potential Impact ~ Customer Lands	Duration	Mitigation	Residual Impact	
Natural Environment	Terrestrial Bio diversity (Flora and Fauna)	Neutral	Neutral	Long-term	Existing site of no significant ecological importance. Organic fertilizer to replace chemical fertilizer in accordance with S.I. 605 of 2017, no impact. Integration with existing farm enterprise on applicant and lands.	None	
		Negative	Neutral	Long-term	High quality development and storm water discharge systems. Nutrient balance / organic fertiliser substitution / replacement of existing fertiliser sources. Organic fertiliser will replace imported organic and chemical fertiliser with no increase in nutrients applied.	slight	
	Fresh Water / Groundwater	Negative	Neutral	Long-term	Fertiliser planning / Buffer Zones / Codes of Good Practice applied (S.I. 605 of 2017, Customer Farmlands).	Slight	
	Landscape	Visual impact	Negative	Long-term	Greenfield site. Site relatively low set in landscape. Low finished floor level relative to average ground level. Well set back from the local road. Properly landscaped, and integrated with existing farmyard.	Slight	
	Archaeology	Disturbance of archaeological finds	Neutral	Long-term	No archaeological finds within this site. Site not located near to, or likely to impact on any archaeological sites.	Neutral	
	Climate / Climate Change	Contribution of greenhouse gases	Positive	Long-term	Pig production is less harmful than ruminant production in terms of methane. Organic manure will replace imported organic and inorganic fertilisers eliminating manufacturing / transport energy use. Integration with existing farming activities on applicant lands.	None	



Human Health / Population	Agriculture and land use	Fertiliser substitution	Neutral	Positive	Long-term	Loss of agricultural land (site), however not significant due to limited area. Improves profitability by reducing costs and improving output. Integration with existing farming activities on applicant and customer farmer lands.	None
	Community	Application of manure	Neutral	Neutral	Long-term	Significant requirement for additional organic fertiliser. All organic fertiliser to be applied to lands farmed in accordance with S.I. 605 of 2017.	None
		Vermin and pest infestation	Negative	Neutral	Long-term	Control programme to be practiced on farm in line with Bord Bia requirements.	None
	Traffic	Fire Hazards	Negative	Neutral	Long-term	Fire points / extinguishers / staff training	None
		Long-term increase in traffic.	Negative	Neutral	Long-term	In-ward/out-ward traffic primarily during working hours. Minimise traffic volume by optimising load sizes. Additional Short term peak during construction. Good road infrastructure.	Slight
	Noise	Stock Noise at feeding/moving. Feed deliveries, manure removal	Negative	Neutral	Long-term	Prioritise activities during working hours. Remote Location.	None
	Air	Generation of Odours	Negative	Neutral	Short-term	Adherence to Code of Good Practice to Reduce Odour Emissions at Spreading. High standard of housing and management and washing between batches. Buffer zones from sensitive dwellings / areas.	None
	Tourism/ Amenities	Landscape	Neutral	Neutral	Long-term	Site location will result in no adverse impact on the environment.	None
		Water Quality	Neutral	Neutral	Long-term	High standard of development and management / Fertiliser planning / Buffer Zones / Codes of Good Practice applied / Integration with existing farming activities	None
	Material Assets	Reduction in material / residential quality	Neutral	N/A	Long/ short-term	Agricultural area, well removed from any dwelling houses. Site location will ensure that there is no negative impact on the material assets of the area.	None



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 Louth Co. Co., An Bord Pleanala and The Department of Agriculture, Food and The Marine as detailed in any planning permission conditions 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 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 pig farm. Any recommendations of the planning authority will be complied with in relation to this Environment Management Programme.

9.2. Organic Fertiliser Management Programme

The applicant will implement and manage a programme for the allocation of organic fertiliser in each particular year. The main aspects of the Organic Fertiliser 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 fertiliser to the lands for use in accordance with the requirements of S.I. 605 of 2017, as amended, and to replace existing imported organic and chemical fertiliser sources with on-farm produced organic fertiliser.
- Proper separation of all clean water on site, and the collection of all soiled water in the soiled water/manure storage tanks.
- Continuous recording of all organic fertiliser transfers onto the farm (as per the record 3 form 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) and the implementation of the Fertiliser Management Plan across the entire farm.



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 on a weekly basis.
- Noise, Odour and Dust emissions not to exceed applicable thresholds.
- Remaining monitoring and analysis as may be determined by the requirements of any planning permission conditions 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 farming activity.

The proposed development is the ideal scenario/model whereby;

- 1. the manure produced by the pigs housed in the proposed developments, is used to fertilise the farmland to grow the cereals,**
- 2. to be used by the animal feed industry to**
- 3. supply farms such as this.**

As indicated the lands (347 Ha) farmed by the applicant can accommodate c. 400 % of the organic fertiliser to be produced in the proposed pig house upon completion of the proposed development. As a result of selections imposed by the applicant in relation to these lands based on proximity, location relative to SAC/SPA's and Aquifer Vulnerability the preferred area selected for receipt of organic fertiliser from the proposed development is limited to c. 123 Ha (i.e. all lands in the townlands of Milltown Grange, Dunmahon, Stephenstown and Rossmakay (180 ha), with the exclusion of any lands in excess of High vulnerability as identified on GSI Maps, notwithstanding that other significant areas remain available to the applicant.

The organic fertiliser from the proposed development and the existing bovine enterprise will be integrated into an fertiliser management plan for the entire farm, devised in line with the requirements of S.I. 605 of 2017 as amended, and will have the net impact of replacing imported organic and chemical fertiliser, with on-farm produced organic fertiliser, resulting in no net increase in the amount of nutrients applied to the applicant's landholding.

Reducing the area for receipt of pig manure to c. 123 Ha will result in an application rate on this area of c. 75 kg Organic N/Ha still well below the 170 kg organic N/Ha Limit, well within permitted levels, and same will still have to be complemented by additional bovine organic fertiliser, imported organic fertiliser and/or chemical fertiliser to meet crop requirements.

The new farm building and ancillary structures will integrate successfully within the existing landscape and its surroundings, as well as successfully integrating with the applicant's 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 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 for this farm.

The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Signed:

Paraic Fay BAgrSc

Date

24/3/20

**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***
- Appendix No. 2 ~ Site Location Map (1:2,500 & 1:10,560)***
- 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 ~***
- Appendix No. 7 ~ Manure Storage Capacity***
- Appendix No. 8 ~ Feed Details***
- Appendix No. 9 ~ Animal Tissue Disposal***
- Appendix No. 10 ~ Local Water Quality Data***
- Appendix No. 11 ~ Extract from Landscape Character Assessment***
- 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 ~ Storm Water Attenuation Proposals**
- 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 ~ Visual Impact Assessment**
- Appendix No. 19 ~ Construction and Demolition Waste Management Plan**



Appendix No. 1

Customer Farmland Details

PIGAP

CUSTOMER FARM REPORT

FARM CODE OR NAME (Treat this as confidential)

John Lambie
347.36
42.55
0
0

Total Net Area (ha)

Net Area of Grassland (ha)

No. Weeks Manure Storage Required

REPS Participant Yes=1 No=0

Maximum Pig Manure Imports Allowed under REPS M³

Year **2014**

LIVE STOCK NUMBERS AND NUTRIENT OUTPUT

Organic N Phosphorus

Kg per head per year

No. Organic N Phosphorus

(kg) (kg)

Type	65	10
Dept. Of Ag 2013	24	3
Suckler Cows	57	8
Cattle (0 - 1 Year Old)	65	10
Cattle (1 - 2 Year Old)	7	1
Cattle > 2 years	13	2
Mountain Ewe & Lambs	4	0.6
Lowland Ewe & Lambs	6	1
Mountain Hoggets		
Lowland Hoggets		
Other specify*		

* Consult Tables in S.I. 31 of 2014

Total Nutrient Output from Grazing Livestock Kg

Grazing LU Equivalent

Total Concentrate fed to grazing livestock (tonnes)

91.7	Conc P
27.5223529	Total
	Deduction
	Net

Kg / Ha /Year

22

183

ORGANIC NITROGEN

Stocking Rates

Overall

Grassland

Maximum Organic N Allowed per Ha

Organic N Allowed per Hectare

Total Organic Nitrogen Allowed

Organic N from Own Grazing Livestock

Maximum Organic N imports

Maximum pig manure imports

based on Organic N

170 Kg

59051 Kg

7798 Kg

51253 Kg

12203 M³

See what level is allowed when P is factored into the equation.

NOTE : On Index 4 soils for Maize 20 kg of Phosphorus is allowed once it is incorporated prior to or during sowing of crop.

* IF a farmer is availing of the Table 15 allowance for the sale of Hay or Silage he must enter the area and the relevant figures in cells J 11 and P11.

PHOSPHORUS GRASSLAND

Soil Test Index (mg/l)

1 (0-3.0)

2 (3.1-5.0)

3 (5.1-8.0)

4 (>8.0)

Grassland stocking rate

Hectares

27

17

7

0

Maximum Available Phosphorus allowed

<85 86-130 131-170 171-210

1 FALSE FALSE FALSE

27 30 33

17 20 23

7 10 13

0 0 0

TOTAL

40

30

20

0

0

0

10

10

10

0

0

0

298

Table 15 Allowance*

1 Cut silage/Hay

hectares per index

2 Cut silage

hectares per index

42.55

TOTAL

TILLAGE LAND

Soil Test Index (mg/l)

1 (0-3.0)

2 (3.1-6.0)

3 (6.1-10.0)

4 (>10.0)

TOTAL

Hectares

278.96

278.96

278.96

0

0

OSR Hectares

55

45

35

20

0

Maize Hectares

8282

8282

8282

25.24

7984

7984

Maximum Available Phosphorus Allowed

Kg

8282

P from Concentrates Fed to Grazing Livestock

Kg

0.0

Chemical P used (see entries in Page 2 below)

Kg

0

Maximum Imported Phosphorus Allowed

Kg

8282

10353

Maximum Pig Manure Allowed

M³

0

Total Net Area

Ha

347.36

Net Area Accounted For

Ha

346.75

From 1st January 2018 this farm may be allowed to import up to

10353 m³

based on the stock numbers and areas in the calculations above.

Maximum pig manure imports based on Organic N

2277550 Gallons

Date

23 March 2020



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Bia agus Mara
Department of Agriculture,
Food and the Marine

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Scheme and other Area-Based Schemes Purposes only
Year: 2019 Scale: 1:4000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O12106
Townland Name: MILLTOWN GRANGE

Parcel	Digitised	MEA*	Claimed
O121060005	3.74	3.74	3.73

Ortho Used: Color Ortho Full Coverage

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O121060005



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Year: 2018 Scale: 1:4000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO. LOUTH

Townland Code: O13704
Townland Name: DUNMAHON

Parcel	Digitised	MEA*	Claimed
O1370400028	5.95	5.92	5.92
O1370400029	0.37	0.37	0.36
O1370400054	0.37	0.35	0.35

Exclusions	Excl	Area	Red%	Elig	Type
O1370400028	0006	0.01	100	0.01	Building
O1370400028	0097	0.02	100	0.02	Scrub
O1370400054	0103	0.02	100	0.02	Farm Road

Ortho Used: Color Ortho Full Coverage

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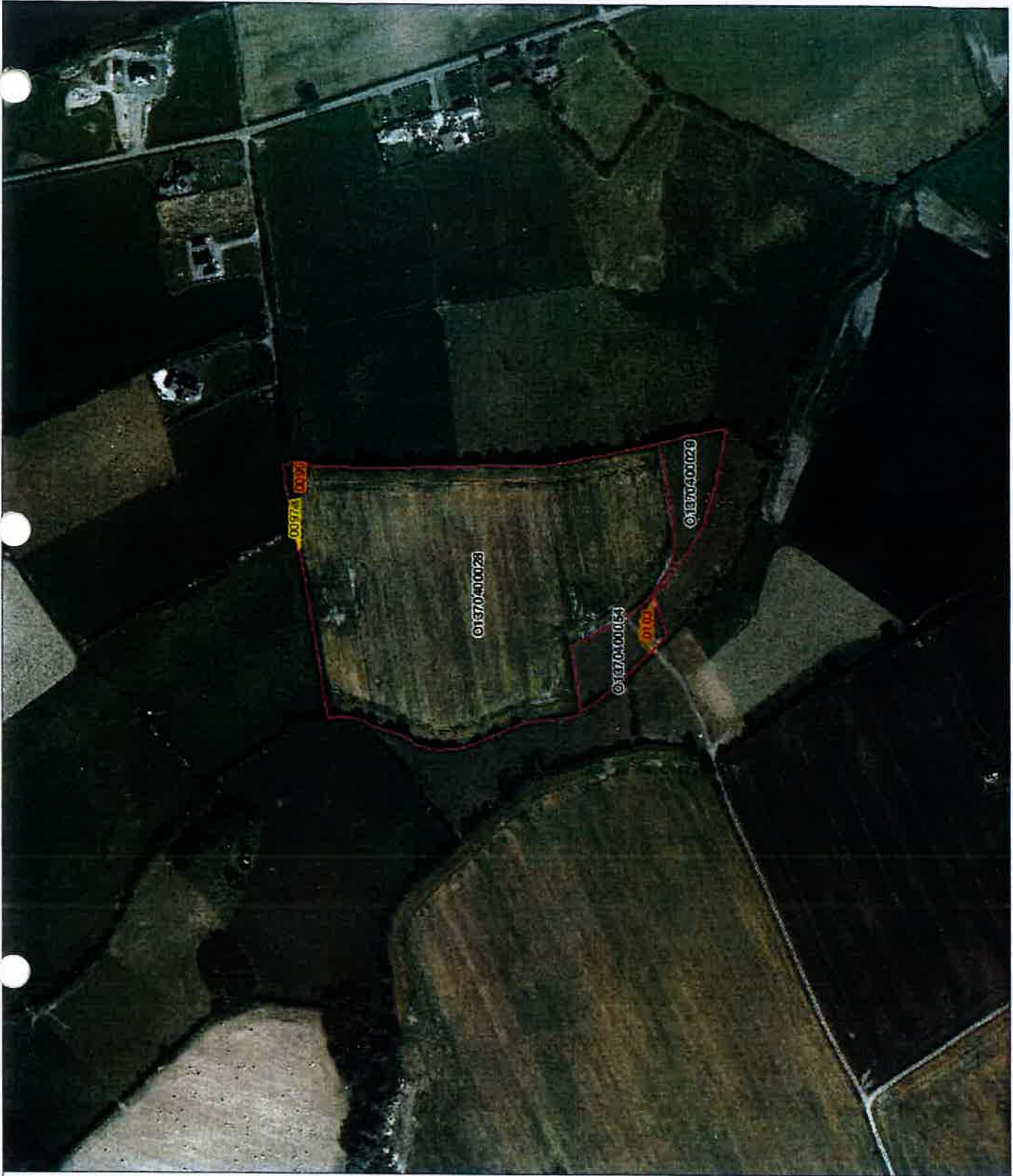
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Scale: 1:5000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O12419
Townland Name: STEPHENSTOWN

Parcel	Digitised	MEA*	Claimed
O1241900002	6.12	6.12	6
O1241900004	19.05	19.05	18.81

Ortho Used: Color Ortho Full Coverage

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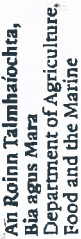
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Name: JOHN LAMBE
Address: ROSSMAKEA
KINCKBRIDGE
DUNDALK
CO. LOUTH

Townland Code: O12419
Townland Name: STEPHENSTOWN

Parcel: O1241900501
Digitised: 20.13
Claimed: 20.13
NEA*: 20.13

Ortho Used: Color Ortho Full Coverage

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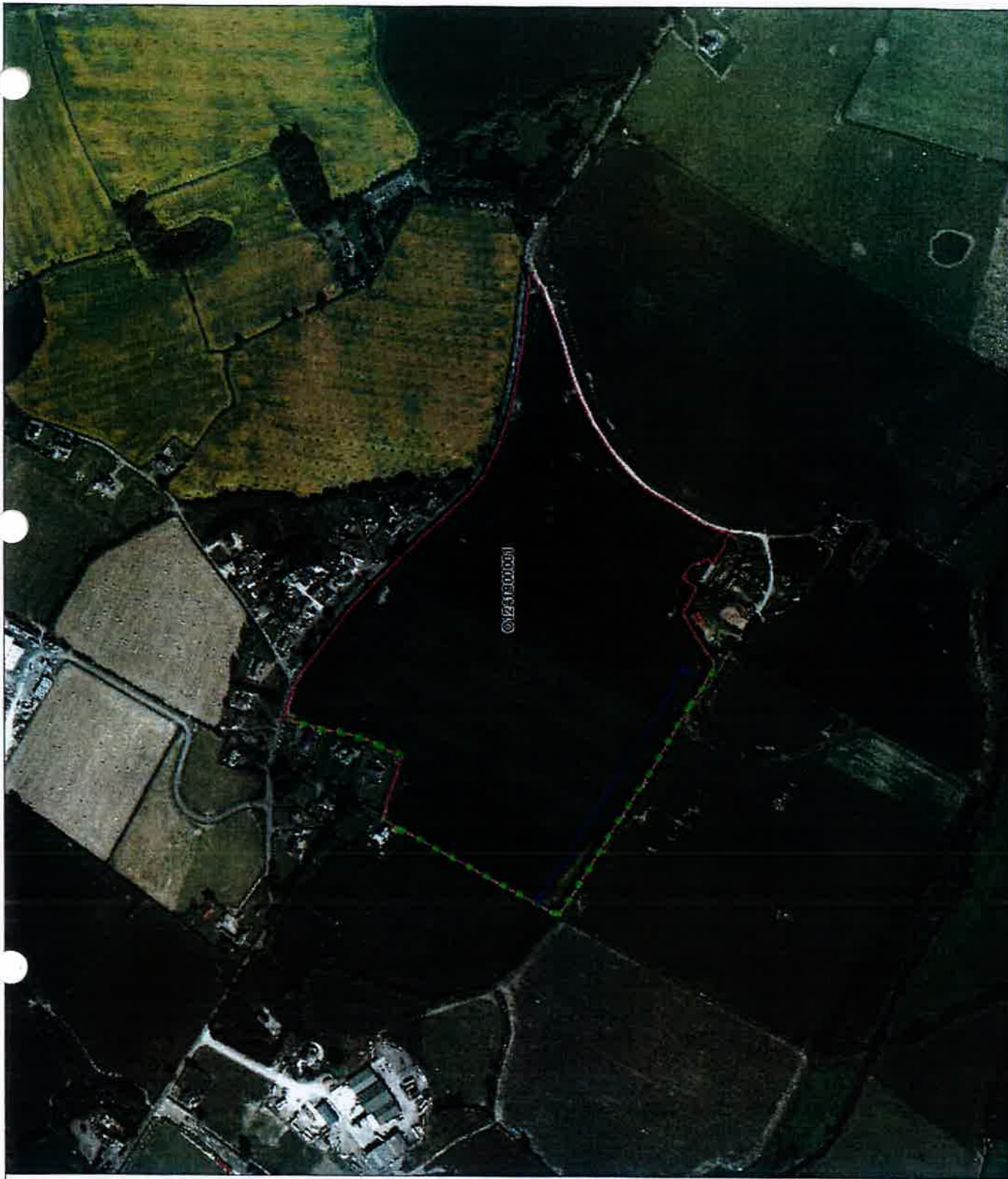
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Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O12419
Townland Name: STEPHENSTOWN

Parcel	Digitised	MEA*	Claimed
O1241900008	14.09	14.05	13.59

Exclusions	Excl	Area	Red%	Elig	Type
Parcel	0041	0.04	100	0.04	Building

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Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O12419
Townland Name: STEPHENSTOWN

Parcel 01241900008 Digitised 6.26 MEA* 6.45 Claimed 6.45

Exclusions	Parcel	Excl	Area	Ref%	Elig	Type
	01241900008	0040	0.11	100	0.11	Scrub

Ortho Used: Color Ortho Full Coverage

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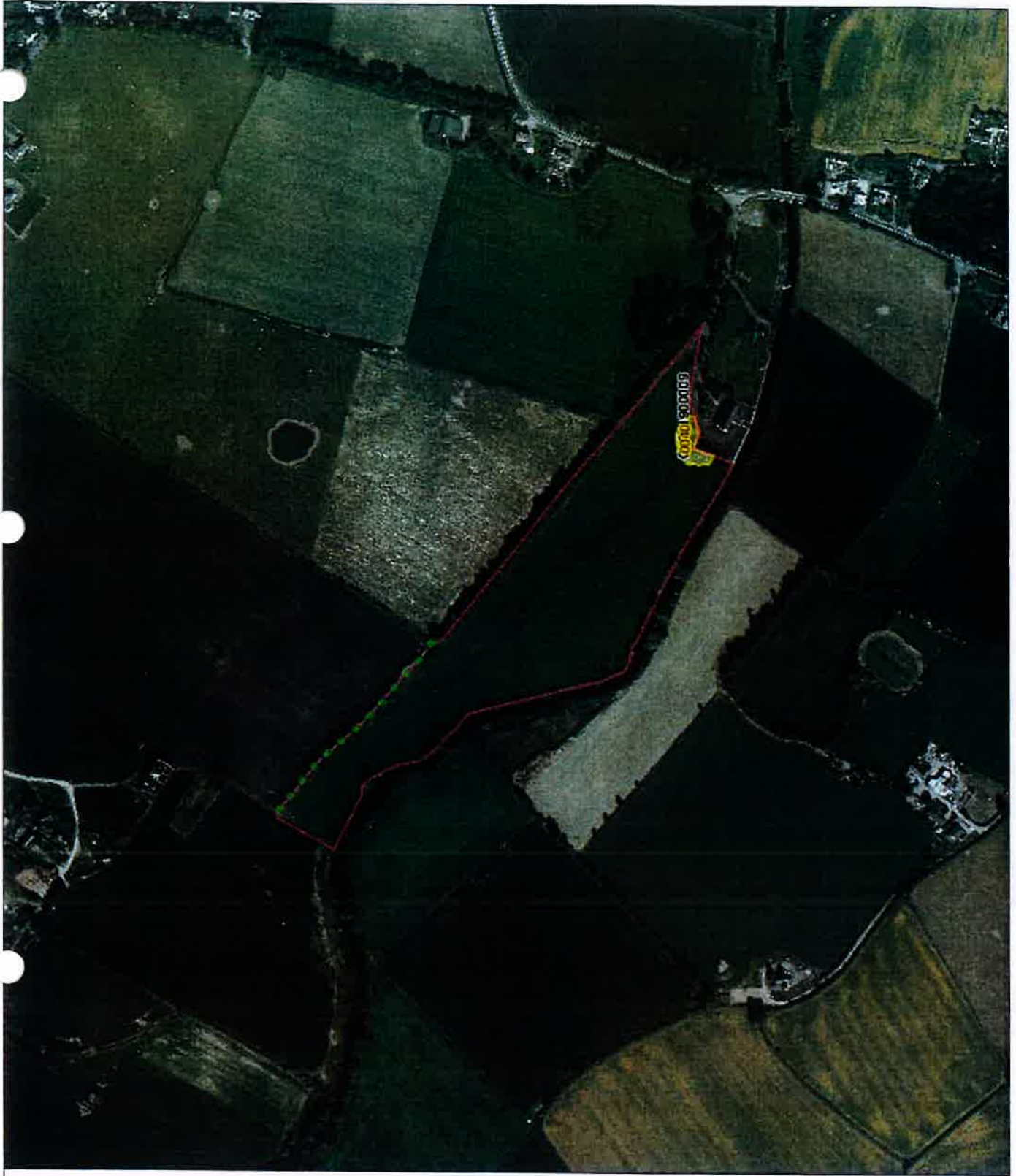
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Year: 2019 Scale: 1:6000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O13713
Townland Name: ROSSMAKAY

Parcel	Digitised	MEA*	Claimed
O1371300001	1.00	1.98	1.4
O1371300002	11.47	11.47	11.47
O1371300016	6.73	6.62	6.62
O1371300020	3.63	3.63	3.6

Exclusions	Excl	Area	Rec%	Elig	Type
O1371300016	0083	0	100	0	Ineligible
O1371300016	0084	0.11	100	0.11	Firm Road

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Year: 2019
Scale: 1:8000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O13713
Townland Name: ROSSMAKAY

Parcel	Digitised	MEA*	Claimed
O1371300007	5.64	5.64	5.62
O1371300024	8.08	7.91	7.85

Exclusions	Excl	Area	Red%	Elig	Type
O1371300024	0101	0.18	100	0.18	Scr2b

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Scale: 1:8000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O13713
Townland Name: ROSSMAKAY

Parcel	Digitised	MEA*	Claimed
O1371300011	21.59	21.59	20.99

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O1371300011





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Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O13713
Townland Name: ROSSMAKAY

Parcel	Digitised	MEA*	Claimed
O1371300015	7.95	7.06	7

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Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O13713
Townland Name: ROSSMAKAY

Parcel
O1371300021 Digitised 3.88 MEA* 3.4 Claimed 3.37

Exclusions	Excl	Area	Rec%	Elig	Type
O1371300021	0096	0.46	100	0.46	River

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Year: 2019 Scale: 1:8000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNICKBRIDGE
DUNDALK
CO. LOUTH

Townland Code: O13713
Townland Name: ROSSMAKAY

Parcel ID	Digitised	MEA*	Classified
O1371300005	1.01	1.01	1.01
O1371300008	1.84	1.84	1.84
O1371300013	6.33	6.33	6.32
O1371300014	2.35	2.35	2.34

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Year: 2019 Scale: 1:6000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O13713
Townland Name: ROSSMAKAY

Parcel	Digitised	MEA*	Claimed
O1371300009	7.12	7.12	7.1
O1371300010	13.65	13.65	13.66
O1371300012	4.78	4.78	4.78

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Year: 2019

Scale: 1:4000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO. LOUTH

Townland Code: O11605
Townland Name: LOUTH HALL

Parcel: O1160500060
Digitised: 5.43
MEA*: 5.41
Claimed: 5.2

Exclusions	Parcel	Area	Elig	Type	
	O1160500060	0.02	100	0.02	Scrub

Ortho Useet: Color Ortho Full Coverage

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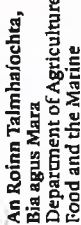
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Year: 2019 Scale: 1:5000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O11507
Townland Name: GLYDEFARM

Parcel	Digitised	MEA*	Claimed
O1150700011	0.27	0	0
O1150700014	15.8	16.8	16.8

Ortho Used: Color Ortho Full Coverage

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Food and the Marine

**For Basic Payment Scheme Areas of Natural Constraint
Scheme and other Area-Based Schemes Purposes only**
Year: 2019
Scale: 1:6000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O11507
Townland Name: GLYDEFARM

Parcel	MEAs*	Digitised	MEAs*	Claimed
O1150700012	2.74	0.64	0.64	0.64
O1150700013	0.64	0.64	0.64	0.64
O1150700015	15.24	15.24	15.12	15.12
O1150700017	1.04	1.04	1.02	1.02
O1150700023	1.75	1.75	1.75	1.75
O1150700045	1.07	1.07	1.03	1.03
O1150700046	5.05	5.05	5.03	5.03
O1150700047	5.44	5.44	5.44	5.44

Exclusions	Parcel	Excl	Area	Ret%	Elig	Type
O1150700045	0222	0.04	100	0.04	Stream	

Ortho Used: Color Ortho Full Coverage

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Department of Agriculture,
Food and the Marine

For Basic Payment Scheme Areas of Natural Constraint
Scheme and other Area-Based Schemes Purposes only
Year: 2019 Scale: 1:5000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O11507
Townland Name: GLYDEFARM

Parcel	Digitised	MEA*	Claimed
O1150700016	7.75	7.75	7.75
O1150700024	1.06	0.87	0.87
O1150700052	2.21	2.21	2.21

Exclusions	Excl	Area	Req%	Elig	Type
O1150700024	0213	0.03	100	0.03	Farm Yard
O1150700024	0214	0.06	100	0.06	Scrub
O1150700024	0217	0.05	100	0.05	Stream

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Year: 2019 Scale: 1:5000

Name: JOHN LAMBE
Address: ROSSMAHEA
KNOCKBRIDGE
DUNDALK
CO. LOUTH

Townland Code: O11323
Townland Name: GREENLANE

Parcel	Digitised	MEA	Claimed
01132300001	13.23	13.23	13.15

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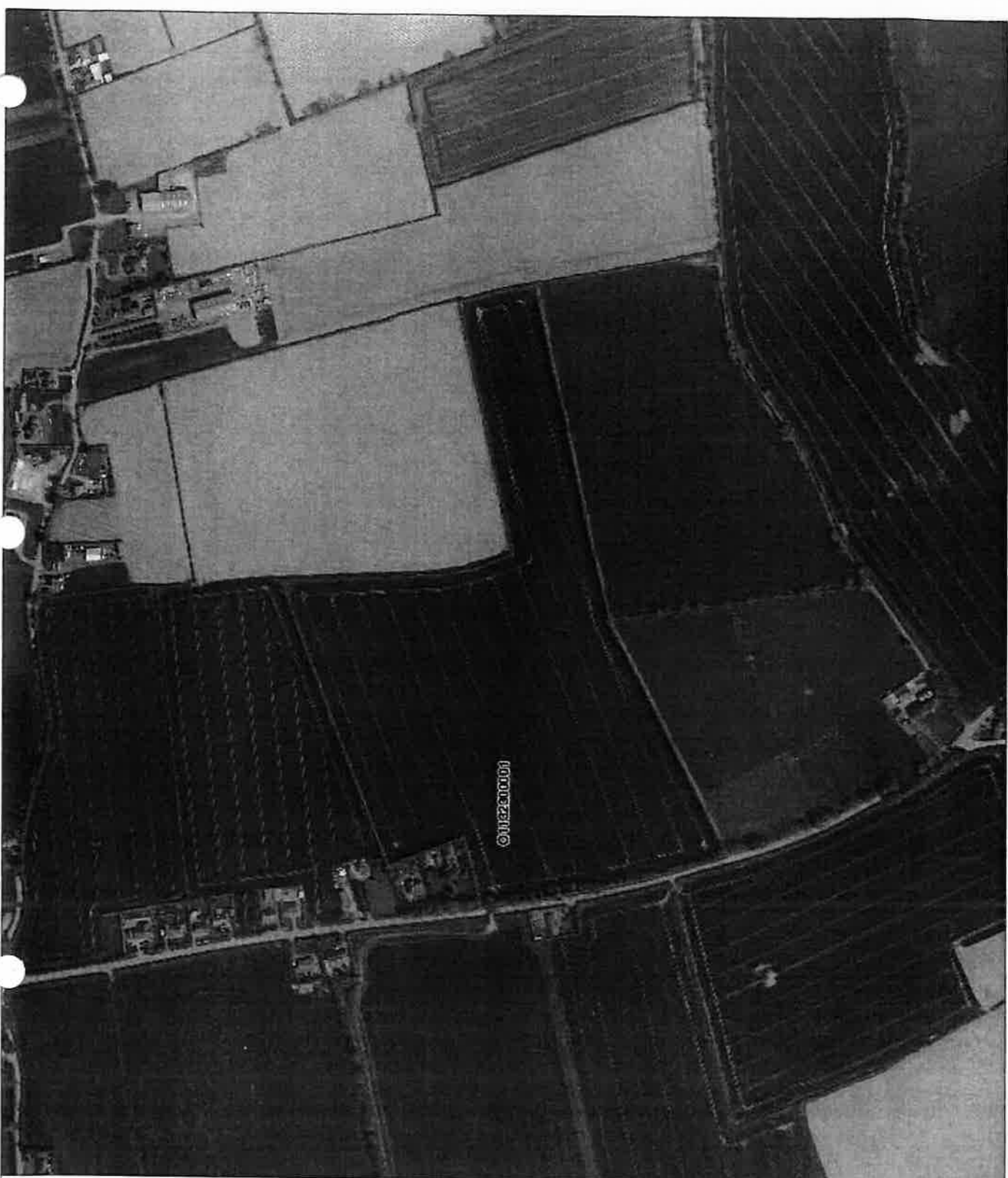
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Year: 2018 Scale: 1:5000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O11304
Townland Name: BALLYBAILIE

Parcel	Digitised	MEA*	Claimed
O113040001	0.59	0	0
O113040012	0.03	0	0
O113040022	6.37	5.11	5.11

Parcel	Manual	Reason
O113040001	4	Scrub

Exclusions	Area	Red%	Effg	Type
O1130400012	0.03	100	0.03	Scrub
O1130400022	0.05	100	0.05	Farm Road
O1130400022	0.04	100	0.04	Farm Road
O1130400022	0.84	30	1.57	Trees
O1130400022	0.05	100	0.01	Building
O1130400022	0.06	100	0.01	Farm Road
O1130400022	0.07	20	1.45	Trees
O1130400022	0.06	100	0.01	Building
O1130400022	0.06	100	0.06	Farm Road

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Year: 2019 Scale: 1:5000

Name: JOHN LAMBE
Address: ROSSMAKEN
KNOCKERIDGE
DUNDALK
CO. DUBLIN

Townland Code: Q18956
Townland Name: WARRENTOWN

Parcel	Digitised	MEA*	Classed
Q189560001	3.81	3.53	7.03
Q189560002	1.44	1.44	1.44
Q189560003	1.2	1.2	1.15
Q189560004	2.13	2.13	2.15
Q189560005	2.57	2.57	2.57

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Year: 2010 Scale: 1:4000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O18854
Townland Name: VESINGSTOWN

Parcel	Digitised	MEAS*	Claimed
O1885400506	3.71	3.71	3.71

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O1885400506





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Year: 2019 Scale: 1:3000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: Q18954
Townland Name: VESINGSTOWN

Parcel	Digitised	MEA*	Claimed
01895400015	3.73	3.73	3.73

Ortho Used: Color Ortho Full Coverage

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For Basic Payment Scheme Areas of Natural Constraint
Scheme and other Area-Based Schemes Purposes only
Year: 2018 Scale: 1:8000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO. LOUTH

Townland Code: Q18854
Townland Name: VES/INGSTOWN

Parcel	Digitised	MEA*	Claimed
Q1885400008	4.48	4.48	4.37
Q1885400011	5.02	5.02	4.87

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Year: 2018 Scale: 1:6000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO. LOUTH

Townland Code: Q18954
Townland Name: VESINGSTOWN

Parcel	Digitized	MEA*	Claimed
Q1895400003	2.16	6.4	2.16
Q1895400007	6.4	6.4	6.4
Q1895400009	2.73	2.73	2.64
Q1895400010	5.22	5.22	5.2
Q1895400012	6.41	6.41	6.35
Q1895400013	2.11	2.11	2.09

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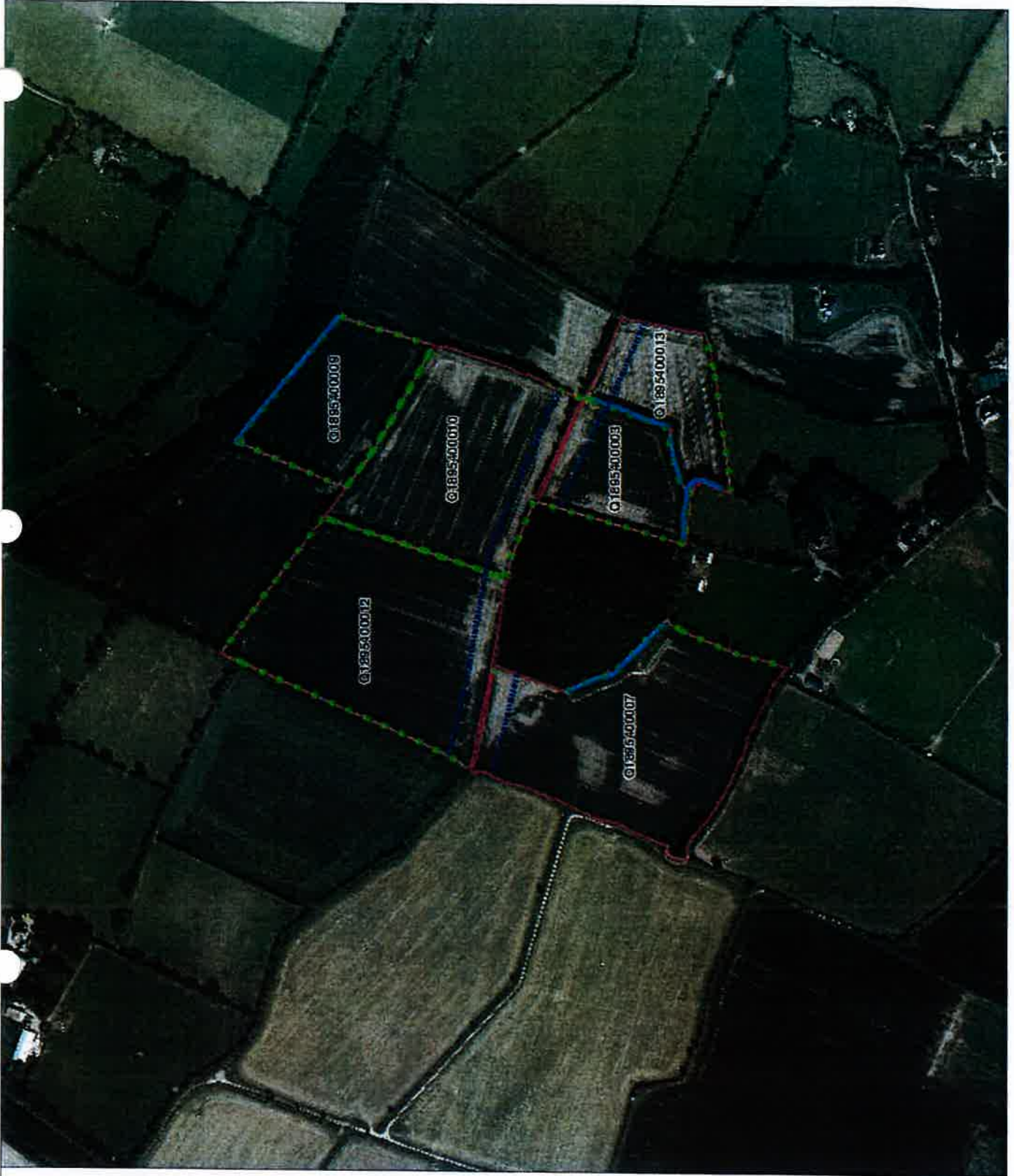
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Food and the Marine

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Year: 2019 Scale: 1:2000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O12108
Townland Name: MOORETOWN

Parcel	Digitised	MEA*	Claimed
O1210800078	0.65	0.03	0.5
O1210800080	0.04	0	0

Exclusions	Excl	Area	Red%	Elig	Type
O1210800079	0004	0.03	100	0.03	Farm Road

Ortho Used: Color Ortho Full Coverage

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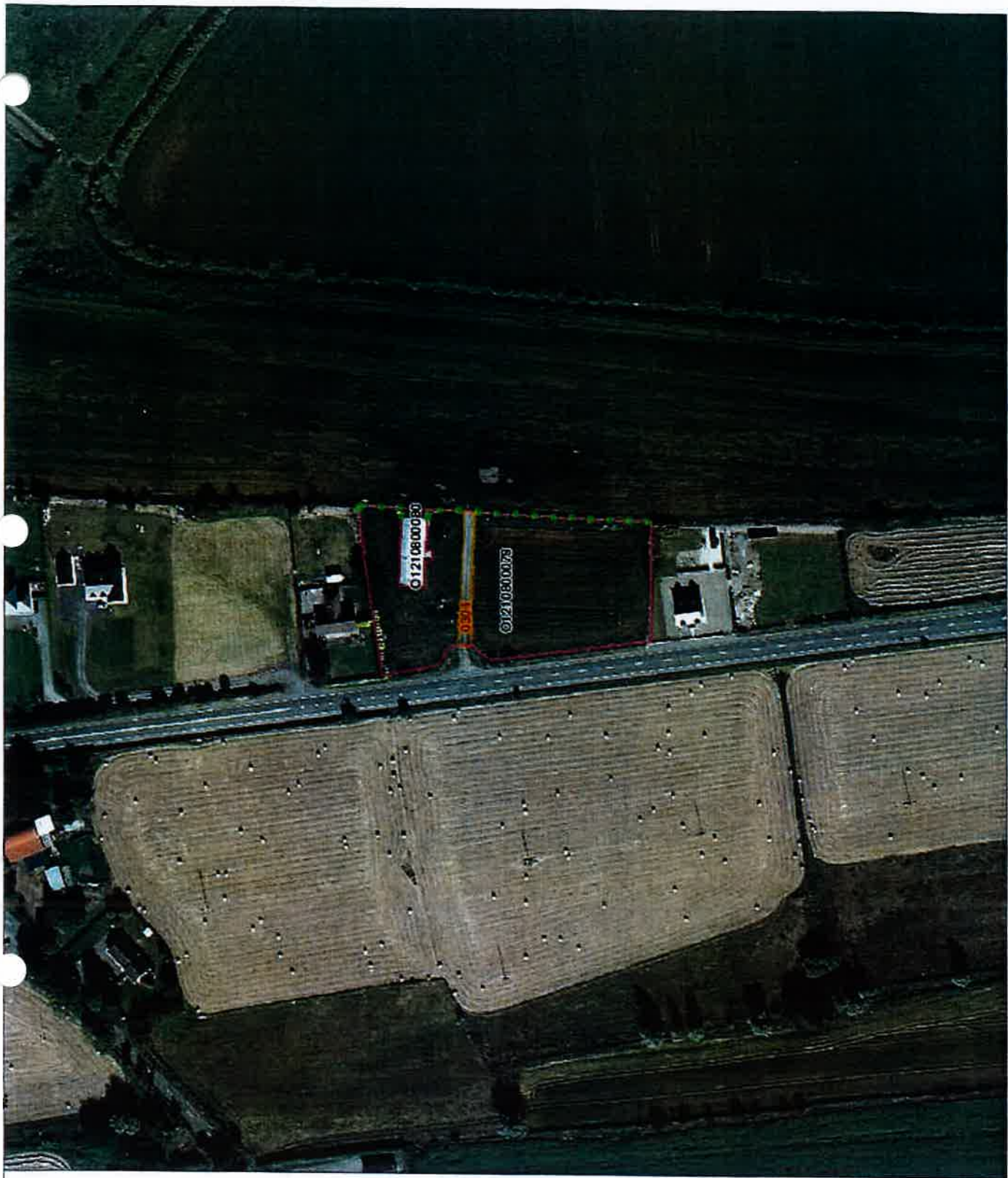
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Department of Agriculture,
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Year: 2019 Scale: 1:4000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO. LOUTH

Townland Code: O12108
Townland Name: MOORETOWN

Parcel	Digitised	MEA*	Claimed
O1210800037	5.96	5.93	5.93

Exclusions	Parcel	Excl	Area	Red%	Elig	Type
	O1210800037	0287	0.05	100	0.05	Scrub

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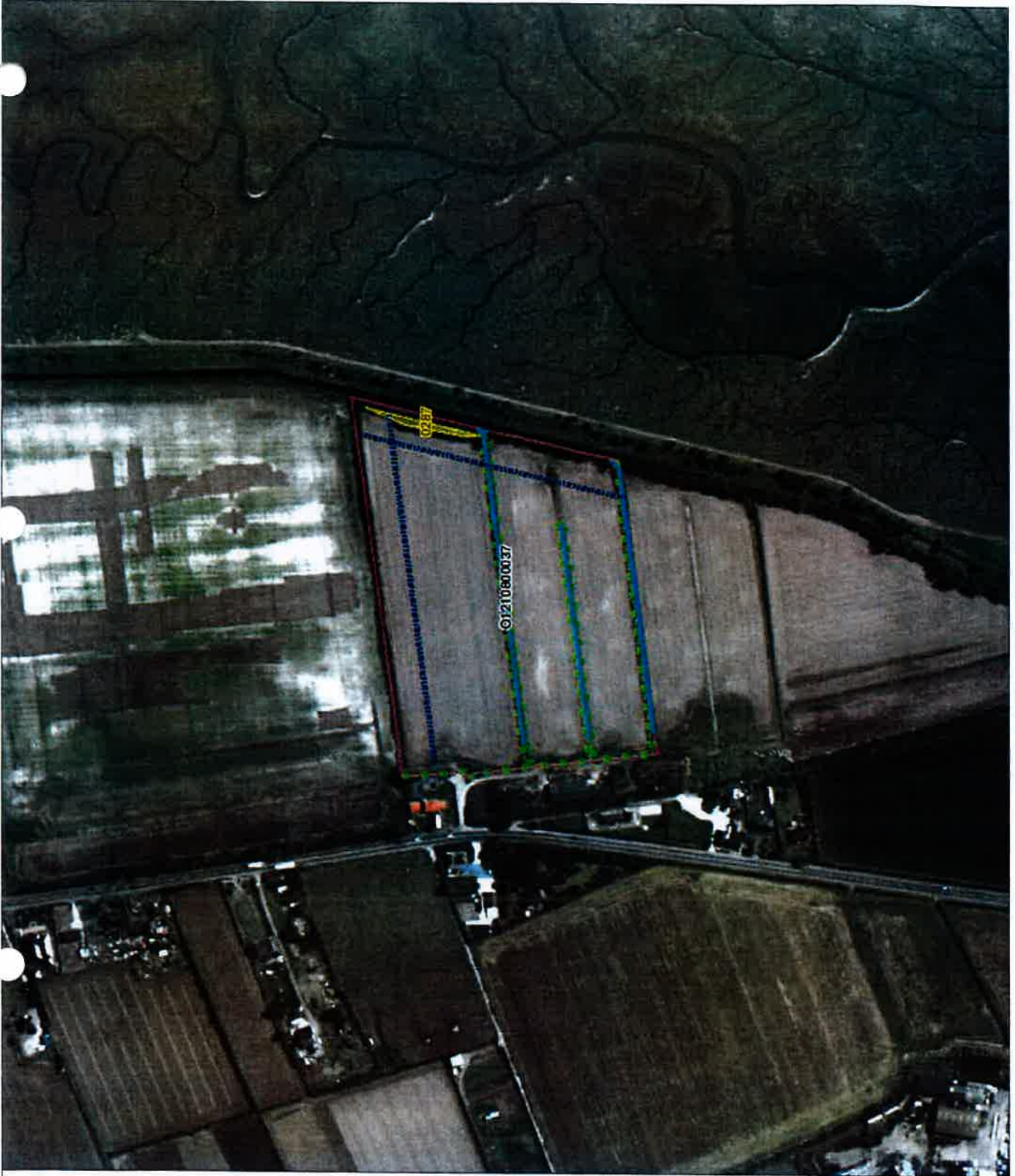
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Department of Agriculture,
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Scheme and other Area-Based Schemes Purposes only
Year: 2018 Scale: 1:5000

Name: JOHN LAMBE
Address: ROSSMAKEA
KNOCKBRIDGE
DUNDALK
CO LOUTH

Townland Code: O12108
Townland Name: MOORETOWN

Parcel	Digitised	MEA*	Claimed
O1210800009	7.06	7.06	6.8
O1210800010	6.43	6.43	6.3
O1210800020	12.04	12.04	11.9

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Appendix No. 2

Site Location Map (1:2,500 & 1:10,560)

Planning Pack Map

— *Site Boundary*

Site Notice 'X'

Site Area "A" and outlined in RED is 2.275 Acres /
0.9207 Hec Including Service Road.
Singed: Myles O Reilly

Site Notice 'X'

"A"

Ros Mhic
Eathach
Rossmáky

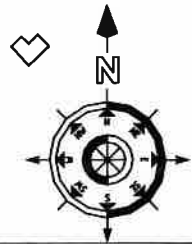
Site Location Map

Scale: 1: 2,500

Háilicir
Wallerstown

0 20 40 60 80 Metres
0 30 60 90 120 150 Feet

OUTPUT SCALE: 1:2,500



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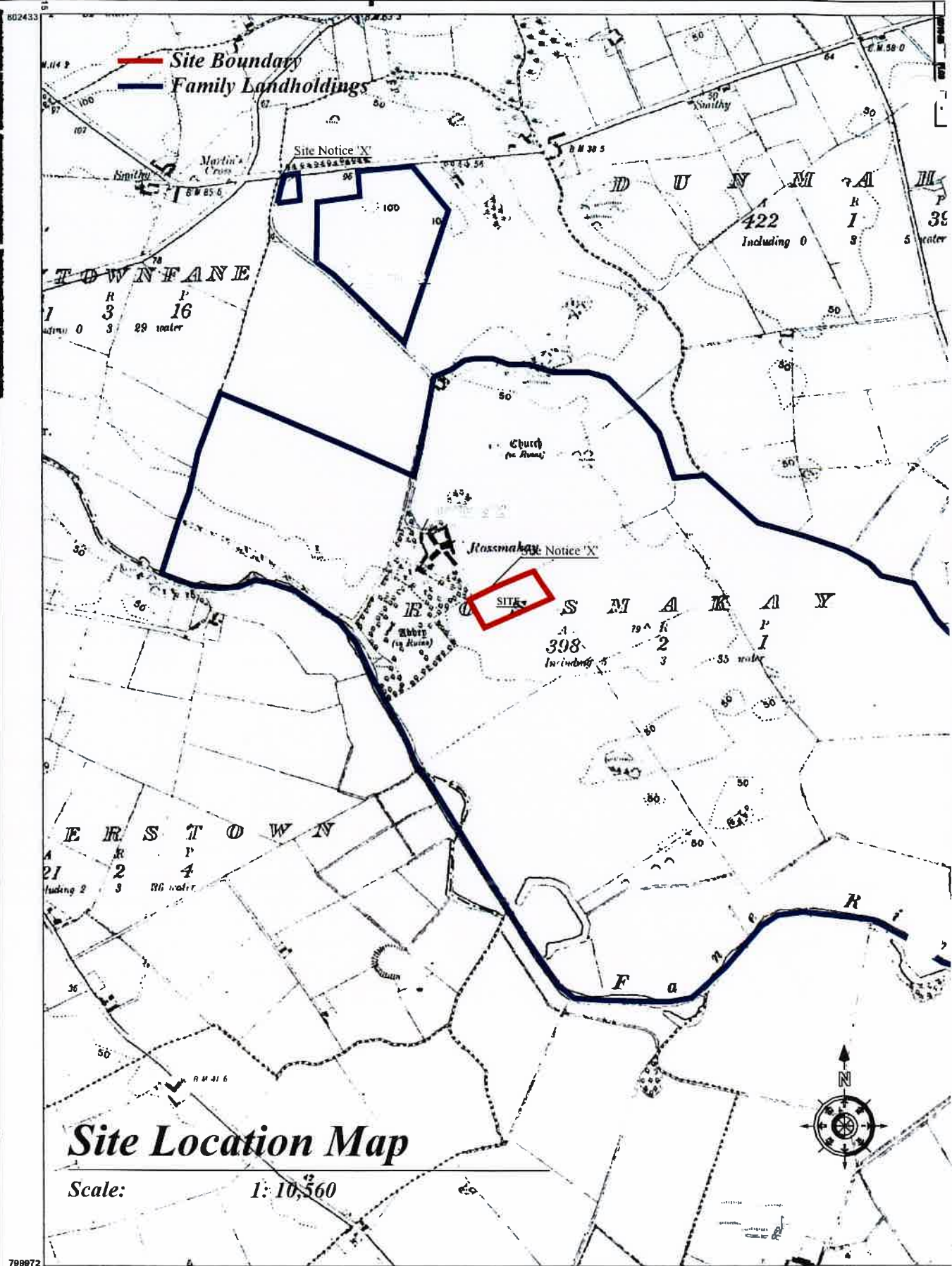
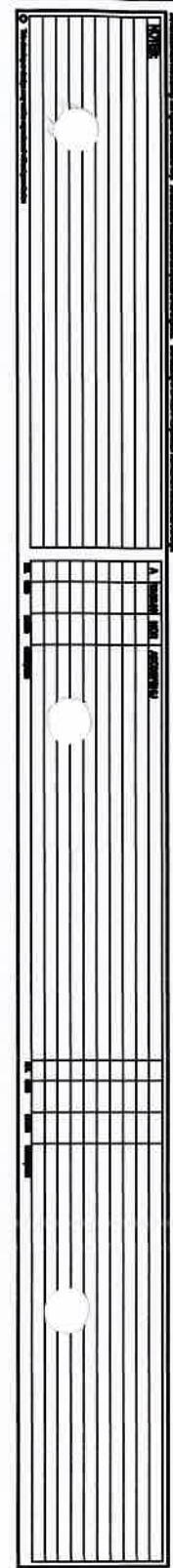
CENTRE
COORDINATES:
ITM 702424,801203

PUBLISHED: 02/04/2018
MAP SERIES: 1:5,000
1:2,500
1:5,000

ORDER NO.: 50002324_1
MAP SHEETS: 1770
1770-D
1831

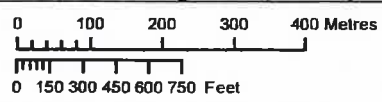
CAPTURE RESOLUTION:
The map objects are only accurate to
resolution at which they were captured.
Output scale is not indicative of data
scale.
Further information is available at
<http://www.osi.ie>; search 'Capture'
LEGEND:
<http://www.osi.ie>; search 'Large Scale'





Site Location Map

Scale: 1:10,560



OUTPUT SCALE: 1:10,560



CENTRE COORDINATES:
ITM 702424,801203

PUBLISHED: 02/04/2018
MAP SERIES: 6 Inch Raster
6 Inch Raster

ORDER NO.: 50002324_1
MAP SHEETS: 9900-19
LH012

CAPTURE RESOLUTION:
The map objects are only at resolution at which they were captured. Output scale is not indicative of scale.
Further information is available at:
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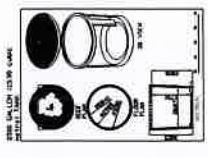
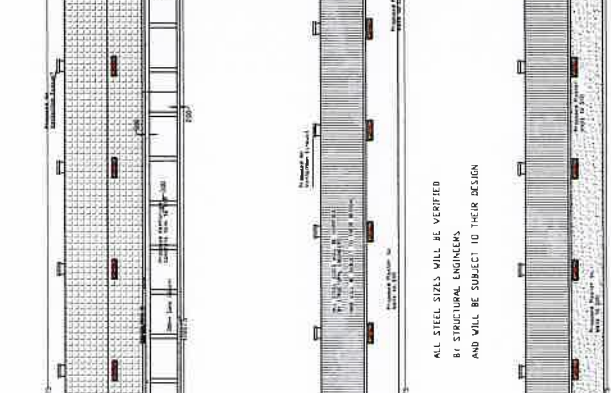
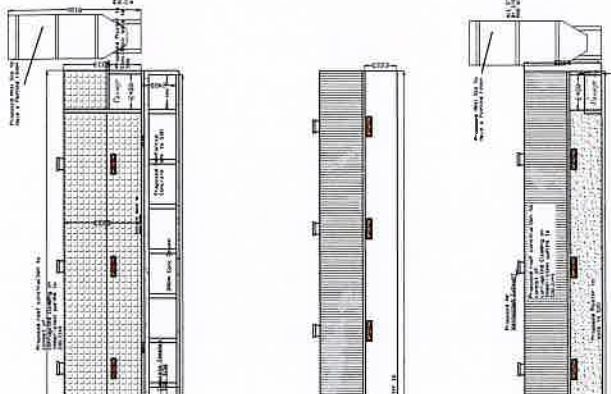
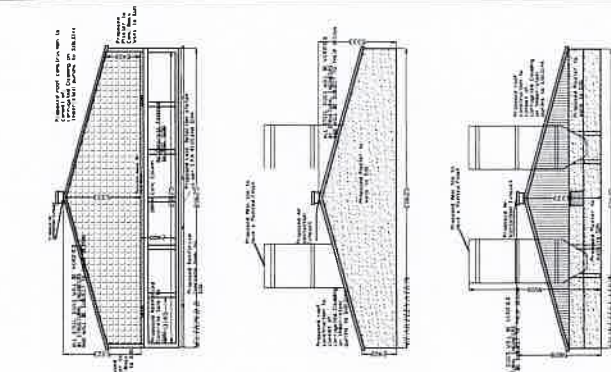
Appendix No. 3

*Site Layout
(Not to scale)*



Appendix No. 4

Engineers Drawings
(Not to scale)



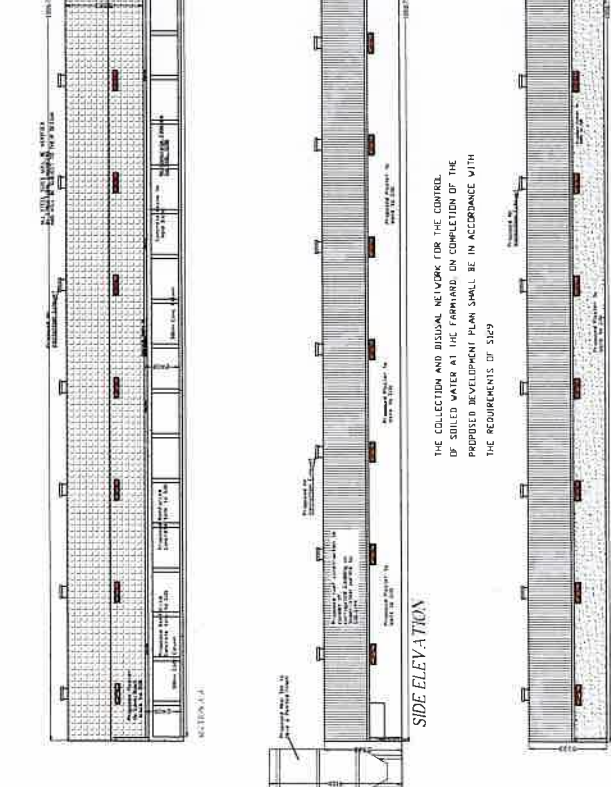
ALL WORK CARRIED OUT TO COMPLY TO S.123 & S.123A DEPT OF AGRICULTURE & FOOD SPECIFICATIONS

NORTHPOINT VARIES N/E STEEL PLAN FOR ORIENTATION

Level above or below Unit 1	Level above or below Unit 1
Foundation above floor	Foundation above floor
Garage	Garage
Garage	Garage

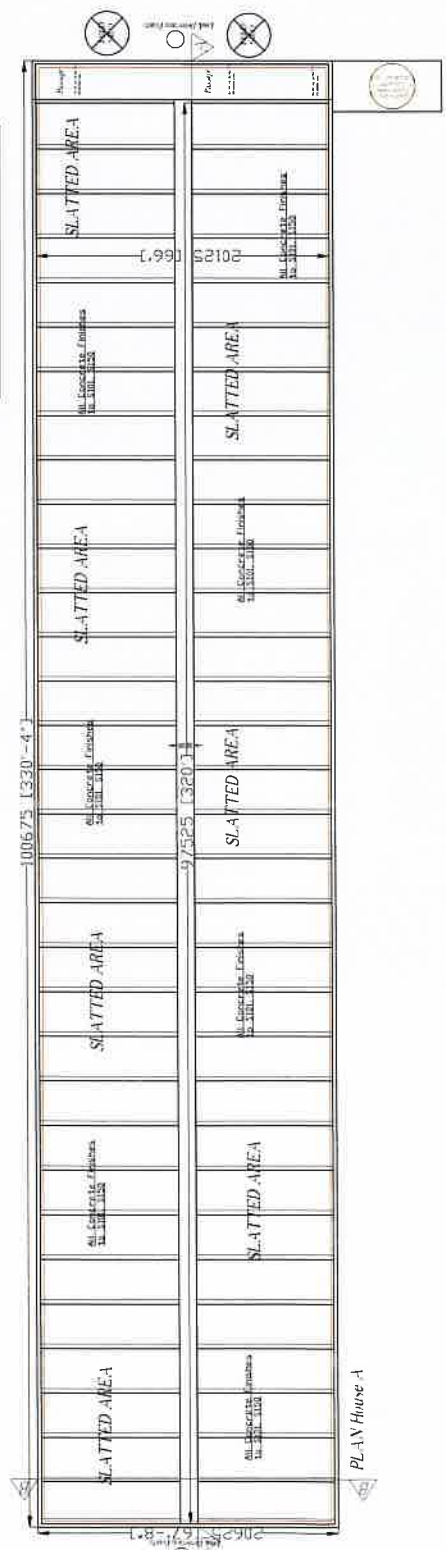
ALL STEEL SIZES WILL BE VERIFIED BY STRUCTURAL ENGINEERS AND WILL BE SUBJECT TO THEIR DESIGN

THE COLLECTION AND DISPOSAL NETWORK FOR THE CONTROL OF SOILED WATER AS IS FORWARDED ON COMPLETION OF THE PROPOSED DEVELOPMENT PLAN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF 3129



SIDE ELEVATION

SIDE ELEVATION



PLAN House A

NOTES:

1. All work shall be done in accordance with the requirements of the relevant codes of practice. The designer is not responsible for structural steelwork connections.
2. The client is responsible for providing the ground level profile.

NO.	DESCRIPTION	DATE	BY	CHECKED

MOR MO'Reilly CIVIL ENGINEERING
 ARCHITECTURAL DESIGN AND TECHNOLOGICAL SERVICES SETTING-OUT
 CIVILIAN, CIVIL, & CONSTRUCTION SERVICES

DATE: 2018-02
 DRAWING NO: 1172
 PROJECT: Planning
 SHEET: 5/11

MO'Reilly Civil Engineering
 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200



Appendix No. 5

*Environmental Protection Agency
– Draft Advice Notes on EIS
– Project Type 13*

PROJECT TYPE 13

Pig-rearing installations; Poultry-rearing installations.	
Introduction	The principal concerns which are likely to arise in this context stem from the issues of waste handling (mainly slurry/manure) and odours. The significance of impacts is very much a factor of the site's proximity to sensitive receptors such as aquifers or residences. Such projects frequently dispose of wastes at locations which are not adjacent to the animal rearing operations.
Project Description	Checklist of items to be described:-
Construction:-	<ul style="list-style-type: none"> ▼ Extension of infrastructure (water, power, access); ▼ Site preparation works; ▼ Materials; ▼ Access.
Operation (including relevant alternatives):-	<ul style="list-style-type: none"> ▼ Access and transportation; ▼ Food, storage, handling and transportation; ▼ Water and power supply; ▼ Quantification of inputs (feed, stock, power); ▼ Quantification of outputs (animal wastes, products, other wastes); ▼ Animal housing structures and associated activities, heating, ventilation, cleaning; ▼ Other structures (offices, maintenance); ▼ Waste storage, handling and transportation; ▼ On-site infrastructure, water storage, roads, fences; ▼ Waste disposal areas and transportation routes; ▼ Waste disposal methods including equipment, duration, frequency, seasons, weather conditions, monitoring and recording.
Decommissioning (if applicable):-	<ul style="list-style-type: none"> ▼ Removability of structures; ▼ Long-term contamination.
Growth:-	▼ Potential changes in numbers, types, intensity or methods.
Associated developments:-	<ul style="list-style-type: none"> ▼ Processing plants; ▼ Foodstuff suppliers; ▼ Breeding stock suppliers; ▼ Equipment suppliers; ▼ Off-site infrastructure upgrading.
Environmental Effects	Typical significant impacts likely to affect:-
Human Beings	▼ Nuisance and loss of amenity.
Fauna	<ul style="list-style-type: none"> ▼ Introduction of predator and scavenger species; ▼ Pest control measures; ▼ Spreading of disease as a result of contact with contaminated domestic animals/birds, carcasses or slurry.
Flora	<ul style="list-style-type: none"> ▼ Potential effects on vegetation due to eutrophication, effluent seepage/ run-off; ▼ Waste spreading
Soils (and Geology)	<ul style="list-style-type: none"> ▼ Nutrient levels; ▼ Assimilative capacity of soils; ▼ Transmissivity and conductivity of geology.

Pig-rearing installations; Poultry-rearing installations.	
Water	<ul style="list-style-type: none"> ▼ Leakage of effluent (including during transportation); ▼ Pollution by contaminated run-off; ▼ Disposal of carcasses; ▼ Location and timing of slurry spreading.
Air	<ul style="list-style-type: none"> ▼ Malodours arising from housing units and manure/slurry stores, ▼ Malodours arising from slurry spreading; ▼ Malodours due to transportation of livestock/slurry; ▼ Noise (particularly in anticipation of feeding); ▼ Volatilisation of ammonia.
Climate	<ul style="list-style-type: none"> ▼ Gases emitted from slurry/manure; ▼ Methane (contribution to greenhouse gases); ▼ Ammonia (contribution to acidifying gases).
The Landscape	<ul style="list-style-type: none"> ▼ Visibility of structures; ▼ Potential visual impact as a result of water body eutrophication; ▼ Impact of odours on amenities and landscape character.
Material Assets	<ul style="list-style-type: none"> ▼ Potential positive impact if slurry/manure gases are trapped for energy usage; ▼ Source of soil nutrients.
Cultural Heritage	
The Interaction of the Foregoing	
Possible Mitigation Options	
	<ul style="list-style-type: none"> ▼ Re-cycling of slurry/manure as energy source or fertiliser; ▼ Monitoring of waste disposal; ▼ Management of waste disposal; ▼ Noise absorption measures; ▼ Effective slurry containment.



Appendix No. 6



Appendix No. 7

Manure Storage Capacity

Slurry Storage Capacity

House Ref. No.	Gross Slurry Storage (M ³)	Overall Tank Depth	Freeboard	Net Slurry Storage (m3)
1	4723	2.40	0.2	4,329
Total	4723			4,329.42

Proposed Annual slurry Production =

2,246.40

Proposed Available Slurry Storage Capacity (months) =

23.13

Note 1: A freeboard allowance of 200m on roofed slatted tanks and 300mm on open tanks in accordance with S.I. 31 of 2017, as amended has been allowed.



Appendix No. 8

Feed Details

Paul & Vincent Limited
Longford Road
Edgeworthstown
Co. Longford
Tel: 043 667 1149
Fax: 043 667 1331
Email: info@paul-vincent.ie
Web: www.paulandvincent.ie
27th July 2017.

Dear Shane

At our Edgeworthstown Mill, we manufacture Pig feeds of the highest quality, these feeds have been formulated to minimise the total nutrient content in excretions produced by the Pigs and in particular with reference to nitrogen and phosphorus emissions.

This is achieved in three ways:

4. High Quality Raw Materials

This increases digestibility and thereby reduces the total volume of waste produced.

5. Low Protein Formulations

By minimising the non-essential amino acid fraction of the diet through lower total crude protein the nitrogen emission through faeces is considerably reduced.

6. Enzyme

By using the enzyme Phytase, the requirement for inorganic phosphate is dramatically reduced and hence, the faecal phosphorus emissions are minimised.

I hope this information is to your satisfaction and if you have any further queries please do not hesitate to contact us as I assure you of our best customer attention at all times.

Yours sincerely,

For Paul & Vincent.



RORY O'CONNOR

Quality Manager.



ISO Reg No: 139



UFAS: 1006





Appendix No. 9

Animal Tissue Disposal



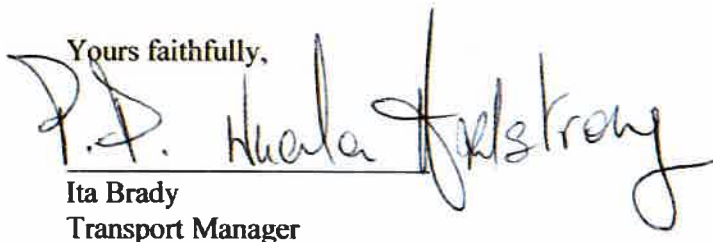
**Planning Department,
Louth County Council,
Millenium Centre,
St Alphonsus Rd ,
Dundalk,
Co.Louth .
13TH February 2019**

To Whom It May Concern:

We wish to confirm that John Lambe, Rossmakay, Knockbridge, Co.Louth is currently not on our list of customers for collection, however we would be available to collect from him on a regular basis should he wish to open an account with us. The pigs would be contained in 240 litre or 660 litre wheelie bins. Our plant at Nobber, which was custom built on a green field site in 1989 is fully equipped with a modern effluent system, which is regularly monitored by the E.P.A. under IPC licence no. P0037-03. We pride ourselves on having a good reputation in the Rendering Industry, and we have been certified under EU Directive 1069/2009 which governs the industry.

If you require any further assistance, please do not hesitate to contact me.

Yours faithfully,


Ita Brady
Transport Manager



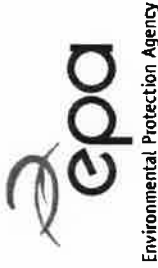
**COLLEGE
GROUP** | College | Nobber | Co.Meath | A82 XT61 | Ireland
+353 46 909 6000 | info@collegegrup.ie | www.collegegrup.ie





Appendix No. 10

Local Water Quality Survey



EPA RIVER QUALITY SURVEYS: BIOLOGICAL

Biotic indices ("Q Values") reflect average water quality at any location as follows:

Q Value*	WFD Status	Pollution Status	Condition **
Q5, Q4-5	High	Unpolluted	Satisfactory
Q4	Good	Unpolluted	Satisfactory
Q3-4	Moderate	Slightly polluted	Unsatisfactory
Q3, Q2-3	Poor	Moderately polluted	Unsatisfactory

* These Values are based primarily on the relative proportions of pollution sensitive to tolerant macroinvertebrates (the young stages of insects primarily but also snails, worms, shrimps etc.) resident at a river site. The intermediate values (Q1-2, 2-3, 3-4 etc.) denote transitional conditions. The scheme mainly reflects the effects of organic pollution (i.e. de-oxygenation and eutrophication) but where a toxic effect is apparent or suspected the suffix '0' is added to the biotic index (e.g. Q1/0, 2/0 or 3/0). An asterisk after the Q value (e.g. Q3*) indicates something worthy of special attention, typically heavy siltation of the substratum.

** "Condition" refers to the likelihood of interference with beneficial or potential beneficial uses.

Also presented is a description of the exact location surveyed with relevant OS Grid Reference, WFD river water body code and relevant Local Authority.

Hydrometric Area 06

Name	Code
ANNAHALE STREAM	06A01
BALLYKELLY	06B03
BALLYMAKENNY STREAM	06B04
BALLYMASCANLAN	06B02
BIG (LOUTH)	06B01
CARRICKASLANE LOUGH STREAM	06C04
CASTLETOWN	06C01
COUNTY WATER	06C03
CULLY WATER	06C02
DEE	06D01
DRUMCONRATH	06D04
DRUMSALLAGH STREAM	06D07
DRUMSHALLON LOUGH STREAM	06D03
FANE	06F01
FLURRY	06F02
GENTLE OWEN'S LAKE STREAM	06G04
GLYDE	06G02
KILCURRY	06K02
KILLARY WATER	06K01
KILMAINHAM (DEE)	06K04
MAGHERACLOONE STREAM	06M01
PIPERSTOWN HOUSE STREAM	06P02

FANE

06F01

Date Surveyed (last survey year only): 16/07/18, 18/06/18, 20/06/18, 21/06/18, 25/06/18

Biological Quality Rating (Q Values)

Station Code	1974	1976	1980	1982	1986	1990	1994	1997	2000	2003	2006	2007	2009	2012	2015	2018
RS06F010155							2-3	2-3	2-3	2-3	2/0	3	3	3	3	3
RS06F010180							3	3	3	3	3					
RS06F010200		3-4	4	3-4	3-4	3-4	3	3-4	3	3	3-4		3-4	3	3	3-4
RS06F010300		3-4	3-4	3-4	3-4	3-4	3	3	3	3	3					
RS06F010400			3	3	3	3-4	3	3	3-4	3	3		3	3	3	3
RS06F010500		5	5	4-5	4	4-5	4	4	4	4	3-4				4	4
RS06F010600			5	4-5	4-5											
RS06F010650						5	3-4	4	4	3-4	3-4		4	4	4-5	4-5
RS06F010700	5	5	5	4	4	5	4	4-5	4-5	4	3-4					
RS06F010800			4	4	4	4										
RS06F010900	5	5	4	4-5		4	3-4	4-5	4-5	4	4		4	4	4	4
RS06F011000			4-5	4-5												

Most Recent Assessment:

There was no change in water quality on the River Fane in 2018. The condition of the upper sections of the river remained unsatisfactory with poor ecological status recorded at south Bridge at Dunfelimy (06F010155) and at Ballynacary Bridge (06F010400). The site at Derrycreevy bridge (06F010200) had moderate status. The lower section of the river remained at good status at sites Magoney bridge (06F010500) and at Stephenstown Bridge (06F010900) with good numbers of sensitive taxa recorded at both sites. The site at the bridge in Inniskeen (06F010650) had high status once again in 2018.

Station Details

Station Code	Station Location	WFD Waterbody Code	Easting	Northing	Local Authority
RS06F010155	South Br Dunfelimy	IE_NB_06F010200	276628	324093	Monaghan County Council
RS06F010180	FANE - 2nd Br u/s Laragh L (Main Rd)	IE_NB_06F010200	279209	322392	Monaghan County Council
RS06F010200	Derrycreevy Br	IE_NB_06F010200	282755	320689	Monaghan County Council
RS06F010300	FANE - Clarebane Br	UKGBNI1NB06060822 9	287348	316786	Monaghan County Council
RS06F010400	Ballynacarry Br	UKGBNI1NB06060825 0	287494	314157	Monaghan County Council
RS06F010500	FANE - Magoney Br	UKGBNI1NB06060824 9	290850	309675	Monaghan County Council
RS06F010600	FANE - Br at Moyle's Mill	UKGBNI1NB06060824 9	291872	307642	Monaghan County Council
RS06F010650	Br. In Inniskeen	UKGBNI1NB06060824 9	293234	307049	Monaghan County Council
RS06F010700	FANE - Castlering Br	IE_NB_06F010900	296621	303721	Louth County Council
RS06F010800	FANE - Knock Br	IE_NB_06F010900	298808	303160	Louth County Council
RS06F010900	Stephenstown Bridge	IE_NB_06F010900	301364	301568	Louth County Council
RS06F011000	FANE - Lurgangreen Br	IE_NB_06F010950	306116	301424	Louth County Council

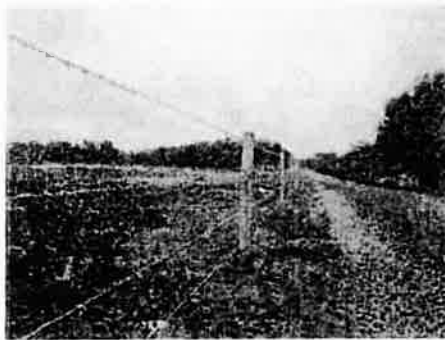
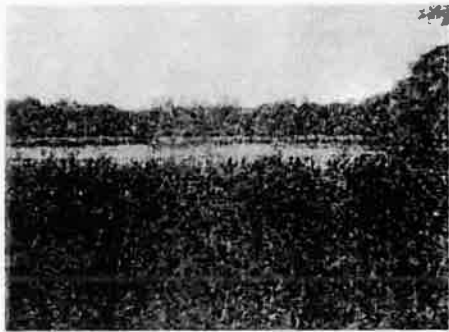


Appendix No. 11

*Extracts from Louth Co.
Landscape Character Assessment*

MUIRHEVNA PLAIN

LANDSCAPE EXAMPLES
IN THIS AREA.



Muirhevna Plain

Key Characteristics

- Serves as a major traffic corridor between North and South.
- Extensive plain located between the Carlingford/Slieve Gullion mountain complex and the uplands of Collon and Monasterboice.
- Rich soils are conducive to extensive agricultural practices both in crop and animal production.
- Robust hedgerows give a sense of enclosure.
- The nature of the topography has had the effect that a number of small meandering rivers drain the flat landscape.
- Contains a number of fine broadleaf wooded areas around country houses.
- Area is rich in archaeological features.
- Renowned for its mythological past leading to the definition of the Táin Trail.
- Isolated housing is very evident especially in the eastern half.

Landscape Description

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 drained by the meandering lazy rivers of the Fane, Glyde, White and Dee rivers. It contains the most fertile agricultural land in the county, which gives an 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. The new motorway, when travelling north, offers uninterrupted views of the Cooley mountains for miles.

Landform and Landcover

In the Blackhall area there is a variety of black mudstones, quartzose and calcareous grey wackes, from the Ordovician/Silurian period. Around Ardee there are undifferentiated groups of limestone, mudstone and sandstone from the Carboniferous/Dinantian Period.

For the greater part of this area, from Salterstown to the western and northern boundaries, there are calcareous limestones, banded mudstones, calcareous red-mica greywackes and turbidites with red mica and red shale.

Glacial deposits comprise in the main of boulder clay and kames along the basins of the Glyde and Dee rivers.

The soils in the area are essentially of two types viz. Acid brown earths with some gleys and brown podzolics; and gleys with brown earths and peaty gleys.

Water to supply the area is abstracted from the rivers Fane, Glyde, Dee and White Rivers. In addition there are 4 aquifers in use.

Whilst there are little are no commercial forests in the area, it abounds in small woodlands which are primarily broadleaf in character, particularly beech, with some oak and chestnut occasionally. Many of these trees are entwined with the ubiquitous climbing ivy. Ardee is particularly rich in tree cover. Other areas include Barmeath (N.H.A), Blackhall (N.H.A), Corderry, Darver (N.H.A.), Drumcar, Drumcashel, Lisrenny House, Rathbrist and Stephenstown.

In addition Louth Hall, Stabannon/Braganstown, Stephenstown Pond, and Ardee Bog are proposed National Heritage Areas.

Rathescor Lake is in charge of The Irish Game Council and is worthy of a N.H.A. designation.

Human Intervention

Field sizes are generally larger in this area than elsewhere in the county. There is some evidence of hedgerow removal to facilitate more intensive farming. Hedgerows consist in the main of thorn, bramble, ash, sycamore, elder and generally maintained in their mature state thereby limiting any extensive views. In some cases the trees on both sides of the road merge, giving a shaded arched effect. The rich soils allow for a wide range of tillage and grassland enterprises. Where intensive animal production takes place it would generally be in beef farming with some mushroom units. The hedgerows tend to obscure and minimise the visual impact of any large farm structures.

Because of the inclusion of Dundalk and Ardee and the manageable nature of the landscape it is not surprising that the highest density of archaeological recorded monuments (particularly souterrains) occurs in this area with the figure in excess of 500. The towns of Dundalk, Ardee and Dunleer are also considered to be of archaeological importance in their own right.

There are some mythological events identified within this area. Táin Bo Cuailgne records the exploits of Queen Maeve and Cú chulainn when the former stole the prized Bull of Cooley from Ulster. Cú chulainn endeavoured to defend Ulster and to regain the Bull from captivity, and return it to the Cooley area. Cú chulainn's slaying of Ferdia at Ardee (after which the town was called) was one of those skirmishes.

Throughout this area there are a number of old country estates with existing houses on them e.g. Athclare Castle, Glyde Court (fast becoming a ruin), Drumcar (now a hospital), Darver Castle, Smarmore Castle, Barmeath Castle and Rokeby Hall.

Milltown village (near Termonfeckin) is listed as a conservation area of architectural merit.

The new motorway (M1) passes through the area and has five junctions along it. The Dublin - Derry N2 and Dundalk -Limerick N52, passes through Ardee at present, and a bypass is being proposed to relieve the traffic congestion in the town. Apart from Dundalk other listed settlements include Knockbridge, Tallanstown, Dromin, Darver, Mansfieldstown, Smarmore, Stabannon and Sandpit. The Dublin Belfast railway offers views of the farmlands and landscape which might not be readily seen from any public road.

Isolated rural housing is much more obvious in the eastern half of the area, due to the influence of the two large county towns and the more open landscape.

There are a number of telecommunications masts in the areas, which in most cases have been located on sites set well back from public roads.

E.S.B. power lines (220 kv) are quite obvious in the landscape.

Landscape Sensitivity

The existence of glacial kames suggests that sand and gravel is a possible mineral resource leading to proposals for quarrying in this area. In the event of permission being granted, it should have a relatively short life span, or phased into a series of small areas which should be returned to their former state as soon as possible.

The soils and topography dictate that farming in this area is the most intensive in the county. In this open flat landscape the removal of traditional hedgerows would have a significant impact on the landscape. Where in some cases hedgerows have to be removed their replacement should be a similar hedgerow and not a post and wire fence, wooden fence, or brick wall.

The rivers Glyde, Dee and Fane have the potential for change in terms of recreation and fishing which can be both positive and negative.

Ardee bog (proposed N.H.A.) is currently under threat from land drainage. The proposed N52 bypass of the town touches on the area also. Another area under threat is the proposed N.H.A. at Stabannon-Braganstown by land reclamation. This bog is an important ecological, botanical, zoological and ornithological site.

With regard to the built environment the question of isolated housing continues apace. The scale of the houses themselves is difficult to integrate into this flat open landscape. New farm buildings, if feasible, should be scaled down so as to have several small units rather than one very large structure.

The recent vandalism and dereliction of Glyde Court House is regrettable, making its reinstatement much more difficult to achieve.

Many of the small broadleaf woodlands are at maturity stage and their regeneration and tree replacement should be encouraged. Commercial farming is not expected to occur in this area, but in the event of it happening, it should be set back from the roadside so as to retain the general

open landscape character of the area and have a 30% broadleaf mix. Any forestry in proximity to the motorway should not interfere with the scenic views for the motorist travelling north.

With theoretical wind speeds of less than 7.5 m/s the building of wind farms is not likely in the current economic energy climate. The least sensitive area in this regard would be north-west of Ardee where the hedgerows are robust and mature.

Muirhevna Plain**Landscape Values & Classification**

Key Values	Objective
<ul style="list-style-type: none"> ▪ Extensive area of good quality agricultural land with fine traditional hedgerows. ▪ Small but very fine broadleaf woodlands throughout the area and within the town of Ardee. ▪ High density of archaeological features, particularly souterrains. ▪ Contains four proposed N.H.A.s ▪ Rathescar Lake worthy of N.H.A. status. 	<p>Conserve /enhance/restore</p> <p>Conserve/ enhance</p> <p>Conserve</p> <p>Conserve /create</p> <p>Conserve /create</p>
Overall Classification	Regional



Appendix No. 12

Met Data

Dublin Airport 1981–2010 averages													
TEMPERATURE (degrees Celsius)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
mean daily max	8.1	8.3	10.2	12.1	14.8	17.6	19.5	19.2	17.0	13.6	10.3	8.3	13.3
mean daily min	2.4	2.3	3.4	4.6	6.9	9.6	11.7	11.5	9.8	7.3	4.5	2.8	6.4
mean temperature	5.3	5.3	6.8	8.3	10.9	13.6	15.6	15.3	13.4	10.5	7.4	5.6	9.8
absolute max.	16.5	16.2	17.2	20.5	23.5	25.7	27.6	28.7	24.6	21.0	18.0	16.2	28.7
min. maximum	-3.1	-0.1	2.4	4.5	6.6	10.4	11.7	11.9	11.2	5.3	-1.8	-4.7	-4.7
max. minimum	11.8	11.9	11.9	12.8	13.2	16.2	19.0	18.2	17.3	15.2	12.8	12.9	19.0
absolute min.	-9.5	-6.7	-7.9	-4.0	-1.6	2.1	4.6	2.4	1.2	-3.3	-8.4	-12.2	-12.2
mean num. of days with air frost	6.4	6.5	3.8	2.4	0.3	0.0	0.0	0.0	0.0	0.5	3.0	6.4	29.4
mean num. of days with ground frost	15.0	14.0	12.0	10.0	3.0	0.0	0.0	0.0	0.0	4.0	10.0	14.0	82.0
mean 5cm soil	3.8	3.8	5.4	8.2	12.2	15.2	16.7	15.8	13.1	9.4	6.2	4.5	9.5
mean 10cm soil	4.1	4.1	5.5	7.9	11.5	14.6	16.2	15.4	13.0	9.7	6.6	4.8	9.4
mean 20cm soil	4.6	4.7	6.1	8.4	11.7	14.8	16.5	16.0	13.7	10.5	7.3	5.3	10.0
RELATIVE HUMIDITY (%)													
mean at 0900UTC	87.0	86.4	84.0	79.5	76.9	76.7	78.5	81.0	83.4	85.5	88.5	88.0	83.0
mean at 1500UTC	80.6	75.7	71.0	68.3	68.0	68.3	69.0	69.3	71.5	75.1	80.3	83.1	73.3
SUNSHINE (hours)													
mean daily duration	1.9	2.7	3.5	5.3	6.2	5.8	5.3	5.1	4.3	3.3	2.4	1.7	3.9
greatest daily duration	8.1	9.8	11.9	13.3	15.4	15.9	15.6	14.2	12.4	10.2	8.8	7.3	15.9
mean num. of days with no sun	9.1	6.2	4.7	2.5	2.0	1.9	1.4	1.5	2.6	4.8	7.3	10.5	54.6
RAINFALL (mm)													
mean monthly total	62.6	48.8	52.7	54.1	59.5	66.7	56.2	73.3	59.5	79.0	72.9	72.7	758.0
greatest daily total	27.1	28.1	35.8	30.4	42.1	73.9	39.2	72.2	40.6	53.2	62.8	42.4	73.9
mean num. of days with >= 0.2mm	17	15	17	15	15	14	16	16	15	17	17	17	191
mean num. of days with >= 1.0mm	12	10	11	10	11	10	10	11	10	11	11	12	129
mean num. of days with >= 5.0mm	4	3	3	3	3	3	3	4	4	4	4	4	42
WIND (knots)													
mean monthly speed	12.5	12.0	11.6	9.9	9.2	8.6	8.7	8.7	9.2	10.4	11.0	11.3	10.3
max. gust	80	73	66	59	58	53	54	56	59	69	66	76	80
max. mean 10-minute speed	53	49	45	39	39	38	36	37	36	51	43	55	55
mean num. of days with gales	2.3	1.5	1.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5	0.8	1.3	8.2
WEATHER (mean no. of days with..)													
snow or sleet	4.6	4.2	2.8	1.2	0.2	0.0	0.0	0.0	0.0	0.0	0.8	2.9	16.6
snow lying at 0900UTC	1.6	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	3.4
hail	1.2	1.5	2.0	1.9	1.3	0.1	0.2	0.1	0.1	0.3	0.3	0.7	9.7
thunder	0.3	0.2	0.3	0.2	0.9	0.8	0.8	0.9	0.3	0.3	0.2	0.2	5.5
fog	3.3	3.1	3.6	3.6	3.4	2.8	3.3	3.8	4.2	3.2	3.1	4.1	41.5



Appendix No. 13

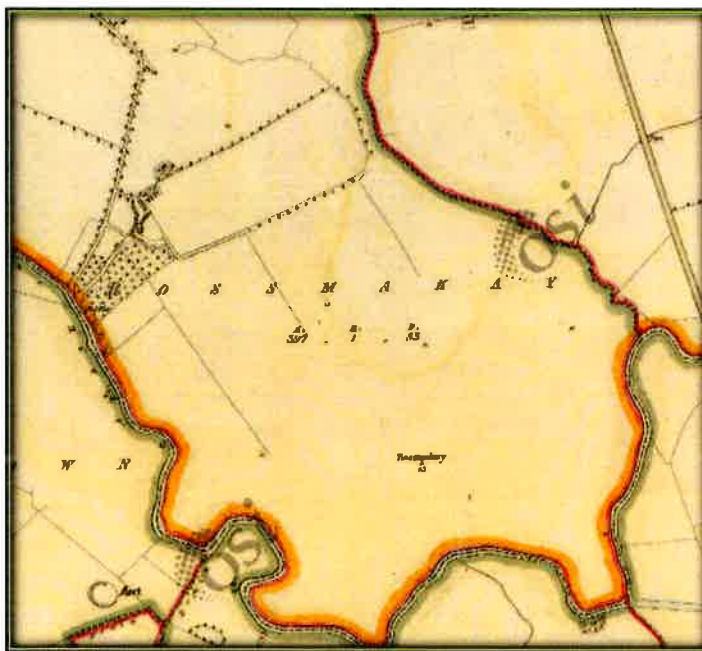
Natura Impact Statement



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

NATURA IMPACT STATEMENT OF A PROPOSED DEVELOPMENT AT ROSSMAKAY, KNOCKBRIDGE, CO. LOUTH

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



John Lambe
c/o Paraic Fay
C.L.W. Environmental Planners Ltd
The Mews
23 Farnham Street

April 2019
Updated February 2020

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1 INTRODUCTION

1.1 REQUIREMENT FOR AN APPROPRIATE ASSESSMENT

This Natura Impact Assessment was prepared for a proposed development at Rossmakay, Knockbridge, Co. Louth. Having regard to the location of the proposed development site and its connectivity to Dundalk Bay, a designated Special Area of Conservation (SAC) and Special Protection Area (SPA), an Appropriate Assessment of the proposed development was prepared in accordance with Article 6 of the Habitats Directive. This NIS was revised followed by an appeal to An Bord Pleanála against the decision of Louth County Council to grant planning permission to this proposed development.

The purpose of the assessment is to determine the appropriateness of the proposed project, in the context of the conservation status of the site or sites. In Ireland, an Appropriate Assessment takes the form of a Natura Impact Statement (NIS), which is a statement of the likely impacts of the plan or project on a Natura 2000 site. The NIS comprises a comprehensive assessment of the plan or project and it examines the direct and indirect impacts that the plan or project might have on its own or in combination with other plans or projects on one or more Natura 2000 sites in view of the sites' conservation objectives. It should be noted that an NIS is not an Ecological Impact Statement, and only impacts upon Natura 2000 sites need to be considered, rather than potential impacts upon local, non-designated ecological receptors.

1.2 THE AIM OF THE REPORT

This Natura Impact Statement (NIS) has been prepared in accordance with the current guidance (DoEHLG, 2009, Revised February 2010), and it provides an assessment of the impacts of an agricultural development at Rossmakay, Knockbridge, Co. Louth on sites designated under European law (Natura 2000 sites).

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

Accordingly, a comprehensive assessment of the impacts of this proposed application on designated sites was carried out in April 2019 (updated upon appeal in February 2020) by Noreen McLoughlin, MSc, MCIEEM of Whitehill Environmental. This assessment allowed areas of potential ecological value and potential ecological constraints associated with this

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

1.3 REGULATORY CONTEXT

RELEVANT LEGISLATION

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

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

The Wildlife Act 1976 (and its amendment of 2000) provides protection to most wild birds and animals. Interference with such species can only occur under licence. Under the act it is an offence to "wilfully interfere with or destroy the breeding place or resting place of any protected wild animal". The basic designation for wildlife is the Natural Heritage Area (NHA). This is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. Under the Wildlife Amendment Act (2000) NHAs are legally protected from damage. NHAs are not part of the Natura 2000 network and so the Appropriate Assessment process does not apply to them.

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

APPROPRIATE ASSESSMENT AND THE HABITATS DIRECTIVE

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora – the ‘Habitats Directive’ - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 - 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as *Natura 2000*. *Natura 2000* sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC).

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

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

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

Article 6(4) states:

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

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

THE APPROPRIATE ASSESSMENT PROCESS

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

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

If adverse impacts on the site cannot be avoided, then mitigation measures should be applied during the Appropriate Assessment process to the point where no adverse impacts on the site remain (European Commission, 2000, 2001).

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

Under the terms of the directive (European Commission, 2000, 2001), consent can only be granted for a project if, as a result of the appropriate assessment either (a) it is concluded that the integrity of the site will not be adversely affected, or (b) where an adverse effect is anticipated, there is shown to be an absence of alternative solutions, and there exists imperative reasons of overriding public interest for the project should go ahead.

2 METHODOLOGY

2.1 PERSONNEL

This ecological assessment was carried out by Noreen McLoughlin, BA, MSc, MCIEEM, of Whitehill Environmental. Noreen has an honours degree in Zoology and an MSc in Freshwater Ecology from Trinity College, Dublin and she has been a full member of the Chartered Institute of Ecology and Environmental Managements for ten years. Noreen has over 15 years experience as a professional ecologist in Ireland.

2.2 APPROPRIATE ASSESSMENT

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

- European Commission (2000). Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.
- European Commission (2002). Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.
- European Commission (2006). Nature and Biodiversity Cases: Ruling of the European Court of Justice.
- European Commission (2007). Clarification of the Concepts of: Alternative Solution, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.
- Department of Environment, Heritage and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities.

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

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

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

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

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

The four stage process is:

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

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

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

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

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

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

2.3 DESK STUDIES

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

- National Parks and Wildlife Service - aerial photographs and maps of designated sites, information on habitats and species within these sites and information on protected plant or animal species; conservation objectives, site synopses and standard data forms for relevant designated sites. The Development Applications Unit did not make any submission to Louth County Council in relation to this development;
- Environmental Protection Agency (EPA)- Information pertaining to water quality, geology and licensed facilities within the area;
- Inland Fisheries Ireland – A submission made by IFI (22/3/2019) to Louth County Council with regards to this proposed development was reviewed. IFI have no objection to this proposed development, so long as certain conditions to protect water quality locally are met by the applicant;
- National Biodiversity Data Centre (NBDC) – Information pertaining to protected plant and animal species within the study area;
- CLW Environmental Planners Ltd – Information regarding the proposed development including site plans, specifications and land-spreading maps;
- Louth County Council – Information on the plans and planning history in the area.

3 SCREENING

3.1 DEVELOPMENT DESCRIPTION

In February 2019, Mr John Lambe applied to Louth County Council for planning permission for an agricultural development on a green field site of 0.9207 hectares at Rossmakay, Knockbridge, Co. Louth. Planning permission is being here for the construction of one pig house to accommodate approximately 1,800 pigs, along with all ancillary structures and associated site works. An extract from the planning drawings as submitted is shown in Figure 1.

Planning permission was granted to the applicant in August 2019, and this grant has been subsequently appealed to An Bord Pleanála.

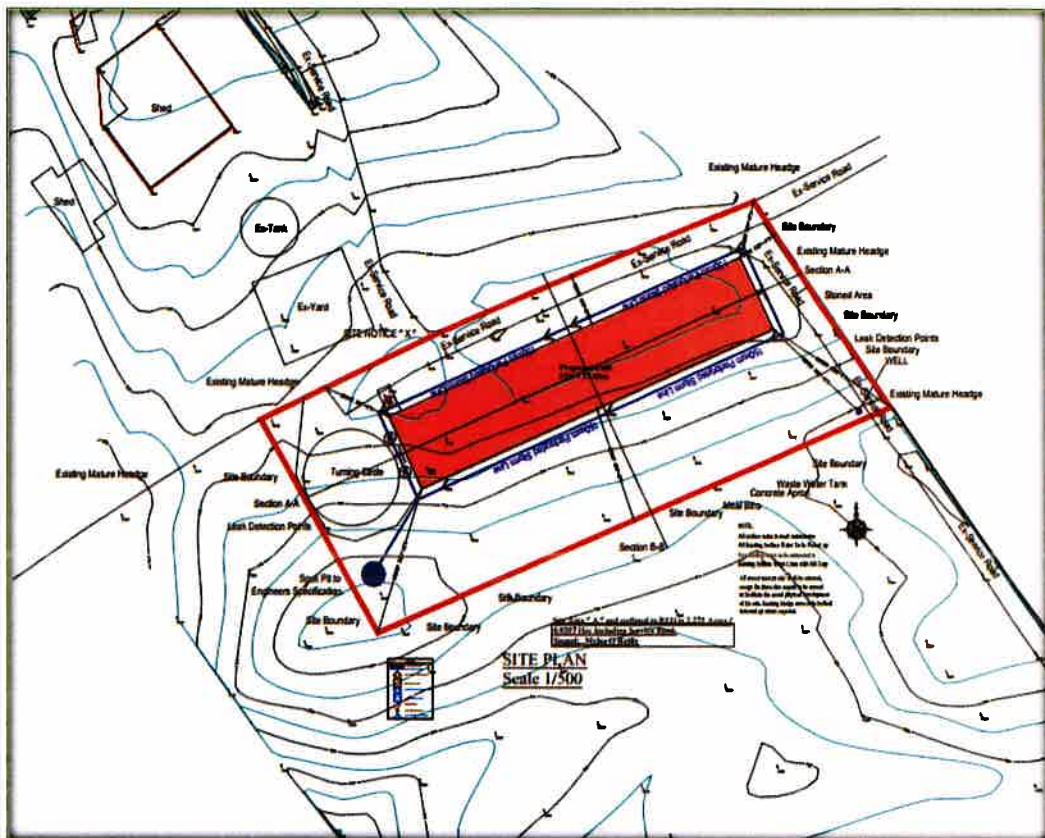


Figure 1 – Extract from Planning Drawings (prepared by M O'Reilly Civil Engineering)

This proposed 1,800 place pig grower/finisher farm will produce finisher pigs at approximately 110 kg live-weight intended for sale to the pig-meat processing sector. Pigs will be brought to this farm as weaners (c. 30 – 35kg's) from a specialised pig breeding farm and will remain on this farm until they reach the target weight approximately 13 – 14 weeks later.

Construction methods for the structures will be standard and will follow best practice guidelines at all stages. The manure storage tanks underneath the proposed developments will be of mass concrete to a specification that ensures a watertight seal. All proposed new tanks will be constructed to Department of Agriculture, Food and The Marine, S123, Minimum Specification for Bovine Livestock Units and Reinforced Tanks and will have leak detection systems underneath. The operation of the farm and the production of the manure will be done in accordance with S.I. 605 of 2017 (as amended).

The volume of organic fertiliser produced per annum will be approximately 2,246m³ and the storage capacity on the farm will be approximately 24 months. All organic fertiliser will be utilised within the applicant's own lands, in accordance with the regulations set out in S.I. 605 of 2017, and for the purposes of efficient grass/crop production. All of the required information to be maintained as outlined in S.I. 605 of 2017 will be kept by the applicant. As the applicant farms 347 hectares himself, he can accommodate approximately 400% of the slurry produced on these lands. It should be noted that the organic manure produced by the proposed development will be used in preference to the imported organic fertiliser that is currently used by the applicant. Therefore, the proposed development will facilitate the substitution of fertiliser with that produced on the applicant's own farm, rather than the spreading of fertiliser on additional lands.

S.I. 605 OF 2017 (AS AMENDED)

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

- The amount of livestock manure applied in any year to land on a holding, together with that deposited to land by livestock, shall not exceed an amount containing 170 kg nitrogen per hectare.
- The spreading of any organic fertiliser during certain times of the year is prohibited (The prohibited spreading period, generally between Mid-October and Mid-January).
- Farmers must keep within the overall maximum fertilisation rates for nitrogen and phosphorus.

- Farmers must have sufficient storage capacity to meet the minimum requirements of the regulations.
- All storage facilities must be kept leak proof and structurally sound.
- Records for the movement of fertilisers must be kept.
- Chemical fertilisers, livestock manure and other organic fertilisers, effluents and soiled water must be spread as accurately and as evenly as possible.
- An upward-facing splash plate or sludge irrigator on a tanker or umbilical system must not be used for the spreading of organic fertiliser or soiled water.
- Chemical fertilisers, livestock manure, soiled water or other organic fertilisers must not be spread when:
 - The land is waterlogged;
 - The land is flooded, or it is likely to flood;
 - The land is frozen, or covered with snow;
 - Heavy rain is forecast within 48 hours;
 - The ground slopes steeply and there is a risk of water pollution, when factors such as surface run-off pathways, the presence of land drains, the absence of hedgerows to mitigate surface flow, soil condition and ground cover are taken into account.
- Chemical fertilisers must not be spread on land within 2 metres of a surface watercourse.

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

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

Any other surface waters	5m
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Table 1 – Requirements for the Application of Fertilisers and Soiled Water as set out in S.I. 605 of 2017.

Prior to its implementation, S.I. 605 of 2017 was subjected to Appropriate Assessment (AA) and a Strategic Environmental Assessment (SEA) Screening at draft stage (March 2017). At this stage, it was referred to as Ireland's Fourth Nitrates Action Programme (NAP). This draft NAP was assessed in terms of the likely significant effects of the programme and where it would adversely affect the integrity of European sites. The NIS identified that the existing and proposed measures would be predominantly positive for European sites. The measures of the NAP were influenced to avoid, as appropriate, measures that would have an adverse effect upon the integrity of the European sites. Any project falling under the requirements of the NAP will be required to conform to the mitigation measures contained within the NIS prepared and to any further regulatory provisions aimed at preventing pollution or other environmental effects.

The applicant is fully aware of his obligations under S.I. 605 of 2017 and he will meet all the requirements under this Directive with the proposed application.

3.2 SITE LOCATION AND SURROUNDING ENVIRONMENT

The proposed application site is located in a rural area in the townland of Rossmakay. Access to the site is via an existing farm laneway that is just off a local, third class road. The site is 3.7km south-east of Knockbridge and 7km south of Dundalk. The location of this site can be seen in Figures 2 and 3.

Land-use surrounding the site is predominantly agricultural and the main habitats occurring locally are improved agricultural grasslands and tillage lands. Other habitats represented locally include hedgerows and treelines. The River Fane and its riparian habitats are also close to the application site and its associated spread-lands.

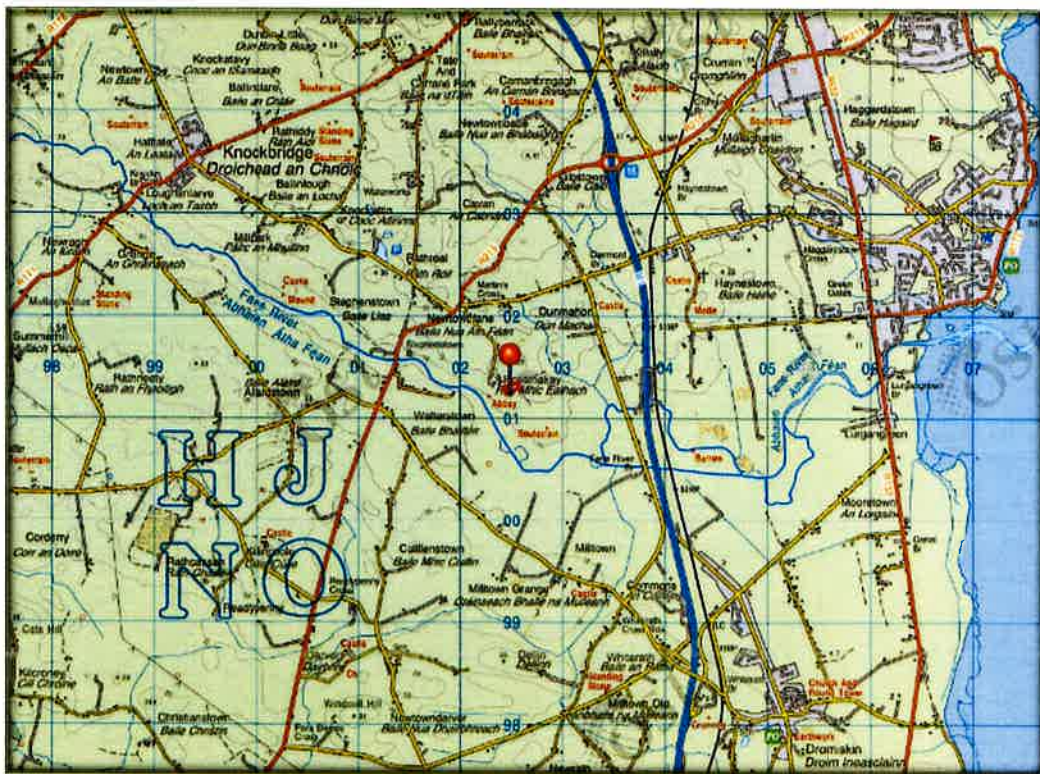


Figure 3 – Site Location Map (Site is Pinned).



Figure 4 – Site Location Map (Site Outlined in Red).

HABITATS AND NOTABLE SPECIES

The dominant habitat within the application site is tillage land that is used for the production of crops. There is an existing hedgerow along the northern and eastern site boundaries. The remaining perimeters are currently unmarked. There are no habitats of biodiversity value within the application site.

An examination of the website of the National Biodiversity Data Centre, revealed that there are no records for the presence of any protected mammal species from within the relevant 1km grid square of this proposed development (Jo201).

WATER FEATURES AND QUALITY

The application site is within the Newry Fane Glyde and Dee Hydrometric Area and Catchment, and the Fane Sub-Catchment and Sub-Basin. There are no drains or streams within of adjacent to the application site. The closest watercourse to the site is the River Fane itself and this is 220m south-west of the application site. This River flows eastwards for approximately 6km until it flows into Dundalk Bay just south of Blackrock.

The EPA have not defined the ecological status of the River Fane or its tributaries within this particular sub-basin. However, water quality upstream of the application site and in the upper reaches of the River Fane has been classed as good. Under the requirements of the Water Framework Directive, all waterbodies must achieve good status by the end of current cycle of the WFD, i.e., 2021.



Figure 5 – The Application Site at Rossmakay (Outlined in Red) and its Surrounding Habitats. The River Fane is Highlighted in Blue.

Land-Spreading

The land-spreading of the pig manure produced on the farm will occur within lands owned or leased by the applicant in the townlands of Louth Hall, Ballybailie, Glydefarm, Vesingtown, Warrenstown, Knockattin, Stephenstown, Dunmahon, Rossmakay, Milltown Grange, Haggardstown and Mooretown. Manure will only be spread on areas of tillage lands. An overview map showing the location of these lands is shown in Figure 6.

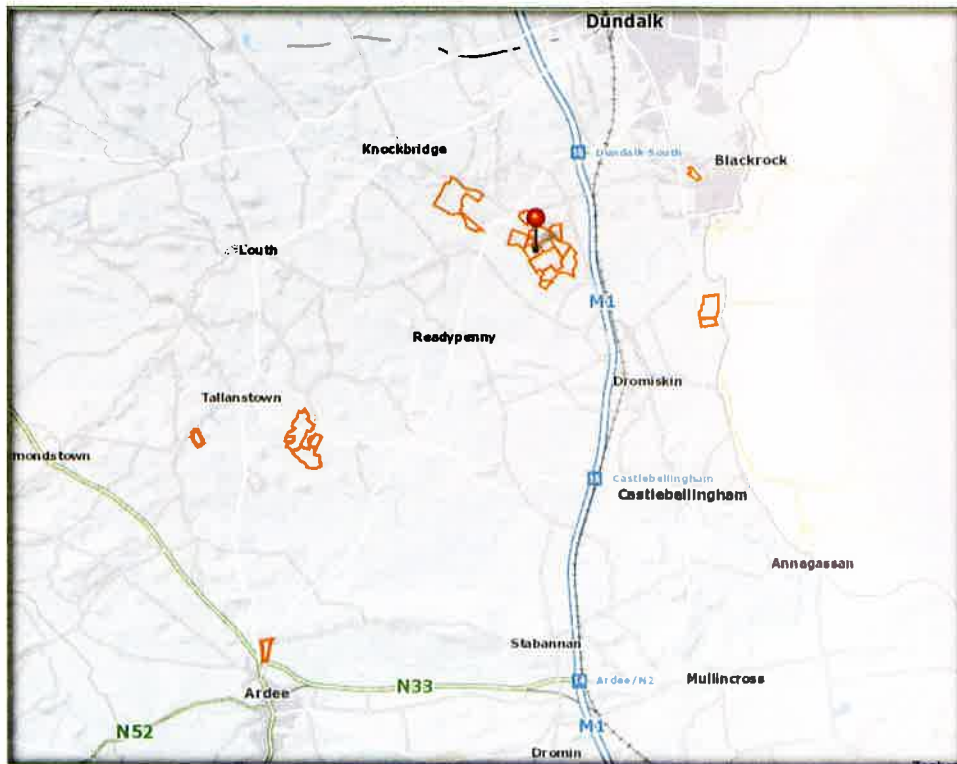


Figure 6 – The Application Site (Pinned) and Lands Owned or Leased by the Applicant (Outlined in Orange)

3.3 NATURA 2000 SITES IDENTIFIED

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

There are four 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 2 and maps showing their locations relative to the application site are shown in Figures 7 and 8. A full description of this site can be read on the website of the National Parks and Wildlife Service (npws.ie).

Site Name & Code	Distance	Qualifying Interests
Dundalk Bay SAC 000455	3.8km east / Land-Spreading upstream and adjacent to SAC.	<ul style="list-style-type: none"> • 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 (<i>Glauco-Puccinellietalia maritimae</i>) • Mediterranean salt meadows (<i>Juncetalia answer1818</i>)
Dundalk Bay SPA 004026	3.5km east / Land-spreading upstream and within SPA.	<ul style="list-style-type: none"> • Great Crested Grebe (<i>Podiceps cristatus</i>) • Greylag Goose (<i>answer answer</i>) • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) • Shelduck (<i>Tadorna tadorna</i>) • Teal (<i>Anas crecca</i>) • Mallard (<i>Anas platyrhynchos</i>) • Pintail (<i>Anas acuta</i>) • Common Scoter (<i>Melanitta nigra</i>) • Red-breasted Merganser (<i>Mergus serrator</i>)

		<ul style="list-style-type: none"> • Oystercatcher (<i>Haematopus ostralegus</i>) • Ringed Plover (<i>Charadrius hiaticula</i>) • Golden Plover (<i>Pluvialis apricaria</i>) • Grey Plover (<i>Pluvialis squatarola</i>) • Lapwing (<i>Vanellus vanellus</i>) • Knot (<i>Calidris canutus</i>) • Dunlin (<i>Calidris answer</i>) • Black-tailed Godwit (<i>Limosa limosa</i>) • Bar-tailed Godwit (<i>Limosa lapponica</i>) • Curlew (<i>Numenius arquata</i>) • Redshank (<i>Tringa answer19</i>) • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) • Common Gull (<i>Larus canus</i>) • Herring Gull (<i>Larus argentatus</i>) • Wetland and Waterbirds
Stabannan-Braganstown SPA 004091	6.7km south	<ul style="list-style-type: none"> • Greylag Goose (<i>answer answer</i>)
Carlingford Mountain SAC 000453	12.4km north-east	<ul style="list-style-type: none"> • Northern Atlantic wet heaths with <i>Erica tetralix</i> • European dry heath • Alpine and Boreal heaths • Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) • Transition mires and quaking bogs • Alkaline fens • Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) • Calcareous rocky slopes with chasmophytic vegetation • Siliceous rocky slopes with chasmophytic vegetation

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

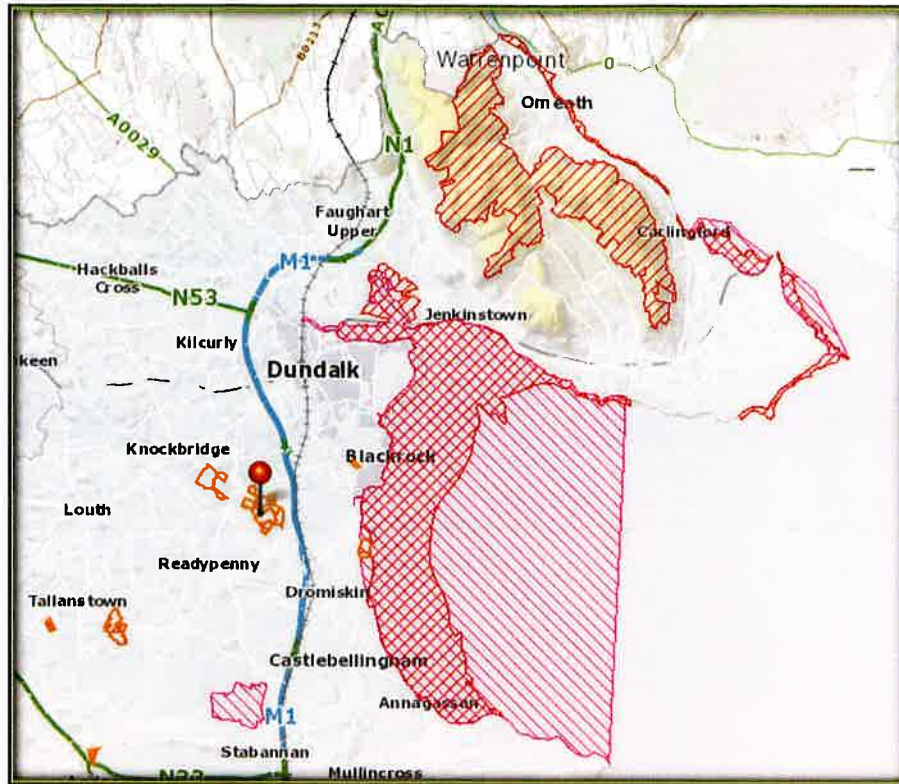


Figure 7 – The Application Site in relation to the Natura 2000 Sites within 15km. SACs – Red Hatching, SPAs – Pink Hatching.



Figure 8 – The Application Site (Pinned) and Spread-lands in relation to the Dundalk Bay SAC / SPA.

3.4 IDENTIFICATION OF POTENTIAL IMPACTS

The proposed development at Rossmakay will occur close to the River Fane, which is a tributary of Dundalk Bay, a designated site under the Natura 2000 network. Land-spreading of the manure produced on the farm will be spread on lands that are adjacent to the River Fane and also on lands that are within the SPA and adjacent to the SAC. This means that there are pollution pathways between the application site, the spread-lands and the SAC / SPA. Therefore, impacts upon this designated site arising from the construction and operation of this proposed development cannot be ruled out.

Only those features of the development that have the potential to affect the integrity and conservation objectives of the identified Natura 2000 sites and protected species have been considered. A number of factors were examined at this stage and dismissed or carried forward for Appropriate Assessment as relevant. The following areas were examined in relation to potential impacts from the proposed development on the Natura 2000 sites identified:

1. Deterioration of water quality in designated areas arising from pollution from surface water run-off during site preparation and construction;
2. Deterioration in water quality in designated areas arising from pollution during the operation of the proposed development;
3. Impacts on designated sites arising from atmospheric emissions;
4. Deterioration in water quality in designated areas resulting from pollution/eutrophication caused by the land-spreading of the manure stored at the site;
5. Risk to Annex I habitats or Annex II species associated with the site;
6. Cumulative impacts.

3.5 ASSESSMENT OF SIGNIFICANCE

This section considers the list of sites identified in Section 3.3. It can be considered that Carlingford Mountain SAC and the Stabannan-Braganstown SPA can be excluded from the remainder of the Appropriate Assessment process. This is based on their distance from the proposed development and the fact that there are no potential pollution pathways. The remaining concerns will therefore focus upon the protected habitats and species of Dundalk SAC and SPA.

3.6 SCREENING CONCLUSIONS

The proposed development is not directly connected with or necessary to the nature conservation management of the designated site. Therefore, following consideration of the location of Dundalk SAC/SPA in relation to the proposed development at Rossmakay, and the potential impacts that may occur, this project must proceed to the next stage of Appropriate Assessment, namely the Natura Impact Assessment.

4 STAGE II – APPROPRIATE ASSESSMENT

4.1 INTRODUCTION

The main objective of this stage (Stage 2, Natura Impact Statement) in the Appropriate Assessment process is to determine whether the proposed development at Rossmakay (either alone or in combination with other plans, programmes and projects) will result in significant adverse impacts to the integrity of the Dundalk Bay SAC/SPA with respect to these site's structures, species, functions and/or conservation objectives. This stage also outlines the mitigation measures that should be taken in order to avoid any negative impacts of this application, should it receive consent.

In this section, the Natura 2000 sites identified in the previous section will be described in greater detail in terms of their site characteristics and conservation objectives.

4.2 NATURA 2000 SITES IDENTIFIED

DUNDALK BAY SAC 000455

Dundalk Bay, Co. Louth, is a very large (5,236.27 hectares) open, shallow sea bay with extensive salt-marshes and intertidal sand/mudflats, extending some 16 km from Castletown River on the Cooley Peninsula in the north, to Annagassan/Salterstown in the south. The bay encompasses the mouths and estuaries of the Rivers Dee, Glyde, Fane, Castletown and Flurry. These rivers drain fairly intensive agricultural catchments and the Castletown River flows through Dundalk town and serves the port. The site has a marked tidal range. The estuaries of the Castletown and Flurry rivers are well sheltered and have extensive salt marshes. Post-glacial raised beaches are a feature of the shoreline. Some agricultural fields which adjoin the bay are included in the site for ornithological interests. Estuaries and particularly intertidal sand and mud flats are well represented at this site. The site contains the largest expanse of intertidal flats on the east coast. The bay is fringed in places by salt marshes, with good examples of *Salicornia* sand flats, Atlantic salt meadows and to a lesser extent, Mediterranean salt meadows. The quality of estuarine habitats is generally good. The site has excellent examples of perennial vegetation of stony banks with the Red Data Book plant *Crambe maritima*.

According to the Natura 2000 Standard Data Form Dundalk Bay SAC (NPWS, 2012) the main habitat classes within this SAC include:

- Shingle, sea cliffs, islets (1%)
- Coastal sand dunes, sand beaches, machair (1%)

- Salt marshes, salt pastures, salt steppes (2%)
- Improved grassland (1%)
- Dry grassland, steppes (1%)
- Other arable land (1%)
- Humid grassland, Mesophile grassland (1%)
- Bogs, Marshes, Water fringed vegetation, Fens (1%)
- Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (91%)

The NPWS Qualifying Interests of the Dundalk Bay SAC include:

- 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 maritima*)
- Mediterranean salt meadows (*Juncetalia maritimi*)

In the Natura 2000 Standard Data Form for this site, NPWS identified the site's highest impact threats and pressures. These high threats include discharges, industry and commercial areas, invasive species, the encroachment of urban areas and human habitation, cultivation, grazing and fertilisation.

The conservation objective (generic) of the Dundalk Bay SAC is:

To maintain / restore the favourable conservation status of the qualifying interests of this SAC.

In 2011, the NPWS published Site Specific Conservation Objectives (SSCOs) for this SAC. These conservation objectives were also supported by a number of other documents relating to the marine and coastal habitats of this large SAC. These site specific conservation objectives aim to define the favourable conservation condition for the particular habitats or species at that site. They outline certain attributes (e.g., distribution, population structure, water quality) for different species and habitats with targets, which define favourable condition for a habitat or species at a particular site. The maintenance of habitats and species within the Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at national level. For the Dundalk Bay SAC, these site specific conservation objectives can be downloaded on the NPWS website. Any potential threats to the attributes and targets as

defined in these site specific conservation objectives were assessed and where necessary, mitigated for.

Within this SAC, the favourable conservation status of a habitat is achieved when:

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

Favourable conservation status of a species is achieved when:

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

For each Qualifying Interest of the SAC, the specific conservation objective is either to *maintain or restore* the favourable conservation condition of that interest, by defining a list of attributes and targets which are indicative of the conservation status of that interest. For habitats, the main attributes include habitat area; habitat and community distribution; vegetation structure/composition and physical structure. The main target is to ensure that the habitats are stable or increasing in area and that the other attributes are maintained or restored. For the Annex II species of the SAC, the main attributes are population trend and distribution, whilst the targets aim to ensure that the long term population trends of the species are stable or increasing and that there is no significant decrease in the numbers or range of areas used by the species, other than that occurring from natural patterns of variation.

DUNDALK BAY SPA

Dundalk Bay SPA encompasses the same estuarine habitats as Dundalk Bay SAC, however it extends much further seawards than the SAC. It extends approximately 15km from north to south and 4-5km east to west.

Estuaries and particularly intertidal sand and mud flats are very well represented at this site and support the largest concentration of wintering waterfowl on the east coast (regularly in

excess of 20,000 wintering waterfowl). The bay has internationally important populations of *Branta bernicla hrota*, *Calidris canutus*, *Limosa limosa* and *Limosa lapponica*. It is the top site in the country for *Calidris canutus*, with over 38% of the national total. A further 13 species have populations of national importance, with particular notable numbers for *Haematopus ostralegus* (12.4% of national total), *Calidris alpina* (8.4% of national total) and *Vanellus vanellus* (7.4% of national total). Dundalk Bay is an important roost site for *Anser anser* and small numbers of *Anser albifrons flavirostris*. Shallow bay waters support divers, grebes and diving duck, with nationally important populations of *Podiceps cristatus* and *Mergus serrator*. This bay is a regular site for passage waders such as *Philomachus pugnax*, *Calidris ferruginea* and *Tringa erythropus*. It is also an important site for wintering gulls, especially *Larus ridibundus* and *Larus canus*. The site provides both feeding and roosting areas for the waterfowl species and habitat quality for most of the estuarine habitats is very good. Wintering bird populations have been well monitored in recent years.

The NPWS Conservation Interests of the Dundalk Bay SPA and their Site Conservation Condition in this SPA (NPWS, 2011) are presented below:

• Great Crested Grebe (<i>Podiceps cristatus</i>)	<i>Moderately Unfavourable</i>
• Greylag Goose (<i>Anser anser</i>)	<i>Favourable</i>
• Light-bellied Brent Goose (<i>Branta bernicla hrota</i>)	<i>Favourable</i>
• Shelduck (<i>Tadorna tadorna</i>)	<i>Favourable</i>
• Teal (<i>Anas crecca</i>)	<i>Favourable</i>
• Mallard (<i>Anas platyrhynchos</i>)	<i>Favourable</i>
• Pintail (<i>Anas acuta</i>)	<i>Favourable</i>
• Common Scoter (<i>Melanitta nigra</i>)	<i>Intermediate (unfavourable)</i>
• Red-breasted Merganser (<i>Mergus serrator</i>)	<i>Favourable</i>
• Oystercatcher (<i>Haematopus ostralegus</i>)	<i>Favourable</i>
• Ringed Plover (<i>Charadrius hiaticula</i>)	<i>Favourable</i>
• Golden Plover (<i>Pluvialis apricaria</i>)	<i>Favourable</i>
• Grey Plover (<i>Pluvialis squatarola</i>)	<i>Moderately unfavourable</i>
• Lapwing (<i>Vanellus vanellus</i>)	<i>Intermediate (unfavourable)</i>
• Knot (<i>Calidris canutus</i>)	<i>Intermediate (unfavourable)</i>

- Dunlin (*Calidris alpina*) *Moderately unfavourable*
- Black-tailed Godwit (*Limosa limosa*) *Favourable*
- Bar-tailed Godwit (*Limosa lapponica*) *Favourable*
- Curlew (*Numenius arquata*) *Moderately unfavourable*
- Redshank (*Tringa totanus*) *Favourable*
- Black-headed Gull (*Chroicocephalus ridibundus*) *Moderately unfavourable*
- Common Gull (*Larus canus*) *Favourable*
- Herring Gull (*Larus argentatus*) *Moderately unfavourable*
- Wetland and Waterbirds

In the Natura 2000 Standard Data Form, NPWS (2011) identified the highest impact threats and pressures to this site. The high threats listed here are largely similar to the threats listed for the Dundalk Bay SAC with the addition of the threat of roads and motorways.

Monitoring of this SPA is continuous and the non-breeding waterbirds have been counted regularly at this site since 1994 as part of the Irish Wetland Bird Survey (I-WeBS). Data from these surveys is presented in the Site Specific Conservation Objectives Supporting Documents (NPWS, 2011).

NON-RELEVANT QUALIFYING INTERESTS OF THE SAC / SPA

Dundalk Bay SAC and SPA are large, complex and varying sites. In some situations, certain qualifying interests of the designated sites can be excluded from further consideration in the NIS, either due to the distance involved or because they are features that are not sensitive to changes in water quality. However, it is considered that for this NIS, all qualifying interests of the Dundalk Bay SAC / SPA will be included in the process, due to the connectivity between the application site, the spread-lands and the designated habitats. No robust scientific reasons can be provided for excluding these habitats and therefore they must be included.

RELEVANT QUALIFYING INTERESTS OF THE SITE

Table 3 describes the qualifying interests of the Dundalk Bay SAC/SPA that have the potential to be impacted upon from the proposed development. In considering these features, the NPWS Site Specific Conservation Objectives (SSCOs) of the site were referred to, along with the most recent Article 17 Reports on the status of protected habitats and species in Ireland (NPWS, 2013).

Qualifying Interests	Reason for Inclusion	Potential Impacts	Overall Conservation Objective and Article 17 Report Summary
<p>Estuaries Habitat Code 1130</p>	<p>The EU interpretation manual describes this habitat as the downstream part of a river valley, subject to the tide and extending from the limit of brackish waters. River estuaries are coastal inlets where, unlike 'large shallow inlets and bays' there is generally a significant freshwater influence. Estuaries, from the high water mark to the sub-tidal, are frequently observed to be composed of a range of distinct substrates. The application site and its spread-lands are close to the River Fane, which is directly upstream of the estuary habitat of Dundalk Bay. Any deterioration in the water quality of the estuary arising from the construction or operation of the proposed development would be a negative impact on this habitat. As the application site is within the zone of influence of this habitat, impacts from construction and operation are possible and mitigation measures will be required to remove these potential impacts.</p>	<p>Possible impacts on this habitat and the species that it supports due to:</p> <ul style="list-style-type: none"> • Pollution or run off from the site into the River Fane leading to eutrophication or a deterioration in water quality downstream and in the estuary. • Pollution in the River Fane and its downstream receptors due to run-off from the land due to land-spreading activities. 	<p>Conservation Objective: To <i>maintain</i> the favourable conservation condition of this habitat.</p> <p>Article 17 Summary Future Prospects – Favourable Overall Trend - Improving</p>
<p>Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>)</p>	<p>There is a significant area of this habitat present throughout the site. The habitat has grown over the past 100 years and that trend is likely to continue. The current habitat structure and function of this habitat is favourable. (NPWS, Saltmarsh</p>	<p>Possible impacts on this habitat and the species that it supports due to:</p> <ul style="list-style-type: none"> • Pollution or a decrease in surface water quality arising from 	<p>Conservation Objective: To <i>maintain</i> the favourable conservation condition of this habitat.</p>

<p>Habitat Code 1330</p>	<p>Monitoring Project 2007 – 2008). Areas of this habitat occur within the zone of influence of the application site and its spread-lands, therefore impacts must be considered and mitigated against.</p>	<p>construction and operation at the application site, as well as impacts due to the land-spreading of the manure.</p>	<p>Article 17 Summary Future Prospects – Inadequate Overall Trend – Stable</p>
<p>Mediterranean salt meadows (<i>Juncetalia maritimi</i>) Habitat Code 14.10</p>	<p>There are only several very small patches of this habitat occurring throughout the SAC, at the Castletown Estuary Marsh and two small patches and two small patches are found adjacent to Blackrock along the upper boundary in Dundalk Marsh (NPWS, Saltmarsh Monitoring Project 2007 – 2008). Both these locations are north of the River Fane Estuary and it is considered unlikely that that these habitats will be impacted upon by the proposed development. However, as this habitat is sensitive to pollution, mitigation measures will be included to protect this habitat and the species that it supports from negative impacts arising from this proposed development.</p>	<p>Possible impacts on this habitat and the species that it supports due to:</p> <ul style="list-style-type: none"> • Pollution or a decrease in water quality arising from construction and operation at the application site, as well as impacts due to land-spreading. 	<p>Conservation Objective: To <i>maintain</i> the favourable conservation condition of this habitat.</p> <p>Article 17 Summary Future Prospects – Inadequate Overall Trend – Stable</p>
<p>Mudflats And Sand-flats Not Covered By Seawater At Low Tide Habitat Code 1140</p>	<p>This habitat is found exclusively between the low water and mean high water marks. The fundamental building block of this habitat is sediment ranging from around 1µm to 2mm. The finer silt and clay sediments are dominant in mud flats and the larger sand fractions are associated with areas exposed to significant wave energy. The type of biological communities found with mudflats and sandflats in Ireland is quite variable and this habitat forms a significant resource for various bird and mammal species for feeding, breeding and resting. This habitat occurs within the zone of influence of the application site and the spread-lands and potential impacts upon this habitat are possible. Therefore mitigation measures will be required in order to remove potential impacts. The overall conservation status of this habitat in Ireland is unfavourable – inadequate (NPWS Article 17 reports, 2013).</p>	<p>Possible impacts on this habitat and the species include:</p> <ul style="list-style-type: none"> • Loss or decrease in the quality or area of this habitat and its associated species due to pollution or a decrease in water quality. • Loss or decrease in the quality or area of this habitat and its associated species due to changes in its sedimentation pattern arising from run off of silt from land-spreading. • Decrease in water quality due to the land-spreading of the manure arising from the farm. 	<p>Conservation Objective: To <i>maintain</i> the favourable conservation condition of this habitat.</p> <p>Article 17 Summary Future Prospects – Favourable Overall Trend - Improving</p>

<p>Perennial Vegetation Of Stony Banks Habitat Code 12200</p>	<p>Perennial vegetation of stony banks is vegetation that is found above the high tide mark on beaches comprised of shingle (cobbles and pebbles). It is dominated by perennial species (i.e. plants that continue to grow from year to year). Vegetated shingle occurs on deposits of shingle lying at or above mean high-water spring tides. This habitat has not been mapped within the Dundalk SAC however its distribution is thought to be widespread. The overall conservation status of this habitat in Ireland is unfavourable – inadequate (NPWS Article 17 reports, 2013)</p>	<p>Possible impacts on this habitat include:</p> <ul style="list-style-type: none"> Loss or decrease in the quality or area of this habitat and its associated species due to disturbance, atmospheric emissions or a decrease in water quality. 	<p>Conservation Objective To <i>maintain</i> the favourable conservation condition of this habitat</p> <p>Article 17 Summary Future Prospects – Inadequate Overall Trend – Stable</p>
<p>Salicornia and other annuals colonising mud and sand</p>	<p>There is a significant area of this habitat present throughout the site and there are indications of growth of this habitat within Dundalk Bay (NPWS, Saltmarsh Monitoring Project 2007 – 2008). Impacts upon this habitat arising from the construction and operation of the proposed development are not anticipated, but they cannot be ruled out. Therefore, mitigation measures will be included to protect this habitat and the species that it supports.</p>	<p>Possible impacts on this habitat include:</p> <ul style="list-style-type: none"> Loss or decrease in the quality or area of this habitat and its associated species due to disturbance, atmospheric emissions, pollution or a decrease in water quality. Pollution due to the land-spreading of the manure arising from the farm. 	<p>Conservation Objective To <i>restore</i> the favourable conservation condition of this habitat</p> <p>Article 17 Summary Future Prospects – Inadequate Overall Trend – Declining</p>
<p>All Features of Interest of the Dundalk Bay SPA</p>	<p>It was considered that all the over wintering bird species that use this site have the potential to be impacted upon by the proposed development, due to potential pollution and decreases in water quality. There is one parcel of land identified for land-spreading that is within the SPA (at Mooretown). The Dundalk Bay SPA Conservation Objectives Supporting Document (NPWS, 2011) provides waterbird distribution maps which were recorded during low tide and high tide surveys between October 2009 and February 2010.</p>	<ul style="list-style-type: none"> Possible impacts upon these species due to eutrophication and decreases in water quality leading to impacts upon their diets. 	<p>To <i>maintain</i> the favourable conservation condition of these species.</p>

	<p>The fields identified for land-spreading have been classed in this document as terrestrial habitats and during the survey period they were used by graylag geese in significant numbers for foraging and roosting / other. Curlew and lapwing were also recorded once on this site during this monitoring period. These species are generally adapted to foraging on agricultural land, including those that have been land-spread.</p>		
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Table 3 – Qualifying Interests of the Dundalk Bay SAC/SPA that are Relevant to this Proposed Application

4.3 IDENTIFICATION OF POTENTIAL IMPACTS

INTRODUCTION

The identification of potential impacts and the assessment of their significance typically requires the identification of the type and magnitude of the impacts. For example, will the impacts be short term or long term, direct, indirect or cumulative and will they occur during construction or operation. This section will establish whether the impacts of the proposed development at Rossmakay that were identified in the previous section, are likely to occur and whether or not they are significant. These potential impacts will be examined with respect to the conservation objectives of the Natura 2000 site identified.

In the screening section of this report, the following possible future impacts on the Dundalk Bay SAC / SPA were listed. These concerns are again listed below and they will be dealt with in more detail in this section.

1. Deterioration of water quality in designated areas arising from pollution from surface water run-off during site preparation and construction;
2. Deterioration in water quality in designated areas arising from pollution during the operation of the proposed development;
3. Impacts on designated sites arising from atmospheric emissions;
4. Deterioration in water quality in designated areas resulting from pollution/eutrophication caused by the land-spreading of the manure stored at the site;
5. Risk to Annex I habitats or Annex II species associated with the site;
6. Cumulative impacts.

DETERIORATION IN WATER QUALITY IN THE SAC/SPA DURING SITE PREPARATION/CONSTRUCTION

The construction of the farm structures and associated works will involve the excavation of soil and the pouring of concrete for foundations and other hard surfaces. If appropriate mitigation measures are not taken during construction and operation of the proposed development, then there is the possibility that water quality in the River Fane and subsequently on the downstream ecological receptors of Dundalk Bay SAC/SPA may be negatively impacted upon. Possible direct impacts include the pollution of the local water courses with silt, oil, cement, hydraulic fluid etc. This would directly affect the habitat of protected species by reducing water quality or by polluting the fine mud/sand sediments of the estuary and intertidal zones. These substances could also have a toxic effect on the

ecology of the water in general, directly affecting certain species and their food supplies. Pollution of the water with hydrocarbons, cement and concrete during the construction phase of this proposed development could also have a significant negative effect on the birds, fish and invertebrate communities.

Therefore, as there is a potential risk of direct and indirect impacts arising from the site preparation and construction of the proposed application, appropriate mitigation will be required to maintain the conservation status of Dundalk Bay SAC / SPA and their protected habitats and species.

DETERIORATION IN WATER QUALITY IN THE SAC POST CONSTRUCTION / OPERATION

Negative impacts upon water quality in Dundalk Bay SAC / SPA arising from the operation of this proposed development have also been considered. The most likely source of pollution during the operation of the development is slurry, oil or silt contaminated surface water run-off from the site into the River Fane or its tributaries, which may lead to a deterioration in water quality and pollution of sand / mud sediments in the SAC/SPA.

ATMOSPHERIC EMISSIONS

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 the potential impacts on the closest Natura 2000 site, i.e., Dundalk Bay SAC and SPA. In this instance a number of factors were taken into account, such as the use of fan ventilation (fans at 7m in height, 0.63m diameter fans with a capacity of 3.7m³/s).

Using these parameters and having set the critical load for ammonia at 3µg/m³ it was determined that the load of ammonia at the edge of the Dundalk Bay SPA that will be accounted for by the process contribution from the proposed development of the farm will be 0.07368µg/m³ versus a background level of 2.73µg/m³. This is an additional load of 2.56% and it will not result in an exceedance of the critical load for this SPA. As the SAC is slightly further from the SPA, the process contribution at its edge from the farm will be slightly lower at 0.0658µg/m³.

The process contribution for nitrogen at the edge of this SPA will be 0.38 kg N/ha/yr against a background level of 16.17 kg N/ha/yr. At the edge of the SAC it will be 0.34 kg N/ha/yr. The Critical Load for the habitats within the SAC / SPA was set at 8 kg N/ha/yr (perennial vegetation of stony banks). Using these figures, it was determined that the contribution of

nitrogen from the farm will be 4.25% of the critical load of this habitat. This additional load can be considered insignificant.

LAND-SPREADING

Inappropriate land-spreading of manure can lead to serious impacts upon the receiving waters in local catchments and it can result in eutrophication, algal blooms, fish kills and loss of biodiversity. Designated habitats and species can be impacted upon and it can take years for the eco-system to recover. The applicant will use all the manure produced within his own farm and it will not be exported. It will be spread in accordance within an up-to-date nutrient management plan for the farm and it will be done in accordance with the European Union (Good Agricultural Practice for the Protection of Waters) Regulations 2017 (S.I. 605 of 2017).

RISK TO ANNEX I HABITATS & ANNEX II SPECIES ASSOCIATED WITH THE SITE

Table 2 lists the qualifying interests of the Dundalk Bay SAC/SPA that may be impacted upon from the construction activities and operation of the proposed development. These qualifying interests are all sensitive to human disturbance, and changes and deteriorations in water quality and habitat structure.

CUMULATIVE IMPACTS

Cumulative impacts or effects are changes in the environment that result from numerous human-induced, small-scale alterations. Cumulative impacts can be thought of as occurring through two main pathways: first; through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects (Bowers-Marriott, 1997).

To make an overview assessment of cumulative impacts, an examination was made of other planning applications granted along the Knockbridge for the past three years. Numerous domestic and industrial developments have been granted permission in that time. The current application will have no cumulative impacts on the SAC / SPA when considered in combination with properly assessed developments. In the future, any proposed developments that have the potential to impact upon the Dundalk Bay SAC or SPA will be subject to the Appropriate Assessment process in order to assess their potential impacts on the designated sites. If impacts upon these sites cannot be avoided, then the design of the developments must change to avoid the impacts or the development should not be permitted to proceed.

Cumulative impacts from the proposed development with other agricultural activities in the area were also considered. All agricultural activities are required to operate within the legislation defined in S.I. 605 of 2017 regarding manure storage, minimisation of soiled water and general good agricultural practice, etc.

In 2015, the applicant was granted planning permission for a separate agricultural development on his farm on the site just north of and adjacent to the application site. This proposed application has not yet been constructed. It pertained to a part slatted, part dry bedded shed and its purpose was to relocate cattle from the existing straw bedded sheds in the yard into new housing. It has not been constructed and if it is constructed at any stage, it will be for the welfare of the animals only and there will be no provision for any increase in stock numbers. It was screened for Appropriate Assessment at the time by Louth County Council and it was determined that no impacts upon any SAC / SPA were likely and that an Appropriate Assessment (NIS) was not a requirement. There will no cumulative impacts upon any designated site when this current application is considered in-combination with this other application should it ever be completed.

The land-spreading of any manure stored on this site, or other sites operated by the applicant in the Knockbridge area has also been considered here, as inappropriate land-spreading of organic fertiliser can lead to cumulative impacts upon water quality and the qualifying features of all designated sites. However, the applicant is aware of his obligations under S.I. 605 of 2017. If spreading is carried out within the requirement of this legislation, any cumulative impacts from this practice will be negligible.

5 MITIGATION MEASURES

In order to avoid any reductions in water quality in the area surrounding the proposed development and in order to protect certain designated sites and species, a number of mitigation measures must be implemented and followed. Measures have also been suggested that will help to protect the local biodiversity of the surrounding area and to ensure the protection of local wildlife.

In considering these points, the following mitigation measures were prepared, and these are outlined below. Although these are standard mitigation measures, their implementation will ensure the protection of Natura 2000 habitats and species, and the local non-designated ecological receptors. The primary parties responsible for the implementation of these measures include the applicant himself, the project manager and the construction contractors. It will be the responsibility of the Local Authority to enforce these measures, along with input from the Department of Agriculture. The largest threat to the Natura 2000 sites from the proposed development is the land-spreading of the manure produced on the farm. However, if this is done in accordance with the legislation defined in S.I. 605 of 2017 and in accordance with the annual farm plan, the integrity and conservation objectives of the Natura 2000 sites will be maintained and protected.

- The construction and operation of the proposed farm must comply with the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2017 (S.I. 605 of 2017).
- Guidelines within the Department of Agriculture's Explanatory Handbook for Good Agricultural Practice Regulations must also be followed.
- The proposed farm structures must adhere to the Department of Agriculture's Farm Building and Structures Specifications. Before use, they should undergo an integrity test that is performed by a suitably qualified person. They should be inspected regularly for deficiencies.
- Manure, slurry and soiled water storage facilities should be constructed to Department of Agriculture, Food and The Marine specifications with leak detection facilities underneath. They should be certified by an engineer before use and inspected regularly.
- Site preparation and construction must be confined to the development site only and should adhere to all standard best practice measures. Work areas should be kept to the minimum area required to carry out the proposed works and the area should be clearly marked out in advance of the proposed works.
- There should be no discharges of contaminated waters to ground or surface waters from these developments. Post construction surface water run-off from hardcore /

concreted / tarmac areas should be directed into a soak-pit. If soak-pit disposal is not viable or practical, then surface water run-off from these areas should be treated via serviced sediment and oil interceptor traps, prior to discharge into any watercourse. All silt drains and farm yard discharge should be in accordance with the specifications within the Department of Agriculture's "Minimum specification for Farmyard Drainage, Concrete Yards and Roads".

- Any excavated material arising from the construction process must not be disposed of within any designated site. It must be used responsibly within the boundary of the application site or disposed of in a licensed facility using a registered contractor.
- Fuels, oils, greases and hydraulic fluids must be stored in bunded compounds well away from watercourses. Refuelling of machinery, etc., should be carried out in bunded areas. Any bulk fuel storage tank should be properly bunded with a bund capacity of at least 110% of that of the fuel tank. Stockpile areas for sands and gravel should be kept to a minimum size, well away from the drains and watercourses.
- Any additional mitigation measures as recommended by IFI in their submission must also be adhered to.
- The pigs should be fed a low-protein diet in order to reduce atmospheric emissions from the farm.
- The storage and handling of all wastes and fertilisers on site must be in accordance with S.I. 605 of 2017.
- It is illegal to remove hedgerows / treelines during the bird nesting season (September – March). Riparian verges along local streams and watercourses must not be damaged during the construction or operation. Any landscaping should involve the planting of native Irish species that are indigenous to the site. Suitable species would include birch, oak, ash willow and alder.

LAND-SPREADING AND FARM OPERATION

In order to avoid any reductions in water quality within the catchment as a whole, all organic fertiliser must be used in accordance with S.I. 605 of 2017 European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2017). The following measures should be implemented at both the applicant's farms on an ongoing basis.

- Out of an abundance of caution and given the capacity of the farm to accommodate the organic fertiliser closer to the site of the proposed development, then the land bank within the SPA in Mooretown should be excluded from land-spreading activities.
- Manure should only be spread on existing improved grassland habitats. It should only be spread in accordance with the Nutrient Management Plan for the farm and in accordance with S.I. 605 of 2017.

- Manure should not be spread in areas where bedrock occurs at the surface or within areas of extreme groundwater vulnerability.
- To avoid contamination of the local watercourses in areas identified for land-spreading, a minimum buffer zone of 10m for any main river channels and 5m for smaller watercourses should be adhered to at all times during the application of effluent. Buffer zones should be increased depending on the gradient of the land. *In addition, when the waterbody is with 1km upstream of a water dependent designated site (SAC / SPA) the buffer for a river should be increased to 20m while a stream should be increased to 10m.*
- Manure should not be applied within 3m of open field drains or ditches in accordance with Good Agricultural Practice for Protection of Water 2017 S.I. 605 of 2017.
- Land spreading should only take place when suitable climatic and environmental conditions exist. Spreading should be avoided on:
 - wet or waterlogged soils
 - land sloping steeply towards water courses
 - frozen or snow covered soils
- Effluent should not be applied in proximity of hedgerows and field margins. This will maintain the biodiversity of these areas and allow for a more natural ecological corridor.
- New technologies for spreading manure that improve efficiency and minimize emissions should be considered, e.g., bandspreader, trailing shoe and the shallow injection technique.

5.1 FINDING OF NO SIGNIFICANT EFFECTS

Finding of No Significant Effects Report Matrix	
Name of project	Construction of a Pig Farm at Rossmakay, Knockbridge, Co. Louth.
Name and location of Natura 2000 site	At its closest point, the proposed development is situated 3.8km west of Dundalk Bay SAC and 3.5km west of the SPA. There are areas identified for land-spreading upstream of the SAC and SPA, whilst one area identified for land-spreading is within the SPA at Mooretown.
Description of project	An Agricultural Development
Is the project directly connected with or necessary to the management of the site?	No
Are there other projects or plans that together with project being assessed could affect the site?	No
The Assessment of Significance of Effects	
Describe how the project is likely to affect the Natura 2000 site	Impacts Upon Water Quality in the SAC & SPA. Subsequent impacts upon the qualifying interests of the sites. Impacts upon species within the sites.
Explain why these effects are not considered significant	Strict mitigation measures must be enforced to ensure that these impacts will not occur. The farm must operate in accordance with the guidelines set out in S.I. 605 of 2017. and within the Nutrient Management Plan for the farm.
Describe how the project is likely to affect species designated under Annex II of the Habitats Directive.	If the mitigation measures outlined in Section 5 are attached to any grant of planning permission, then any direct, indirect or cumulative impacts upon these species will be negligible.
Data Collected to Carry out the Assessment	
Who carried out the assessment	Noreen McLoughlin, MSC, MCIEEM. Consultant Ecologist
Sources of data	NPWS, EPA, National Biodiversity Data Centre, Louth County Council,
Level of assessment completed	Stage II Appropriate Assessment (NIS)
Where can the full results of the assessment be accessed and viewed	Full results included

6 APPROPRIATE ASSESSMENT CONCLUSION

This current NIS has been undertaken to evaluate the potential impacts of the proposed development with regard to the effects upon the conservation objectives and qualifying interests (including the habitats and species) of the Dundalk Bay SAC / SPA. It is considered that following mitigation, that the proposed project does not have the potential to significantly affect the conservation objectives of these aforementioned Natura 2000 sites and the integrity of these sites as a whole will not be adversely impacted.

The qualifying interests of the site and their potential to be impacted upon from the potential development were listed in Section 4.2. It is considered that these potential impacts can be successfully mitigated against. With implementation of the mitigation measures there will be no deterioration in water quality and there will be or impacts upon any qualifying interest of the site.

In light of the above, it is considered that the proposed works do not have the potential to significantly affect the conservation objectives or qualifying interests of the Dundalk Bay SAC / SPA. The integrity of the sites will not be adversely affected. Table 4 follows the integrity of the SAC / SPA checklist, which shows that the integrity of the site would not be affected by the proposed development.

Conservation Objective: Does the project have the potential to:	Yes / No
Cause delays in progress towards achieving the conservation objectives of the site?	N
Interrupt progress towards achieving the conservation objectives of the site?	N
Disrupt those factors that help to maintain the favourable conditions of the site?	N
Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site?	N
Other Objectives: does the project have the potential to:	
Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem?	N
Change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site?	N
Interfere with predicted or expected natural changes to the site (such as water dynamics	N

or chemical composition)?	
Reduce the area of key habitats?	N
Reduce the population of key species?	N
Change the balance between key species?	N
Reduce diversity of the site?	N
Result in disturbance that could affect population size or density or the balance between key species?	N
Result in fragmentation?	N
Result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding, etc.)	N

Table 4 – Integrity of Site Checklist (From NPWS, Information Checklist for AA, Box 6, EC (2002))



Noreen McLoughlin, MSc, MCIEEM.
Ecologist.

(PI Insurance details available on request)

APPENDIX I - REFERENCES AND FURTHER READING

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Appendix No. 14

Extract from General Soil Map of Ireland.



HEAD

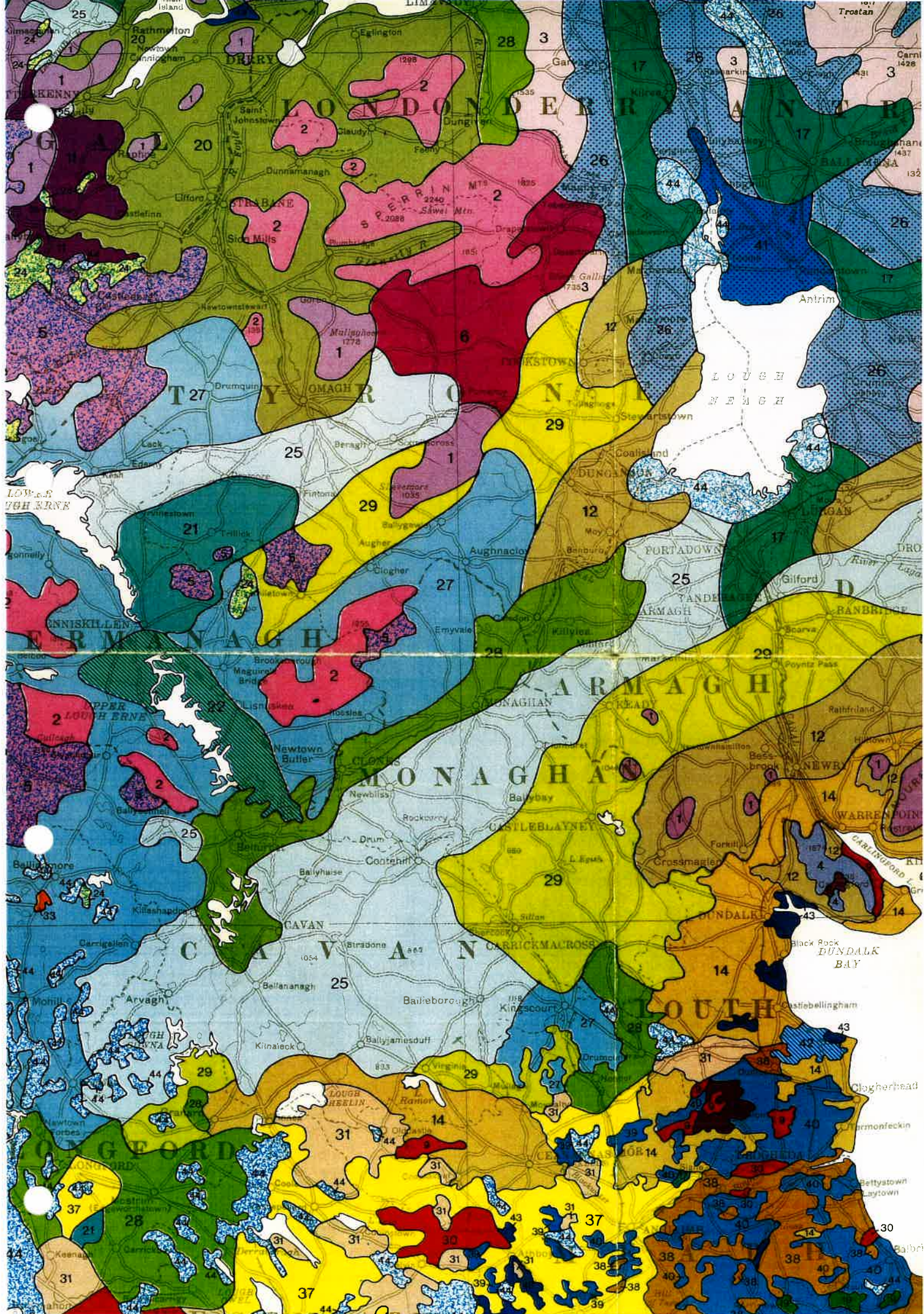
Broad Physiographic Divisions	Soil Association			Parent Material	Per cent of total area
	Nos.	Principal Soil	Associated Soils		
Rolling Lowland	12	Acid Brown Earths (70%) (Coarse texture)	Gleys (25%) Podzols (5%)	Mostly granite or rhyolite glacial till	1.13 2.50
	13	Acid Brown Earths (70)	Grey Brown Podzolics (15) Gleys (15)	Mixed sandstone, limestone glacial till	1.69 1.40
	14	Acid Brown Earths (75)	Gleys (15) Brown Podzolics (10)	Ordovician - Silurian - Cambrian shale glacial till	4.22 4.32
	15	Brown Podzolics (60)	Acid Brown Earths (20) Gleys (20)	Sandstone, Lower Avonian shale glacial till	6.31 5.23
	16	Acid Brown Earths (90)	Gleys (5), Regosols (3), Podzols (2)	Morainic sands and gravels and blown sands	4.2 .35
	17	Acid Brown Earths (90)	Gleys (5) Peaty Gleys (5)	Basalt glacial till	.02 1.35
	18	Podzols (70)	Gleys (20), Peat (10)	Sandstone, granite, mica schist glacial till	.74 .61
	19	Acid Brown Earths (70)	Gleys (15), Peaty Gleys (15)	Upper Carboniferous shale and sandstone glacial till	.77 .64
	20	Brown Podzolics (60)	Acid Brown Earths (20), Gleys (20)	Mica schist glacial till	1.41 2.46
	21	Gleys (75)	Peaty Gleys (25)	Sandstone glacial till	2.95 2.78
	22	Gleys (75)*	Acid Brown Earths (15) Peat (10)	Upper Carboniferous shale glacial till	4.86 4.27
	23	Lithosols (80)	Rock Outcrop and Peat (20)	Granite and sandstone and shallow glacial till (quartzite in places)	1.31 1.08
24	Blanket Peat (Low level)			5.14 4.40	

3. "Total area" of the Republic of Ireland plus Northern Ireland.

4. "Brown Earths" refer to brown earth soils of medium to high base status.

26	Drumlin (Wet Mineral and Organic Soils)	Gleys (60)	Acid Gleys
27	Drumlin (Drier Mineral and Organic Soils)	Gleys (85)*	Interc Peaty
28		Grey Brown Podzolics (60)	Gleys Peat
29		Acid Brown Earths (75)	Interc Peaty
30		Grey Brown Podzolics (70)	Brow Gleys
31		Minimal Grey Brown Podzolics (80)	Gleys Basal
32		Degraded Grey Brown Podzolics (50)	Peat Gleys
33	Flat to Undulating Lowland (Mainly dry Mineral Soils)	Shallow Brown Earths and Rendzinas (60)	Grey Gleys
34		Minimal Grey Brown Podzolics (70)	Gleys
35		Grey Brown Podzolics (80)	Brow
36		Grey Brown Podzolics (80)	Gleys
37		Grey Brown Podzolics (75)	Gleys
38		Grey Brown Podzolics (75)	Gleys
39		Gleys** (90)	Grey
40		Gleys* (80)	Grey
41	Flat to Undulating Lowland (Mainly wet Mineral and Organic Soils)	Gleys* (75)	Acid Peaty
42		Gleys* (90)	Grey
43		Gleys (60)	Brow Peaty
44		Basin Peat	

4 5 6 7 8 9 W X 1 2 3 4 5 6 7 8 9 X Y





Appendix No. 15

Storm Water Attenuation Proposals

18/530 TE

24th January 2019

John Lambe

c/o C L W Environmental Planners Ltd

23 Farnham St,

Cavan,

Co. Cavan.

Belturbet Business Park,
Creeny,
Belturbet,
Co. Cavan.

Tel: 049 9522236

Fax: 049 9522808

Web: www.traynorenvironmental.com

Re: Soakaway design as per BRE 365 for 2077m² impermeable area for Mr John Lambe, Knockbridge, Dundalk, Co Louth.

Dear John,

We have designed per BRE Digest 365 based on the total impermeable area as supplied and Met Eireann's Extreme Rainfall Return Periods for Knockbridge, Dundalk, Co Louth.

Site Information Supplied as part of the layout provided By CLW Environmental Planners Ltd

Impermeable area feeding Soakaway = 2077 m²

(The Roof area is: 2077sq.m.)

Rainfall Information as Per Met Eireann (30 Year Rainfall Returns)

Storm dur.	Area	Rainfall
mins.	m²	mm.
5	2077	11.1
10	2077	15.4
30	2077	21.8
60	2077	26.2
120	2077	31.6
240	2077	38.1
360	2077	42.4
720	2077	51.1
1440	2077	61.6
2880	2077	70.6

Void Ratio

The void ratio for the trench fill was set at 30% (0.3) to accommodate the use of granular fill material i.e. rounded gravel. The safety factor was taken as 1.

Soil infiltration rate

Tests carried out at 1.60m below ground level.
 Calculated as per BRE365 = 0.0092mm/sec

Outflow from Soakaway in model storm

Internal Surface area to 50% effective depth	60.00 sq m
Soil Infiltration Rate	0.0092 m/s
Storm duration in seconds	= 3600s
Outflow Factor cu.m./sec	0.0005495

The Base of the soakaway trial pit is set at 1.60 m Below the invert of the inlet drain According to BRE Digest 365 method

For Ease of Construction the infiltration trench will be rounded off to:

22m long x 14m wide x 1.5m deep

This can be further divided into 2 No. Soakaways 11m Long x 7m Wide x 1.50m Deep Each or an alternative arrangement once capacity is reached.

Traynor Environmental Ltd – BRE Digest 365 Calculations

Infiltration Rate	
Test Hole Dimension	
Length (l)	3.40m
Width (m)	1.80m
Depth (m)	1.60m
Drop Time (mins)	617mins

Soil Infiltration Rate, $f = V_{p75-25} / \alpha_{p50} \times t_{p75-25}$

Where

V_{p75-25} = the effective storage volume of water in the trial pit between 75% and 25% effective depth;

α_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area;

t_{p75-25} = the time for the water level to fall from 75% to 25% effective depth

$$V_{p75-25} = 3.40 \times 1.80 \times (1.20 - 0.40) = 4.896\text{m}^3$$

$$4.896 / (14.44 \times 37020) \times 1000$$

$$= 0.0092\text{mm/sec}$$

Calculation of Storage Required in Soakaway								
Storm dur.	Area	Rainfall	Inflow	Outflow	Storage reqd.	Is storage provided	Time to empty 50%	Is time satisfactory
mins.	m ²	mm.	cu.m.	cu.m.	cu.m.	= or > vol. reqd.	minutes	i.e. < 24 Hours ?
5	2077	11.1	23.05	0.15	22.91	Yes	385.96	Yes
10	2077	15.4	31.99	0.30	31.69	Yes	533.94	Yes
30	2077	21.8	45.28	0.89	44.39	Yes	747.92	Yes
60	2077	26.2	54.42	1.78	52.64	Yes	886.91	Yes
120	2077	31.6	65.63	3.56	62.07	Yes	1045.89	Yes
240	2077	38.1	79.13	7.12	72.01	Yes	1213.36	Yes
360	2077	42.4	88.06	10.68	77.38	Yes	1303.85	Yes
720	2077	51.1	106.13	21.37	84.77	Yes	1428.32	Yes
1440	2077	61.6	127.94	42.73	85.21	Yes	1435.78	Yes
2880	2077	70.6	146.64	85.46	61.17	Yes	1030.75	Yes

Figure 1: Site Layout for Knockbridge, Dundalk, Co Louth showing Location of Tested Area

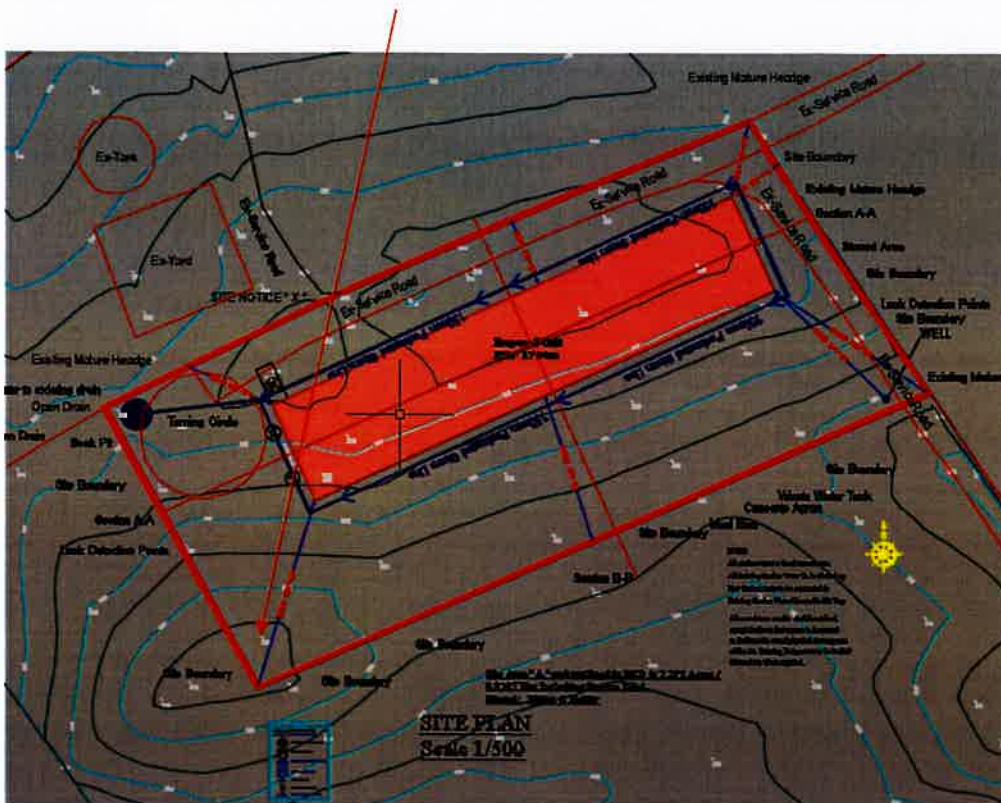
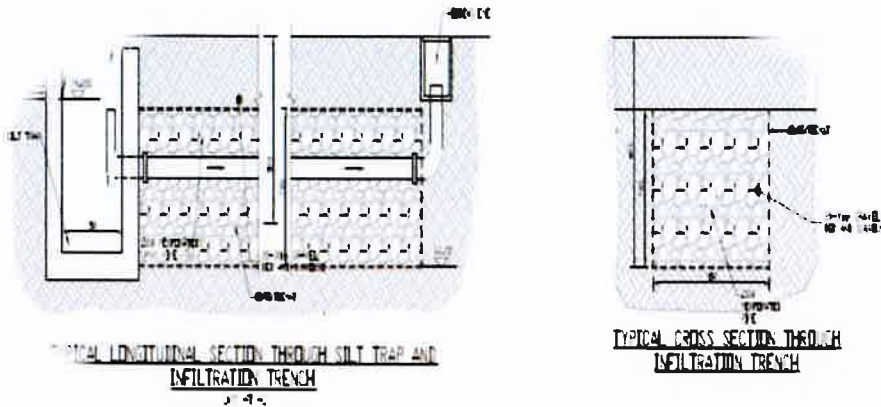


Figure 2: Cross Section of proposed soakaway at Knockbridge, Dundalk, Co Louth.



NB:

During the design process, a Silt Trap **must** be incorporated into any drains discharging into the soakaway system.

NB:

Any paved surface runoff or runoff from a car-parking area **must** pass through an oil interceptor/hydrocarbon retention geotextile before discharge to the soakaway if applicable.

NB:

Please note for the purpose of the design, that the fill material used must have no less free volume than 30%.

NB:

The base of the soakaway has not been included in the design calculations.

NB:

All elements of the soakaway **must** be maintained by suitably qualified professionals i.e. *Silt traps must be regularly cleaned.*

NB:

Please note that all relevant aspects of BRE365 **must** be taken into account in the design and installation of this soakaway system e.g. minimum separation distance of 5m from building foundations and from soil polishing filter for domestic wastewater.

Should you have any queries on this, do not hesitate to contact me.

Yours sincerely



Nevin Traynor

BSc. Env, H.Dip I.T, Cert SHWW, EPA/FAS Cert.

For Traynor Environmental Ltd


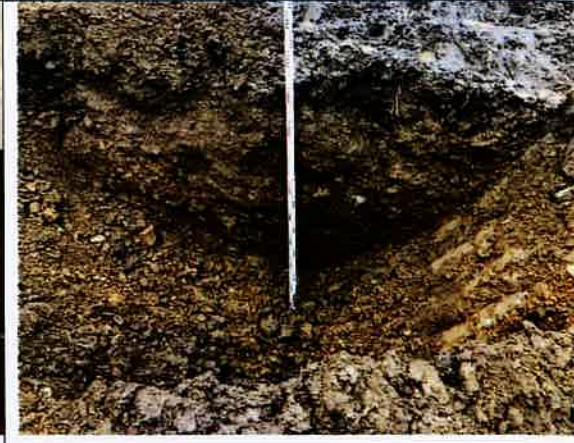




Encl – Appendices A

SOAKAWAY TESTING TO BRE DIGEST 365
SITE AT THE KNOCKBRIDGE, DUNDALK, CO LOUTH
COMPLETED BY
TRAYNOR ENVIRONMENTAL LTD

APPENDIX A – SITE PHOTOGRAPHS



Photographs From the Soakaway Test No. 1

<p><i>Surface View Of Trial Pits and Soakaway Test Hole No 1</i></p>	<p><i>Surface View Of Trial Pits and Soakaway Test Hole No 1 Prior To Test</i></p>
	
<p><i>Soil Removed From Soakaway Hole</i></p>	<p><i>Filling of Soakaway Hole</i></p>
	
<p><i>Soakaway "Under Test"</i></p>	<p><i>End Of Soakaway Test</i></p>
	

SOAKAWAY TESTING TO BRE DIGEST 365
SITE AT THE KNOCKBRIDGE, DUNDALK, CO LOUTH
COMPLETED BY
TRAYNOR ENVIRONMENTAL LTD

APPENDIX B – MET EIREANN RAINFALL RETURN PERIODS



Met Eireann
Return Period Rainfall Depths for Sliding Durations
Irish Grid: Easting: 302447, Northing: 301258,

DURATION	Interval		Years														
	6 months	year	2	3	4	5	10	20	30	50	75	100	150	200	250	500	
5 mins	2.8	3.9	4.5	5.4	6.1	6.5	8.1	9.9	11.1	12.7	14.2	15.3	17.1	18.4	19.5	N/A	
10 mins	3.9	5.5	6.3	7.6	8.4	9.1	11.3	13.8	15.4	17.7	19.7	21.3	23.8	25.7	27.2	N/A	
15 mins	4.6	6.4	7.4	8.9	9.9	10.7	13.3	16.2	18.1	20.8	23.2	25.1	28.0	30.2	32.0	N/A	
30 mins	5.9	8.2	9.4	11.2	12.4	13.3	16.3	19.6	21.8	24.9	27.6	29.7	32.9	35.3	37.4	N/A	
1 hour	7.7	10.4	11.9	14.0	15.4	16.5	19.9	23.8	26.2	29.7	32.7	35.1	38.6	41.3	43.6	N/A	
2 hours	10.0	13.3	15.0	17.5	19.1	20.4	24.4	28.8	31.6	35.5	38.9	41.5	45.4	48.4	50.9	N/A	
3 hours	11.7	15.3	17.2	20.0	21.8	23.1	27.5	32.2	35.2	39.4	43.0	45.7	49.9	53.1	55.7	N/A	
4 hours	13.0	17.0	19.0	21.9	23.8	25.3	29.9	34.9	38.1	42.4	46.2	49.0	53.4	56.6	59.3	N/A	
6 hours	15.2	19.6	21.8	25.0	27.1	28.7	33.7	39.0	42.4	47.1	51.1	54.1	58.7	62.1	64.9	N/A	
9 hours	17.7	22.6	25.0	28.5	30.8	32.5	37.9	43.7	47.3	52.3	56.5	59.7	64.5	68.1	71.1	N/A	
12 hours	19.7	25.0	27.6	31.3	33.7	35.6	41.3	47.3	51.1	56.3	60.7	64.0	69.0	72.7	75.8	N/A	
18 hours	23.0	28.8	31.7	35.7	38.4	40.3	46.5	52.9	57.0	62.5	67.1	70.6	75.9	79.8	83.0	N/A	
24 hours	25.6	31.8	34.9	39.2	42.0	44.1	50.6	57.3	61.6	67.3	72.1	75.7	81.1	85.2	88.5	99.5	
2 days	31.9	38.8	42.2	46.9	49.9	52.1	59.0	66.1	70.6	76.4	81.4	85.1	90.6	94.7	98.0	109.0	
3 days	37.1	44.6	48.2	53.3	56.5	58.9	66.1	73.6	78.2	84.4	89.5	93.3	99.0	103.2	106.5	117.7	
4 days	41.7	49.8	53.6	59.0	62.3	64.8	72.5	80.3	85.1	91.4	96.7	100.7	106.5	110.8	114.3	125.7	
6 days	50.0	58.9	63.2	69.1	72.7	75.5	83.7	92.1	97.2	104.0	109.6	113.7	119.8	124.4	128.0	139.9	
8 days	57.4	67.2	71.8	78.1	82.0	84.9	93.7	102.6	108.0	115.1	121.0	125.3	131.7	136.4	140.2	152.5	
10 days	64.4	74.8	79.7	86.4	90.5	93.6	102.9	112.2	117.9	125.3	131.4	136.0	142.6	147.5	151.4	164.1	
12 days	70.9	82.0	87.1	94.2	98.6	101.8	111.5	121.2	127.1	134.8	141.2	145.9	152.7	157.8	161.8	174.9	
16 days	83.3	95.4	101.1	108.7	113.5	117.0	127.5	137.9	144.3	152.5	159.3	164.2	171.5	176.8	181.0	194.8	
20 days	94.9	108.0	114.1	122.3	127.4	131.2	142.3	153.4	160.1	168.8	175.9	181.1	188.7	194.3	198.7	213.1	
25 days	108.7	122.9	129.5	138.3	143.8	147.8	159.7	171.5	178.6	187.8	195.3	200.8	208.8	214.7	219.3	234.4	

NOTES:

N/A Data not available

These values are derived from a Depth Duration Frequency (DDF) Model

For details refer to:

'Fitzgerald D. L. (2007), Estimates of Point Rainfall Frequencies, Technical Note No. 61, Met Eireann, Dublin'

Available for download at www.met.ie/climate/dataproducts/Estimation-of-Point-Rainfall-Frequencies_TN61.pdf

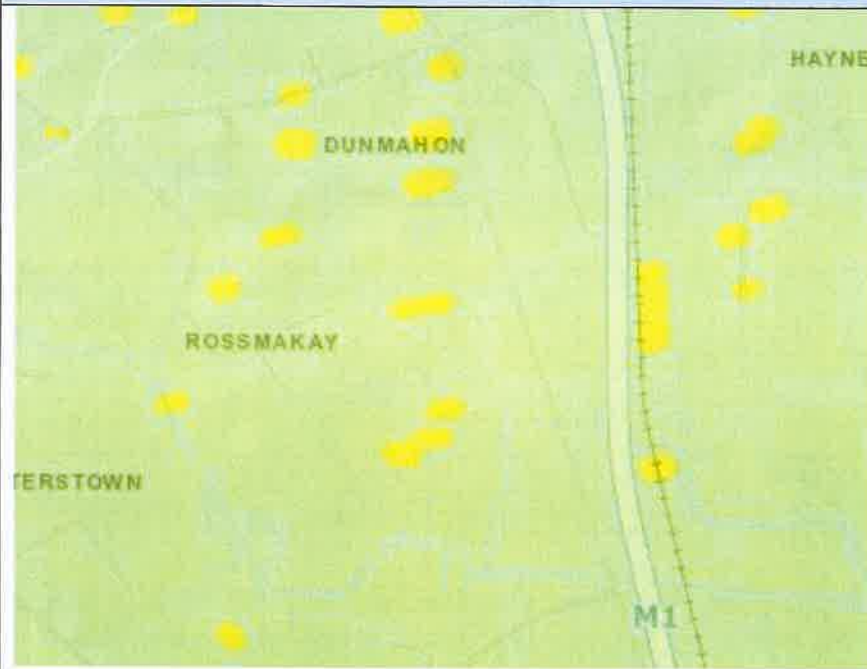
SOAKAWAY TESTING TO BRE DIGEST 365
SITE AT THE ROSMARKEY, ROSSMAKEA, KNOCKBRIDGE, DUNDALK, CO LOUTH
COMPLETED BY
TRAYNOR ENVIRONMENTAL LTD

APPENDIX C – MAPS USED AS PART OF THE DESK STUDY



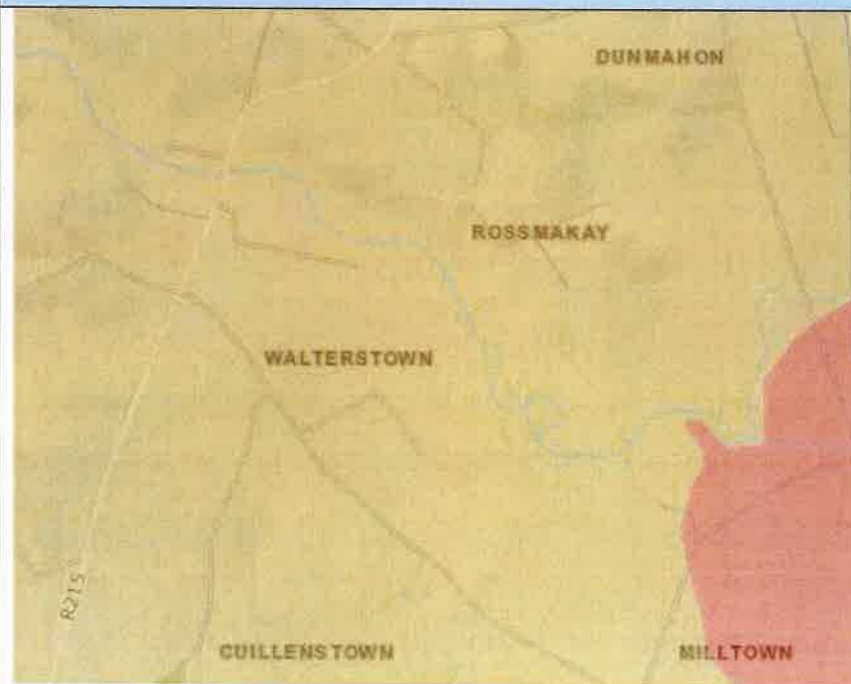
Maps Used as Part of the EPA Site Sulfatability Assessment

Map 1 - Bedrock Map



According to the GSI data for the site the site is underlain with SMV Silurian Metasediments and Volcanics

Map 2 - Bedrock Aquifer Map



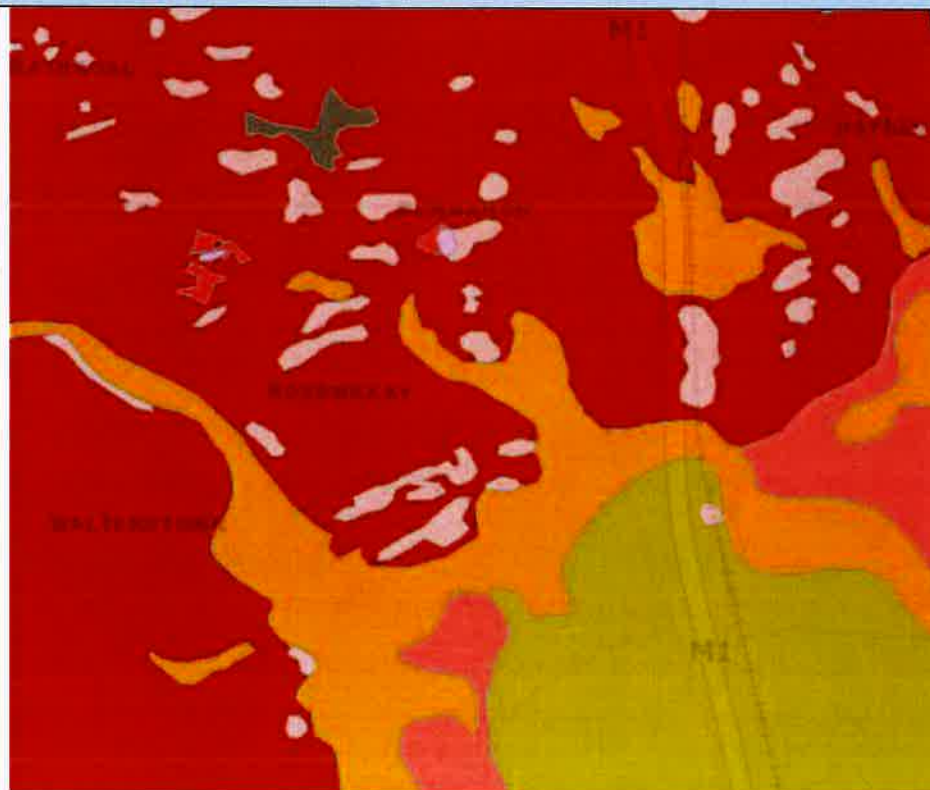
The aquifer under the site is a *Poor Aquifer - Bedrock* which is *Generally Unproductive* except for *Local Zones*

Map 3 – Vulnerability Map



The GSI data suggests the area is High terms of Vulnerability.

Map 4 - Subsoils Map



The data from Teagasc describe the subsoils in this area as Fine loamy over shale or slate bedrock

**SOAKAWAY TESTING TO BRE DIGEST 365
SITE AT THE KNOCKBRIDGE, DUNDALK, CO LOUTH
COMPLETED BY
TRAYNOR ENVIRONMENTAL LTD**

APPENDIX D – PI INSURANCE DETAILS

PROFESSIONAL INDEMNITY INSURANCE

We confirm the following details relating to our client's Professional Indemnity Insurance:

Insured: Traynor Environmental Ltd

Address: Belturbet Business Park
Creeny
Belturbet
Co. Cavan

Lead Insurer(s): Axia Specialty Europe SE

Period of Insurance: 12 July 2018 to 11 July 2019

Policy Number: 1711/02265

Limit of Indemnity: An amount which our Insured consider to be commensurate with their responsibilities arising from the overall conduct of their business

Signed:



**Carl Evans
Partner
Group Chief Executive - Professional Risks**

Date: 25 July 2018

The policy is subject to the insuring agreements, exceptions, exclusions, limitations, conditions and declarations contained therein. The above is accurate at the date of signature. No obligation is imposed herein on the signatory to advise of any alteration.

Professional Risks is a division of Griffiths & Armour, a partnership which is authorised and regulated by the Financial Conduct Authority in the United Kingdom

Declares - PI Insurance



Appendix No. 16

European Communities (Welfare of Farmed Animals) Regulations 2010 – S.I. 311 of 2010



STATUTORY INSTRUMENTS.

S.I. No. 311 of 2010

EUROPEAN COMMUNITIES (WELFARE OF FARMED ANIMALS)
REGULATIONS 2010

(Prn. A10/0932)

S.I. No. 311 of 2010

EUROPEAN COMMUNITIES (WELFARE OF FARMED ANIMALS)
REGULATIONS 2010

ARRANGEMENT OF REGULATIONS

Part 1

PRELIMINARY & GENERAL

1. Citation
2. Interpretation
3. Codes of practice

Part 2

ANIMAL WELFARE GENERALLY

4. Scope
5. Obligation to ensure welfare of an animal

Part 3

WELFARE OF LAYING HENS

6. Application of Part 3
7. General conditions for keeping laying hens
8. Free range or barn systems
9. Un-enriched cage systems
10. Enriched cage systems
11. Register

Part 4

WELFARE OF CHICKENS KEPT FOR MEAT PRODUCTION

12. Application of Part 4
13. General conditions for keeping chickens meant for meat production
14. Training

Part 5

WELFARE OF CALVES AND PIGS

15. Application of Part 5
16. Accommodation for calves and pigs
17. Accommodation for calves
18. Accommodation for pigs
19. Accommodation for sows and gilts after service
20. Use of concrete slatted floors
21. Restrictions on certain procedures
22. Import of calves or pigs

Part 6

SLAUGHTER OF ANIMALS

23. Slaughter of an animal
24. General requirements for slaughterhouses
25. Other requirements for slaughterhouses
26. Requirements for slaughter or killing other than in slaughterhouses
27. Disease control, fur animals, surplus chicks
28. Emergency and humane killing and slaughtering
29. Import of meat

Part 7

AUTHORISED OFFICERS

30. Appointment of authorised officer
31. Functions of authorised officer
32. Search warrant

Part 8

WELFARE NOTICE AND EMERGENCY MEASURES

33. Welfare notice
34. Service of welfare notice
35. Appeal against welfare notice

4 [311]

36. Power to seize and dispose of an animal

37. Emergency measures

Part 9

FINAL PROVISIONS

38. Obstruction, etc

39. Forgery

40. Evidence on certificate

41. Offences

42. Revocation and savers

Schedule 1

CONDITIONS UNDER WHICH AN ANIMAL SHOULD BE KEPT

Schedule 2

CONDITIONS UNDER WHICH LAYING HENS SHOULD BE KEPT

Schedule 3

CONDITIONS APPLICABLE TO PREMISES WHERE CHICKENS ARE KEPT FOR MEAT
PRODUCTION

Schedule 4

CONDITIONS UNDER WHICH CALVES AND PIGS SHOULD BE KEPT

Schedule 5

CONDITIONS RELATING TO ANIMALS TO BE SLAUGHTERED OR KILLED

S.I. No. 311 of 2010

EUROPEAN COMMUNITIES (WELFARE OF FARMED ANIMALS)
REGULATIONS 2010

I, BRENDAN SMITH, Minister for Agriculture, Fisheries and Food, in exercise of the powers conferred on me by section 3 of the European Communities Act 1972 (No. 27 of 1972) and for the purpose of giving effect to Council Directive No. 93/119/EEC of 22 December 1993¹, Council Directive 98/58/EC of 20 July 1998², Council Directive No. 1999/74/EC of 19 July 1999³ and Commission Directive 2002/4/EC of 30 January 2002⁴, Council Directive No 2007/43/EC of 28 June 2007⁵, Council Directive No. 2008/119/EC of 18 December 2008⁶ and Council Directive No. 2008/120/EC of 18 December 2008⁷, hereby make the following regulations-

Part 1

PRELIMINARY AND GENERAL

Citation

1. These Regulations may be cited as the European Communities (Welfare of farmed animals) Regulations 2010 and come into operation on 30 June 2010.

Interpretation

2. (1) In these Regulations—

“animal” means an animal (including fish, reptiles or amphibians) bred or kept for the production of food, wool, skin or fur or for other farming purposes;

“authorised officer” means-

- (a) an authorised officer within the meaning of section 17A (inserted by the Diseases of Animals (Amendment) Act 2001 (No. 3 of 2001)) of the Diseases of Animals Act 1966 (No. 6 of 1966),
- (b) an authorised person or inspector within the meaning of the Protection of Animals Kept for Farming Purposes Act 1984 (No. 13 of 1984),
- (c) an authorised officer within the meaning of the European Communities (Food and Feed Hygiene) Regulations 2009 (S.I. No. 432 of 2009),

¹O.J. No. L 340 of 31.12.1993, p. 21.

²O.J. No. L 221 of 8.8.1998, p. 23.

³O.J. No. L 203 of 3.8.1999, p. 53.

⁴O.J. No. L 30 of 31.1.2002, p.44.

⁵O.J. No. L182 of 12.7.2007 p. 19

⁶O.J. No. L010 of 15.1.2009 p. 7

⁷O.J. No. L047 of 18.2.2009 p. 5

*Notice of the making of this Statutory Instrument was published in
“Iris Oifigiúil” of 2nd July, 2010.*

6 [311]

- (d) a member of the Garda Síochána,
- (e) an officer of Customs and Excise, or
- (f) a person appointed under Regulation 30;

“calf” means a bovine animal less than six months old;

“Calves Directive” means Council Directive No.2008/119/EC of 18 December 2008;

“Chicken welfare Directive” means Council Directive No 2007/43/EC of 28 June 2007;

“General Welfare Directive” means Council Directive No. 98/58/EC of 20 July 1998;

“Laying Hens Directive” means Council Directive No. 1999/74/EC of 19 July 1999 and Commission Directive 2002/4/EC of 30 January 2002;

“Minister” means Minister for Agriculture, Fisheries and Food;

“Pigs Directive” means Council Directive No. 2008/120/EC of 18 December 2008;

“premises” includes land, with or without buildings;

“registered veterinary practitioner” has the same meaning as in the Veterinary Practice Act 2005 (No. 22 of 2005);

“Slaughter Directive” means Council Directive No. 93/119/EEC of 22 December 1993.

(2) A word or expression that is used in these Regulations and is also used in the Chicken welfare Directive, the Calves Directive, the General Welfare Directive, the Laying Hens Directive, the Pigs Directive or the Slaughter Directive has, unless the contrary intention appears, the same meaning in these Regulations as it has in the Directive in which it occurs.

Codes of practice

3. (1) The Minister may-

- (a) publish or cause to be published codes of practice, or
- (b) adopt a code of practice published by another person (whether within the State or otherwise),

for the purpose of providing practical guidance relating to any of the purposes of these Regulations.

(2) The Minister may amend or replace a code of practice referred to in paragraph (1).

(3) A person who has in his or her possession or under his or her control an animal of a particular class or description shall have due regard to a code of practice (if any) that relates to an animal of that class or description or kept under similar types of management or husbandry practices, published or adopted in accordance with paragraph (1).

(4) If a person fails to comply with a code of practice, that person is not by reason only of that failure liable in any civil or criminal proceedings but the code of practice is admissible in evidence in proceedings and a court may take account of any failure to act in accordance with it in deciding any question in the proceedings.

Part 2

ANIMAL WELFARE GENERALLY

Scope

4. (1) This Part does not apply to—

- (a) an animal living in the wild,
- (b) subject to paragraph (2), an animal used in competitions, shows, cultural or sporting events or activities while being so used,
- (c) an experimental or laboratory animal that is the subject of a licence issued under the Cruelty to Animals Act 1876, or
- (d) an invertebrate animal.

(2) Notwithstanding paragraph (1)(b), these Regulations apply to an animal of a kind or species that is normally bred or kept for the production of food, wool, skin, fur or feathers or for use in, or for the purpose of, the farming of land or of animal husbandry and, in particular, includes animals of the bovine, ovine, porcine and caprine species, equidae and poultry.

Obligation to ensure welfare of an animal

5. (1) A person shall take all necessary steps to ensure the welfare of an animal in his or her possession, in his or her control or under his or her care and to ensure that the animal is not caused unnecessary pain, suffering or injury.

(2) A person shall ensure that the conditions under which an animal (other than fish, a reptile or an amphibian) is bred or kept, having regard to its species and degree of development, adaptation and domestication, and to its physiological and ethological needs in accordance with established experience and scientific knowledge, comply with Schedule 1.

Part 3

WELFARE OF LAYING HENS

Application of Part 3

6. (1) This Part applies to premises where there are 350 or more laying hens.

(2) This part is without prejudice to the generality of Regulation 5.

General conditions for keeping laying hens

7. A person shall not have in his or her possession or under his or her control or cause or permit another person to have in his or her possession or under his or her control a laying hen unless the hen is kept and reared in conditions that comply with Schedule 2.

Free-range or barn systems

8. (1) Subject to paragraph (3), the owner or person in charge of a barn or free-range system used to keep laying hens shall not confine, or cause or permit another person to keep or confine a laying hen unless the premises is equipped—

- (a) with either linear feeders providing at least 10 cm per hen or circular feeders providing at least 4 cm per hen,
- (b) with either continuous drinking troughs providing at least 2.5 cm per hen or circular troughs providing at least 1 cm per hen,
- (c) without prejudice to paragraph (4), with at least one nest for every seven hens, and
- (d) with, subject to paragraph (5), adequate perches without sharp edges, mounted other than above litter, that provide space of at least 15 cm in length per hen.

(2) A person shall not provide or use nipple drinkers or cups in a barn or free-range system unless, without prejudice to paragraph (3), there is at least one nipple drinker or cup for every ten hens.

(3) A person shall not keep a laying hen in a barn or free-range system where drinking points are plumbed in to a water supply unless, at least two nipple drinkers or cups are within reach of each hen.

(4) A person shall not keep a laying hen in a barn or free-range system in group nests unless there is a minimum of 1 square metre of nest space available for every group of a maximum of 120 hens.

(5) A person shall not keep a laying hen in a barn or free-range system unless the horizontal distance between perches is at least 30 cm and the distance between a perch and a wall is at least 20 cm.

(6) A person shall not keep a laying hen in a barn or free-range system unless a littered area, that covers at least one third of the ground surface, of at least 250 square centimetres per hen is provided.

(7) A person shall not keep a laying hen in a barn or free-range system unless the floor is constructed in a manner that adequately supports each forward facing claw of the laying hen.

(8) A person shall not keep a laying hen in a barn or free-range system if-

- (a) the laying hen has access to more than four different levels,
- (b) the headroom between different levels is less than 45 centimetres,
- (c) the hen does not have equal access to drinking and feeding facilities, or
- (d) droppings from one level may fall on another level.

(9) A person shall not keep a laying hen in a barn or free-range system if the laying hens have access to open runs unless-

- (a) there are several popholes, at least 35 centimetres high and 40 centimetres wide and extending along the whole length of the building, giving access to the outer area,
- (b) a total opening of 2 metres is available for each group of 1,000 laying hens,
- (c) open runs are of an area appropriate to the stocking density and nature of the ground in order to prevent contamination, and
- (d) the stocking density does not exceed 9 laying hens per square metre usable area.

(10) A person shall, if laying hens have access to open runs, ensure that the runs are equipped—

- (a) with appropriate shelter to protect the laying hens from predators and weather conditions, and
- (b) where necessary, with appropriate drinking troughs.

Un-enriched cage systems

9. (1) Subject to paragraphs (2) and (3), the owner or person in charge of an un-enriched cage system shall not keep a laying hen in a cage unless-

- (a) the cage has at least 550 unrestricted square centimetres of area (measured in a horizontal plane and not including non-waste deflection plates that may restrict the available area) available for each laying hen in the cage,

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- (b) a feed trough, to which each laying hen has unrestricted access, the length of which measures at least 10 centimetres multiplied by the number of laying hens in the cage, is present in the cage,
- (c) subject to subparagraph (d), a drinking channel, to which each laying hen has unrestricted access, the length of which measures at least 10 centimetres multiplied by the number of laying hens in the cage, is present in the cage,
- (d) where drinking points are plumbed in, at least two nipple drinkers or cups are within reach of the cage,
- (e) the cage is at least 40 centimetres high over at least 65 per cent of its floor area and not less than 35 centimetres at any point,
- (f) the floor of the cage is constructed in a manner that adequately supports each forward facing claw of each hen,
- (g) the slope of the floor of the cage does not exceed 14 per cent or 8 degrees, and
- (h) the cage is fitted with suitable claw-shortening devices.

(2) A person shall not keep or rear laying hens in an un-enriched cage system built, renovated or brought into service for the first time after 1 January 2003.

(3) A person shall not keep or rear laying hens in an un-enriched cage system after 1 January 2012.

Enriched cage systems

10. (1) The owner or person in charge of an enriched cage system shall not keep a laying hen in an enriched cage system unless-

- (a) each cage has a total area of at least 2000 square centimetres,
- (b) at least 750 square centimetres, of which a minimum of 600 square centimetres is usable area, is available for each laying hen in each cage,
- (c) the height of each cage other than above the usable area is at least 20 centimetres at every point,
- (d) there is a nest in each cage,
- (e) adequate litter is available in each cage to permit pecking and scratching by each laying hen,
- (f) appropriate perches, that measure, in length, at least 15 centimetres multiplied by the number of laying hens in each cage, are present in the cage,

- (g) a feed trough, to which each laying hen has unrestricted access, that measures at least 12 centimetres multiplied by the number of laying hens in the cage, is present in each cage,
- (h) subject to subparagraph (i), a drinking system, to which each laying hen has unrestricted access, appropriate to the number of laying hens is provided in each cage,
- (i) if drinking points are plumbed in, at least two nipple drinkers or two cups are within reach of each laying hen,
- (j) there is a minimum aisle width of at least 90 centimetres between tiers of cages,
- (k) there is a minimum distance of 35 centimetres between the floor of the building and the bottom tier of cages, and
- (l) each cage is fitted with suitable claw-shortening devices.

Register

11. (1) The Minister shall cause to be established and maintained a register ("the Register") of all persons owning, keeping, rearing or having under their control laying hens.

(2) A person shall not own or have in his or her charge or under his or her control a laying hen if he or she is not entered in the Register in relation to the premises where the laying hen is located.

(3) An application under this Regulation shall be in writing, be in a form and include any information that the Minister may require.

(4) The Minister shall not consider an application for registration if the application does not contain all information sought by the Minister.

(5) The Minister may enter a person's name and particulars on the register, attach conditions to registration, vary a condition, refuse an application or revoke a registration.

(6) Without prejudice to the generality of paragraph (5), the Minister may refuse to enter a person's name on the Register, or may revoke registration if—

- (a) the application does not comply with this Regulation,
- (b) in the opinion of the Minister, the application contains a statement that is false or misleading in a material respect,
- (c) the premises to which the application or registration relates does not comply, in the opinion of the Minister, with these Regulations,
- (d) the person is, in the opinion of the Minister, not a fit person to keep laying hens,

- (e) he or she is satisfied that these Regulations have not been or will not be complied with,
- (f) the applicant or registered person has committed an offence, whether he or she has been convicted or not, under any enactment relating to animals, animal health, animal welfare or public health,
- (g) the applicant or registered person has failed to comply with a condition of registration,
- (h) a registered person has ceased to keep or rear laying hens at the premises to which registration relates,
- (i) a person is disqualified by a Court of competent jurisdiction under any enactment from keeping, dealing in or having charge or control of, directly or indirectly, laying hens, or
- (j) it is necessary, in the opinion of the Minister—
 - (i) to prevent the risk or spread of disease,
 - (ii) to eradicate disease, or
 - (iii) is necessary, incidental, supplementary or consequential for the purposes of giving effect to an act of the institutions of the European Union.

(7) Without prejudice to the generality of paragraph (5), the Minister shall refuse an application or revoke registration in accordance with paragraph (10) if the applicant or registered person has been convicted, on indictment, of an offence relating to an animal, animal health, animal welfare or public health.

(8) Other than in the case of refusal or revocation under paragraph (7) or (9), if the Minister proposes to revoke a registration, or to refuse an application, he or she shall—

- (a) notify applicant or registered person in writing of the proposal and of the reasons for the proposal, and that he or she may make representations to the Minister in relation to the proposal within 14 days of the notification,
- (b) consider a representation made before deciding whether to proceed with, modify or annul the proposal, and
- (c) notify the applicant or registered person of the decision and the reasons for the decision.

(9) If the Minister is of the opinion that it is necessary to prevent the risk of disease or to give effect to an act of an institution of the European Union, he or she may refuse an application or revoke a registration in accordance with paragraph (10).

(10) If the Minister refuses an application or revokes a registration in accordance with this paragraph, he or she shall—

- (a) notify the applicant or registered person in writing of the decision and the reasons for the decision, and that he or she may make representations to the Minister in relation to the decision within 14 days of the date of the notification,
- (b) consider a representation made, and
- (c) confirm, modify or annul the decision and notify the applicant or registered person of the decision and the reasons for the decision.

(11) A person to whom a registration is granted shall make such returns to the Minister as and when, and in a form that, the Minister may direct.

(12) A person to whom registration is granted ceases to be registered upon he or she informing the Minister, in writing that he or she has ceased to keep laying hens.

(13) The Minister may establish and maintain the register in a form that is not legible if it is capable of being converted into a legible form.

(14) If a person entered in the Register dies the Minister shall, without prejudice to paragraph (7), on the application of the personal representative of such person enter in the Register the name of the personal representative in place of that person.

(15) A person who, on the coming into operation of this Regulation, is registered under Regulation 10 of the Regulations revoked by Regulation 42 (1)(a) is considered to be registered under this Regulation and may be dealt with as if registered under this Regulation.

(16) On the coming into operation of these Regulations, an application for registration under Regulation 10 of the Regulations revoked by Regulation 42(1)(a) is considered to be an application for registration under this Regulation and shall be determined in accordance with this Regulation.

Part 4

WELFARE OF CHICKENS KEPT FOR MEAT PRODUCTION

Application of Part 4

12. (1) This Part applies to premises where there are 500 or more chickens kept for meat production but does not apply to premises—

- (a) with breeding stock only,
- (b) used solely as a hatchery,
- (c) used solely in connection with extensive indoor and free range chickens, or

(d) organically reared chickens.

(2) This part is without prejudice to the generality of Regulation 5.

General conditions for keeping chickens meant for meat production

13. A person shall not have in his or her possession or under his or her control or cause or permit another person to have in his or her possession or under his or her control a chicken meant for meat production—

(a) unless the chicken is kept and reared in conditions that comply with Part 1 of Schedule 3, and

(b) the stocking density on a premises or on an individual building on a premises—

(i) does not exceed 33 kilogrammes per square metre,

(ii) in the case of a premises that conforms to Parts 1 and 2 of Schedule 3, does not exceed 39 kilogrammes per square metre, or

(iii) in the case of a premises that conforms to Parts 1, 2 and 3 of Schedule 3, does not exceed 42 kilogrammes per square metre.

Training

14. (1) The Minister may approve appropriate training courses for the purpose of ensuring that a person has adequate training in the proper husbandry of chickens kept for meat production and, in particular, the matters listed in Part 4 of Schedule 3

(2) A person providing a course shall furnish—

(a) a person who has successfully completed a training course with a certificate (“certificate in chicken welfare”), and

(b) the Minister with the names and addresses of persons who have successfully completed the course.

(3) Notwithstanding paragraph (2)(a), the Minister may require a person to undergo additional training, if the Minister considers it necessary.

(4) A person shall not purport to act as the owner or keeper of chickens kept for meat production unless he or she has been issued with a certificate in chicken welfare.

(5) The owner or keeper of chickens kept for meat production shall provide, to persons engaged in rearing, handling or transport of the chickens, adequate training regarding the welfare of the chickens, and record the details of that training.

(6) Paragraph (4) does not apply to a person who, immediately before the making of these Regulations, was the keeper or owner of chickens kept for meat

production for a period of not less than five years (the proof of which rests with him or her).

Part 5

WELFARE OF CALVES AND PIGS

Application of Part 5

15. (1) This Part applies to—

- (a) calves confined for rearing or fattening, and
- (b) pigs confined for breeding, rearing or fattening.

(2) Regulations 19(1), (2), (3) and (4) and 20 apply to-

- (a) a premises built, rebuilt or used, for the first time for breeding, rearing or fattening pigs from 1 January 2003, and
- (b) all premises used for breeding, rearing or fattening pigs from 1 January 2013.

(3) This part is without prejudice to the generality of Regulation 5.

Accommodation for calves and pigs

16. (1) A person shall not have in his or her possession or under his or her control or cause or permit another person to have in his or her possession or under his or her control a calf or pig unless the conditions for keeping, rearing and fattening the calf or pig, as the case may be, comply with Part 1 of Schedule 4.

(2) A person shall not have in his or her possession or under his or her control or cause or permit another person to have in his or her possession or under his or her control a calf unless the conditions for keeping, rearing and fattening the calf comply with Part 2 of Schedule 4.

(3) A person shall not have in his or her possession or under his or her control or cause or permit another person to have in his or her possession or under his or her control a pig unless the conditions for keeping, rearing and fattening the pig comply with Part 3 of Schedule 4.

Accommodation for calves

17. (1) Subject to paragraph (3), the owner or person in charge of a premises built, rebuilt or brought into use on or after 1 January 1998 and used for rearing or fattening calves shall not confine, or cause or permit another person to confine a calf-

- (a) over eight weeks of age in an individual pen unless a registered veterinary practitioner certifies that the health or behaviour of the calf requires that it be isolated to receive treatment,

- (b) unless the pen in which the calf is confined is of a width at least equal to the height of the calf at the withers and of a length at least 10% greater than the body length of the calf, measured from the tip of the nose to the caudal end of the pin bone (tuber ischia).

(2) A person shall not keep, or cause or permit another person to keep, a calf in an individual pen with solid walls but a pen shall have perforated walls that ensure that a calf confined therein has direct visual and tactile contact with other calves unless the person is in possession of a certificate from a registered veterinary practitioner that states that the calf, due to health or behaviour, requires to be individually isolated to receive treatment.

(3) A person shall not keep calves in a group, or cause or permit another person to keep calves in a group, unless the unobstructed space available for each calf is at least equal to—

- (a) 1.5 square metres for each calf with a live weight of less than 150 kilogrammes,
- (b) 1.7 square metres for each calf with a live weight of 150 kilogrammes or more but less than 220 kilogrammes, and
- (c) 1.8 square metres for each calf with a live weight of 220 kilogrammes or over.

(4) A person shall not use, or cause or permit another person to use, premises built, rebuilt or brought into operation before 1 January 1998 for rearing or fattening calves unless the premises complies with paragraphs (1), (2) and (3).

(5) This Regulation does not apply to—

- (a) a calf kept with its mother for suckling, or
- (b) a premises with fewer than six calves.

Accommodation for pigs

18. (1) The owner or person in charge of a premises used for breeding, rearing or fattening pigs shall not confine, or cause or permit another person to confine, a pig unless the floor area available to each weaner or rearing pig (other than sows and gilts after service) reared in a group is at least—

- (a) 0.15 square metres for each pig of an average weight of 10 kilogrammes or less
- (b) 0.20 square metres for each pig of an average weight of between 10 kilogrammes and less than or equal to 20 kilogrammes,
- (c) 0.30 square metres for each pig of an average weight of greater than 20 kilogrammes and less than or equal to 30 kilogrammes,

- (d) 0.40 square metres for each pig of an average weight of greater than 30 kilogrammes and less than or equal to 50 kilogrammes,
- (e) 0.55 square metres for each pig of an average weight of greater than 50 kilogrammes and less than or equal to 85 kilogrammes,
- (f) 0.65 square metres for each pig of an average weight of greater than 85 kilogrammes and less than or equal to 110 kilogrammes,
- (g) 1.00 square metre for each pig of an average weight of greater than 110 kilogrammes.

(2) A person shall not keep a pig or cause or permit another person to keep a pig in a building or part of a building if there are continuous noise levels, equal to or greater than 85dBA in the building or part thereof where pigs are kept.

(3) A person shall not keep a pig, or cause or permit another person to keep a pig unless the pig is kept where there is a light intensity of 40 lux or more for a continuous period of at least 8 hours in any 24 hour period.

Accommodation for sows and for gilts after service

19. (1) Subject to paragraphs (2) and (3), the owner or person in charge of a premises used for breeding, rearing or fattening pigs shall not confine, or cause or permit another person to confine, either a sow or a gilt after service unless the floor area available to each sow or gilt after service reared in a group is at least—

- (a) a minimum of 2.50 square metres for each sow in a group of sows or gilts if there are fewer than 6 pigs in the group,
- (b) a minimum of 2.25 square metres for each sow in a group of sows or gilts if there are more than 5 but fewer than 40 pigs in the group,
- (c) a minimum of 2.025 square metres for each sow in a group of sows or gilts if there are 40 or more pigs in the group,
- (d) a minimum of 1.81 square metres for each gilt after service if there are fewer than 6 pigs in the group,
- (e) a minimum of 1.64 square metres for each gilt after service if there are more than 5 but fewer than 40 pigs in the group, or
- (f) a minimum of 1.48 square metres for each gilt after service if there are 40 pigs or more in the group.

(2) A minimum floor area of at least—

- (a) 1.3 square metres for each pregnant sow, or
- (b) 0.95 square metres for each gilt after service,

shall comprise a continuous solid floor and no more than 15% of the floor area referred to in this paragraph shall consist of openings designed for drainage.

(3) Subject to paragraph (4), the owner or person in charge of a premises used for breeding, rearing or fattening pigs shall not confine, or cause or permit another person to confine, either a sow or a gilt in the period commencing 28 days after service and ending 7 days before the expected date of farrowing other than in—

(a) a group in a pen the sides of which are greater than 2.8 metres in length, or

(b) a group in a pen the sides of which are greater than 2.4 metres in length if there are no more than five sows or gilts in the group.

(4) A person may keep a sow or gilt to which paragraph (3) refers in an individual pen during the period mentioned in that paragraph if—

(a) there are no more than 9 sows on the premises, and

(b) the sow or gilt may turn easily in the pen

(5) A person shall not tether or cause or permit another person to tether a sow or gilt.

(6) A person shall not have in his or her possession or under his or her control a sow or gilt that has been tethered in contravention of paragraph (5).

Use of concrete slatted floors

20. The owner or person in charge of a premises used for breeding, rearing or fattening pigs shall not keep, or cause or permit another person to keep, a pig on a concrete slatted floor unless—

(a) the maximum width of each opening is no more than—

(i) 11 millimetres in any floor where a piglet is kept,

(ii) 14 millimetres in any floor where a weaner is kept,

(iii) 18 millimetres in any floor where a rearing pig is kept, or

(iv) 20 millimetres in any floor where either a sow or a gilt after service is kept,

and

(b) the minimum width of each slat is at least—

(i) 50 millimetres in any floor where a piglet or weaner is kept, or

(ii) 80 millimetres in any floor where a rearing pig, a sow or a gilt after service is kept.

Restrictions on certain procedures

21. (1) Subject to paragraph (2), a person shall not carry out or cause or permit another person to carry out a procedure (other than for therapeutic or diagnostic purposes) on a pig that is likely to result in damage to, or loss of a sensitive part of the body or the alteration of the bone structure of, a pig other than—

- (a) non-routine, uniform reduction of corner teeth of piglets, by grinding or clipping, no later than 7 days after birth, leaving an intact smooth surface where injury has occurred to a sow's teats or to the tails or ears of another pig,
 - (b) reduction in length of boars tusks where necessary to prevent injury to other animals or for safety reasons,
 - (c) non-routine docking of part of the tail where injury has occurred to the tail or ear of a pig,
 - (d) castration of male pigs by means that do not involve tearing tissue, or
 - (e) nose ringing when the pig is kept in an outdoor husbandry system.
- (2) (a) Subject to paragraph (3), a procedure outlined in paragraph (1) may only be carried out under hygienic conditions by a registered veterinary practitioner or a person who has competence relating to, and experience of, the procedure.
- (b) A person shall only carry out a procedure specified in paragraph (1) (a) or (c) if the environment, stocking density or the management system in which a pig is reared would not, in the opinion of a registered veterinary practitioner who is familiar with the premises, and has been consulted in a professional capacity regarding the necessity of carrying out the procedure, facilitate injury to the pig.

(3) A person, other than a registered veterinary practitioner, shall not castrate or dock the tail of a pig older than 7 days.

(4) A registered veterinary practitioner shall not castrate or dock the tail of a pig older than 7 days unless the pig is under anaesthetic and additional prolonged analgesia administered by that registered veterinary practitioner.

Import of calves or pigs

22. A person shall not import—

- (a) a calf, or
- (b) a pig,

from a country that is not a member state of the European Union unless the calf or pig is accompanied by a certificate, issued by a competent authority in

that country, certifying that the animal has received treatment at least equal to the treatment provided for in these Regulations.

Part 6

SLAUGHTER OF ANIMALS

Slaughter of an animal

23. (1) A person shall take all necessary care during movement, lairaging, restraint, stunning, slaughter or killing of an animal to ensure that the animal is spared avoidable excitement, pain or suffering.

(2) This part is without prejudice to the generality of Regulation 5.

General requirements for slaughterhouses

24. (1) Subject to paragraph (2), the owner or person in charge of a slaughterhouse shall ensure that-

(a) the construction, facilities and equipment of the slaughterhouse, and its operation, are such as to spare an animal any avoidable excitement, pain or suffering, and

(b) a soliped, ruminant, pig, rabbit or poultry brought into the slaughterhouse is—

(i) moved and if necessary lairaged in accordance with Part 1 of Schedule 5,

(ii) restrained in accordance with Part 2 of Schedule 5,

(iii) stunned before slaughter or killed instantaneously in accordance with Part 3 of Schedule 5,

(iv) bled in accordance with Part 4 of Schedule 5.

(2) Subparagraph (1)(b)(iii) does not apply in the case of an animal subject to particular methods of slaughter required by certain religious rites, if the religious authority on whose behalf slaughter is carried out is competent to apply and monitor the special provisions which apply to slaughter according to the religious rites of that religion.

(3) A religious authority to which paragraph (2) applies shall operate under the responsibility of a registered veterinary practitioner.

Other requirements for slaughterhouses

25. (1) The owner or person in charge of a slaughterhouse or a person engaged in the slaughter of an animal shall ensure that-

(a) instruments, restraint and other equipment and installations used for stunning or killing are designed, constructed, maintained and used in such a way as to achieve rapid and effective stunning or killing,

- (b) suitable spare equipment and instruments are kept at the place of slaughter for emergency use and that spare equipment and instruments are properly maintained and are inspected at least once a month,
- (c) subject to paragraph (2), a person shall not move, lair, restrain, stun, slaughter or kill an animal unless that person has the knowledge and skill necessary to perform the tasks humanely and efficiently, and
- (d) a person carrying out the slaughter of an animal takes all necessary care to ensure that the animal is rendered unconscious, killed or slaughtered in a manner or by a means that does not cause unnecessary, avoidable or excessive pain or suffering to the animal.

(2) If an authorised officer is of the opinion that a person employed for slaughtering or killing an animal does not possess the necessary skill, ability and professional knowledge, the owner or the person in charge of the slaughterhouse or other premises shall, in accordance with the directions of the authorised officer and subject to any time limits that he or she may specify, arrange a staff training programme enabling such person to obtain the required training in order to satisfy the standards appropriate to that type of employment.

(3) A person shall comply with a direction under paragraph (2).

Requirements for slaughter or killing other than at a slaughterhouse

26. A person shall not kill or slaughter or cause or permit another person to kill or slaughter a soliped, ruminant, pig, rabbit or poultry, which is to be killed or slaughtered other than at a slaughterhouse unless Regulation 24(1)(b)(ii), (iii) and (iv) are complied with.

Disease control, fur animal, surplus chicks

27. (1) A person shall not slaughter or kill or permit a person to slaughter or kill a soliped, ruminant, pig, rabbit or poultry, if it is to be slaughtered or killed for the purpose of disease control, other than in accordance with Part 5 of Schedule 5.

(2) A person shall not slaughter or kill or permit a person to slaughter or kill an animal farmed for its fur other than in accordance with Part 6 of Schedule 5.

(3) A person shall not slaughter or kill or permit a person to slaughter or kill surplus day-old chicks, and embryos in hatchery waste unless they are killed as rapidly as possible in accordance with Part 7 of Schedule 5.

Emergency and humane killing and slaughtering

28. (1) Regulations 25 and 26 do not apply in the case of an animal which has to be killed immediately for emergency reasons.

(2) Subject to paragraph (3), the owner or person in charge of a seriously injured or diseased animal shall ensure that it is slaughtered or killed immediately to avoid unnecessary suffering, unless a registered veterinary practitioner

considers, after examining the animal, that it is not necessary to slaughter or kill the animal.

(3) A registered veterinary practitioner may authorise the transport of an injured or diseased animal for the purpose of slaughter or killing provided the practitioner is of the opinion that transport does not entail further unnecessary suffering for the animal.

Import of meat

29. A person shall not import meat obtained from a soliped, ruminant, pig, rabbit or poultry from a third country unless it is accompanied by a veterinary certificate certifying that the animal had been slaughtered or killed under conditions which offer guarantees of humane treatment at least equivalent to that granted to an animal of European Union origin.

Part 7

AUTHORISED OFFICERS

Appointment of authorised officer

30. (1) The Minister may, by instrument in writing, appoint such and so many persons as he or she thinks fit to be authorised officers for the purposes of some or all of these Regulations as may be specified in the instrument.

(2) The manager of a local authority may by instrument in writing, appoint such and so many persons as he or she thinks fit to be authorised officers for the purposes of Part 6 of these Regulations.

(3) The Minister or manager of a local authority may terminate the appointment of an authorised officer appointed by him or her, whether or not the appointment was for a fixed period.

(4) An appointment as an authorised officer ceases-

(a) if it is terminated pursuant to paragraph (3),

(b) if it is for a fixed period, on the expiry of that period, or

(c) if the person appointed is an officer of the Minister or a local authority, upon the person ceasing to be such an officer.

(5) Nothing in paragraph (4) is to be construed so as to prevent the Minister or manager of a local authority from reappointing as an authorised officer a person to whom that paragraph relates.

(6) An officer of the Minister or of a local authority shall furnish an authorised officer appointed under this Regulation with a warrant of his or her appointment as an authorised officer and, when exercising a power conferred on him or her, the officer, an officer of Customs and Excise or a member of the Garda Síochána shall, if requested by a person affected, produce the warrant or evidence that he or she is such an officer or member to the person.

Functions of authorised officer

31. (1) If an authorised officer has reasonable cause to suspect that—

- (a) an animal is present, has been present or may be present on a premises,
- (b) an animal is or has been killed, slaughtered, processed, stored or otherwise dealt with on a premises, or
- (c) a document relating to an animal is present, was present or may be present on a premises,

the authorised officer may enter the premises and he or she may—

- (i) search the premises,
- (ii) stop a person, vehicle, vessel or container,
- (iii) board and search a vehicle, vessel or container,
- (iv) examine an animal, vehicle, vessel, container or other thing that may be used in connection with an animal,
- (v) take, without payment, samples from an animal, feed or other thing or an article, substance or liquid as he or she may reasonably require and carry out or cause to be carried out on a sample such tests, analyses, examinations or inspections as he or she considers necessary or expedient,
- (vi) require the production of a document or thing relating to an animal, feed, vehicle, vessel, container or other thing,
- (vii) retain a document or thing (for so long as is necessary),
- (viii) give a direction to, or request information of, a person regarding an animal, feed, vessel, vehicle, container, premises or other thing as he or she considers necessary,
- (ix) require the name and address of a person and the name and address of any other relevant person including the person to whom an animal or feed, is being delivered or who is causing it to be delivered,
- (x) require of a person the ownership, identity and origin of the animal or feed,
- (xi) make a record whether in writing, by photography or otherwise, or
- (xii) mark or otherwise identify an animal, feed, or a sample taken under subparagraph (v).

- (2) If an authorised officer has reasonable cause to suspect that-
- (a) an offence is being or has been committed under these Regulations,
 - (b) a contravention of an act of the institutions of the European Union relating to animal welfare is being or has been committed, or
 - (c) evidence of an offence or contravention may be, is or has been on a premises-

the authorised officer may, in addition to the powers exercisable by him or her under subsection (1)—

- (i) search a person, where the authorised officer considers it necessary,
- (ii) seize and detain, an animal, carcass, animal product, animal by-product, animal feed, food, vessel, vehicle, container, equipment, machinery or other thing, or
- (iii) dispose of, or require the owner or person in charge of or in possession of an animal, carcass, animal product, animal by-product, animal feed, food or other thing to deal with or dispose of it (or any equipment, machinery, plant or other thing used in connection with, or that may have been in contact with, the animal, carcass, animal product, animal by-product, animal feed or food) in a manner that the authorised officer sees fit.

(3) An authorised officer shall not enter, except with the consent of the occupier, a private dwelling, unless he or she has obtained a search warrant under Regulation 32 other than if he or she has reasonable cause to suspect that before a search warrant could be sought in relation to the dwelling anything to which either paragraph (1) or (2) relates is being or is likely to be destroyed or disposed of.

(4) An authorised officer may use reasonable force, if necessary, in exercise of his or her powers under this Regulation.

(5) An authorised officer, when exercising a power under this Regulation may be accompanied by other persons and may take with him or her, or those persons may take with them, any equipment or materials to assist the officer in the exercise of the power.

(6) An authorised officer is not liable in any proceedings for anything done in the purported exercise of his or her powers under these Regulations if the court is satisfied that the act was done in good faith and that there were reasonable grounds for doing it.

(7) Without prejudice to the generality of paragraph (1), a direction or requirement of an authorised officer may include conditions prohibiting,

restricting or otherwise controlling the use, processing or movement of an animal as may be specified by the authorised officer.

(8) Nothing in this Regulation operates to prejudice any power to search, or to seize or detain property, which may, apart from these Regulations, be exercised by a member of the Garda Síochána or an officer of Customs and Excise.

(9) If a member of the Garda Síochána has reasonable grounds to suspect that a person has committed an offence under these Regulations, the member may without warrant arrest the person.

Search warrant

32. (1) If a judge of the District Court is satisfied by information on oath of an authorised officer that there are reasonable grounds for suspecting-

- (a) that evidence of, or relating to, the commission or intended commission of an offence under these Regulations is to be found on a premises,
- (b) there is or was an animal, feed, equipment or other thing made, used or adapted for use (including manufacture and transport) in connection with an animal or feed, on a premises,
- (c) a document or other record related to a thing to which subparagraph (a) or (b) refers is or may be on the premises,

the judge may issue a search warrant.

(2) A search warrant under this Regulation shall be expressed and operate to authorise a named authorised officer, accompanied by such authorised officers or other persons as the named authorised officer thinks necessary, at any time, within one month from the date of issue of the warrant, on production if so requested of the warrant, to enter (if necessary by use of reasonable force) the premises, vehicle, vessel or aircraft named in the warrant.

(3) If a premises is entered pursuant to a warrant issued under this Regulation, an authorised officer so entering may exercise all or any of the powers conferred on an authorised officer under these Regulations.

Part 8

WELFARE NOTICE AND EMERGENCY MEASURES

Welfare Notice

33. (1) If an authorised officer is of the opinion that—

- (a) an animal is being caused unnecessary pain, suffering or injury,
- (b) an animal is at risk of being caused unnecessary pain, suffering or injury,
- (c) there is a serious risk to the welfare of an animal, herd or flock or

- (d) the conditions under which an animal, herd or flock is being bred or kept contravene these Regulations,

he or she may serve or cause to be served on the owner or keeper of the animal, herd or flock a notice ("welfare notice") stating that opinion and directing that—

- (i) an ill or injured animal be cared for in an appropriate manner,
- (ii) veterinary or other specialist advice be obtained in respect of an ill or injured animal,
- (iii) an animal be supplied with feed appropriate to its age and species and in such quantity as will maintain it in good health,
- (iv) an animal be given access to such a supply of suitable liquid as will enable it to fulfil its fluid intake needs,
- (v) one or more animals be moved to and kept in such place as the officer specifies in the notice,
- (vi) one or more animals be sold, destroyed or otherwise disposed of in such manner and at such place (if any) as the officer may specify in the notice,
- (vii) such alterations or additions be made to the premises, land or place at which the animal is kept, or to the equipment and facilities found there, as the officer may specify in the notice,
- (viii) such alterations be made to the manner in which the animal is kept as the officer may specify in the notice, or
- (ix) such other measures be taken as are necessary to ensure that the animal is kept in a manner that complies with these Regulations.

(2) A welfare notice may specify one or more requirements or refer to one or more animals or species of animal.

(3) A requirement contained in a welfare notice may specify a time limit within which it is to be complied with.

(4) A welfare notice may require the owner or keeper of the animal to choose between two or more of the requirements specified in the welfare notice.

(5) A requirement specified in a welfare notice (in this Regulation referred to as "the earlier welfare notice") may be modified or withdrawn in a further welfare notice and in that event the earlier welfare notice shall have effect subject to such modification or withdrawal.

(6) A person, including a person upon whom a welfare notice is served, shall not deal with an animal to which the welfare notice relates other than in accordance with the terms of the welfare notice.

(7) In the event of an appeal made pursuant to Regulation 35 a person, including the person appealing, shall not deal with an animal to which a welfare notice relates pending the determination of the appeal other than in accordance with such directions as shall be given in writing to the appellant by an authorised officer.

(8) If the terms of a welfare notice are confirmed with or without modification by the judge of the District Court hearing an appeal under Regulation 35, a person including the person who made the appeal shall not deal with an animal to which the welfare notice relates other than in accordance with the welfare notice as confirmed.

(9) Any costs pertaining to action required to comply with a welfare notice will be borne by the owner of the animal to which the welfare notice relates.

Service of Welfare Notice

34. (1) A welfare notice shall, subject to paragraph (2), be addressed to the person concerned by name and may be served on a person—

- (a) by giving it to the person,
- (b) by leaving it at the address at which the person ordinarily resides or, where an address for service has been furnished, at that address,
- (c) by sending it by post in a prepaid registered letter to the address at which the person ordinarily resides or, where an address for service has been furnished, at that address, or
- (d) if the address at which the person ordinarily resides cannot be ascertained by reasonable enquiry and the compliance notice relates to a premises, by delivering it to the premises or by affixing it in a conspicuous position on or near the premises.

(2) If a welfare notice is to be served on a person who is the owner or keeper of an animal and the name of the person cannot be ascertained by reasonable enquiry, it may be addressed to that person by using the words “the owner” or “the keeper”.

(3) A person shall not, at any time within 6 months after a welfare notice is affixed under paragraph (1)(d), remove, damage or deface the notification or compliance notice without lawful authority.

(4) For the purposes of this Regulation, a company within the meaning of the Companies Acts is considered to be ordinarily resident at its registered office and every other body corporate or unincorporated body is considered to be ordinarily resident at its principal office or place of business.

Appeal against welfare notice

35. (1) A person may appeal within 7 days of the service of a welfare notice to the judge of the District Court having jurisdiction in the District Court District where the animal to which the welfare notice relates is situated or to the

judge of the District Court where the person bringing the appeal ordinarily resides or carries on business on the grounds that the notice or any terms thereof are not justified having regard to these Regulations and the objectives of the Calves Directive, Chicken Welfare Directive, General Welfare Directive, Laying Hens Directive or Pigs Directive (hereafter referred to as “an appeal”).

(2) An appeal may be heard at any sitting of the District Court within the appropriate District Court District.

(3) Notice of an appeal shall be served on the Minister at least 2 days prior to the hearing of the appeal by serving it on the Minister or by leaving it at the place and in the manner specified in the welfare notice.

(4) A notice of appeal shall contain a statement of the grounds upon which it is alleged that the notice or any of the terms thereof are not justified.

(5) A copy of the notice of appeal shall be lodged with the District Court Clerk in the manner specified in the welfare notice (if any) at least 2 days prior to the hearing of the appeal.

(6) On the hearing of an appeal under this Regulation a judge of the District Court may confirm, modify or annul a welfare notice.

Power to seize and dispose of an animal

36. (1) Without prejudice to Regulation 31 or 33, if—

- (a) the owner or keeper of an animal fails to comply with the terms of a welfare notice within the time limit specified therein,
- (b) an authorised officer has reasonable grounds for believing that the terms of a welfare notice will not be complied with,
- (c) a welfare notice has been confirmed with or without modification under Regulation 35 and the notice has not been complied with,
- (d) an authorised officer has reasonable grounds for believing that the terms of a welfare notice which has been confirmed with or without modification under Regulation 35 will not be complied with, or
- (e) pending the determination of an appeal made under Regulation 35, an authorised officer has reasonable grounds for believing that—
 - (i) a welfare notice, or
 - (ii) a direction given pursuant to Regulation 31,

has not been or will not be complied with, an authorised officer may at any time seize the animal at such premises as he or she thinks fit.

(2) An authorised officer may sell or dispose of a seized animal or cause it to be sold or be otherwise disposed of or destroyed in such manner and at such

place as the authorised officer considers appropriate in the circumstances of the case.

(3) Any profits arising out of the sale or disposal of an animal under this Regulation shall be paid to the owner of the animal less any expenses incurred in connection with seizure, maintenance, sale, disposal or destruction of the animal.

(4) The costs (including ancillary costs) of seizure, maintenance, sale, disposal or destruction of an animal under Regulation 31, this Regulation or Regulation 37 are, subject to paragraph (3), recoverable-

- (a) by deducting the costs from any sum that is or becomes payable by the Minister to the owner of the animal, or
- (b) as a simple contract debt in any court of competent jurisdiction from the person who was the owner of the animal at the time of seizure, sale, disposal or destruction took place.

Emergency measures

37. Notwithstanding Regulation 33(1), if an authorised officer who is a veterinary practitioner is of the opinion that an animal-

- (a) is suffering a degree of pain, suffering or injury, or
- (b) is seriously at risk of being subject to a degree of pain, suffering or injury,

and that measures should be taken immediately to relieve its pain or suffering or risk of pain or suffering, he or she may seize, sell, dispose of or destroy or may arrange for the sale, disposal or destruction of the animal.

Part 9

FINAL PROVISIONS

Obstruction, etc

38. A person shall not—

- (a) obstruct or impede an authorised officer in the exercise of his or her functions under these Regulations,
- (b) fail, without reasonable cause, to comply with a requirement or direction of an authorised officer under Regulation 31,
- (c) in purporting to give information to an authorised officer for the performance of the officer's functions under Regulation 31—
 - (i) make a statement that he or she knows to be false in a material particular or recklessly make a statement which is false in a material particular, or
 - (ii) fail to disclose a material particular,

- (d) tamper or otherwise interfere with a sample taken under Regulation 31, or
- (e) aid or abet a contravention of these Regulations.

Forgery

39. (1) A person shall not forge or utter knowing it to be forged a direction or requirement of an authorised officer under Regulation 31 (if the direction or requirement is in written form) or a welfare notice or a document purporting to be an extract therefrom (hereafter in this Regulation referred to as “a forged document”).

(2) A person shall not alter with intent to defraud or deceive, or utter knowing it to be so altered a direction or requirement of an authorised officer under Regulation 31 (if the direction or requirement is in written form) or a welfare notice or an extract therefrom (hereafter in this Regulation referred to as “an altered document”).

(3) A person shall not have, without lawful authority, in his or her possession or under his or her control a forged document or an altered document.

Evidence on certificate

40. (1) In proceedings for an offence consisting of a contravention of these Regulations, a certificate purporting to be signed by a person employed at a laboratory named in the certificate stating the capacity in which that person is so employed and stating any one or more of the following, namely—

- (a) that the person received a sample submitted to the laboratory,
- (b) that, for such period as is specified in the certificate, the person had in his or her custody a sample so submitted,
- (c) that the person gave to such other person as is specified in the certificate a sample so submitted, or
- (d) that the person carried out any laboratory examination and the result of that examination,

is, unless the contrary is proved, evidence of the matters stated in the certificate.

(2) A certificate purporting to be signed by an officer of the Minister and to certify that on a specific day or days or during the whole of a specified period—

- (a) a particular person was registered in the register,
- (b) the registration of a particular person had been revoked, or
- (c) that a particular registration was subject to a particular condition or conditions,

is, without proof of the signature of the person purporting to sign the certificate or that he or she is an officer of the Minister, evidence, unless the contrary is shown, of the matters stated in the certificate.

(3) In proceedings for an offence under these Regulations the court may, if it considers that the interests of justice so require, direct that oral evidence of the matters stated in a certificate under paragraph (1) or (2) be given, and the court may for the purpose of receiving oral evidence adjourn the matter.

(4) In proceedings for an offence, evidence of an act of the institutions of the European Community may be given by production of a copy of the act certified by an officer of the Minister to be a copy of the act, and it is not necessary to prove the signature of the officer or that he or she is an officer of the Minister.

(5) Paragraph (4) is in addition to and not in substitution for the European Communities (Judicial Notice and Documentary Evidence) Regulations 1972 (S.I. No. 341 of 1972).

Offences

41. (1) A person who—

- (a) contravenes Regulation 5, 7, 8, 9, 10, 11 (2), (12), 13, 14(4), (5), 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 (1), (3), 26, 27, 28 (2), 29, 33 (6), (7), 34 (3), 38 or 39, or
- (b) fails to comply with a direction or requirement of an authorised officer under Regulation 31 or the requirements of a welfare notice or a welfare notice confirmed with or without modification,

commits an offence and is liable—

- (i) on conviction to a fine not exceeding €5,000 or to a term of imprisonment not exceeding 6 months or both, or
- (ii) on conviction on indictment to a fine not exceeding €100,000 or to a term of imprisonment not exceeding 3 years or both.

(2) A summary offence under these Regulations may be prosecuted by—

- (a) the Minister, or
- (b) in respect of Part 6, the local authority in whose functional area the alleged offence occurs.

(3) If an offence under these Regulations is committed by a body corporate or by a person purporting to act on behalf of a body corporate or on behalf of an unincorporated body of persons and it is proved to have been so committed with the consent or connivance of or to be attributable to any wilful neglect on the part of any other person who, when the offence was committed, was, or purported to act as, a director, manager, secretary or other officer (including a member of any committee of management or other controlling authority) of the

body, such other person as well as the body, or the person so purporting to act on behalf of the body, commits an offence and is liable to be proceeded against and punished as if he or she were guilty of the first-mentioned offence.

(4) If the affairs of a body corporate are managed by its members, paragraph (3) applies in relation to the acts and defaults of a member in connection with the functions of management as if the member were a director or manager of the body corporate.

(5) In a prosecution for an offence under these Regulations, it is not a defence for the defendant to show that Regulation 6 applies to that person in respect of the premises to which the alleged offence relates if he or she is entered in the Register maintained under Regulation 11 unless he or she can show to the satisfaction of the Court that he or she has given notice in accordance with Regulation 11(13) and the Minister is put on notice of this defence no later than 10 days prior to the sitting of the Court where the case is heard.

Revocation and savers

42. (1) The following are revoked—

- (a) the European Communities (Welfare of farmed animals) Regulations 2008 (S.I. No. 14 of 2008),
- (b) the European Communities (Welfare of farmed animals) (Amendment) Regulations 2009 (S.I. No. 32 of 2009), and
- (c) the European Communities (Welfare of farmed animals) (Amendment)(No. 2) Regulations 2009 (S.I. No. 71 of 2009).

(2) A welfare notice within the meaning of the Regulations revoked by paragraph (1) that is in force immediately before the making of these Regulations remains in force and shall be dealt with as if it were a welfare notice.

(3) An appeal under Regulations revoked by paragraph (1) shall be dealt with as if it were an appeal under Regulation 35 of these Regulations.

(4) These Regulations are in addition to and not in substitution for the Protection of animals kept for farming purposes Act 1984 (No. 13 of 1984).

(5) In case of conflict, these Regulations prevail over the Slaughter of Animals Act 1935.

CONDITIONS UNDER WHICH AN ANIMAL SHOULD BE KEPT

Staffing.

1. An animal shall be cared for by a sufficient number of persons possessing the appropriate ability, knowledge and professional competence.

Inspection.

2. An animal kept in a husbandry system in which the welfare of the animal depends on frequent human attention shall be inspected at least once a day and an animal in another system shall be inspected at intervals sufficient to detect and allow for action to avoid any suffering.

3. Adequate lighting (fixed or portable) shall be available to enable an animal to be thoroughly inspected at any time.

4. An animal which appears to be ill or injured must be cared for appropriately without delay and, where the animal does not respond to such care, veterinary advice must be obtained as soon as possible. Where necessary, a sick or injured animal shall be isolated in suitable accommodation with, where appropriate, dry comfortable bedding.

Record keeping.

5. The owner or keeper of an animal shall maintain a record of any medicinal treatment given and of the number of mortalities found at each inspection. Equivalent information being kept for other purposes shall suffice.

6. These records shall be retained for a period of at least 3 years and shall be made available to an authorised officer when requested by him or her.

Freedom of movement.

7. The freedom of movement of an animal, having regard to its species and in accordance with established experience and scientific knowledge, must not be restricted in such a way as to cause it unnecessary suffering or injury. Where an animal is continuously or regularly tethered or confined, it must be given the space appropriate to its physiological and ethological needs in accordance with established experience and scientific knowledge.

Buildings and accommodation.

8. Materials to be used for the construction of accommodation, and in particular for the construction of pens and equipment with which an animal may come into contact, must not be harmful to the animal and must be capable of being thoroughly cleaned and disinfected.

9. Accommodation and fittings for securing an animal shall be constructed and maintained so that there are no sharp edges or protrusions likely to cause injury to the animal.

10. Air circulation, dust levels, temperature, relative air humidity and gas concentrations must be kept within limits which are not harmful to an animal.

11. An animal kept in buildings must not be kept either in permanent darkness or without an appropriate period of rest from artificial lighting. Where the natural light available is insufficient to meet the physiological and ethological needs of an animal appropriate artificial lighting must be provided.

Animals not kept in buildings.

12. An animal not kept in buildings shall where necessary and possible be given protection from adverse weather conditions, predators and risks to its health.

Automatic or mechanical equipment.

13. All automated or mechanical equipment essential for the health and well-being of an animal must be inspected at least once daily. If defects are discovered these must be rectified immediately or, if this is impossible, appropriate steps must be taken to safeguard the health and well-being of the animal. Where the health and well-being of an animal is dependent on an artificial ventilation system, provision must be made for an appropriate backup system to guarantee sufficient air renewal to preserve the health and well-being of the animal in the event of failure of the system and an alarm system must be provided to give warning of breakdown. The alarm system must be tested regularly.

Feed, water and other substances.

14. An animal must be fed a wholesome diet which is appropriate to its age and species and which is fed to the animal in sufficient quantity to maintain it in good health and satisfy its nutritional needs. No animal shall be provided with food or liquid in a manner, nor shall such food or liquid contain any substance, which may cause unnecessary suffering or injury.

15. An animal must have access to feed at intervals appropriate to its physiological needs.

16. An animal must have permanent access to a suitable water supply or be able to satisfy its fluid intake needs by other means.

17. Feeding and watering equipment must be designed, constructed and placed so that contamination of food and water and the harmful effects of competition between animals are minimised.

18. No animal remedy may be administered to an animal other than an animal remedy authorised under and administered in accordance with the European Communities (Animal Remedies) (No. 2) Regulations 2007 (S.I. No. 786 of

2007) and the European Communities (Control of Animal Remedies and their Residues) Regulations 2009 (S.I. No. 183 of 2009) and no other substance may be given to an animal unless it has been demonstrated by scientific studies of animal welfare or established experience that the effect of that substance is not detrimental to the health or welfare of the animal.

Breeding procedures.

19. Natural or artificial breeding or breeding procedures that cause or are likely to cause suffering or injury to an animal must not be practised. This provision does not preclude the use of certain procedures likely to cause minimal or momentary suffering or injury or which might necessitate interventions which would not cause lasting injury.

20. An animal shall not be kept for farming purposes unless it can reasonably be expected, on the basis of its genotype or phenotype, that it can be kept without detrimental effect on its health or welfare.

Schedule 2

Regulation 7.

CONDITIONS UNDER WHICH LAYING HENS SHOULD BE KEPT

1. All laying hens shall be inspected by the owner or person in charge of the premises where they are located at least once each day.

2. The sound level shall be minimised and constant and sudden noises on a premises shall be avoided.

3. Ventilation fans, feeding machinery and other equipment shall be constructed, located, operated and maintained in a manner that causes the least possible noise.

4. Each building used to keep or rear laying hens shall have light levels that are sufficient to allow laying hens to see one another and be seen clearly, to investigate their surroundings visually and show normal levels of activity. Where there is natural light, light apertures shall be placed in a manner that light is distributed evenly within the accommodation.

After the first days of conditioning, lighting shall follow a 24 hour cycle, include an uninterrupted period of darkness of approximately eight hours so that the laying hens may rest and avoid problems such as immuno-depression and ocular anomalies and, otherwise, be such as to prevent health and behavioural problems. An adequate period of twilight, when the light is dimmed and which facilitates the laying hens setting down without disturbance or injury, shall be provided.

5. Without prejudice to paragraph 6, parts of buildings, equipment, machinery or other utensils that may come into contact with laying hens shall be thoroughly cleansed and disinfected at regular intervals.

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6. On each occasion when depopulation is carried out, parts of buildings, equipment, machinery or other utensils that may come into contact with laying hens shall be thoroughly cleansed and disinfected prior to the introduction of a new batch of laying hens.

7. While cages are occupied, they shall be kept satisfactorily clean.

8. Droppings must be removed as often as necessary and dead laying hens must be removed when found or, at a minimum, once a day.

9. Each cage shall be constructed in a manner that prevents a laying hen from escaping.

10. Accommodation that comprises two or more tiers of cages must have devices (or other appropriate measures must be taken) to facilitate inspection of each tier and removal of laying hens without difficulty.

11. A cage door must be designed and be of such dimensions that an adult laying hen may be removed without unnecessary suffering or sustaining injury.

12. Mutilation of a laying hen is, without prejudice to point 19 of the Annex of the General Welfare Directive, prohibited.

13. Beak trimming may only be undertaken by trained and competent personnel and the beaks of laying hens over 9 days old shall not be trimmed.

Regulation 13(a)

Schedule 3

Part 1

CONDITIONS APPLICABLE TO PREMISES WHERE CHICKENS ARE KEPT FOR MEAT PRODUCTION.

1. Drinkers

Drinkers shall be positioned and maintained in such a way that spillage is minimised

2. Feeding

Feed shall be either continuously available or meal fed and must not be withdrawn from chickens more than 12 hours before the expected slaughter time.

3. Litter

All chickens shall have permanent access to litter that is dry and easily crumbled on the surface.

4. Ventilation and heating

Ventilation shall be sufficient to avoid a chicken overheating and shall operate, where necessary, in combination with heating systems to remove excessive moisture.

5. Noise

The sound level shall be minimised. Ventilation fans, feeding machinery or other equipment shall be constructed, placed, operated and maintained in such a way that they cause the least possible amount of noise.

6. Light

All buildings shall have lighting with an intensity of at least 20 lux during the lighting period, measured at birds-eye level and illuminating at least 80% of the usable area. A temporary reduction in lighting may be allowed when necessary following veterinary advice.

Within seven days of chickens being placed in a building until three days before the anticipated time of slaughter, lighting must follow a 24 hour rhythm and include periods of darkness lasting at least 6 hours, with one period of darkness of at least 4 hours, excluding dimming periods.

7. Inspection

All chickens kept for meat production must be inspected at least twice per day. Special attention must be paid to signs indicating a possible reduced level of welfare or health.

Chickens that are seriously injured or show evident signs of health disorder (such as those having difficulty in walking, abnormal accumulation of fluid or severe malformations), and are likely to suffer, shall receive appropriate treatment or be culled immediately.

A registered veterinary practitioner shall be contacted when necessary.

8. Cleaning

Those parts of a building, equipment, machinery or utensils in contact with chickens shall be thoroughly cleaned and disinfected every time final depopulation is carried out and before new birds are introduced into the building.

After final depopulation of a building, all litter must be removed and an adequate amount of clean litter that conforms to paragraph 3 provided.

9. Record keeping

The owner or keeper shall maintain an accurate record in respect of each building in which chickens are kept of—

- (a) the number of chickens introduced,

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- (b) the useable area,
- (c) the hybrid or breed of the chickens,
- (d) the number of birds found dead after each inspection, with an indication of the cause of death, if known,
- (e) the number of birds culled after each inspection with the reasons for culling, and
- (f) the number of chickens remaining in the flock following the removal of chickens for sale or slaughter.

The records referred to in this paragraph shall be maintained for at least 3 years and be made available for inspection on request to an authorised officer.

10. Surgical intervention

All surgical interventions which result in damage to or loss of a sensitive part of the body or alteration of bone structure carried out for other than therapeutic reasons or diagnostic purposes are prohibited.

11. Castration

Castration of chickens shall only be carried out in accordance with the direction of a registered veterinary practitioner by persons trained in techniques of castration.

12. Beak trimming

Beak trimming may only be undertaken, after all other measures to prevent feather pecking and cannibalism have failed, by trained and competent personnel and the beaks of chickens over 9 days old shall not be trimmed.

Regulation 13 (b)
(ii)

Part 2

REQUIREMENTS FOR HIGHER STOCKING DENSITIES

1. The owner or keeper shall inform the Minister, at least 15 days prior to the placement of a flock on the premises, of his or her intention to use a stocking density greater than 33 kilogrammes per square metre. The information shall state the exact stocking density proposed.

2. The owner or keeper shall maintain in each house to which a higher stocking density applies documentation describing in detail the production system and, in particular, it shall include technical detail relating to the building and equipment, including-

- (a) an accurate plan of the building including dimensions of areas occupied by chickens,

- (b) ventilation, and, if relevant, cooling and heating system, including their location, a ventilation plan detailing target air quality parameters, such as airflow, air speed and temperature,
- (c) feeding and watering systems and their location,
- (d) alarm systems and backup systems in the event of failure of any automated or mechanical equipment essential for the health and well being of the chickens, and
- (e) floor type and litter normally used.

The information maintained under this paragraph shall be kept updated and made available on request to an authorised officer.

The owner or keeper shall inform the Minister of any changes in a building, equipment or procedures used for the purposes of this Part.

3. The owner or keeper shall ensure that each building on a holding used for the purposes of this Part is equipped with ventilation and, if necessary, heating and cooling systems designed, constructed and operated in such a way that-

- (a) the concentration of ammonia (NH_3) does not exceed 20 parts per million and the concentration of carbon dioxide (CO_2) does not exceed 3,000 parts per million measured at the level of the chickens heads,
- (b) the inside temperature, when the outside temperature measures in the shade exceeds 30 degrees centigrade, does not exceed the outside temperature by more than 3 degrees centigrade, and
- (c) the average relative humidity measured inside the building during 48 hours does not exceed 70% when the outside temperature is below 10 degrees centigrade.

Part 3

*Regulation 13 (b)
(iii)*

CRITERIA FOR FURTHER INCREASING STOCKING DENSITY

1. The monitoring of the premises by the Minister over the previous two year period did not show any deficiencies with respect to the requirements of Part 3 of these Regulations.
2. Regular monitoring by the owner or keeper is carried out using codes of practice prepared in accordance with Regulation 3.
3. In at least 7 consecutive, subsequently checked flocks from a house, the cumulative daily mortality rate is less than $1\% + 0.6\% \times$ the slaughter age of the flock expressed in days.
4. If no monitoring was carried out in the previous two years, at least one inspection shall be carried out to verify compliance with paragraphs 1 to 3.

5. Despite paragraph 3, the Minister may permit an increase in stocking density if the owner or keeper provides sufficient explanation for the exceptional nature of a higher daily cumulative mortality rate or to show that the cumulative daily mortality rate is caused by factors beyond the owner's or keeper's control.

Regulation 14

Part 4

TRAINING

An approved training course shall cover, at least, Community legislation concerning the protection of chickens and, in particular-

- (a) the matters referred to in this Schedule,
- (b) physiology, in particular drinking and feeding needs, animal behaviour and the concept of stress,
- (c) the practical aspects of the careful handling of chickens, catching loading and transporting chickens.
- (d) Emergency care for chickens, emergency killing and culling, and
- (e) Preventive biosecurity measures.

Regulation 16

Schedule 4

Part 1

CONDITIONS UNDER WHICH CALVES AND PIGS SHOULD BE KEPT

1. Materials used for the construction of accommodation and in particular boxes, stalls and equipment with which calves or pigs may come into contact shall not be harmful to the calves or pigs. Those parts of the accommodation with which an animal may come into contact shall be capable of being thoroughly cleansed and disinfected and shall be thoroughly cleansed and disinfected, using an approved disinfectant to prevent cross-infection and the build-up of disease-carrying organisms.

2. Electrical circuits and equipment shall be installed in accordance with the terms of the National Rules for Electrical Installations Second Edition 1991 (ET 101/1991) or any amendment, modification or replacement to those Rules.

3. Insulation, heating and ventilation of the building shall ensure that the air circulation, dust level, temperature, relative air humidity and gas concentrations are kept within limits which are not harmful to the calves or pigs.

4. All automated or mechanical equipment essential for the health and well-being of calves or pigs shall be inspected at least once daily. Where defects are discovered, these shall be rectified immediately or as soon as reasonable. In the

meantime, all appropriate steps shall be taken to safeguard the health and well-being of the calves or pigs until the defect has been rectified, notably by using alternative methods of feeding and maintaining a satisfactory environment.

Where an artificial ventilation system is used, provision shall be made for an appropriate back-up system to guarantee sufficient air renewal to preserve the health and well-being of the calves or pigs in the event of the failure of the system, and an alarm system, independent of the mains electricity supply, shall be provided to inform the owner or person in charge of the breakdown or fire.

The alarm system shall be tested at least once a month and maintained in proper working order.

5. Calves and pigs shall not be kept permanently in darkness. To meet their behavioural and physiological needs, the accommodation shall be well lit by natural or artificial light, for at least 8 continuous hours each day. Every source of artificial light shall be mounted so as not to cause discomfort to the calves or pigs.

An adequate source of light shall be available to enable the calves or pigs to be properly inspected at any time.

6. All housed calves reared in groups or in individual pens shall be inspected by the owner or the person in charge at least twice daily. Calves kept outside, and pigs shall be inspected at least once daily.

Any calf or pig that appears to be ill or injured shall be treated appropriately without delay and veterinary advice shall be obtained as soon as possible for any calf or pig that is not responding to the care of the owner or person in charge.

Where necessary, sick or injured calves and pigs shall be isolated in adequate accommodation with dry, comfortable bedding.

A calf or pig shall be able to turn around easily unless such movement is contrary to specific advice from a registered veterinary practitioner.

7. Where tethers are used, they shall not cause injury to the calves and shall be inspected regularly and adjusted as necessary to ensure a comfortable fit.

Each tether shall be designed to avoid the risk of strangulation or injury and to allow the calf to move in accordance with paragraph 1 Part 2.

8. Housing, pens, equipment and utensils for calves and pigs shall be properly cleansed and disinfected to prevent cross-infection and the build-up of disease-carrying organisms. Faeces, urine and uneaten or spilt food shall be removed and bedding changed as often as necessary to minimize smell and avoid attracting flies or rodents.

9. Floors shall be smooth but not slippery so as to prevent injury to the calves or pigs and so designed as not to cause injury or suffering to calves or pigs standing or lying on them. Floors shall be suitable for the size and weight of the

calves or pigs and form a rigid, even and stable surface. The lying area shall be comfortable, clean, and adequately drained and shall not adversely affect the calves or pigs. Appropriate bedding shall be provided for all calves less than 2 weeks old. If bedding is provided for pigs, it shall be clean, dry and not harmful to the pigs.

10. (a) Feeding and watering equipment for calves and pigs shall be designed, constructed, placed and maintained so that contamination of feed and water is minimized.

(b) Equipment and fittings shall be designed and maintained in such a way as to minimize, as far as is practicable, the exposure of the calves or pigs to spills of feed or water, or to faeces and urine.

11. Calves and pigs shall be cared for by a sufficient number of suitably experienced personnel.

Part 2

Specific Provisions for Calves.

1. Subject to Regulation 5, the accommodation for calves shall be constructed in such way as to allow each calf to lie down, rest, stand up and groom itself without difficulty. Each calf shall have a clean place in which to rest and shall, unless isolated for veterinary reasons, be able to see other calves.

2. Calves shall not be tethered, with the exception of group-housed calves which may be tethered for periods of not more than one hour at the time of feeding milk or milk substitute.

3. All calves shall be provided with an appropriate diet adapted to their age, weight and behavioural and physiological needs, to promote good health and welfare and for this purpose the food for calves shall contain sufficient iron to ensure an average blood haemoglobin level of at least 4.5 mmol/litre and a minimum daily ration of fibrous food shall be provided for each calf over 2 weeks old, the quantity being raised from 50g to 250g per day for calves from 8 to 20 weeks old.

4. All calves shall be fed at least twice a day. Where calves are housed in groups and not fed ad libitum or by an automatic feeding system, each calf shall have access to the food at the same time as the others in the group.

5. All calves over 2 weeks of age shall have access to a sufficient quantity of fresh water or be able to satisfy their fluid intake needs by drinking other liquids. However, in hot weather conditions or for calves that are ill, fresh drinking water shall be available at all times.

6. Each calf shall receive bovine colostrum as soon as possible after it is born and, in any case, within the first 6 hours of life.

*Part 3**Specific Provisions for various Categories of Pigs***Chapter I****ALL PIGS**

1. Subject to Regulation 18, accommodation for pigs shall be constructed in such way as to allow each pig lie down, rest, and stand up without difficulty. Each pig shall have a clean place in which to rest and shall, unless isolated for veterinary reasons, be able to see other pigs.

Each pig shall have access to a clean lying area that is physically and thermally comfortable, adequately drained and that is of sufficient area to allow each pig lie down at the same time.

2. If pigs are kept together, measures shall be taken to prevent fighting that goes beyond normal behaviour and to investigate the causes of fighting. If possible, measures, including provision of plentiful straw or other materials, shall be put in place. Pigs which show persistent aggression towards others or are victims of aggression shall be isolated or kept separate from the group.

3. All pigs shall be provided with an appropriate diet adapted to their age, weight and behavioural and physiological needs, to promote good health and welfare.

4. All pigs shall be fed at least once a day. Where pigs are housed in groups and not fed ad libitum or by an automatic feeding system, each pig shall have access to the food at the same time as the others in the group.

5. All pigs over 2 weeks of age shall have permanent access to a sufficient quantity of fresh water.

6. In addition to measures normally taken to prevent tail-biting and other vices and in order to enable them to satisfy their behavioural needs, all pigs, taking into account environmental conditions, management systems and stocking densities, shall be able to obtain straw or any other suitable material or object.

7. Subject to Regulation 18(2), the owner or person in charge shall take all necessary measures to ensure that pigs are not subject to constant or sudden noise.

8. A pig shall have permanent access to a sufficient quantity of suitable material, such as straw, hay, wood, peat or mushroom compost to enable proper investigation and manipulation activities, that does not compromise the health of the pig.

Chapter II

BOARS

9. Subject to paragraph 10, boar pens shall be sited and constructed so as to allow the boar to turn around and to hear, smell and see other pigs, and to provide for clean resting areas. The lying area shall be dry and comfortable.

The minimum unobstructed floor area of the pen for an adult boar shall be 6 square metres.

10. If pens are used for natural service, the minimum unobstructed floor area of a pen for an adult boar shall be 10 square metres.

Chapter III

SOWS AND GILTS

11. Pregnant sows and gilts shall, if necessary, be treated against external and internal parasites. If they are placed in farrowing crates, pregnant sows and gilts shall be thoroughly cleaned.

12. Sows and gilts shall be provided with a clean, adequately drained, comfortable lying area and shall, in the week before expected farrowing, be given suitable nesting material unless this is not technically feasible due to the slurry system in use on the premises.

13. An unobstructed area behind the sow or gilt shall be available for the ease of natural or assisted farrowing.

14. Farrowing crates where sows are kept loose shall have some adequate means, such as farrowing rails, to protect the piglets.

15. Sows and gilts shall be provided with a diet that satisfies their nutritional needs and contains sufficient quantity of suitable bulky or high fibre food to satisfy their hunger and the need to chew and to ensure that they do not display signs of hunger.

Chapter IV

PIGLETS

16. Piglets shall be provided with a source of heat and a solid, dry and comfortable lying area, covered with a mat or littered with suitable material, away from the sow where all of them can rest at the same time.

17. Where a farrowing crate is used, the piglets shall have sufficient space to be able to be suckled without difficulty.

18. Tail docking or tooth clipping shall not be carried out routinely except where injuries to sows' teats or to other pigs' ears or tails have occurred.

Where tooth clipping appears necessary, this shall be carried out within seven days of birth.

19. Subject to paragraph 20, piglets shall not be weaned from the sow at less than 28 days of age unless the welfare or health of the dam or piglets would otherwise be adversely affected.

20. Despite paragraph 19, piglets, if accommodated in specialised housing that has been thoroughly cleaned and disinfected immediately before the introduction of those piglets, may be weaned from the sow at no less than 21 days of age.

21. Housing to which paragraph 20 refers shall be separate, in a manner that adequately prevents the risk or spread of disease, from housing containing sows.

Chapter V

WEANERS AND REARING PIGS

22. Pigs shall be placed in groups as soon as possible after weaning. They should be kept in stable groups with as little mixing as possible.

If pigs unfamiliar with one another are to be mixed, they shall be mixed at as early an age as possible and, preferably, within seven days of weaning.

Pigs shall be afforded adequate opportunity to escape and hide from other pigs.

23. An animal remedy shall not be administered, to facilitate mixing of pigs, other than in exceptional circumstances, under and in accordance with the written prescription of a registered veterinary practitioner; that prescription shall be retained by the owner or person in charge of the pigs and a copy shall be retained by the registered veterinary practitioner who prescribes the animal remedy.

Schedule 5

Regulation 24

Part 1

REQUIREMENTS FOR THE MOVEMENT AND LAIRAGING OF ANIMALS IN SLAUGHTERHOUSES.

I. General requirements.

1. A slaughterhouse shall have suitable equipment and facilities available for the purpose of unloading animals from means of transport.

2. Animals shall be unloaded as soon as possible after arrival. If delay is unavoidable they shall be protected from extremes of weather and provided with adequate ventilation.

3. Animals which might injure each other on account of their species, sex, age or origin shall be kept and lairaged apart from each other.

4. Animals shall be protected from adverse weather conditions. If they have been subjected to high temperature in humid weather they shall be cooled by appropriate means.

5. The condition and state of health of the animals shall be inspected at least every morning and evening.

6. Without prejudice to Chapter VI of Annex I to Directive 64/433/EEC, animals which have experienced pain or suffering during transport or upon arrival at the slaughterhouse, and unweaned animals, shall be stunned and slaughtered immediately. If this is not possible, they shall be separated and then stunned and slaughtered as soon as possible and at least within the following two hours. Animals which are unable to walk shall not be dragged to the place of slaughter, but shall be killed where they lie or, where it is possible and does not entail any unnecessary suffering, transported on a trolley or moveable platform to the place of emergency slaughter.

II. Requirements for animals delivered other than in containers.

1. Equipment for unloading animals shall have non-slip flooring and, if necessary, be provided with lateral protection. Bridges, ramps and gangways shall be fitted with sides, railings or some other means of protection to prevent animals falling off them. Exit or entry ramps shall have the minimum possible incline consistent with the animal being able to retain its footing.

2. During unloading, care shall be taken not to frighten, excite or mistreat the animals, and to ensure that they are not overturned. Animals shall not be lifted by the head, horns, ears, feet, tail or fleece in such a way as to cause them unnecessary pain or suffering. When necessary, they shall be led individually.

3. Animals shall be moved with care. Passageways shall be so constructed as to minimise the risk of injury to animals, and so arranged as to exploit their gregarious tendencies. Instruments intended for guiding animals shall be used solely for that purpose, and only for short periods. Instruments which administer electric shocks may be used only for adult bovine animals and pigs which refuse to move, provided that the shocks last no more than two seconds, are adequately spaced out and that the animals have room ahead of them in which to move. Such shocks may be applied only to the muscles of the hindquarters.

4. Animals shall not be struck on, nor shall pressure be applied to, any particularly sensitive part of the body. In particular, animals' tails shall not be crushed, twisted or broken and their eyes shall not be grasped. Blows and kicks shall not be inflicted.

5. Animals shall not be taken to the place of slaughter unless they can be slaughtered immediately. If they are not slaughtered immediately on arrival they shall be lairaged.

6. A slaughterhouse shall be equipped with a sufficient number of pens for adequate lairaging of the animals with protection from the effects of adverse weather.

7. A lairage shall have:

- (a) floors which minimise the risk of slipping and which do not cause injury to animals in contact with them,
- (b) adequate ventilation, taking into account the extremes of temperature and humidity which may be expected. Where mechanical means of ventilation are required, provision shall be made for emergency back-up facilities in the event of breakdown,
- (c) artificial lighting at a level sufficient to permit inspection of all animals at any time; if necessary, adequate back-up lighting shall be available,
- (d) where necessary, equipment for tethering animals,
- (e) where necessary, adequate supplies of a suitable bedding material for all animals kept in the lairage overnight.

8. Where, in addition to the lairages referred to above, slaughterhouses, have field lairages without natural shelter or shade, appropriate protection from adverse weather shall be provided. Field lairages shall be maintained in such condition as to ensure that animals are not subjected to physical, chemical or other health hazards.

9. Animals which are not taken directly upon arrival to the place of slaughter shall have drinking water available to them from appropriate facilities at all times. Animals which have not been slaughtered within 12 hours of their arrival shall be fed, and shall subsequently be given moderate amounts of food at appropriate intervals.

10. Animals which are kept for 24 hours or more at a slaughterhouse shall be lairaged and, where appropriate, tethered, in such a way that they can lie down and feed without difficulty. Where animals are not tethered, food shall be provided in a way which will permit the animals to feed undisturbed.

III. Requirements for animals delivered in containers.

1. Containers in which animals are transported shall be handled with care, and shall not be thrown, dropped or knocked over. Where possible, they shall be loaded and unloaded horizontally and mechanically.

2. Animals delivered in containers with perforated or flexible bottoms shall be unloaded with particular care in order to avoid injury. Where appropriate, animals shall be unloaded from the containers individually.

3. Animals which have been transported in containers shall be slaughtered as soon as possible; otherwise they shall if necessary be watered and fed in accordance with paragraph 9 of Section II.

Part 2.

RESTRAINT OF ANIMALS BEFORE STUNNING, SLAUGHTER OR KILLING.

1. Animals shall be restrained in an appropriate manner in such a way as to spare them any avoidable pain, suffering, agitation, injury or contusions.

However, in the case of ritual slaughter, restraint of bovine animals before slaughter using a mechanical method intended to avoid any pain, suffering or agitation and any injuries or contusions to the animals is obligatory.

2. Animals' legs shall not be tied, and animals shall not be suspended before stunning or killing. However, poultry and rabbits may be suspended for slaughter provided that appropriate measures are taken to ensure that, on the point of being stunned, they are in a sufficiently relaxed state for stunning to be carried out effectively and without undue delay.

Furthermore, holding an animal in a restraint system may in no circumstances be regarded as suspension.

3. Animals which are stunned or killed by mechanical or electrical means applied to the head shall be presented in such a position that the equipment can be applied and operated easily, accurately and for the appropriate time. The Minister may, however, in the case of solipeds and cattle, authorise the use of appropriate means to restrain head movements.

4. Electrical stunning equipment shall not be used as a means of restraint or immobilisation or to make animals move.

Part 3.

STUNNING OR KILLING OF ANIMALS OTHER THAN ANIMALS REARED FOR FUR.

I. Permitted Methods.

A. Stunning.

1. Captive bolt pistol.
2. Concussion.
3. Electronarcosis.
4. Exposure to carbon dioxide.

B. Killing.

1. Free bullet pistol or rifle.

2. Electrocutation.
3. Exposure to carbon dioxide.

C. The Minister may, however, authorise decapitation, dislocation of the neck and the use of a vacuum chamber as a method of killing for certain specific species, provided that Regulation 23 is complied with and that specific requirements laid down in Section III of this Part are met.

II. Specific Requirements for Stunning.

Stunning shall not be carried out unless it is possible to bleed the animals immediately afterwards.

1. Captive bolt pistol.

- (a) Instruments shall be positioned so as to ensure that the projectile enters the cerebral cortex. In particular, it is prohibited to shoot cattle in the poll position.

Sheep and goats may be shot in the poll position if the presence of horns prevents use of the crown position. In such cases the shot shall be placed immediately behind the base of the horns and aimed towards the mouth, and bleeding shall commence within 15 seconds of shooting.

- (b) When using a captive bolt instrument, the operator shall check to ensure that the bolt retracts to its full extent after each shot. If it does not so retract, the instrument shall not be used again until it has been repaired.
- (c) Animals shall not be placed in stunning pens unless the operator who is to stun them is ready to do so as soon as the animal is placed in the pen. Animals shall not be placed in a head restraint until the slaughterman is ready to stun them.

2. Concussion.

- (a) This is only permitted using a mechanically-operated instrument which administers a blow to the skull. The operator shall ensure that the instrument is applied in the proper position and that the correct strength of cartridge is used, in accordance with the manufacturer's instructions, to produce an effective stun without fracture of the skull.
- (b) However, in the case of small batches of rabbits, where a non-mechanical blow to the skull is used, that operation shall be carried out in such a way that the animal is immediately rendered unconscious and remains so until its death and in compliance with Regulation 23.

3. Electronarcosis.

A. Electrodes.

1. Electrodes shall be so placed that they span the brain, enabling the current to pass through it. Appropriate measures shall also be taken to ensure that there is good electrical contact, in particular by removing excess wool or wetting skin.

2. Where animals are stunned individually, the apparatus shall:

(a) incorporate a device which measures the impedance of the load and prevents operation of the apparatus if the minimum required current cannot be passed;

(b) incorporate an audible or visible device indicating the length of time of its application to an animal;

(c) be connected to a device indicating the voltage and the current under load, and be positioned so as to be clearly visible to the operator.

B. Waterbath stunners

1. Where waterbath stunners are used to stun poultry, the level of the water shall be adjustable in order to ensure that there is good contact with the bird's head.

The strength and duration of the current used in this case will be determined by an authorised officer so as to ensure that the animal is immediately rendered unconscious and remains so until death.

2. Where poultry are stunned in groups in a waterbath, a voltage sufficient to produce a current strong enough to ensure that every bird is stunned shall be maintained.

3. Appropriate measures shall be taken to ensure that the current passes properly, in particular, by the use of good electrical contacts and by wetting the shackle-to-leg contact.

4. Waterbaths for poultry shall be adequate in size and depth for the type of bird being slaughtered, and shall not overflow at the entrance. The electrode which is immersed in the water shall extend the length of the waterbath.

5. If necessary, manual back-up shall be available.

C. Exposure to carbon dioxide.

1. The concentration of carbon dioxide for stunning pigs shall be at least 70% by volume.

2. The chamber in which pigs are exposed to the gas, and the equipment used for conveying the pigs through it, shall be so designed, constructed and maintained as to avoid injury to the pigs and compression of the chest and enable

them to remain upright until they lose consciousness. Adequate lighting shall be provided in the conveying mechanism and the chamber to allow pigs to see other pigs or their surroundings.

3. The chamber shall be fitted with devices for measuring the gas concentration at the point of maximum exposure and for giving a clearly visible and audible warning if the concentration of carbon dioxide falls below the required level.

4. Pigs shall be placed in pens or containers in which they can see each other and conveyed into the gas chamber within 30 seconds from their entry into the installation. They shall be conveyed as rapidly as possible from the entrance to the point of maximum concentration of the gas and shall be exposed to it for long enough to ensure that they remain unconscious until they have been killed.

5. The Minister may, on application, and subject to such conditions as he or she may specify, authorise the stunning of poultry by exposure to carbon dioxide or a mixture of other gases or refuse an application.

III. Specific Requirements for Killing.

1. Free bullet pistol or rifle.

These methods, which may be used to kill various species, in particular large farmed game and deer, are subject to authorisation by the Minister, who shall be satisfied, in particular, that these methods are used by duly qualified staff and are in compliance with Regulation 23.

2. Decapitation and dislocation of the neck.

These methods, which are to be used only for killing poultry, are subject to authorisation by the Minister, who shall be satisfied, in particular, that these methods are used by duly qualified staff and are in compliance with Regulation 23.

3. Electrocutation and carbon dioxide.

The Minister may authorise the killing of various species by these methods provided that, in addition to Regulation 23, the specific provisions laid down in paragraphs 3 and 4 of Section II are complied with. The Minister may, to ensure the effectiveness of these methods, lay down the strength and duration of the current used and the concentration and length of exposure to carbon dioxide.

4. Vacuum chamber.

This method, which is to be used only for the killing without bleeding of certain animals for consumption belonging to farmed game species (quail, partridge and pheasant), is subject to authorisation by the Minister. To obtain authorisation the owner or person in charge of the animals shall ensure, in addition to compliance with Regulation 23, that:

- (a) the animals are placed in an airtight chamber in which a vacuum is swiftly achieved by means of a powerful electric pump,
- (b) the vacuum is maintained until the animals are dead,
- (c) the animals are held in groups in transport containers which can be placed in the vacuum chamber, which is designed for that purpose.

Part 4.

BLEEDING OF ANIMALS.

1. For animals which have been stunned, bleeding shall be started as soon as possible after stunning and be carried out in such a way as to bring about rapid, profuse and complete bleeding. In any event, the bleeding shall be carried out before the animal regains consciousness.

2. All animals which have been stunned shall be bled by incising at least one of the carotid arteries or the vessels from which they arise.

After incision of the blood vessels, no further dressing procedures nor any electrical stimulation may be performed on the animals before the bleeding has ended.

3. Where one person is responsible for the stunning, shackling, hoisting and bleeding of animals, that person shall carry out those operations consecutively on one animal before carrying them out on another animal.

4. Manual back-up shall be available where poultry is bled by means of automatic neck-cutters so that, in the event of a breakdown, birds may be slaughtered immediately.

Part 5

KILLING METHODS FOR DISEASE CONTROL.

Permitted Methods.

1. Any method permitted under Part 3 that causes certain death.

2. Injection of an overdose of a drug with anaesthetic properties if the carcase is to be disposed of in accordance with the Animal By-products Regulation within the meaning of the European Communities (Transmissible Spongiform Encephalopathies and Animal By-Products) Regulations 2008 (S.I. No. 252 of 2008).

3. In addition, the Minister may, in compliance with Regulation 23, permit the use of other methods for killing conscious animals, ensuring in particular that:

- (a) if methods are used which do not cause immediate death (for example, captive bolt shooting), appropriate measures are taken to kill the animals as soon as possible, and in any event before they regain consciousness,

(b) nothing more is done to the animals before it has been ascertained that they are dead.

4. Permitted methods of killing for disease control set out in this Schedule shall be carried out by or under the supervision of an authorised officer.

Part 6

METHODS OF KILLING FUR ANIMALS.

I. Permitted methods.

1. Mechanically-operated instruments which penetrate the brain.
2. Injection of an overdose of a drug with anaesthetic properties.
3. Electrocuting with cardiac arrest.
4. Exposure to carbon monoxide.
5. Exposure to chloroform.
6. Exposure to carbon dioxide.

The Minister shall decide on the most appropriate method of killing for the different species concerned in compliance with Regulation 23.

II. Specific requirements.

1. Mechanically-operated instruments which penetrate the brain.
 - (a) Instruments shall be positioned so as to ensure that the projectile enters the cerebral cortex.
 - (b) This method is permitted only if it is followed by immediate bleeding.
2. Injection of an overdose of a drug with anaesthetic properties.

Only those anaesthetics, doses and applications which cause immediate loss of consciousness followed by death may be used.

3. Electrocuting with cardiac arrest.

Electrodes shall be placed so that they span the brain and the heart and the minimum current level used shall lead to immediate loss of consciousness and cardiac arrest. However, for foxes, where electrodes are applied to the mouth and rectum, a current of an average value of 0.3 amps shall be applied for at least 3 seconds.

4. Exposure to carbon monoxide.

- (a) The chamber in which the animals are exposed to the gas shall be designed, constructed and maintained in such a way as to avoid injury to the animals and allow them to be supervised.
- (b) The animals shall be introduced into the chamber only after it has been filled with a concentration of carbon monoxide of at least 1% by volume, supplied by a source of 100% carbon monoxide.
- (c) The gas produced by an engine specially adapted for that purpose may be used to kill mustelids and chinchillas provided that tests have shown that the gas used:
 - (i) has been suitably cooled,
 - (ii) has been sufficiently filtered, and
 - (iii) is free from any irritant matter or gas.

The animals cannot be placed in the chamber until the concentration of carbon monoxide has reached at least 1% by volume.

- (d) When inhaled the gas shall first induce deep general anaesthesia and shall then cause certain death.
- (e) The animals shall remain in the chamber until they are dead.

5. Exposure to chloroform.

Exposure to chloroform may be used to kill chinchillas provided that:

- (a) the chamber in which the animals are exposed to the gas is designed, constructed and maintained in such a way as to avoid injury to the animals and allow them to be supervised;
- (b) the animals are introduced into the chamber only if it contains a saturated chloroform-air compound;
- (c) when inhaled, the gas first induces deep general anaesthesia and then causes certain death;
- (d) the animals remain in the chamber until they are dead.

6. Exposure to carbon dioxide.

Carbon dioxide may be used to kill mustelids and chinchillas provided that-

- (a) the chamber in which the animals are exposed to the gas is designed, constructed and maintained in such a way as to avoid injury to the animals and allow them to be supervised,

- (b) the animals are introduced into the chamber only when the atmosphere contains the highest possible concentration of carbon dioxide supplied by a source of 100% carbon dioxide,
- (c) when inhaled, the gas first induces deep general anaesthesia and then causes certain death, and
- (d) the animals remain in the chamber until they are dead.

Part 7

KILLING OF SURPLUS CHICKS AND EMBRYOS IN HATCHERY WASTE.

I. Permitted methods for the killing of chicks.

- 1. Use of a mechanical apparatus causing rapid death.
- 2. Exposure to carbon dioxide.
- 3. However, the Minister may permit the use of other scientifically recognised killing methods provided that they comply with Regulation 5.

II. Specific requirements.

- 1. Use of a mechanical apparatus producing rapid death.
 - (a) The animals shall be killed by an apparatus which contains rapidly rotating mechanically operated killing blades or expanded polystyrene projections.
 - (b) The capacity of the apparatus shall be sufficient to ensure that all animals are killed immediately, even if they are handled in large numbers.
- 2. Exposure to carbon dioxide.
 - (a) The animals shall be placed in an atmosphere with the highest obtainable concentration of carbon dioxide, supplied by a source of 100% carbon dioxide.
 - (b) The animals shall remain in this atmosphere until they are dead.

III. Permitted method of the killing of embryos.

- 1. To kill any living embryos instantaneously, all hatchery waste shall be treated by the mechanical apparatus mentioned in paragraph 1 of Section II.
- 2. However, the Minister may permit the use of other scientifically recognised killing methods provided that they comply with Regulation 23.

*Part 8*MONITORING AND FOLLOW-UP AT SLAUGHTER REGARDING CHICKENS REARED FOR
MEAT PRODUCTION**1. Mortality**

1.1 In the case of stocking densities higher than 33 kilogrammes per square metre, the documentation accompanying the flock shall include the daily mortality rate and cumulative daily mortality rate calculated by the owner or keeper and the hybrid or breed of the chickens.

1.2 Under the supervision of the veterinary inspector at the establishment where chickens are to be slaughtered, the data referred to at 1.1 and the number of broilers dead on arrival at the establishment shall be recorded, indicating the premises and house of origin. The veterinary inspector shall check the plausibility of data furnished under 1.1 taking into account the number of broilers slaughtered and the number dead on arrival.

2. Post mortem inspection

In the context of checks carried out under Regulation (EC) No. 854/ 2004 of the European Parliament and of the Council of 29 April 2004, the veterinary inspector at the establishment where chickens are to be slaughtered shall evaluate the results of the post mortem inspection to identify possible indications of poor welfare conditions such as abnormal levels of contact dermatitis, parasitism and systemic illness at the premises or a particular house at the premises of origin.

3. Communication of results

If the mortality rate referred to in paragraph 1 or the results of post mortem inspection referred to at paragraph 2 are consistent with poor animal welfare conditions, the veterinary inspector at the establishment where chickens are to be slaughtered shall communicate the data to the owner or keeper of the animals who shall take appropriate remedial action and make an official report.



GIVEN under my Official Seal,
24 June 2010.

BRENDAN SMITH,
Minister for Agriculture, Fisheries and Food.

EXPLANATORY NOTE.

(This note is not part of the Instrument and does not purport to be a legal interpretation.)

These Regulations give effect to a series of European Directives concerning the protection of animals including broilers, laying hens, calves and pigs and animals being slaughtered.

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Appendix No. 17

Copy of Nitrates Directive – S.I. 605 of 2017



STATUTORY INSTRUMENTS.

S.I. No. 605 of 2017

EUROPEAN UNION (GOOD AGRICULTURAL PRACTICE FOR
PROTECTION OF WATERS) REGULATIONS 2017

EUROPEAN UNION (GOOD AGRICULTURAL PRACTICE FOR
PROTECTION OF WATERS) REGULATIONS 2017

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PROHIBITED

S.I. No. 605 of 2017

EUROPEAN UNION (GOOD AGRICULTURAL PRACTICE FOR PROTECTION OF WATERS) REGULATIONS 2017

I, EOGHAN MURPHY, Minister for Housing, Planning and Local Government, in exercise of the powers conferred on me by section 3 of the European Communities Act 1972 (No. 27 of 1972) and for the purpose of giving further effect to Directive 91/676/EEC of 12 December 1991¹, Directive 2000/60/EC of 23 October 2000², Directive 2003/35/EC of 26 May 2003³, Directive 2006/11/EC of 15 February 2006⁴, Directive 2006/118/EC of 12 December 2006⁵ and Directive 2008/98/EC of 19 November 2008⁶ hereby make the following regulations:

PART 1

PRELIMINARY

Citation, commencement and application

1. (a) These Regulations may be cited as the European Union (Good Agricultural Practice for Protection of Waters) Regulations 2017.
- (b) These Regulations shall apply to all holdings in the State.
- (c) These Regulations shall apply to all movements of livestock manure in the State.
- (d) These Regulations shall come into effect on 1 January 2018.

Purpose of Regulations

2. The purpose of these Regulations is to give effect to Ireland's Nitrates Action Programme for the protection of waters against pollution caused by agricultural sources. The set of measures in these regulations provides a basic level of protection against possible adverse impacts to waters arising from the agricultural expansion targets set under Food Harvest 2020.

Revocations

3. The European Union (Good Agricultural Practice for Protection of Waters) Regulations 2014 and the European Union (Good Agricultural Practice for Protection of Waters) (Amendment) (No. 2) Regulations 2014 are hereby revoked.

¹O.J. No. L 375/1, 31 December 1991.

²O.J. No. L 327/1, 22 December 2000.

³O.J. No. L 156/17, 25 June 2003.

⁴O.J. No. L 64/52, 4 March 2006.

⁵O.J. No. L 372/19, 27 December 2006.

⁶O.J. No. L 312/3, 22 November 2008.

Notice of the making of this Statutory Instrument was published in "Iris Oifigiúil" of 2nd January, 2018.

Interpretation

4. (1) In these Regulations, save where the context otherwise requires—

“Act of 1992” means the Environmental Protection Agency Act, 1992 (No. 7 of 1992);

“Agency” means the Environmental Protection Agency established under section 19 of the Act of 1992;

“agriculture” includes the breeding, keeping and sale of livestock (including cattle, horses, pigs, poultry, sheep and any creature kept for the production of food, wool, skins or fur), the making and storage of silage, the cultivation of land, and the growing of crops (including forestry and horticultural crops);

“application to land”, in relation to fertiliser, means the addition of fertiliser to land whether by spreading on the surface of the land, injection into the land, placing below the surface of the land or mixing with the surface layers of the land but does not include the direct deposition of manure to land by animals;

“aquifer” means a subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow either a significant flow of groundwater or the abstraction of significant quantities of groundwater;

“biochemical oxygen demand” for the purposes of sub-article (2) (b) (i) means a 5 day biochemical oxygen demand test done in accordance with method ISO 5815-1:2003, International Organisation for Standardization, or any update of that method;

“chemical fertiliser” means any fertiliser that is manufactured by an industrial process;

“dry matter” for the purposes of sub-article (2)(b)(ii) means a test for total solids done in accordance with method 2540B, Standard Methods for the Examination of Water and Wastewater, American Public Health Association, 21st Edition, 2005, or any update of that method;

“eligible area” in relation to a holding and the grassland stocking rate, means the eligible area of the holding or the grassland as appropriate excluding areas under farm roads, paths, buildings, farmyards, woods, dense scrub, rivers, streams, ponds, lakes, sandpits, quarries, expanses of bare rock, areas of bogland not grazed, areas fenced off and not used for production, inaccessible areas and areas of forestry (including Christmas trees), or required to be totally destocked under a Commonage Framework Plan;

“farmyard manure” means a mixture of bedding material and animal excreta in solid form arising from the housing of cattle, sheep and other livestock excluding poultry;

“fertiliser” means any substance containing nitrogen or phosphorus or a nitrogen compound or phosphorus compound utilised on land to enhance growth of

vegetation and may include livestock manure, the residues from fish farms and sewage sludge;

“groundwater” means all water that is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil;

“holding” means an agricultural production unit and, in relation to an occupier, means all the agricultural production units managed by that occupier;

“livestock” means all animals kept for use or profit (including cattle, horses, pigs, poultry, sheep and any creature kept for the production of food, wool, skins or fur);

“livestock manure” means waste products excreted by livestock or a mixture of litter and waste products excreted by livestock, even in processed form;

“local authority” means a city council or county council within the meaning of the Local Government Act, 2001 (No. 37 of 2001);

“the Minister” means the Minister for Housing, Planning and Local Government;

“the Nitrates Directive” means Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources;

“occupier”, in relation to a holding, includes the owner, a lessee, any person entitled to occupy the holding or any other person having for the time being control of the holding;

“organic fertiliser” means any fertiliser other than that manufactured by an industrial process and includes livestock manure, dungstead manure, farmyard manure, slurry, soiled water, silage effluent, spent mushroom compost, non-farm organic substances such as sewage sludge, industrial by-products and sludges and residues from fish farms;

“ploughing” includes ploughing and primary cultivation, excluding light cultivation carried out to encourage natural regeneration;

“relevant local authority” means the local authority in whose administrative area a farm holding or part of a farm holding is situated;

“river basin district” means a river basin district established by the European Communities (Water Policy) Regulations, 2003 (S.I. No. 722 of 2003) or any amendment thereof in relation to the establishment of river basin districts;

“slurry” includes—

- (a) excreta produced by livestock while in a building or yard, and
- (b) a mixture of such excreta with rainwater, washings or other extraneous material or any combination of these, of a consistency that allows it

to be pumped or discharged by gravity at any stage in the handling process but does not include soiled water;

“soil test” means a soil sample taken in accordance with the soil sampling procedure set out in Schedule 1 and analysed in accordance with that Schedule, at a laboratory that meets the requirements of the Minister for Agriculture, Food and the Marine for this purpose;

“soiled water” has the meaning assigned by sub-article (2);

“steep slope” means ground which has an average incline of 20% or more in the case of grassland or 15% or more in the case of other land;

“tidal waters” includes the sea and any estuary up to high water mark medium tide and any enclosed dock adjoining tidal waters;

“waters” includes—

- (a) any (or any part of any) river, stream, lake, canal, reservoir, aquifer, pond, watercourse, or other inland waters, whether natural or artificial,
- (b) any tidal waters, and
- (c) where the context permits, any beach, river bank and salt marsh or other area which is contiguous to anything mentioned in paragraph (a) or (b), and the channel or bed of anything mentioned in paragraph (a) which is for the time being dry, but does not include a sewer;

“waterlogged ground” means ground that is saturated with water such that any further addition will lead, or is likely to lead, to surface run-off;

and cognate words shall be construed accordingly.

- (2) (a) In these Regulations “soiled water” includes, subject to this sub-article, water from concreted areas, hard standing areas, holding areas for livestock and other farmyard areas where such water is contaminated by contact with any of the following substances—
 - (i) livestock faeces or urine or silage effluent,
 - (ii) chemical fertilisers,
 - (iii) washings such as vegetable washings, milking parlour washings or washings from mushroom houses,
 - (iv) water used in washing farm equipment.
- (b) In these Regulations, “soiled water” does not include any liquid where such liquid has either—
 - (i) a biochemical oxygen demand exceeding 2,500 mg per litre, or

- (ii) a dry matter content exceeding 1% (10 g/L).
 - (c) For the purposes of these Regulations, soiled water which is stored together with slurry is deemed to be slurry.
- (3) In these Regulations a reference to:—
- (a) an Article, Part or Schedule which is not otherwise identified is a reference to an Article, Part or Schedule of these Regulations,
 - (b) a sub-article or paragraph which is not otherwise identified is a reference to a sub-article or paragraph of the provision in which the reference occurs, and
 - (c) a period between a specified day in a month and a specified day in another month means the period commencing on the first-mentioned day in any year and ending on the second-mentioned day which first occurs after the first-mentioned day.
- (4) In these Regulations a footnote to a table in Schedule 2 shall be deemed to form part of the table.

PART 2

FARMYARD MANAGEMENT

Minimisation of soiled water

5. (1) An occupier of a holding shall take all such reasonable steps as are necessary for the purposes of minimising the amount of soiled water produced on the holding.

(2) Without prejudice to the generality of sub-article (1), an occupier of a holding shall ensure, as far as is practicable, that—

- (a) clean water from roofs and unsoiled paved areas and that flowing from higher ground on to the farmyard is diverted away from soiled yard areas and prevented from entering storage facilities for livestock manure and other organic fertilisers, soiled water, and effluents from dungsteads, farmyard manure pits, silage pits or silage clamps and
- (b) rainwater gutters and downpipes where required for the purposes of paragraph (a) are maintained in good working condition.

Collection and holding of certain substances

6. (1) Livestock manure and other organic fertilisers, soiled water and effluents from dungsteads, farmyard manure pits, silage pits or silage clamps arising or produced in a building or yard on a holding shall, prior to its application to land or other treatment, be collected and held in a manner that prevents the run-off or seepage, directly or indirectly, into groundwaters or surface waters of such substances.

(2) The occupier of a holding shall not cause or permit the entry to waters of any of the substances specified in sub-article (1).

Provision and management of storage facilities

7. (1) Storage facilities for livestock manure and other organic fertilisers, soiled water and effluents from dungsteeds, farmyard manure pits, silage pits or silage clamps shall be maintained free of structural defect and be maintained and managed in such manner as is necessary to prevent run-off or seepage, directly or indirectly, into groundwater or surface water, of such substances.

(2) Storage facilities being provided on a holding on or after 31 March 2009 shall—

- (a) be designed, sited, constructed, maintained and managed so as to prevent run-off or seepage, directly or indirectly, into groundwater or surface water of a substance specified in sub-article (1), and
- (b) comply with such construction specifications for those facilities as may be approved from time to time by the Minister for Agriculture, Food and the Marine.

(3) Storage facilities other than those referred to in sub-article (2) shall be of such construction and design and shall be maintained and managed in such a manner so as to comply with the requirements of sub-article (1) and article 6(2).

(4) In this article “storage facilities” includes out-wintering pads, earthen-lined stores, integrated constructed wetlands and any other system used for the holding or treatment of livestock manure or other organic fertilisers.

General obligations as to capacity of storage facilities

8. (1) The capacity of storage facilities for livestock manure and other organic fertilisers, soiled water and effluents from dungsteeds, farmyard manure pits, silage pits or silage clamps on a holding shall be adequate to provide for the storage of all such substances as are likely to require storage on the holding for such period as may be necessary as to ensure compliance with these Regulations and the avoidance of water pollution.

(2) For the purposes of sub-article (1) an occupier shall have due regard to the storage capacity likely to be required during periods of adverse weather conditions when, due to extended periods of wet weather, frozen ground or otherwise, the application to land of livestock manure or soiled water is precluded.

(3) For the purposes of Articles 8 to 14, the capacity of storage facilities on a holding shall be disregarded insofar as the occupier does not have exclusive use of those facilities.

(4) For the purposes of Articles 10 to 14 the capacity of facilities required in accordance with these Regulations for the storage of manure from livestock of the type specified in Tables 1, 2 or 3 of Schedule 2 shall be determined by reference to the criteria set out in the relevant table and the rainfall criteria set

out in Table 4 of that schedule and shall include capacity for the storage for such period as may be necessary for compliance with these Regulations of rain-water, soiled water or other extraneous water which enters or is likely to enter the facilities.

(5) The occupier of a holding shall only be eligible to avail of a derogation from the limits on the amount of livestock manure to be applied as specified in Article 20 if the capacity of storage facilities for livestock manure, effluent and soiled water on the holding is in accordance with Articles 8 and 9.

Capacity of storage facilities for effluents and soiled water

9. Without prejudice to the generality of Article 8, the capacity of facilities for the storage on a holding of—

- (a) effluent produced by ensiled forage and other crops shall equal or exceed the capacity specified in Table 5 of Schedule 2,
- (b) soiled water shall equal or exceed the capacity required to store all soiled water likely to arise on the holding during a period of 10 days, and
- (c) soiled water being provided on a holding on or after 1 January 2015 shall equal or exceed the capacity required to store all soiled water likely to arise on the holding during a period of 15 days.

Capacity of storage facilities for pig manure

10. (1) Without prejudice to the generality of Article 8, the capacity of facilities for the storage on a holding of livestock manure produced by pigs shall, subject to sub-article (2) and Article 14, equal or exceed the capacity required to store all such livestock manure produced on the holding during a period of 26 weeks.

(2) The period specified in Schedule 3 shall, in substitution for that prescribed by sub-article (1), apply in relation to livestock manure produced by pigs on a holding where all the following conditions are met—

- (a) the number of pigs on the holding does not at any time exceed one hundred pigs, and
- (b) the holding comprises a sufficient area of land for the application in accordance with these Regulations of all livestock manure produced on the holding.

Capacity of storage facilities for poultry manure

11. (1) Without prejudice to the generality of Article 8, the capacity of facilities for the storage on a holding of livestock manure produced by poultry shall, subject to sub-article (2) and Article 14, equal or exceed the capacity required to store all such livestock manure produced on the holding during a period of 26 weeks.

(2) The period specified in Schedule 3 shall, in substitution for that prescribed by sub-article (1), apply in relation to livestock manure produced by poultry on a holding where all the following conditions are met—

- (a) tillage or grassland farming is carried out on the holding,
- (b) the number of poultry places on the holding does not exceed 2,000 places, and
- (c) the holding comprises a sufficient area of land for the application in accordance with these Regulations of all livestock manure produced on the holding.

Capacity of storage facilities for manure from deer, goats and sheep

12. Without prejudice to the generality of Article 8, the capacity of facilities for the storage on a holding of livestock manure produced by deer, goats and sheep shall, subject to Article 14, equal or exceed the capacity required to store all such livestock manure produced on the holding during a period of six weeks.

Capacity of storage facilities for manure from cattle

13. Without prejudice to the generality of Article 8, the capacity of facilities for the storage on a holding of livestock manure produced by cattle shall, subject to Article 14, equal or exceed the capacity required to store all such livestock manure produced on the holding during the period specified in Schedule 3.

Reduced storage capacity in certain circumstances

14. (1) The capacity of facilities for the storage of livestock manure on a holding may, to such extent as is justified in the particular circumstances of the holding, be less than the capacity specified in Article 10, 11, 12 or 13, as appropriate, in the case of a holding where—

- (a) the occupier of the holding has a contract providing exclusive access to adequate alternative storage capacity located outside the holding,
- (b) the occupier has a contract for access to a treatment facility for livestock manure, or
- (c) the occupier has a contract for the transfer of the manure to a person registered under and in accordance with the European Communities (Transmissible Spongiform Encephalopathies and Animal By-products) Regulations 2008 S.I. 252 of 2008 to undertake the transport of manure.

(2) Subject to sub-article (3), the capacity of facilities for the storage of livestock manure may be less than the capacity specified in Article 12 or 13, as appropriate, in relation to—

- (a) deer, goats or sheep which are out-wintered at a grassland stocking rate which does not exceed 130 kg nitrogen at any time during the period specified in Schedule 4 in relation to the application of organic fertiliser other than farmyard manure, or

- (b) livestock (other than dairy cows, deer, goats or sheep) which are out-wintered at a grassland stocking rate which does not exceed 85 kg nitrogen at any time during the period specified in Schedule 4 in relation to the application of organic fertiliser other than farmyard manure.

(3) Sub-article (2) shall apply only in relation to a holding where all the following conditions are met—

- (a) all the lands used for out-wintering of the livestock are comprised in the holding,
- (b) the out-wintered livestock have free access at all times to the required lands,
- (c) the amount of manure produced on the holding does not exceed an amount containing 140kg of nitrogen per hectare per annum,
- (d) severe damage to the surface of the land by poaching does not occur, and
- (e) the reduction in storage capacity is proportionate to the extent of out-wintered livestock on the holding.

(4) In this article, a grassland stocking rate of 130 kg or 85 kg of nitrogen, as the case may be, means the stocking of grassland on a holding at any time by such numbers and types of livestock as would in the course of a year excrete waste products containing 130 kg or 85 kg of nitrogen, as the case may be, per hectare of the grassland when calculated in accordance with the nutrient excretion rates for livestock specified in Table 6 of Schedule 2.

PART 3

NUTRIENT MANAGEMENT

Interpretation, commencement etc

15. (1) In this Part, “crop requirement”, in relation to the application of fertilisers to promote the growth of a crop, means the amounts and types of fertilisers which are reasonable to apply to soil for the purposes of promoting the growth of the crop having regard to the foreseeable nutrient supply available to the crop from the fertilisers, the soil and from other sources.

(2) The amount of nitrogen or phosphorus specified in Table 7 or 8 of Schedule 2, as the case may be, in relation to a type of livestock manure or other substance specified in the relevant table shall for the purposes of this Part be deemed to be the amount of nitrogen or phosphorus, as the case may be, contained in that type of manure or substance except as may be otherwise specified in a certificate issued in accordance with Article 32.

(3) The amount of nitrogen or phosphorus available to a crop from a fertiliser of a type which is specified in Table 9 of Schedule 2 in the year of application of

that fertiliser shall, for the purposes of this Part, be deemed to be the percentage specified in that table of the amount of nitrogen or phosphorus, as the case may be, in the fertiliser.

(4) The amount of nitrogen or phosphorus available to a crop from an organic fertiliser of a type which is not specified in Table 9 of Schedule 2 shall be deemed to be the amount specified in the table in relation to cattle manure or, where supported by the necessary analysis, the amount of nitrogen estimated on the basis of the C:N ratio of the compost in accordance with Table 9A unless a different amount has been determined in relation to that fertiliser by, or with the agreement of, the relevant local authority or the Agency, as the case may be.

(5) A reference in this Part to the “nitrogen index” or the “phosphorus index” in relation to soil is a reference to the index number assigned to the soil in accordance with Table 10 or 11 of Schedule 2, as the case may be, to indicate the level of nitrogen or phosphorus available from the soil.

Duty of occupier in relation to nutrient management

16. (1) An occupier of a holding shall take all such reasonable steps as are necessary for the purposes of preventing or minimising the application to land of fertilisers in excess of crop requirement on the holding.

(2) For the purposes of the determination of the grassland stocking rate in tables 12, 13A and 13B the previous calendar year’s stocking rate data shall be used.

(3) (a) For the purposes of this article, the phosphorus index for soil shall be deemed to be phosphorus index 3 unless a soil test indicates that a different phosphorus index is appropriate in relation to that soil.

(b) The soil test to be taken into account for the purposes of paragraph (a) in relation to soil shall, subject to paragraph (c), be the soil test most recently taken in relation to that soil.

(c) Where a period of four years or more has elapsed after the taking of a soil test, the results of that test shall be disregarded for the purposes of paragraph (a) except in a case where that soil test indicates the soil to be at phosphorus index 4.

(d) An occupier of a holding located in an area where soils have an organic matter content of 20% and above, as defined on the Teagasc-EPA Indicative Soils map, shall ensure that the soil test undertaken includes organic matter determination. The phosphorus fertilisation rate for soils with more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils. Soil organic matter determination shall not be required where it is certified by a Farm Advisory System Advisor that soils on a holding/field in such areas are mineral soils.

(4) Without prejudice to the generality of sub-article (1) and subject to sub-article (5), the amount of available nitrogen or available phosphorus applied to

promote the growth of a crop specified in Table 12, 13A, 14, 15, 16, 17, 18, 19, 20 or 21 of Schedule 2 shall not exceed the amount specified in the table in relation to that crop having regard to the relevant nitrogen index or phosphorus index, as the case may be, for the soil on which the crops are to be grown. In the case of crops not identified in the tables listed above, fertilisers shall be applied in accordance with the national agriculture and food development authority's guidance as approved by the Minister for Agriculture, Food and the Marine.

(5) Increased phosphorus build-up on grassland on farms with grassland stocking rates of 130kg nitrogen per hectare and above shall only be permitted in accordance with the rates contained in Table 13B provided that the following conditions are met:

- (a) Soil analysis is carried out for soil phosphorus and soil organic matter contents; soil organic matter testing shall not be required where it is certified by a Farm Advisory System Advisor that all soils on a holding are mineral soils.
- (b) An occupier availing of the phosphorus build-up programme shall engage the services of a Department of Agriculture, Food and the Marine approved Farm Advisory System Advisor.
- (c) A detailed farm nutrient plan for the holding shall be submitted in a format specified by the Minister for Agriculture, Food and the Marine.
- (d) The occupier shall participate in an appropriate training programme specified by the Minister for Agriculture, Food and the Marine for the purpose of meeting the requirements of these regulations.

(6) In the case of a holding on which grazing livestock are held, the amount of available phosphorus supplied to the holding by concentrated feedstuff shall be the amount fed to such livestock in excess of 300kg per 85kg livestock manure nitrogen in the previous calendar year and the phosphorus content of such concentrated feedstuff shall, in the absence of a known phosphorus content or phosphorus content provided by the supplier, be deemed to be 0.5 kg phosphorus in respect of each 100 kg of such concentrated feedstuff.

(7) The nitrogen and phosphorus maximum limits in Tables 12, 13A and 13B are in addition to the nitrogen and phosphorus contained in grazing livestock manure produced on the holding.

PART 4

PREVENTION OF WATER POLLUTION FROM FERTILISERS AND CERTAIN ACTIVITIES

Distances from a water body and other issues

17. (1) Chemical fertiliser shall not be applied to land within 2m of any surface waters.

(2) Organic fertiliser or soiled water shall not be applied to land within—

- (a) 200m of the abstraction point of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 100m³ or more of water per day or serving 500 or more persons,
- (b) 100m of the abstraction point (other than an abstraction point specified in paragraph (a)) of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m³ or more of water per day or serving 50 or more persons,
- (c) 25m of any borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified in paragraph (a) or (b),
- (d) 20m of a lake shoreline or a turlough likely to flood,
- (e) 15m of exposed cavernous or karstified limestone features (such as swallow-holes and collapse features),
- (f) subject to sub-article (13), 5m of any surface waters (other than a lake or surface waters specified at paragraph (a) or (b)), or
- (g) the distance specified in sub-article 2(f) shall be increased to 10m for a period of two weeks preceding and two weeks following the periods specified in Schedule 4.

(3) Notwithstanding the requirements of sub-articles (2)(a), (2)(b) and (2)(c), the following distances shall apply—

- (a) 30m from the abstraction point in the case of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m³ or more of water per day or serving 50 or more persons,
- (b) 15m from the abstraction point in the case of any borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified in paragraph (a).

(4) Sub-article (3) shall only apply in situations where a local authority or Irish Water (as the case may be) has completed a technical assessment of conditions in the vicinity of the abstraction point, including taking into account variation in soil and subsoil conditions, the landspreading pressures in the area, the type of abstraction, available water quality evidence and the likely risk to the water supply source and the local authority, in consultation with Irish Water, where relevant, has determined that the distance does not give rise to a risk to the water supply and a potential danger to human health.

(5) A local authority may, following consultation with Irish Water, where relevant, decide to apply the landspreading restriction to the upstream catchment area and to the close proximity downstream of the abstraction point in the case of any surface waters.

(6) A local authority may, in the case of any particular abstraction point and following consultation with the Agency and, where relevant, Irish Water, specify a greater distance to that specified in sub-articles (2) or (3) where, following prior investigations by Irish Water or the local authority (as the case may be), the local authority is satisfied that such distance is appropriate for the protection of waters being abstracted at that point. The distance so specified shall be determined by the local authority using an evidence-based approach which takes into account the natural vulnerability of the waters to contamination from land spreading, the potential risk to human health arising from the landspreading activity as well as the water quality evidence, including information on water quality trends.

(7) Notwithstanding the provisions of sub-articles (2), (3) and (6), a local authority shall, following prior investigations by Irish Water or the local authority (as the case may be) and following consultation with the Agency and, where relevant, Irish Water, specify an alternative distance, including a landspreading exclusion area where necessary, in the case of a water abstraction for human consumption in a scheme supplying 10m³ or more of water per day, or serving 50 or more persons, within a timeframe to be agreed with the Agency and, where relevant, Irish Water, where—

- (a) on the basis of the results of monitoring carried out for the purposes of Article 7 of the European Communities (Drinking Water) Regulations (S.I. No. 122 of 2014), the quality of water intended for human consumption does not meet the parametric values specified in Part I of the Schedule of those Regulations or the quality of water constitutes a potential danger to human health, and it appears to the local authority following consultation with the Agency and, where relevant, Irish Water, that this is due to the landspreading of organic fertilisers or soiled water in the vicinity of the abstraction point, or
- (b) investigations undertaken by Irish Water as part of the management of a water supply scheme indicate that the landspreading activity presents a significant risk to the drinking water supply or a potential danger to human health having regard to catchment factors in the vicinity of the abstraction point including but not limited to slope, vulnerability, and hydrogeology, the scale and intensity of land spreading pressures, the type of water supply source and water quality evidence, including information on water quality trends.

(8) A distance specified by a local authority in accordance with sub-articles (3), (5), (6) and (7) may be described as a distance or distances from an abstraction point, a hydrogeological boundary or topographical feature or as an area delineated on a map or in such other way as appears appropriate to the authority.

(9) In relation to sub-articles (6) and (7), "prior investigations" means, in relation to an abstraction point, an assessment of the susceptibility of waters to contamination in the vicinity of the abstraction point having regard to—

- (a) the direction of flow of surface water or groundwater, as the case may be,
- (b) the slope of the land and its runoff potential,
- (c) the natural geological and hydrogeological attributes of the area including the nature and depth of any overlying soil and subsoil and its effectiveness in preventing or reducing the entry of harmful substances to water, and
- (d) where relevant, the technical specifications set out in the document "Groundwater Protection Schemes" published in 1999 (ISBN 1-899702-22-9) or any subsequent published amendment of that document.

(10) Where a local authority specifies a distance in accordance with either of sub-articles (3), (5), (6) or (7) the authority shall, as soon as may be—

- (a) notify the affected landowners, Irish Water, the Agency and the Department of Agriculture, Food and the Marine of the distance so specified,
- (b) send to the Agency a summary of the report of any investigations undertaken and the reasons for specifying the alternative distance,
- (c) make an entry in the register maintained in accordance with Article 30(6), and
- (d) publish and maintain on the local authority website an updated schedule of setback distances specified for each drinking water supply.

(11) The Agency may issue advice and/or direction to Irish Water or a local authority in relation to any requirements including requirements for technical assessments and prior investigations arising under sub-articles (2), (3), (4), (5), (6), (7), (8) or (9) and Irish Water or a local authority (as the case may be) shall comply with any such advice or direction given.

(12) Notwithstanding sub-article (2)(f), organic fertiliser or soiled water shall not be applied to land within 10m of any surface waters where the land has an average incline greater than 10% towards the water.

(13) Where farmyard manure is held in a field prior to landspreading it shall be held in a compact heap and shall not be placed within-

- (a) 250m of the abstraction point of any surface waters or borehole, spring or well used for the abstraction of water for human consumption in a

water scheme supplying 10m³ or more of water per day or serving 50 or more persons,

- (b) 50m of any other borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified at paragraph (a),
- (c) 20m of a lake shoreline or a turlough likely to flood,
- (d) 50m of exposed cavernous or karstified limestone features (such as swallow-holes and collapse features),
- (e) 20m of any surface waters (other than a lake or surface waters specified at paragraph (a)).

(14) Farmyard manure shall not be held in a field at any time during the periods specified in Schedule 4 as applicable to that substance.

(15) Silage bales shall not be stored outside of farmyards within 20m of surface waters or a drinking water abstraction point in the absence of adequate facilities for the collection and storage of any effluent arising.

(16) No cultivation shall take place within 2m of a watercourse identified on the modern 1:5,000 scale OSi mapping or better, except in the case of grassland establishment or the sowing of grass crops.

(17) Supplementary feeding points shall not be located within 20m of waters and shall not be located on bare rock.

(18) In the case of holdings with grassland stocking rates of 170kgs nitrogen per hectare from livestock manure or above, bovine livestock shall not be permitted to drink directly from waters from 1 January 2021 onwards. Where bovine livestock have direct access to water from the holding, a fence shall be placed at least 1.5m from the top of the riverbank or water's edge (as the case may be) by 1 January 2021. It will be permissible to move livestock across a watercourse to an isolated land parcel where necessary, provided that both sides of the watercourse are fenced.

(19) In the case of holdings identified in sub-Article 18, supplementary drinking points may not be located within 20m of surface waters from 1 January 2021.

(20) There shall be no direct runoff of soiled water from farm roadways to waters from 1 January 2021. The occupier of a holding shall comply with any specification for farm roadways specified by the Minister for Agriculture, Food and the Marine pursuant to this requirement.

(21) There shall be no direct runoff of soiled waters to waters resulting from the poaching of land on the holding.

Requirements as to manner of application of fertilisers, soiled water etc

18. (1) Livestock manure, other organic fertilisers, effluents, soiled water and chemical fertilisers shall be applied to land in as accurate and uniform a manner as is practically possible.

(2) Organic and chemical fertilisers or soiled water shall not be applied to land in any of the following circumstances—

- (a) the land is waterlogged;
- (b) the land is flooded or likely to flood;
- (c) the land is snow-covered or frozen;
- (d) heavy rain is forecast within 48 hours, or
- (e) the ground slopes steeply and there is a risk of water pollution having regard to factors such as surface runoff pathways, the presence of land drains, the absence of hedgerows to mitigate surface flow, soil condition and ground cover.

(3) A person shall, for the purposes of sub-article (2)(d), have regard to weather forecasts issued by Met Éireann.

(4) Organic fertilisers or soiled water shall not be applied to land—

- (a) by use of an umbilical system with an upward-facing splashplate,
- (b) by use of a tanker with an upward-facing splashplate,
- (c) by use of a sludge irrigator mounted on a tanker, or
- (d) from a road or passageway adjacent to the land irrespective of whether or not the road or passageway is within or outside the curtilage of the holding.

(5) Subject to sub-article (6), soiled water shall not be applied to land—

- (a) in quantities which exceed in any period of 42 days a total quantity of 50,000 litres per hectare, or
- (b) by irrigation at a rate exceeding 5 mm per hour.

(6) In an area which is identified on maps compiled by the Geological Survey of Ireland as “Extreme Vulnerability Areas on Karst Limestone Aquifers”, soiled water shall not be applied to land—

- (a) in quantities which exceed in any period of 42 days a total quantity of 25,000 litres per hectare, or
- (b) by irrigation at a rate exceeding 3 mm per hour unless the land has a consistent minimum thickness of 1m of soil and subsoil combined.

(7) For the purposes of sub-article (6), it shall be assumed until the contrary is shown that areas so identified as “Extreme Vulnerability Areas on Karst Limestone Aquifers” do not have a consistent minimum thickness of 1m of soil and subsoil combined.

Periods when application of fertilisers is prohibited

19. (1) Subject to this article, the application of fertiliser to land is prohibited during the periods specified in Schedule 4.

(2) Sub-article (1) shall not apply in relation to the application to land of—

- (a) soiled water, or
- (b) chemical fertilisers to meet the crop requirements of Autumn-planted cabbage or of crops grown under permanent cover, or
- (c) fertilisers whose application rate or usage rate is less than 1kg per hectare of available nitrogen or phosphorus.

Limits on the amount of livestock manure to be applied

20. (1) The amount of livestock manure applied in any year to land on a holding, together with that deposited to land by livestock, shall not exceed an amount containing 170 kg of nitrogen per hectare. Where imported livestock manure is to be applied to the land on the holding, calculations shall be based on the previous calendar year’s stocking rate.

(2) For the purposes of sub-article (1), the amount of nitrogen produced by livestock and the nitrogen content of livestock manure shall be calculated in accordance with Tables 6, 7 and 8 of Schedule 2 except in the case of pig manure or poultry manure where a different amount is specified in a certificate issued in accordance with Article 32 in relation to that manure.

(3) For the purposes of sub-article (1), the area of a holding shall be deemed to be the eligible area of the holding.

Ploughing and the use of non-selective herbicides

21. (1) Where arable land is ploughed between 1 July and 30 November the necessary measures shall be taken to provide for emergence, within 6 weeks of ploughing, of green cover from a sown crop. A rough surface shall be maintained prior to a crop being sown in the case of lands ploughed between 1 December and 15 January.

(2) Where grassland is ploughed between 1 July and 15 October the necessary measures shall be taken to provide for emergence by 1 November of green cover from a sown crop.

(3) Grassland shall not be ploughed between 16 October and 30 November.

(4) (a) When a non-selective herbicide is applied to arable land or to grassland in the period between 1 July and 30 November the necessary measures shall be taken to provide for the emergence, within 6 weeks

of the application, of green cover from a sown crop or from natural regeneration.

- (b) When a non-selective herbicide is applied to land after 15 October, the requirement in sub-article 4 (a) shall be reduced to 75% of the relevant cereal area where a contract is in place for seed crops or crops producing grain destined for human consumption which prohibits the application of a non-selective herbicide preharvest.

(5) Where green cover is provided for in compliance with this Article, the cover shall not be removed by ploughing or by the use of a non-selective herbicide before 1 December unless a crop is sown within two weeks of its removal.

(6) In the case of land which is ploughed in the course of a ploughing competition under the auspices of the National Ploughing Association, a temporary exemption applies in the form of an extension to the time period specified in sub-article (1) or (2) for establishment of green cover after the land is ploughed.

PART 5

GENERAL

General duty of occupier

22. (1) An occupier of a holding shall ensure compliance with the provisions of these Regulations in relation to that holding.

(2) An occupier of a holding shall comply with any advice or guidelines which may be issued from time to time for the purposes of these Regulations by the Minister, the Minister for Agriculture, Food and the Marine or the Agency.

Keeping of records by occupier

23. (1) Records shall be maintained for each holding which shall indicate—

- (a) total area of the holding,
- (b) eligible area of the holding,
- (c) cropping regimes and their individual areas,
- (d) livestock numbers and type,
- (e) an estimation of the annual fertiliser requirement for the holding and a copy of any Nutrient Management Plan prepared in relation to the holding,
- (f) quantities and types of chemical fertilisers moved on to or off the holding, including opening stock, records of purchase and closing stock,
- (g) livestock manure and other organic fertilisers moved on to or off the holding including quantities, type, dates and details of exporters and

importers, as the case may be, in a format specified by the Minister for Agriculture, Food and the Marine,

- (h) the results of any soil tests carried out in relation to the holding,
- (i) the nature and capacity of facilities on the holding for the storage of livestock manure and other organic fertilisers, soiled water and effluents from dungsteads, farmyard manure pits, silage pits or silage clamps, including an assessment of compliance with Articles 9 to 14,
- (j) the quantities and types of concentrated feedstuff fed to grazing livestock on the holding, and
- (k) the location of any abstraction point of water used for human consumption from any surface waters, borehole, spring or well.

(2) Where fertiliser is used on a holding and a certificate of the type mentioned in Article 15 or 20 was issued in relation to that fertiliser in accordance with Article 32, a copy of the certificate shall be retained and be available for inspection on the holding for a period of not less than five years from the expiry of validity of the certificate.

(3) Records shall be prepared for each calendar year by 31 March of the following year and shall be retained for a period of not less than five years.

(4) Notwithstanding sub-paragraphs (1), (2) and (3), an occupier shall, where requested by the Minister, the Minister for Agriculture, Food and the Marine, a local authority or the Agency, provide such information as is requested relating to the movement of organic fertilisers on or off the holding.

False or misleading information

24. A person shall not compile information which is false or misleading to a material extent or furnish any such information in any notice or other document for the purposes of these Regulations.

Authorised person

25. (1) In this Article, "authorised person" means—

- (a) a person who is an authorised person for the purposes of section 28 of the Local Government (Water Pollution) Act, 1977 (No. 1 of 1977), or
- (b) a person appointed under sub-article (11) to be an authorised person for the purposes of these Regulations.

(2) An authorised person may for any purpose connected with these Regulations—

- (a) enter and inspect any premises for the purposes of performing a function under these Regulations or of obtaining any information which he or she may require for such purposes,

- (b) at all reasonable times, or at any time if he or she has reasonable grounds for believing that there is or may be a risk to the environment, or that an offence under these Regulations is being or is about to be committed, arising from the carrying on of an activity at a premises, enter any premises and bring onto those premises such other persons (including a member of the Garda Síochána) or equipment as he or she may consider necessary, or
 - (c) at any time if he or she has reasonable grounds for suspecting there may be a risk to the environment, or that an offence under these Regulations is being or is about to be committed, involving the use of any vehicle halt and board the vehicle and require the driver of the vehicle to take it to a place designated by the authorised person, and such a vehicle may be detained at that place by the authorised person for such period as he or she may consider necessary.
- (3) An authorised person shall not enter into a private dwelling under this article unless one of the following conditions applies—
- (a) the entry is effected with the consent of the occupier or
 - (b) the entry is authorised by a warrant issued under sub-article (7).
- (4) Whenever an authorised person enters any premises or boards any vehicle, under this article, he or she may—
- (a) take photographs and carry out inspections, record information on data loggers, make tape, electrical, video or other recordings,
 - (b) carry out tests and make copies of documents (including records kept in electronic form) found therein and take samples,
 - (c) monitor any effluent, including trade effluent or other matter, which is contained in or discharged from a premises,
 - (d) carry out surveys, take levels, make excavations and carry out examinations of depth and nature of subsoil,
 - (e) require that the premises or vehicle or any part of the premises or anything in the premises or vehicle shall be left undisturbed for a specified period,
 - (f) require information from an occupier of the premises of any occupant of the vehicle or any person employed on the premises or any other person on the premises,
 - (g) require the production of, or inspect, records (including records held in electronic form) or documents, or take copies of or extracts from any records or documents, and

- (h) remove and retain documents and records (including documents held in electronic form) for such period as may be reasonable for further examination,

which the authorised person, having regard to all the circumstances, considers necessary for the purposes of exercising any function under these Regulations.

- (5) (a) An authorised person who, having entered any premises or boarded any vehicle pursuant to these Regulations, considers that a risk to the environment arises from the carrying on of an activity at the premises or involving the use of the vehicle, may direct the owner or occupier of the premises or the driver of the vehicle to take such measures as are considered by that authorised person to be necessary to remove that risk.
 - (b) If the owner, occupier or driver referred to in paragraph (a) fails to comply with a direction of an authorised person under this subsection, the authorised person may do all things as are necessary to ensure that the measures required under the direction are carried out and the costs incurred by him or her in doing any such thing shall be recoverable from the owner or occupier by him or her, or the person by whom he or she was appointed.
- (6) A person shall not—
- (a) refuse to allow an authorised person to enter any premises or board any vehicle or to bring any person or equipment with him or her in the exercise of his or her powers,
 - (b) obstruct or impede an authorised person in the exercise of any of his or her powers,
 - (c) give to an authorised person information which is to his or her knowledge false or misleading in a material respect, or
 - (d) fail or refuse to comply with any direction or requirement of an authorised person.
- (7) (a) Where an authorised person in the exercise of his or her powers under this Article is prevented from entering any premises, or if the authorised person has reason to believe that evidence related to a suspected offence under these Regulations may be present in any premises and that the evidence may be removed therefrom or destroyed, or if the authorised person has reason to believe that there is a significant immediate risk to the environment, the authorised person or the person by whom he or she was appointed may apply to the District Court for a warrant under this Article authorising the entry by the authorised person onto or into the premises.

(b) If, on application being made to the District Court under this Article, the District Court is satisfied, on the sworn information of the authorised person that he or she has been prevented from entering a premises, the Court may issue a warrant authorising that person, accompanied, if the Court deems it appropriate by another authorised person or a member of the Garda Síochána, as may be specified in the warrant, at any time or times within one month from the date of the issue of the warrant, on production if so requested of the warrant, to enter, if need be by force, the premises concerned and exercise the powers referred to in sub-article (4) or (5).

(8) An authorised person may, in the exercise of any power conferred on him or her by these Regulations involving the bringing of any vehicle to any place, or where he or she anticipates any obstruction in the exercise of any other power conferred on him or her by these Regulations, request a member of the Garda Síochána to assist him or her in the exercise of such a power and any member of the Garda Síochána to whom he or she makes such a request shall comply with this request.

(9) Any certificate or other evidence given, or to be given, in respect of any test, examination or analysis of any sample shall, in relation to that sample, be evidence, without further proof, of the result of the test, examination or analysis unless the contrary is shown.

(10) When exercising any power conferred on him or her by these Regulations an authorised person shall, if requested by any person affected, produce a certificate or other evidence of his or her appointment as an authorised person.

(11) A person may be appointed as an authorised person for the purposes of these Regulations by the Minister, the Minister for Agriculture, Food and the Marine or the Agency.

(12) In this article “premises” includes land whether or not there are any structures on the land.

Offences and related matters

26. (1) A person who contravenes a provision of Parts 2 to 5 and Schedule 5 of these Regulations, excluding Article 17(5), (6), (7), (10) and (11), is guilty of an offence and shall be liable—

(a) on summary conviction to a Class A fine or to imprisonment for a term not exceeding 3 months or both or,

(b) on conviction on indictment to a fine not exceeding €500,000 or to imprisonment for a term not exceeding one year or to both such fine and such imprisonment.

(2) Where an offence under these Regulations has been committed by a body corporate and it is proved to have been so committed with the consent or connivance of or to be attributable to any neglect on the part of any person who, when the offence was committed, was a director, manager, secretary or other

officer of the body corporate, or a person purporting to act in any such capacity, that person, as well as the body corporate, is guilty of an offence and liable to be proceeded against and punished as if guilty of the first-mentioned offence.

(3) Where the affairs of a body corporate or unincorporated body are managed by its members, sub-article (2) shall apply to the acts and defaults of a member in connection with the functions of management as if such a member were a director or manager of the body.

(4) A prosecution for a summary offence under these Regulations may be taken by a local authority or the Agency.

(5) A prosecution for a summary offence may be taken by a local authority whether or not the offence is committed in the functional area of the authority.

(6) Where a court imposes a fine or affirms or varies a fine imposed by another court for an offence under these Regulations, prosecuted by the Agency or a local authority, it shall, on the application of the Agency or local authority concerned (made before the time of such imposition, affirmation or variation), provide by order for the payment of the amount of the fine to the Agency or local authority, as the case may be, and such payment may be enforced by the Agency or local authority, as the case may be, as if it were due to it on foot of a decree or order made by the court in civil proceedings.

(7) Where a person is convicted of an offence under these Regulations the court shall, unless it is satisfied that there are special and substantial reasons for not so doing, order that person to pay to the Agency or local authority concerned the costs and expenses, measured by the court, reasonably incurred by the Agency or local authority in relation to the investigation, detection and prosecution of the offence, including costs incurred in the taking of samples, the carrying out of tests, examinations and analyses and in respect of the remuneration and other expenses of employees, consultants and advisers.

(8) (a) Where a local authority has reason to believe that an offence has been or is being committed in relation to a holding the authority may by notice require the person who appears to the authority to be the occupier to provide such information as is specified in the notice in relation to the alleged offence and it shall be the duty of that person to provide such information within the time frame specified in the notice insofar as is known to him or her.

(b) A notice issued in accordance with paragraph (a) shall set out the provisions of Articles 22(1) and 24 and of sub-article (1).

(9) Where a local authority considers that an offence under these Regulations has been or is being committed in relation to a holding the authority shall take such enforcement measures as are warranted by the circumstances and as are necessary to ensure satisfactory compliance with these Regulations and which, save in the case of a trivial or insignificant offence or specific mitigating circumstances, shall include prosecution for the alleged offence.

(10) (a) Where on application by motion by the Agency or a local authority to the District Court, Circuit Court or the High Court, the court hearing the application is satisfied that a person has failed or is failing to comply with a provision of Parts 2 to 5 of these Regulations, the court may by order—

(i) direct the person to comply with the provisions,

(ii) make such other provision, including provision in relation to the payment of costs, as the court considers appropriate, and

(iii) make such interim or interlocutory order as it considers appropriate.

(b) An application for an order under this Article may be made whether or not there has been a prosecution for an offence under these Regulations in relation to the relevant failure of compliance and shall not prejudice the initiation of a prosecution for an offence under these Regulations in relation to the failure of compliance.

(11) The powers, duties and functions assigned to a local authority or the Agency by this Article are additional to, and not in substitution for, the powers, duties and functions assigned by the Local Government (Water Pollution) Acts 1977 and 1990 or any other statute.

(12) A local authority shall maintain a register of inspections undertaken of farm holdings and information received for the purposes of Article 26(8) and shall keep updated a record of all enforcement measures undertaken in accordance with the requirements of Article 26(9).

PART 6

FUNCTIONS OF PUBLIC AUTHORITIES

Minister for Agriculture, Food and the Marine

27. (1) The Minister for Agriculture, Food and the Marine shall carry out, or cause to be carried out, such monitoring and evaluation programmes in relation to farm practices as may be necessary to determine the effectiveness of measures being taken in accordance with these Regulations.

(2) The Minister for Agriculture, Food and the Marine shall, in relation to each year, make the overall results of monitoring and evaluations carried out in accordance with sub-article (1) available to the Agency, to the Minister and, on request, to a local authority.

(3) The Minister for Agriculture, Food and the Marine shall prepare and keep updated a register of all holdings and shall, on request, make a copy of the register available to the Minister, the Agency or a local authority.

(4) The Minister for Agriculture, Food and the Marine shall make available to the Minister, a local authority and/or the Agency a report of an inspection or

inspections carried out for the purposes of these Regulations and/or upon written request other information in relation to any holding or holdings as the case may be where such transfer of data is necessary for the purposes of ensuring compliance with these Regulations.

(5) The Minister for Agriculture, Food and the Marine shall make available to the Minister, a local authority and its agents upon written request information in relation to any holding or holdings as the case may be where such transfer of data is necessary for the purposes of promoting compliance with these Regulations.

Making and review of action programme by the Minister

28. (1) The Minister shall, following consultation with the Minister for Agriculture, Food and the Marine and other interested parties in accordance with this Article, prepare and publish not later than 31 December 2021 and every four years thereafter, a programme of measures (hereafter in this Article referred to as “an action programme”) for the protection of waters against pollution from agriculture.

(2) An action programme required by sub-article (1) shall include all such measures as are necessary for the purposes of Article 5 of the Nitrates Directive and shall contain a review of the action programme most recently made for those purposes and of such additional measures and reinforced actions as may have been taken.

(3) The Minister shall ensure that all interested parties are given early and effective opportunities to participate in the preparation, review and revision of an action programme required by this Article and for this purpose shall—

- (a) inform interested parties by public notices or other appropriate means including electronic media, in relation to any proposals for the preparation, review or revision of an action programme,
- (b) make available to interested parties information in relation to the proposals referred to in paragraph (a) including information about the right to participate in decision-making in relation to those proposals,
- (c) provide an opportunity for comment by interested parties before any decision is made on the establishment, review or revision of an action programme,
- (d) in making any such decision, take due account of the comments made by interested parties and the results of the public participation, and
- (e) having examined any comments made by interested parties, make reasonable efforts to inform those parties of the decisions taken and the reasons and considerations on which those decisions are based, including information on the public participation process.

(4) The Minister shall ensure that such reasonable time is allowed as is sufficient to enable interested parties to participate effectively.

(5) Where the Minister publishes any information in accordance with this Article, the Minister shall—

- (a) do so in such manner as the Minister considers appropriate for the purpose of bringing that information to the attention of the public, and
- (b) make copies of that information accessible to interested parties free of charge through a website or otherwise.

(6) The Minister shall specify by way of public notice on a website or otherwise the detailed arrangements made to enable public participation in the preparation, review or revision of an action programme, including—

- (a) the address to which comments in relation to those proposals may be submitted, and
- (b) the date by which such comments should be received.

(7) In this Article “interested parties” includes persons who—

- (a) are carrying on any business which relies upon the water environment or which is affected, or likely to be affected, by the action programme, or
- (b) are carrying on any activities which have or are likely to have an impact on water status, or
- (c) have an interest in the protection of the water environment whether as users of the water environment or otherwise.

Agency

29. (1) The Agency shall prepare at four-yearly intervals a report in accordance with Article 10 of the Nitrates Directive and shall submit such report to the Minister.

(2) The Agency shall undertake a review of progress made in implementing these Regulations and shall submit a report to the Minister by 30 June 2021 and every four years thereafter with the results of that review and with recommendations as to such additional measures, if any, as appear to be necessary to prevent and reduce water pollution from agricultural sources.

(3) In preparing the reports required under sub-articles (1) and (2) the Agency shall consult with the Department of Agriculture, Food and the Marine and the co-ordinating local authority in each river basin district, and such other persons as it considers appropriate.

(4) The Department of Agriculture, Food and the Marine, the relevant local authorities and Irish Water shall provide the Agency with such information appropriate to their functions as may be requested by the Agency for the purposes of these Regulations.

(5) Each monitoring programme prepared by the Agency for the purposes of Article 10 of European Communities (Water Policy) Regulations, 2003 (S.I. No. 722 of 2003) shall include provision for such monitoring as is necessary for the purposes of these Regulations.

(6) The Agency shall, from time to time as it considers appropriate, make recommendations and give directions to a local authority in relation to the monitoring and inspections to be carried out, or other measures to be taken, by the authority for the purposes of these Regulations and may revise such recommendations and directions at such times thereafter as the Agency considers appropriate.

(7) The powers, duties and functions assigned to the Agency by these Regulations are additional to, and not in substitution for, the powers, duties and functions assigned to the Agency by section 63 of the Environmental Protection Agency Act, 1992 (No. 7 of 1992) or any other statute.

Local authorities

30. (1) A local authority shall carry out, or cause to be carried out, such monitoring of surface waters and groundwaters at selected measuring points within its functional area as makes it possible to establish the extent of pollution in the waters from agricultural sources and to determine trends in the occurrence and extent of such pollution.

(2) A local authority shall carry out or cause to be carried out such inspections of farm holdings as is necessary for the purposes of these Regulations and shall aim to co-ordinate its inspection activities with inspections carried out by other public authorities.

(3) For the purposes of sub-article (2) a local authority shall aim to develop co-ordination arrangements with other public authorities with a view to promoting consistency of approach in inspection procedures and administrative efficiencies between public authorities and to avoid any unnecessary duplication of administrative procedures and shall have regard to any inspection protocol which may be developed by the Minister, following consultation with the Minister for Agriculture, Food and the Marine.

(4) A local authority shall, in the exercise of its functions for the purposes of these Regulations—

(a) consult to such extent as it considers appropriate with the Minister, the Minister for Agriculture, Food and the Marine, the Agency, Irish Water and such other persons as it considers appropriate, and

(b) have regard to any recommendations made, and comply with any direction given, to the authority by the Agency in accordance with Article 29.

(5) A local authority shall follow the protocol as established by the Minister for furnishing a report of an inspection or inspections to the Department of

Agriculture, Food and the Marine and such other persons as it considers appropriate for the purposes of these Regulations where non-compliance has been detected.

(6) A local authority shall maintain a register of all prior investigations carried out by the local authority itself or carried out by Irish Water within its jurisdiction, and distances specified, for the purposes of Article 17.

Compliance with Data Protection Acts

31. The provision of information by a local authority, the Agency or the Minister for Agriculture, Food and the Marine in accordance with Article 27, 29 or 30 of these Regulations shall not be a breach of the Data Protection Acts, 1988 and 2003.

Certificate in relation to nutrient content of fertiliser

32. (1) A certificate of the type specified in Article 15 or 20 may be issued by a competent authority where the authority is satisfied that the nutrient content of the fertiliser in question has been assessed on the basis of appropriate methodologies based on net farm balance and is as specified in the certificate.

(2) A certificate issued under this Article shall be valid for such period, not exceeding twelve months, as shall be specified in the certificate.

(3) In this Article “competent authority” means—

- (a) the Agency in relation to fertiliser arising in an activity in relation to which there is in force a licence under Part IV of the Act of 1992, and
- (b) the Minister for Agriculture, Food and the Marine in relation to any other fertiliser.

(4) Notice of the methodologies used for the purposes of sub-article (1) shall be notified to the European Commission by the competent authority.

Exemption for exceptional circumstances for research

33. (1) A temporary exemption from a requirement of these Regulations may be granted to a person by the Agency or the Minister for Agriculture, Food and the Marine in the case of exceptional circumstances relating to research.

(2) A temporary exemption for the purposes of sub-article (1) shall be granted by way of certificate issued to a person by the Agency or the Minister for Agriculture, Food and the Marine and shall be subject to such conditions, if any, as are specified in the certificate.

(3) A certificate issued for the purposes of this Article shall specify the nature, extent and duration of the exemption to which the certificate relates and a copy of the certificate shall be sent as soon as may be to the relevant local authority.

Transitional provisions

34. Notwithstanding Articles 16 and 26 and sub-article (2), the application to land of phosphorus in excess of the quantities prescribed by Article 16 shall not be an offence for the purposes of Article 16 in a case where—

- (a) the excess arises from the application of pig manure, and
- (b) the excess amount does not exceed the amounts specified in Schedule 2, Table 22 of these Regulations from the prescribed dates.

SCHEDULE 1

SOIL TEST

A soil test refers to the results of an analysis of a soil sample carried out by a soil-testing laboratory that meets the requirements of the Minister for Agriculture, Food and the Marine for this purpose.

The analysis for phosphorus and, where appropriate, organic matter content and soil pH, and the taking of soil samples shall be carried out in accordance with the procedures below.

Analysis for Phosphorus

The Morgan's extractable P test as detailed below shall be used to determine the Soil P Index.

Preparation of soil sample

The soil shall be dried at 40°C for at least 24 hours (longer if necessary to ensure complete drying) in a forced draught oven with moisture extraction facilities. It shall then be sieved through a 2 mm mesh screen to remove stones and plant debris. After thorough mixing, it shall be sub-divided to obtain a representative sample. Where large samples are received at the laboratory, the entire sample shall be dried and sieved prior to sub-sampling for analysis.

Morgan's extracting solution

Constituents:— 1,400 ml of 40% NaOH in approximately 15 litres of water. Add 1,440 ml of glacial acetic acid. Make up to 20 litres with water and adjust pH to 4.8. The pH of the solution must be checked regularly and adjusted as necessary before use. A volume ratio of one part sieved soil to five parts of solution must be used, e.g. 6 ml of the prepared soil sample is extracted with a 30 ml volume of Morgan's extracting solution. The sample shall be shaken for 30 minutes to get a suitable mix and permit intended reaction, after which it is filtered through a No. 2 Whatman filter paper into vials for analysis. The filtered extract shall be analysed using standard laboratory techniques.

Results shall be reported in mg per litre.

Analysis of organic matter

Organic matter content shall be determined by loss on ignition.

Place a quantity of the prepared soil sample in an oven for 16 hours at 105°C. Remove and cool in a desiccator. Put approximately 4g of this soil into a pre-weighed crucible and determine the weight of the soil (initial weight). Place in a muffle furnace at 500°C for 16 hours for ashing. Remove the crucible, cool in a desiccator and determine the weight of the ash (final weight).

The organic matter of the soil is the difference in weight between the initial and final weights expressed as a percentage of the initial weight.

Analysis of soil pH

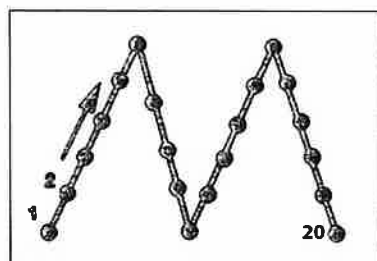
Soil pH shall be determined by measuring pH in a soil:water suspension of 1:2 ratio. Place 10 ml of dried sieved soil and 20 mls of deionised water into a suitable container. Mix thoroughly and allow to stand for at least 10 minutes. Stir for 30 seconds, and allow to settle immediately before recording the pH on a meter calibrated using buffer solutions of pH 4.0 and 7.0

Soil Sampling Procedure

The soil sample shall be taken in accordance with the procedure as specified below:

- (a) The sampling area shall not exceed 4 hectares. Exceptionally, where soil types and cropping of lands were similar during the previous five years, a sample area of up to 5 hectares shall be deemed acceptable.
- (b) Separate samples shall be taken from areas that are different in soil type, previous cropping history, slope, drainage or persistent poor yields.
- (c) Any unusual spots such as old fences, ditches, drinking troughs, dung or urine patches or where fertiliser or lime has been heaped or spilled shall be avoided.
- (d) A field shall not be sampled for phosphorus until 3 months after the last application of any fertiliser containing this nutrient (chemical or organic).
- (e) The sampling pattern shown in the figure below shall be followed. A soil core shall be taken to the full 100 mm depth. 20 cores shall be taken from the sampling area and placed in the soil container to make up the sample. Ensure the container is full of soil.
- (f) The field and sample numbers shall be written/attached onto the soil container.

Figure 1: Sampling pattern



SCHEDULE 2

CRITERIA AS TO STORAGE CAPACITY AND NUTRIENT
MANAGEMENT

Table 1 Slurry storage capacity required for sows and pigs

Unit type	m ³ /week ¹				
	2.0:1	2.5:1	3.0:1	3.5:1	4.0:1
Water:meal ratio changing for finishers only					
Breeding unit (per sow place)	-	-	-	-	0.174
Integrated unit (per sow place)	0.312	0.355	0.398	0.441	0.483
Finishing unit (per pig)	0.024	0.031	0.039	0.046	0.053

¹An additional 200mm freeboard must be provided in all covered tanks and 300mm freeboard in all uncovered tanks. Allowance must also be made for net rainfall during the specified storage period for uncovered tanks.

Table 2 Slurry storage capacity required for cattle, sheep and poultry

Livestock type	m ³ /week ¹
Dairy cow	0.33
Suckler cow	0.29
Cattle > 2 years	0.26
Cattle (18-24 months old)	0.26
Cattle (12-18 months old)	0.15
Cattle (6-12 months old)	0.15
Cattle (0-6 months old)	0.08
Lowland ewe	0.03
Mountain ewe	0.02
Lamb-finishing	0.01
Poultry — layers per 1000 birds (30% DM)	0.81

¹An additional 200mm freeboard must be provided in all covered tanks and 300mm freeboard in all uncovered tanks. Allowance must also be made for net rainfall during the specified storage period for uncovered tanks.

Table 3 Storage capacity required for dungstead manure

Livestock type	Solid fraction (m ³ /week)	Seepage fraction (m ³ /week) ¹
Dairy cow	0.28	0.04
Suckler cow	0.25	0.03
Cattle > 2 years	0.23	0.02
Cattle (18-24 months old)	0.23	0.02
Cattle (12-18 months old)	0.13	0.01
Cattle (6-12 months old)	0.13	0.01
Cattle (0-6 months old)	0.07	0.01

¹Allowance must also be made for net rainfall during the specified storage period for uncovered tanks.

Table 4 Average net rainfall during the specified storage period

County	Millimetres per week
Carlow	24
Cavan	27
Clare	32
Cork	37
Donegal	38
Dublin	17
Galway	34
Kerry	45
Kildare	18
Kilkenny	23
Laois	22
Leitrim	33
Limerick	26
Longford	23
Louth	20
Mayo	40
Meath	19
Monaghan	23
Offaly	20
Roscommon	26
Sligo	32
Tipperary	27
Waterford	31
Westmeath	21
Wexford	25
Wicklow	33

Article 9

Table 5 Storage capacity required for effluent produced by ensiled forage

Crop	Minimum storage requirement	
	Short Term Storage ¹	Full Storage
Grass	7	21
Arable silage	7	21
Maize	4	10
Sugar beet tops	15	50

¹Only permitted where a vacuum tanker or an irrigation system is available on the holding.

Table 6 Annual nutrient excretion rates for livestock

Livestock type	Total Nitrogen kg/year	Total Phosphorus kg/year
Dairy cow	85	13
Suckler cow	65	10
Cattle (0-1 year old)	24	3
Cattle (1-2 years old)	57	8
Cattle > 2 years	65	10
Mountain ewe & lambs	7	1
Lowland ewe & lambs	13	2
Mountain hogget	4	0.6
Lowland hogget	6	1
Goat	9	1
Horse (>3 years old)	50	9
Horse (2-3 years old)	44	8
Horse (1-2 years old)	36	6
Horse foal (< 1 year old)	25	3
Donkey/small pony	30	5
Deer (red) 6 months — 2 years	13	2
Deer (red) > 2 years	25	4
Deer (fallow) 6 months — 2 years	7	1
Deer (fallow) > 2 years	13	2
Deer (sika) 6 months — 2 years	6	1
Deer (sika) > 2 years	10	2
Breeding unit (per sow place)	35	8
Integrated unit (per sow place)	87	17
Finishing unit (per pig place)	9.2	1.7
Laying hen per bird place	0.56	0.12
Broiler per bird place	0.24	0.09
Turkey per bird place	1	0.4

Table 7 Amount of nutrient contained in 1m³ of slurry

Livestock type	Total Nitrogen (kg)	Total Phosphorus (kg)
Cattle	5.0	0.8
Pig	4.2	0.8
Sheep	10.2	1.5
Poultry — layers 30% DM	13.7	2.9

For the purposes of calculation, assume that 1 m³ = 1,000 litres = 1 tonne.

Table 8 Amount of nutrients contained in 1 tonne of organic fertilisers other than slurry

Livestock type		Total Nitrogen (kg)	Total Phosphorus (kg)
Poultry manure	broilers/deep litter	11.0	6.0
	layers 55% dry matter	23.0	5.5
	turkeys	28.0	13.8
Dungstead manure (cattle)		3.5	0.9
Farmyard manure		4.5	1.2
Spent mushroom compost		8	1.5
Sewage sludge		Total nitrogen and total phosphorus content per tonne shall be declared by the supplier in accordance with the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 to 2001 and any subsequent amendments thereto.	
Dairy processing residues and other products not listed above		Total nitrogen and total phosphorus content per tonne based on certified analysis shall be provided by the supplier.	

Article 15

Table 9 Nutrient availability in fertilisers

Fertiliser	Availability (%)		
	Nitrogen	Phosphorus	
		Soil Index 1 & 2	Soil Index 3 & 4
Chemical	100	100	100
Pig and poultry manure ,	50	50	100
Farmyard manure	30	50	100
Spent mushroom compost	20	50	100
Cattle and other livestock manure (including that produced on the holding)	40	50	100

Table 9A Nutrient availability in compost

Compost C:N ratio ¹	N availability (%)
<10	25
12.5	17.5
15.0	10
17.5	5.5
>20	0.0

¹The determination of the C:N ratio shall be based on a methodology agreed with the Agency or the Minister for Agriculture, Food and the Marine

Table 10 Determining nitrogen index for tillage crops

Tillage crops that follow permanent pasture			
Nitrogen Index			
Index 1	Index 2	Index 3	Index 4
The 5th tillage crop following permanent pasture. For subsequent tillage crops use the continuous tillage table.	The 3rd or 4th tillage crop following permanent pasture. If original permanent pasture was cut only, use index 1.	The 1st or 2nd tillage crop following permanent pasture (see also Index 4). If original permanent pasture was cut only, use index 2.	The 1st or 2nd tillage crop following very good permanent pasture which was grazed only.
Continuous tillage: — crops that follow short leys (1-4 years) or tillage crops			
Previous crop			
Index 1	Index 2	Index 3	Index 4
Cereals Maize	Sugar beet Fodder beet Potatoes Mangels Kale Oil seed rape, Peas, Beans		
	Leys (1-4 years) grazed or cut and grazed		
	Swedes removed	Swedes grazed in situ	
Vegetables receiving less than 200 kg/ha nitrogen	Vegetables receiving more than 200 kg/ha nitrogen		

Table 11 Phosphorus index system

Soil phosphorus index	Soil phosphorus ranges (mg/l)	
	Grassland	Other crops
1	0.0-3.0	0.0-3.0
2	3.1-5.0	3.1-6.0
3	5.1-8.0	6.1-10.0
4	> 8.0	>10.0

Table 12 Annual maximum fertilisation rates of nitrogen on grassland

Grassland stocking rate ¹	Available Nitrogen ²
(kg/ha/year)	(kg/ha)
≤170	206
Grassland stocking rate greater than 170 kg/ha/year ^{3,4}	
171-210	282
211-250	250
>250	250 ⁵

¹Total annual nitrogen (kg) excreted by grazing livestock averaged over the eligible grassland area (ha) (grazing and silage area). Stocking rate refers to grassland area only.

²The maximum nitrogen fertilisation of grassland shall not exceed that specified for stocking rates less than or equal to 170 kg/ha/year unless a minimum of 5% of the eligible area of the holding is used to grow crops other than grass or a derogation applies in respect of the holding.

³This table does not imply any departure from Article 20(1) which prohibits the application to land on a holding of livestock manure in amounts which exceed 170kg nitrogen per hectare per year, including that deposited by the animals themselves (or 250kg in the case of a holding to which a derogation has been granted, in accordance with the Nitrates Directive).

⁴From 1 January 2021 these fertilisation rates are only applicable where the fertiliser type specified by the Minister for Agriculture, Food and the Marine is used.

⁵The application of nitrogen from livestock manure (including that deposited by the animals themselves) to the eligible grassland area shall not exceed 250 kg nitrogen per hectare per year.

Table 13A Annual maximum fertilisation rates of phosphorus on grassland

Grassland stocking rate ¹ (kg/ha/year)	Phosphorus Index			
	1	2	3	4
	Available Phosphorus (kg/ha) ^{2,3,6}			
<85	27	17	7	0
86-130	30	20	10	0
131-170	33	23	13	0
Grassland stocking rate greater than 170 kg/ha/year ^{4,5}				
171-210	36	26	16	0
211-250	39	29	19	0
>250	39	29	19	0

¹Total annual nitrogen (kg) excreted by grazing livestock averaged over the eligible grassland area (grazing and silage area). Stocking rate refers to grassland area only.

²The fertilisation rates for soils which have more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils.

³Manure produced by grazing livestock on a holding may be applied to Index 4 soils on that holding in a situation where there is a surplus of such manure remaining after the phosphorus fertilisation needs of all crops on soils at phosphorus indices 1, 2 or 3 on the holding have been met by the use only of such manure produced on the holding.

⁴The maximum phosphorus fertilisation of grassland shall not exceed that specified for stocking rates less than or equal to 170 kg/ha/year unless a minimum of 5% of the eligible area of the holding is used to grow crops other than grass or a derogation applies in respect of the holding.

⁵This table does not imply any departure from Article 20(1) which prohibits the application to land on a holding of livestock manure in amounts which exceed 170kg Nitrogen per hectare per year, including that deposited by the animals themselves (or 250kg in the case of a holding to which a derogation has been granted in accordance with the Nitrates Directive).

⁶An additional 15 kg of phosphorus per hectare may be applied on soils at phosphorus indices 1, 2, or 3 for each hectare of pasture establishment undertaken.

Table 13B Annual maximum fertilisation rates of phosphorus on grassland adopting increased P build-up application rates

Grassland stocking rate ¹ (kg/ha/year)	Phosphorus Index			
	1	2	3	4
	Available Phosphorus (kg/ha) ^{2,3,6}			
131-170	63	43	13	0
	Grassland stocking rate greater than 170 kg/ha/year ^{4,5}			
171-210	66	46	16	0
211-250	69	49	19	0
>250	69	49	19	0

¹Total annual nitrogen (kg) excreted by grazing livestock averaged over the eligible grassland area (grazing and silage area). Stocking rate refers to grassland area only.

²The fertilisation rates for soils which have more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils.

³Manure produced by grazing livestock on a holding may be applied to Index 4 soils on that holding in a situation where there is a surplus of such manure remaining after the phosphorus fertilisation needs of all crops on soils at phosphorus indices 1, 2 or 3 on the holding have been met by the use only of such manure produced on the holding.

⁴The maximum phosphorus fertilisation of grassland shall not exceed that specified for stocking rates less than or equal to 170 kg/ha/year unless a minimum of 5% of the eligible area of the holding is used to grow crops other than grass or a derogation applies in respect of the holding.

⁵This table does not imply any departure from Article 20(1) which prohibits the application to land on a holding of livestock manure in amounts which exceed 170kg Nitrogen per hectare per year, including that deposited by the animals themselves (or 250kg in the case of a holding to which a derogation has been granted in accordance with the Nitrates Directive).

⁶An additional 15 kg of phosphorus per hectare may be applied on soils at phosphorus indices 1, 2, or 3 for each hectare of pasture establishment undertaken.

Table 14 Annual maximum fertilisation rates of available nitrogen on grassland (cut only, no grazing livestock on holding)

	Available nitrogen (kg/ha)
1st cut	125
Subsequent cuts	100
Hay	80

Table 15 Annual maximum fertilisation rates of phosphorus on grassland cut only

	Phosphorus Index			
	1	2	3	4
	Available Phosphorus (kg/ha) ^{1,2,3}			
First cut	40	30	20	0
Subsequent cuts	10	10	10	0

¹The fertilisation rates for soils which have more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils.

²The fertilisation rates apply to grassland where there is no grazing livestock on the holding.

³The fertilisation rates in this table apply to those areas of farms where hay or silage is produced for sale off the holding on farms stocked <85kg grassland stocking rate.

Table 16 Maximum fertilisation rates of nitrogen on tillage crops

Crop	Nitrogen Index			
	1	2	3	4
	Available Nitrogen (kg/ha)			
Winter Wheat ^{1,2}	210	180	120	80
Spring Wheat ^{1,2}	160	130	95	60
Winter Barley ¹	180	155	120	80
Spring Barley ^{1,3}	135	100	75	40
Winter Oats ¹	145	120	85	45
Spring Oats ¹	110	90	60	30
Sugar Beet	195	155	120	80
Fodder Beet	195	155	120	80
Potatoes: Main Crop, >120 days ⁴	250	190	170	140
Potatoes: Maincrop/seed, 90-120 days ⁴	270	230	210	180
Potatoes: Early, 60-90 days ⁴	210	170	150	120
Potatoes: Salad, <60 days ⁴	140	120	100	60
Maize	180	140	110	75
Field Peas/Beans	0	0	0	0
Oil Seed Rape	225	180	160	140
Linseed	75	50	35	20
Swedes/Turnips	90	70	40	20
Kale	150	130	100	70
Forage Rape	130	120	110	90

¹Where proof of higher yields is available, an additional 20kg N/ha may be applied for each additional tonne above the following yields:

Winter Wheat — 9.0 tonnes/ha Spring Wheat — 7.5 tonnes/ha

Winter Barley — 8.5 tonnes/ha Spring Barley — 6.5 tonnes/ha

Winter Oats — 7.5 tonnes/ha Spring Oats — 6.5 tonnes/ha

The higher yields shall be based on the best yield achieved in any of the three previous harvests, at 20% moisture content.

²Where milling wheat is grown under a contract to a purchaser of milling wheat, an extra 30 kg N/ha may be applied.

³Where malting barley is grown under a contract to a purchaser of malting barley, an extra 20 kg N/ha may be applied where it is shown on the basis of agronomic advice that additional nitrogen is needed to address a proven low protein content in the grain.

⁴Length of growing season

Table 17 Maximum fertilisation rates of phosphorus on tillage crops

Crop	Phosphorus Index			
	1	2	3	4
	Available Phosphorus (kg/ha) ¹			
Winter Wheat ^{2,3,5}	45	35	25	0
Spring Wheat ^{2,3}	45	35	25	0
Winter Barley ^{2,3,5}	45	35	25	0
Spring Barley ^{2,3}	45	35	25	0

Crop	Phosphorus Index			
	1	2	3	4
	Available Phosphorus (kg/ha) ¹			
Winter Oats ^{2,3,5}	45	35	25	0
Spring Oats ^{2,3}	45	35	25	0
Sugar Beet	70	55	40	20
Fodder Beet	70	55	40	20
Potatoes: Main Crop	125	100	75	50
Potatoes: Early	125	115	100	50
Potatoes: Seed/Salad	125	115	100	85
Maize	70	50	40	20 ⁴
Field Peas	40	25	20	0
Field Beans	50	40	20	0
Oil Seed Rape	55	45	35	0
Linseed	35	30	20	0
Swedes/Turnips	70	60	40	40
Kale	60	50	30	0
Forage Rape	40	30	20	0

¹The fertilisation rates for soils which have more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils.

²Where proof of higher yields is available, an additional 3.8kg P/ha may be applied on soils at phosphorus 1, 2, or 3 for each additional tonne above a yield of 6.5 tonnes/ha. The higher yields shall be based on the best yield achieved in any of the three previous harvests, at 20% moisture content.

³Where pH is greater than or equal to 7, 20kg P/ha may be applied on soils at phosphorus index 4.

⁴Must be incorporated prior to or during sowing.

⁵For winter cereals on soils of P index 1 and 2, 20 kg of the maximum P fertilisation rate may be applied up to 31st October, which must be incorporated prior to or during sowing.

Table 18 Maximum fertilisation rates of nitrogen on vegetable crops

Crop	Nitrogen Index				Maximum additional supplementation (Top dressing)
	1	2	3	4	
	Available Nitrogen (kg/ha)				
Asparagus (Establishment)	140	115	95	70	
Asparagus (After harvest)	0	0	0	0	70
Broad Beans	0	0	0	0	
French Beans	90	85	75	70	
Beetroot	140	125	105	90	
Brussels Sprouts	120	115	105	100	180
Spring Cabbage	50	35	15	0	250
Other Cabbage	150	135	115	100	100
Broccoli	120	115	100	90	120
Cauliflower (Winter and Spring)	75	50	25	0	150
Cauliflower (Summer and Autumn)	120	85	65	40	120

Crop	Nitrogen Index				Maximum additional supplementation (Top dressing)
	1	2	3	4	
	Available Nitrogen (kg/ha)				
Carrots	90	70	40	0	
Celery	120	85	65	50	180
Courgettes	140	125	105	90	
Leeks	150	130	100	80	150
Lettuce	100	90	80	70	50
Onions	70	60	50	40	70
Scallions	90	80	70	60	60
Parsley	100	80	60	40	150
Parsnip	100	85	70	50	70
Peas (Market)	0	0	0	0	
Rhubarb	100	90	80	70	200
Spinach	140	125	105	90	100
Swede (Horticultural)	70	45	25	20	30
Swede (Transplanted crops)	90	60	30	0	

Table 19 Maximum fertilisation rates of phosphorus on vegetable crops

Crop	Nitrogen Index			
	1	2	3	4
	Available Phosphorus (kg/ha) ¹			
Asparagus (Establishment)	65	45	35	20
Asparagus (After harvest)	27	22	15	10
Broad Beans	65	45	35	20
French Beans	65	45	35	20
Beetroot	65	45	35	20
Brussels Sprouts	65	45	35	20
Spring Cabbage	65	45	35	20
Other Cabbage	65	45	35	20
Broccoli	65	45	35	20
Cauliflower (Winter and Spring)	65	45	35	20
Cauliflower (Summer and Autumn)	65	45	35	20
Carrots	65	45	35	20
Celery	88	65	55	28
Courgettes	65	45	35	20
Leeks	65	45	35	20
Lettuce	80	60	40	20

Crop	Nitrogen Index			
	1	2	3	4
	Available Phosphorus (kg/ha) ¹			
Onions	65	45	35	20
Scallions	65	45	35	20
Parsley	65	45	35	20
Parsnip	65	45	35	20
Peas (Market)	65	45	35	20
Rhubarb	65	45	35	20
Spinach	65	45	35	20
Swede (Horticultural)	70	60	45	35
Swede (Transplanted crops)	70	60	45	35

¹The fertilisation rates for soils which have more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils.

Table 20 Annual maximum fertilisation rates of nitrogen on fruit/soft fruit crops

	Available Nitrogen (kg/ha)
Apples (Dessert)	125
Apples (Culinary)	125
Pears	50
Cherries	70
Plums	70
Blackcurrants	80
Gooseberries	40
Raspberries	60
Strawberries	50
Redcurrants	60
Loganberries	50
Blackberries	50

Table 21 Annual maximum fertilisation rates of phosphorus on fruit/soft fruit crops

	Phosphorus Index			
	1	2	3	4
	Available Phosphorus (kg/ha) ¹			
Apples (Dessert)	25	16	12	8
Apples (Culinary)	20	12	10	8
Pears	16	8	4	0
Cherries	16	8	4	0
Plums	16	8	4	0
Blackcurrants	20	16	12	8

Phosphorus Index				
	1	2	3	4
Available Phosphorus (kg/ha) ¹				
Gooseberries	20	16	12	8
Raspberries	20	16	12	8
Strawberries	16	8	4	0
Redcurrants	20	16	12	8
Loganberries	20	16	12	8
Blackberries	20	16	12	8

¹The fertilisation rates for soils which have more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils.

Table 22 Phosphorus excess limits Article 34

Date	Total available phosphorus (kg/ha)
1 January 2017	3
1 January 2018	3
1 January 2019	2
1 January 2020	1
1 January 2021	0

SCHEDULE 3

Articles 10, 11, 13 and 16

STORAGE PERIODS FOR LIVESTOCK MANURE

1. The storage period specified for the purposes of Articles 10(2), 11(2), 13 and 16(5)(b) is—

- (a) 16 weeks in relation to holdings in counties Carlow, Cork, Dublin, Kildare, Kilkenny, Laois, Offaly, Tipperary, Waterford, Wexford and Wicklow;
- (b) 18 weeks in relation to holdings in counties Clare, Galway, Kerry, Limerick, Longford, Louth, Mayo, Meath, Roscommon, Sligo and Westmeath;
- (c) 20 weeks in relation to holdings in counties Donegal and Leitrim, and
- (d) 22 weeks in relation to holdings in counties Cavan and Monaghan.

2. Where 20% or more of a holding lies within one or more counties of higher storage requirement as specified in paragraph 1, the holding shall be deemed for the purposes of this Schedule to lie wholly within the county in relation to which the longest storage period is specified.

SCHEDULE 4

Articles 14, 17 and 19

PERIODS WHEN APPLICATION OF FERTILISERS TO LAND IS
PROHIBITED

1. In counties Carlow, Cork, Dublin, Kildare, Kilkenny, Laois, Offaly, Tipperary, Waterford, Wexford and Wicklow, the period during which the application of fertilisers to land is prohibited in the period from—

- (a) 15 September to 12 January in the case of the application of chemical fertiliser
- (b) 15 October to 12 January in the case of the application of organic fertiliser (other than farmyard manure)
- (c) 1 November to 12 January in the case of the application of farmyard manure.

2. In counties Clare, Galway, Kerry, Limerick, Longford, Louth, Mayo, Meath, Roscommon, Sligo and Westmeath, the period during which the application of fertilisers to land is prohibited is the period from—

- (a) 15 September to 15 January in the case of the application of chemical fertiliser
- (b) 15 October to 15 January in the case of the application of organic fertiliser (other than farmyard manure)
- (c) 1 November to 15 January in the case of the application of farmyard manure.

3. In counties Cavan, Donegal, Leitrim and Monaghan, the period during which the application of fertilisers to land is prohibited is the period from—

- (a) 15 September to 31 January in the case of the application of chemical fertiliser

- (b) 15 October to 31 January in the case of the application of organic fertiliser (other than farmyard manure)
- (c) 1 November to 31 January in the case of the application of farmyard manure.



GIVEN under the Official Seal of the Minister for Housing, Planning and Local Government,
20 December 2017.

EOGHAN MURPHY,
Minister for Housing, Planning and Local Government.

EXPLANATORY NOTE

(This note is not part of the Instrument and does not purport to be a legal interpretation)

These Regulations revoke the European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2014.

These Regulations, which give effect to Ireland's 4th Nitrates Action Programme, provide statutory support for good agricultural practice to protect waters against pollution from agricultural sources and include measures such as

- periods when land application of fertilisers is prohibited
- limits on the land application of fertilisers
- storage requirements for livestock manure, and
- monitoring of the effectiveness of the measures in terms of agricultural practice and impact on water quality.

The Regulations give further effect to several EU Directives including Directives in relation to protection of waters against pollution from agricultural sources ("the Nitrates Directive"), dangerous substances in water, waste management, protection of groundwater, public participation in policy development and water policy (the Water Framework Directive).

BAILE ÁTHA CLIATH
ARNA FHOILSIÚ AG OIFIG AN tSOLÁTHAIR
Le ceannach díreach ó
FOILSEACHÁIN RIALTAIS,
52 FAICHE STIABHNA, BAILE ÁTHA CLIATH 2
(Teil: 01 - 6476834 nó 1890 213434; Fax: 01 - 6476843)
nó trí aon díoltóir leabhar.

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Appendix No. 18

Visual Impact Assessment



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1 Landscape and Visual Impact Assessment

1.1 Introduction

Michael Fitzpatrick Architects Ltd has been commissioned on behalf of the Applicant to carry out an analysis of the visual impacts of the proposed erection of 1 no. pig unit and all ancillary site works at Rossmakay, Co. Louth.

1.2 Methodology

A survey of the potential visibility of the proposed development was carried out on 30th April 2019. In the first instance, mapping analysis was carried out to identify locations from which views of the proposed development were likely to be seen from the adjoining Protected Structure Rossmakay House Lhs 012-049 (NIAH 13901214). Mapping analysis identified a number of representative locations where there was a potential for the proposed development to be visible. At each of the representative locations, photographs were taken looking towards the proposed development. The chosen views were taken using a high resolution digital camera with a horizontal field of coverage of 73.6°, which would be considered a wide angle. A wide-angle lens was used to provide sufficient context in the view. Photographs with a narrow field of view may exclude relevant context. Wide-angle views, capable of providing sufficient context are particularly important when the viewpoint is close to proposed development. Photographs and photomontages based on wide angle photography are printed at A3 size, so that the angle of vision covered by the print, when held at reading distance, is approximately the same as would be covered by the same extent of the real scene, when viewed from the camera position.

The camera positions of the views were established using survey standard digital GPS equipment, and a topographical survey of the site and surroundings. All survey data was related to Irish National Grid. The date and time when each photograph was taken was recorded. Photomontages were prepared for each of the view locations. Models of the proposed development were constructed using 3D software, Graphisoft Archicad. The models were based on survey information and on design drawings provided by the design team.

The surveyed reference points on existing buildings were attached to the three dimensional models. The model used for photomontages included appropriate detail of the proposed buildings as shown on design drawings. Renderings were made on computer from each camera position using the field of view of each photograph, and, in the case of photomontages, with the sun position correct for the date and time that each photograph was taken. The renders were inserted into the relevant view, and were scaled and positioned using the field of vision of each photograph and the surveyed reference points in each view. MFA would expect the dimensional accuracy of the scaling and positioning of the image of the proposed development within each view to be better than $\pm 1\%$.



1.3 Existing Environment

The subject site is located south of the L3167 Road. The site is located circa 4.5 kilometres West of Blackrock. The L3167 Road runs along the North of proposed site. The nearest individual dwelling is the Protected Structure Rossmakay House located circa 150m to the North West of the site. Existing vegetation consisting of 3 bands of trees/hedgerows are located to South of neighbouring site, between protected structure and proposed development. Existing farm outbuildings are located in close proximity to the north of proposed development and are neighbouring existing protected structure. Existing farm yard consists of 8 no. outbuildings of various scale, spread out over an area of 10,650sqm. The local area is majorly characterised by individual dwellings of varying scale.

1.4 Impact Assessment

1.4.1 Characteristics of the Proposed Development

The proposed development at Rossmakay, Co. Louth consists of 1 no. pig unit and all ancillary site works. Agricultural nature of proposed works are in keeping with existing farm outbuilding located to the North West of proposed site. Location of proposal is circa 1000 meters from the N52 road to the North West of site. The M1 is located circa 1400 to the East of the site. Ridge height of proposed poultry unit is to be 5333mm. Walls of proposed pig unit to be finished in green corrugated cladding. Proposed site has a gradient slope, with the proposed development located at the lowest point, as can be seen in 'before development' images.

1.4.2 Definition of Impacts on the Built Environment

The assessment of visual impacts on landscape and on the built environment had regard to the Guidelines on the Information to be contained in Environmental Impact Statements prepared by the Environmental Protection Agency (2002), and to Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.

The list of definitions given below is taken from Section 5: Glossary of Impacts contained in the Guidelines on the Information to be contained in Environmental Impact Statements prepared by the Environmental Protection Agency. Some comment is also given below on what these definitions might imply in the case of visual impact or landscape and visual impact. The definitions from the EPA document are in italics.

Imperceptible Impact: *An impact capable of measurement but without noticeable consequences.*

The definition implies that the development would be visible, capable of detection by the eye, but not noticeable. If the development were not visible, there could be no impact.

Slight Impact: *An impact which causes noticeable changes in the character of the environment without affecting its sensitivities.* For this definition to apply, a development would be both visible and noticeable, and would also bring about a change in the visual character of the environment. However, apart from the development itself, the visual sensitivity of the surrounding environment should remain unchanged.



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Moderate Impact: *An impact that alters the character of the environment in a manner that is consistent with emerging trends.* In this case, a development must bring about a change in the visual character of the environment; and this change must be consistent with a pattern of change that is already taking place.

Significant Impact: *An impact which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.* The wording of the definition is clear. Difficulty in assessing whether an impact might or might not be significant lies in the word 'sensitive'. In visual terms, particularly when related to the appearance of landscape or the built environment, what one person might be sensitive to another might not. A conservative approach, classifying impacts as significant even though many observers might not regard them as significant, is taken here.

Profound Impact: *An impact which obliterates sensitive characteristics.* In visual terms, profound impacts are only likely to occur on a development site, in that it is only on the site that all previous visually sensitive characteristics could be obliterated. Outside the site, some visual characteristic of the original environment is likely to remain. The range of possible impacts listed above deal largely with the extent of impact; and the extent of the impact of a development is usually proportional to the extent to which that development is visible. The extent of impact will also, in part, depend on the sensitivity of the spaces from which the development is seen. This proportionality may be modified by the extent to which a development is regarded as culturally or socially acceptable. It is also the case that a building thought startling when first built, in time becomes part of the background, and what at first might have been regarded by the public a significant impact, fades to slight. Though buildings are intended to be permanent, and will be permanently visible, the extent of visual impact associated with a building often diminishes with time.

1.4.3 Construction Phase

The extent of visual impact of the development during the construction phase is likely to be similar to that for the operational phase, as set out below. The character of visual impacts during the construction phase is likely to be wholly negative at first, becoming neutral to positive as work proceeds and the new structure becomes apparent.

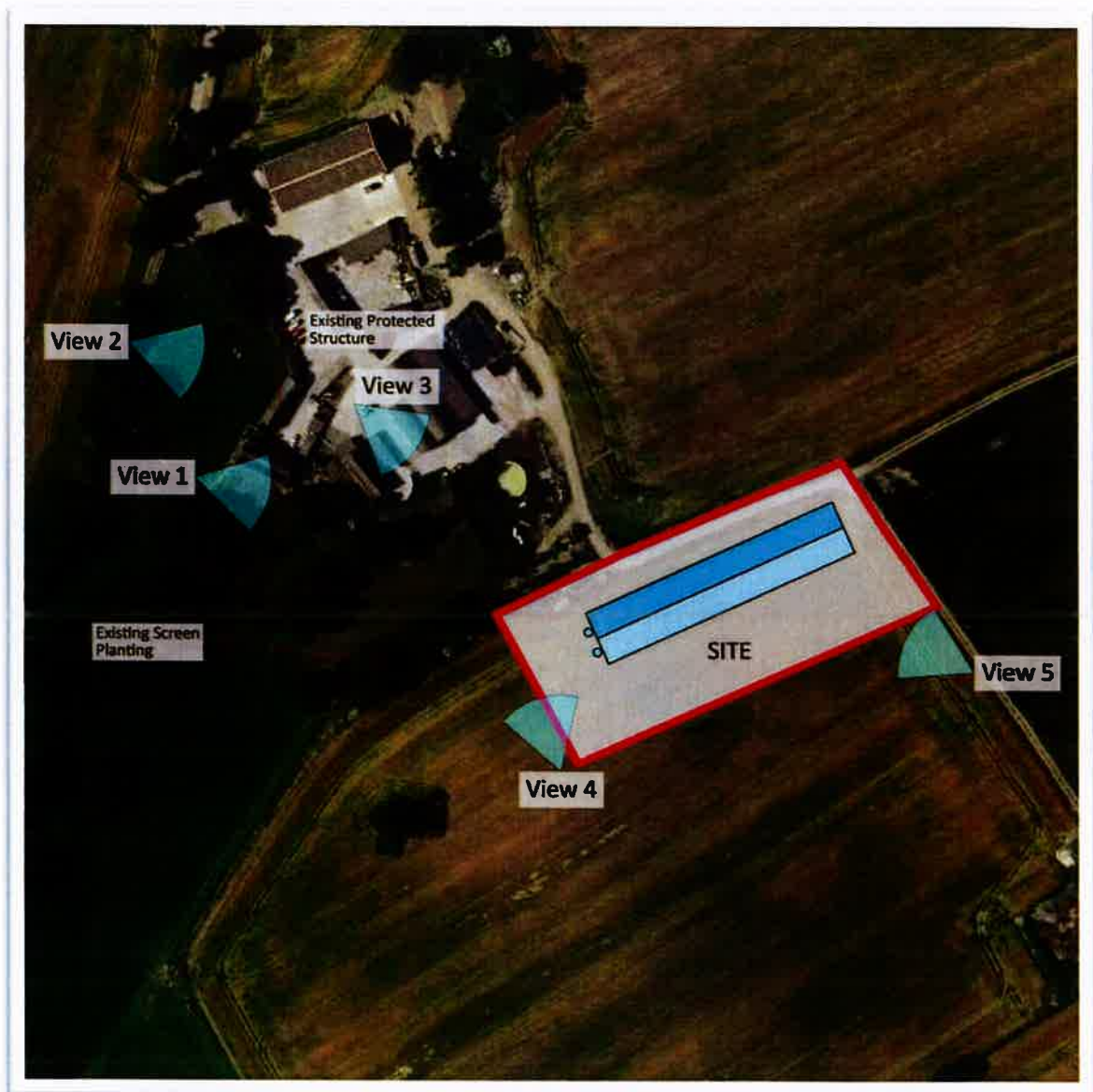
1.4.4 Operational Phase

The extent of potential visual impact of the proposed development on the built environment from locations around the proposed development is discussed below. The view locations discussed below are representative of locations from which it was suggested by mapping analysis that development might be visible.



View Location Extent of Potential Impact

- View 1: Neighbouring protected structure entrance lane looking East – Imperceptible Impact
- View 2: Neighbouring protected structure entrance lane looking East – No Impact
- View 3: Neighbouring farm yard looking South East – Slight Impact
- View 4: Existing field looking North – Significant Impact
- View 5: Existing field lane looking North West – Significant Impact





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In the do-nothing scenario, no development will take place, and the present character of the site will remain.

The character of the impact: positive, negative or neutral, will depend on how well a development is received by the public, and on the general contribution of the development to the built environment. The character of a visual impact, and even the duration of a visual impact, is very dependent on the attitude of the viewer. If a viewer is opposed to a new building for reasons other than visual, that viewer is likely to see the building in a negative light, no matter how beautiful the building might be.

1.5 Mitigation Measures

No mitigation measures are proposed. However, it should be noted that, while the landscaping proposed as part of this application will, of itself, result in changes in the visual environment, many would consider boundary and other landscaping planting to have a mitigating effect on the visual impact of new development.

1.6 Residual Impacts

Since no mitigation measures are proposed, predicted residual visual impacts will be as described for potential impacts above. The nature and extent of predicted visual impact of the proposed development on the built environment from locations around the proposed development is described below.

View 1: View from private Lane looking West towards the proposed development. Proposed development is located circa 160 meters from viewpoint. Proposed pig unit will not be visible due to existing trees and hedgerows. The proposed development will result in an imperceptible visual impact.

View 2: View from private Lane looking West towards the proposed development. Proposed development is located circa 200 meters from viewpoint. Existing out buildings, trees and hedges around the perimeter of the site prevent any view of the development from this location. The proposed development will not result in any visual impact.

View 3: View from neighbouring farm yard looking South East towards the proposed development. Proposed development is located circa 120 meters from viewpoint. The development will be visible from this location, however it will be hidden by existing outbuildings and proposed planting scheme to the Western boundary of the development. The proposed development will result in slight visual impact.

View 4: View from existing field looking North towards the proposed development and Rossmakay House. Proposed development is located circa 50 meters from viewpoint. View is taken from the highest point on existing field. The proposed development will result in significant visual impact from view location, however views of Rossmakay House are screened by existing trees and hedgerows.

View 5: View from existing field lane looking North West towards proposed development and Rossmakay House. Proposed development is located circa 70 meters from viewpoint. View is taken from the highest point along existing field lane. The proposed development will result in significant visual impact from view location, however views of Rossmakay House are screened by existing trees and hedgerows.



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The above-mentioned views are taken from a robust range of vantage points from the neighbouring property and existing field.

Views 1 & 2 are taken along the access lane to Rossmakay house and are the areas where the proposed development is most likely to be viewed from the neighbouring protected structure. Views of the proposed development are screened by existing outbuildings and the 3 bands of trees/hedgerows to the South perimeter of the neighbouring site. View 3 is taken from the farm yard to the rear of Rossmakay House. The development is visible from these locations however it is mostly screened by existing units and proposed planting which will help reduce the visual impact. Proposed development will consist of an agricultural unit, similar in nature to the outbuilding as seen in View 3. Views 4 & 5 are taken from the highest points from the existing field and show the extent of the screen planting which exists around the perimeter of the neighbouring protected structure. Views also highlight the low set nature of proposed development, particularly in comparison to neighbouring protected structure and farm outbuildings.



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View 1: Neighbouring protected structure entrance looking East towards proposed development. (Before Development)



View 1: Neighbouring protected structure entrance looking East towards proposed development. (After Development)



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View 2: Neighbouring protected structure entrance looking East towards proposed development. (Before Development)



View 2: Neighbouring protected structure entrance looking East towards proposed development. (After Development)



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View 3: Neighbouring farm yard looking South East towards the proposed development. (Before Development)



View 3: Neighbouring farm yard looking South East towards the proposed development. (After Development)

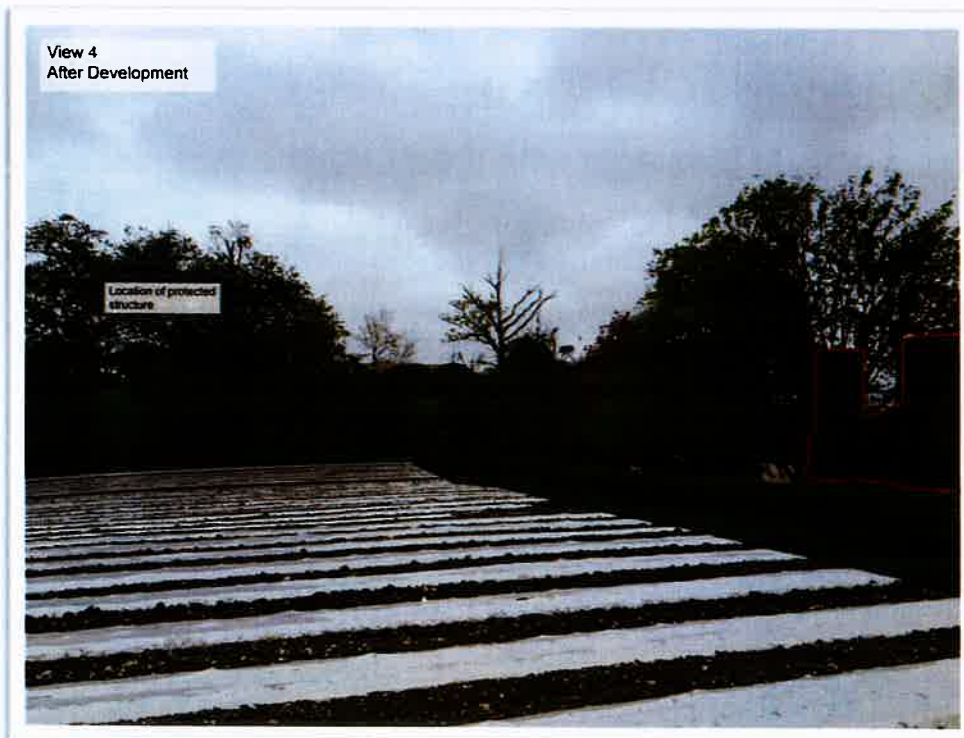


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View 4: Existing field looking North towards the proposed development. (Before Development)



View 4: Existing field looking North towards the proposed development. (After Development)



View 5: Existing field lane looking North West towards the proposed development. (Before Development)



View 5: Existing field lane looking North West towards the proposed development. (After Development)



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2.0 Summary

Given the agricultural nature of the proposed development and the surrounding structures, the long established nature of the site as an agricultural farmyard, the set-back distance from the protected structure, existing shelter vegetation/hedgerows/trees between the protected structure and the proposed development and the site location below the level of the existing structures the proposed development will have no adverse impact on Rosmakay House.

Specification amended this day 13th June 2019

Signed *Michael Fitzpatrick*

Michael Fitzpatrick

B.A. Arch., Dip. Arch., MRIAI

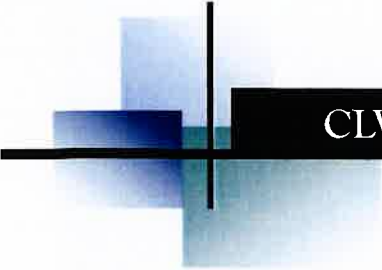
RIAI Grade III Conservation Architect

Michael Fitzpatrick Architects Ltd



Appendix No. 19

*Construction Waste
Management Plan*

The logo for CLW Environmental Planners Ltd. features a stylized cross shape composed of overlapping blue and black squares, with a vertical black line intersecting the center.

CLW Environmental Planners Ltd.

The Mews,
23 Farnham Street,
Cavan,
Co. Cavan

Phone: 049-4371447/9

Fax: 049-4371451

E-mail: info@clw.ie

Construction
Waste Management Plan

For

Proposed Development
Of 1 No. Pig House and associated works

At

Rossmakay,
Knockbridge,
Dundalk,
Co. Louth.

23rd March 2020

Applicant:

Mr. John Lambe
Rossmakay,
Knockbridge,
Dundalk,
Co. Louth.

Proposed Development:

Construction of 1 no. pig house together with all ancillary structures and site works
associated with the above development at

Location:

Rossmakay,
Knockbridge,
Dundalk,
Co. Louth.

Background:

The following Construction and Demolition (C&D) Waste Management Plan has been completed in accordance with the Department of Environment, Heritage and Local Government, Best Practice Guidelines on the preparation of Waste Management Plans for Construction and Demolition Projects, July 2006.

1. Introduction:

The management of C&D waste on this site should reflect the waste management hierarchy, with waste prevention and minimisation being the first priority succeeded by reuse and recycling. The subsequent use of recycled materials in reconstruction works also reduces the quantities of waste which ultimately needs to be consigned to landfill sites.

In this phase of the development, the proposed development has been subdivided into 2 areas of work for the purposes of this plan;

1. Site Development
2. Construction of 1 no. pig house and associated works.

2. Waste Management Objectives

- **Prevention of Waste:**

The primary effort therefore should be to engage in waste prevention and reduce the amount of waste generated in the first place i.e. minimise the resources needed to do the job. Prevention is financially advantageous as it reduces the purchase of construction materials and reduces the need to remove wastes from the site.

The prevention of waste can be minimized by;

- Renovating existing buildings where appropriate.
- Re-using materials where appropriate.
- Re-cycling wastes where appropriate.
- Waste disposal as a last resort.

- **Renovation:** which retains and repairs existing structural and decorative elements, with the introduction only where necessary of new items, contributes greatly to a reduction in C&D waste arising. **As this is an application for a proposed new build, renovation of existing buildings is not applicable to this site.**

- **Reuse of Waste:**

Material that is generated should be reused on site or salvaged for subsequent reuse to the greatest extent possible and disposal should only be considered as a last resort. Initiatives should be put in place to maximise the efficient use/reuse of materials. Innovative initiatives to avoid the need for disposal should be investigated.

- **Recycling of Waste:**

In relation to the small volume of waste which cannot be used on site there are a number of established markets available for the beneficial use of this C&D waste:

- waste timber can be recycled as shuttering or hoarding, or sent for reprocessing as medium density fibreboard;
- waste concrete can be utilised as fill material for roads or in the manufacture of new concrete when arising at source; and
- in addition, the technology for the segregation and recovery of stone, for example, is well established, readily accessible and there is a large reuse market for aggregates as fill for roads and other construction projects. Bitmac and Asphalt can also be recycled in roads projects.

3. Overall Management of C&D Waste on the Farm:

As this is a typical agricultural development, there are no waste streams with the potential for significant adverse environmental impact. The site owner/appointed contractor, is/will be experienced at carrying out similar development projects on this, or other farms, and will be responsible for the management of C & D waste from this farm. All external contractors to be used will be experienced with regard to pig farm developments.

4. Demolition Plan:

Not Applicable as no Demolition Proposed

5. Site - Development Plan:

The proposed development is to be completed on a greenfield area. This will involve excavating the site of the proposed developments to facilitate site leveling requirements and the construction of manure and soiled water storage tanks. This will involve the excavation of a certain amount of spoil. This material will be used to level low-lying parts of the site with any remaining soil banked around the boundary of the site. In the interim, all excavated soil will be stored on the site well removed from drainage ditches.

6. Construction Plan:

It is important to emphasise the potential for certain purchasing procedures to contribute to a reduction in excessive material wastage on site. Examples include:

- ordering materials on an "as needed" basis to prevent oversupply;
- purchasing coverings, panelling or other materials in shape, dimensions and form that minimises the creation of excessive scrap waste on site;
- ensuring correct storage and handling of construction materials to minimise generation of damaged materials/waste
- ensuring correct sequencing of operations.

The proposed development of a regular shaped building, similar, and in some cases identical construction methods to that previously completed on other similar pig farms, will minimise the amount of waste material on the site. A significant amount of materials can be manufactured to the required size off site. In order to minimize wastage and other adverse impacts;

- where possible all concrete and aggregates will be ordered and supplied to exactly meet requirements.
- The proposed steel superstructure for the buildings will be made to order off site, and will only require erection on site, thus eliminating any waste.
- The roofing timbers can be ordered to size thus eliminating the need for cutting and wastage.
- All internal fixtures and fittings will be made to order off site and delivered to the site for installation.
- Any wastes that may arise on site will be appropriately stored, recycled where possible with any remaining wastes disposed of as previously outlined.

**Construction waste Types, Costs and
projected disposal/recovery routes:**

- Metal and Electrical - To be removed, segregated and stored for re-use on the farm or recycling – Oxigen Environmental (Or other approved contractor) – **NWCPO-08-01106-06**
- Fluorescent Tubes - N/A
- Insulation/Timber - Excess to be removed off-site by Oxigen Environmental (Or other approved contractor) – **NWCPO-08-01106-06**
-
- General Waste` - To be removed offsite by Oxigen Waste – Oxigen Environmental (Or other approved contractor) – **NWCPO-08-01106-06**

Given the pre-fabricated nature of the development i.e. steel cut and measured off site, timber cut off-site to pre determined lengths, etc. there will be minimal waste streams generated on-site. Skips/trailers will be provided on-site for waste collection and based on previous experience with similar developments it is envisaged that total waste arisings consisting of packaging, offcuts, etc. will equate to 10 – 15 tonnes. All of this material is to be sent to Oxigen Waste or other approved contractor.

Waste Disposal cost estimate €1,500 - €3,000

- Soil/Stone - To be used as infill / landscaping material as part of proposed site works.

As all soil/stone is to be used on-site there is no associated waste disposal cost.

7. Waste Audit

As a result of the prefabrication of a significant portion of the development (incl. steel portal frame, etc., off-site and the simple nature of construction (i.e. pre fabricated steel, pre-cut timbers, slats and penning pre-made off-site, and equipment), the sources of waste on-site have been limited and are mainly attributable to packaging, and minor off-cuts (steel, insulation, timber, etc.), and are not capable of being reduced further.

The remaining wastes produced are not hazardous, dangerous and/or do not have significant potential for causing pollution. In addition they are not suitable for re-use on site and are destined for Oxigen (Or other approved waste contractor) for further segregation and recycling, as the volumes to be generated make on-site separation impractical as it would increase transport and costs associated with transporting partially filled receptacles.

All waste removed off-site will, be tracked/recorded and documented.

8. Conclusion:

Due to the nature of the proposed development, i.e. agricultural, there are no areas of significant concern with regard to the proposed development.

The volume of waste emanating from the proposed works will be minimized by optimizing the construction process and pre-fabricating a significant proportion of the houses off-site, with minimal wastes arising on-site.

The operator/construction contractor is greatly experienced at overseeing similar developments on this, and other pig farms and will be in charge of the management of the construction waste management plan.

Appropriate records are to be maintained of all materials sent off site for recycling/disposal.

Signed:



Paraic Fay
B.Agr.Sc.

Date: 23032020