Poultry Farm

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

In respect of a proposed development involving the construction of 1 no. poultry house including all ancillary facilities at:

DRUMCREEGHAN,
LATTON,
CASTLEBLANEY,
CO. MONAGHAN

On behalf of:

MR. DECLAN SULLIVAN
DRUMCREEGHAN,
LATTON,
CASTLEBLANEY,
CO. MONAGHAN

June 2017

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A. NON-TECHNICAL SUMMARY

This Environmental Impact Assessment Report (E.I.A.R.) has been prepared by C.L.W. Environmental Planners Ltd. on behalf of Mr. Declan Sullivan, Drumcreeghan, Latton, Castleblayney, Co. Monaghan in respect of the proposed development of 1 No. poultry house together with all ancillary structures and associated site works, on and or adjacent to an existing poultry farm. The 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. The farm will operate under Licence by the Environmental Protection Agency, and this licence will be progressed upon receipt of planning permission.

The proposed development is to be completed adjacent to the applicants existing Pullet rearing house at Drumcreeghan, Latton, Castleblayney, Co. Monaghan. The E.I.A.R. has been prepared after an Environmental Impact Assessment (E.I.A.) of the proposed development carried out by C.L.W. Environmental Planners Ltd., in accordance with the Planning and Development Act 2000 (as amended), Planning & Development Regulations 2001-2015 and the Protection of Environment Act 2003.

The existing farm operated by the applicant is located adjacent to the site of the proposed development and has been operated as a poultry farm for the last number of years. It consists of 1 No. Pullet rearing house with capacity for c. 28,000 birds, together with all ancillary structures and facilities necessary for the operation of this enterprise. The existing and proposed poultry farming activities are the only agricultural activities carried out on this site by the applicant, however the applicant's existing bovine/ovine farmyard complex is located adjacent to same and utilises the existing access route.

The proposed development of 1 No. Pullet rearing house will be completed to the side of the existing house, and on the site of a previously approved development, so as to minimise any potential visual impact from same. The capacity of the farm upon completion of all proposed developments will increase from c. 28,000 to c. 60,000 birds exceeding the threshold required for the preparation of an Environmental Impact Assessment Report as per S.I. 600 of 2001 (Planning and Development Regulations 2001), Schedule 5 Part 2 1 (e) (i) as follows;

> ***"Installations for intensive rearing of poultry not included in Part 1 of this Schedule which would have more than 40,000 places for poultry."***

As all manure is to be moved off-site by a registered contractor in line with the requirements of S.I. 31 of 2014. The additional structures and site works required as part of the proposed development will include meal storage silo(s), soiled water tank, and gas storage tanks etc.

The proposed development will be located in the townland of Drumcreeghan, Latton, Castleblayney, adjacent to the existing poultry farmyard complex. The applicant is highly experienced in poultry farm management, and in particular the management of Pullet rearing enterprises. The operation of the proposed development will be integrated, in so far as is possible, with the operation of the existing farming activities. The management principles and production process are similar for the existing and proposed developments. The proposed development will provide significant economies of scale for the applicant.

The capacity of this farm is and will be in excess of that for which a Licence from the Environmental Protection Agency (E.P.A.) is required. The applicant will ensure that the required licence is in place prior to operation of the proposed development. This E.I.A.R. will be submitted to the EPA as part of the Licence application process. The present enterprise provides part-time employment for the applicant, however upon completion of the proposed developments there will be closer to full time employment for the applicant.

The proposed site, and site of the existing activities, drain naturally through field drains which flow to the Balladian Stream, a tributary of the Balladian/Dromore River. The site of the existing and proposed development is located in the North Western River Basin District. Storm water from roofs and clean yards will discharge to field drainage via a storm water collection system. The storm water discharge points will be regularly checked, inspected and monitored. There will be no discharge of any soiled water or any effluent from the site to any watercourse or to groundwater.

The site is in a rural agricultural area c. 4.5 km's South of Ballybay. The activity on the farm is, and will be, a poultry farming activity appropriate to the area and consistent with the development plan for Co. Monaghan. The site is well serviced by the current road infrastructure and is accessed by a local road which subsequently connects with the Regional Route, the R162 Ballybay – Shercock Road, adjacent to the site. The proposed developments will be completed adjacent to the existing structures and will use the proposed access routes and site infrastructure. The poultry house for which permission is sought would be located to the rear of the existing poultry house, c. 100 m from the adjoining local road, and as previously detailed on the site of a previously approved development.

The topography of this site means that the existing poultry house is above the adjoining road levels. The proposed new house finished floor level will be similar to the existing house, and below the surrounding ground level, and the completion of same will involve a limited excavation. The location of the proposed development, in close proximity to the existing development, and screened by same and the existing hedgerows together with the proposed external finishes and proposed landscaping will mean that the development will be well integrated into the existing landscape/farmyard complex.

The site is located c. 23 Km from the closest Natura 2000 site – Kilroosky Lough Cluster SAC.

Hazardous waste generated at this site will be in the form of spent fluorescent lighting tubes. The annual quantity of each of this class of waste generated on the site is and will be mimimal. It is proposed to accumulate the used fluorescent tubes in a specialised storage area in the site pending periodic disposal at the Monaghan Co. Co. civic amenity centre. Alternatively these tubes may be returned to the supplier.

As the existing house has been well maintained it has been ensured that only the most efficient systems of poultry husbandry are in operation on this farm. All existing systems are well maintained and serviced so as to ensure that they are operating to maximum efficiency. The proposed poultry house will be similar in design principles to the existing house.
The type of house existing on this farm is a simple closed building of block and timber/wood construction, thermally insulated with a forced computer controlled ventilation system and

artificial lighting. Birds are housed on a solid floor, with litter (wood shavings/chopped straw) spread over the entire floor area. Automated feeding and drinking systems are in operation and are in line with Best Available Techniques (BAT) requirements. A button nipple drinking system is used in the existing house as this is the most efficient type of drinking system and it ensures that the manure/litter remains as dry as possible.

The proposed poultry house will be of a steel or timber portal frame construction on a concrete base. Walls will be plastered blockwork / concrete, with a pre-fabricated panel construction and the roof cladding will be box profile juniper green (or similar). The proposed poultry house will be c. 79.7m by 18.4m with an overall height of c. 6 m.

The house will be thermally insulated with a forced computer controlled ventilation system and artificial lighting. Birds are housed on a solid floor, with litter (wood shavings/chopped straw) spread over the entire floor area. Automated feeding and drinking systems are proposed and are in line with Best Available Techniques (BAT) requirements. A button nipple drinking system will be used in the proposed houses as this is the most efficient type of drinking system and will ensure that the manure/litter remains as dry as possible.

The production process on this farm will be similar to other such houses in Co. Monaghan, and will be in line with the requirements of the Department of Agriculture, Food & Marine and Bord Bia. The applicant will be responsible for the feeding, management and husbandry of the birds and for ensuring that all of the required records are maintained. The stock for this farm will be brought from the hatchery as day olds, and will remain in the houses until they are at point of lay (c. 15-16 weeks of age) at which time they will be transported off-site to specialised layer houses. The proposed houses will operate in an all in - all out basis to maintain a single age profile, and to maintain the health status of the birds.

The poultry manure from this farm is/will be removed off site by an authorised contractor, Eamon Fitzpatrick Contractors, on behalf of the applicant. The contractor provides the machinery and labour necessary for cleaning out the houses and is responsible for cleaning of the houses, arranging transport and making arrangements for the receipt of this material. Eamon Fitzpatrick Contractors carry out this function for a number of poultry farmers so as to provide a consistent, reliable service to all farmers and to provide a consistent supply of manure to the compost yards/recipient farmers. The estimated manure production as a result of the proposed development will be a total of c. 480 tonne / annum an increase of c. 250 tonnes from the c. 230 tons/annum produced by the existing enterprise.

Soiled water from the existing, and proposed development where applicable, will be collected in dedicated soiled water collection tanks, located at the end of each house. This soiled water will then be applied to the adjoining landholding, in accordance with S.I. 31 of 2014.

Emissions to air from the site are and will be small, and are attributable to the animals that are on the site. The odour associated with a site of the proposed capacity does not and will not cause significant annoyance and will not interfere with amenity outside the boundary of the site. Odour emissions from the site may be increased at times when birds and/or manure is being removed from the site, however this occurs for only a short period in every cycle. The production cycle allows for c. 3 flocks/annum.

Well maintained, properly ventilated poultry farms with modern manure removal will minimise any potential adverse odour impact and will minimise odour outside the confines of the site/immediate area. Transient increases in odour emissions may be associated with manure removal from the site. The applicant has not experienced any complaints arising from the existing activities on the site.

A small proportion of the birds maintained on the farm die prematurely. These carcasses are and will be stored in a covered sealed container on site, awaiting collection by an authorised contractor. College Proteins is an authorised contractor who regularly remove these carcasses, and any other such material to an authorised Animal By-Products plant at Nobber, Co. Meath, in compliance with existing requirements.

The potential of the proposed development, either independently and/or when assessed cumulatively with the existing development, and/or other developments in the area, for either direct or in-direct, short, medium, of long term adverse impact on environmental parameters is negligible, if any, because;

- of the nature and scale of the proposed development,
- wastes would be removed from the site by authorised waste contractors for either disposal or use elsewhere,
- all manure is to be removed off site by an experienced contractor, and,
- all soiled water will be collected in dedicated soiled water collection tanks pending its application to the landholding owned by the Applicant.

While waste generated in the site would be accumulated and stored temporarily in the site, there would be no disposal or recovery of any waste undertaken on the site.

1. Introduction and Development Context

This Environmental Impact Assessment Report (E.I.A.R.) was compiled following an Environmental Impact Assessment (E.I.A.) of a proposed development on an existing poultry/pullet rearing farming enterprise, at Drumcreeghan, Latton, Castleblayney, Co. Monaghan, operated by the applicant, Mr. Declan Sullivan. The E.I.A.R. is to be submitted to Monaghan County Council in support of an application for Planning Permission to construct 1 No. proposed poultry house (for Pullet rearing) together with all ancillary structures and associated site works, on and or adjacent to an existing poultry farm at Drumcreeghan, Latton, Castleblayney, Co. Monaghan. Please refer to the site plan contained in Appendix No. 2 and the drawings contained in Appendix No. 3.

The E.I.A.R. is drafted with particular regard to the Planning and Development Acts 2000 (as amended), the Planning and Development Regulations 2001 - 2015 and in particular Article 94 and Schedule 6 of the 2001 Planning and Development Regulations, and the Protection of Environment Act 2003. It is submitted to provide information that may be helpful to the planning authority in making its decision on the application for the proposed development and to comply with Schedule 5, Part 2, 1 (e) (i) of S.I. 610 of 2001, which specifies a requirement for an EIS/E.I.A.R. for poultry units exceeding 40,000 places for poultry.

1(1) Description of the Site and the proposed development

- ***1(1)(1) Scale of existing and proposed developments.***

The existing farm consists of 1 No. poultry/Pullet rearing houses currently operating at a total of c. 28,000 pullets, together with all ancillary structures and facilities necessary for the operation of this enterprise. The currently proposed development is for 1 No. pullet house together with all ancillary structures and associated site works. The capacity of the farm following completion of the currently proposed developments will be a maximum of c. 60,000 pullets. The applicant will require a Licence from the E.P.A. to accommodate the proposed developments and increase in scale, and this application will be completed with the E.P.A. upon receipt of planning permission.

The existing and proposed poultry farming activities are the only agricultural activities to be carried out on this site by the applicant, however the applicants existing bovine/ovine faming activities will continue to be carried out on adjoining lands.

The proposed development will operate along similar management principles and production processes.

The proposed development will be carried out, to ensure compliance with the Nitrates directive (Appendix 19), animal welfare legislation, and to ensure that this farm operates at maximum, efficiency, flock performance and environmental standards. This proposed development will be located in the townland of Drumcreeghan, Latton, Castleblayney, adjacent to the site of the existing farmyard/poultry housing.

The proposed capacity of this farm will be in excess of that for which a Licence from the Environmental Protection Agency (E.P.A.) is required (i.e. in excess of 40,000 places). A Licence for the operation of the farm will be obtained from the Agency prior to the commencement of operational activities on site. The enterprise currently on site provides part-time employment for the applicant; however upon completion of the proposed development it will provide closer to full time employment and will ensure the economic sustainability of his farming enterprise.

The purpose of the proposed development is for the rearing of birds from day olds to point of lay (c. 15-16 weeks). These birds will then be transported to specialised layer farms, to produce eggs for human consumption. The scale of the proposed farm and the licensable activity is average by current industry standards.

The proposed poultry house will have a total internal floor area of c. 1,344.7 m^2. The new poultry/layer house will be c. 79.7 m long and c.18.4 m wide and c. 6 m high at the apex. A soiled water collection tank of c 15.9 m^3 capacity will be located at the front of the proposed poultry house.

There is 1 No. existing soiled water tank on the farm with a capacity of 15.9 m^3. The existing tank is located adjacent to the existing poultry house. It is proposed to construct an additional soiled water tank to collect any soiled water from the proposed poultry house. Manure will be removed c. 3 times per annum at the end of each batch.

The proposed building will be sympathetic to the surrounding landscape in terms of their design and appearance, and where possible will be similar to the existing buildings on the farm and will not be intrusive in the landscape. The F.F.L.[1] of proposed house will be at a similar level to the existing developments. The drawing details with regard to the proposed developments are included in Appendix No. 3. As referred to previously planning permission has previously been granted by Monaghan Co. Co. for the development of a poultry house at this location.

[1] Finished floor level

1(1)(2) Planning/Licensing History

The subject site is an existing poultry farm and the existing farm has developed over recent years. Site Location Maps are contained in Appendix No. 2.

A. Planning Permission

Planning permission has been granted by Monaghan County Council on the subject site, and this permission is summarised as follows:

File Number	Received Date	Applicant Name	Development Address	Development Description
061640	18/10/2006	Declan Sullivan	Drumcreeghan Latton Castleblayney Co. Monaghan	construct 1no. poultry houses, together with all ancillary structures and associated site works aris...
071065	25/05/2007	Declan Sullivan	Drumcreeghan, Latton, Castleblayney Co. Monaghan	construct 1 No. poultry house, together with all ancillary structures and associated site works aris...
129016	29/06/2012	Declan Sullivan	Drumcreeghan, Latton, Castleblayney Co. Monaghan	construct 1 No. poultry house, together with all ancillary structures and associated site works aris...
17123	16/03/2017	Declan Sullivan	Drumcreeghan Latton Castleblayney Co. Monaghan	permission to retain alterations to 1 No. Poultry house constructed on foot of planning permission R...

B. E.P.A. Licence

A licence application will submitted to the Agency in respect of this farm upon receipt of planning permission.

- ***1(1)(3) Site Location.***

The site/existing farm is located centrally within Co. Monaghan, c. 4 kms south of Ballybay and adjacent to the R 162 Regional Route, at National Grid Reference E270970 N316121. The site comprises an overall area of c. 1.11 hectares owned by the applicant with a total of c. 18.78 hectares farmed. The existing and proposed poultry farming activities are the only agricultural activities carried out by the applicant on this site, although the applicant has additional lands within proximity of this site, upon which bovine/ovine livestock are, and will continue to be farmed/housed.

The activity on this site is, and will be, a poultry farming activity similar to the current activities on site and consistent with the development plan for Co. Monaghan. The existing site, while remotely located is serviced by a good road network, to be accessed by a local road which subsequently connects with the Regional Route R162 Ballybay – Shercock Road, adjacent to the site.

This proposed site is accessed via an existing entrance that currently services the existing farmyard complex. As part of this application an alternate entrance, opening onto the local road to the rear of the site has been proposed for all HGV traffic accessing the farm. The proposed development will be completed adjacent to the existing structures. The poultry house for which permission is sought would be located to the rear of the existing house when viewed from the road and c. 100m from the public road, to the rear of the existing developments on site, and on a site previously approved by Monaghan Co. Co.

The location of this farm yard is identified on the location maps (1:2,500) included in Appendix 1, which also indicates the extent of the land owned by the applicant at this location. The layout of the proposed development is shown on the Site Layout plan included in Appendix 2. The proposed site is compact, and is designed to be safe, secure and efficient in operation. There are no third party dwellings located within c. 140 metres of the proposed development.

- ***1(1)(4) Topography***

The proposed development site is typical of the local Drumlin topography of the area and falls gradually in a northerly – north westerly direction. The site is slightly above the level of the adjoining road, however the proposed development will be screened from view by the existing house, hedgerows and proposed landscaping, (landscaping as detailed on the plans provided, and, in line with Department of Agriculture, Food and The Marine Specifications as contained in Appendix No. 15). The subject site topography is similar in nature to the general topography in this area.

As can be seen from the plans submitted with this application the floor level of the proposed development has been set so as to ensure that the development is integrated, in so far as is possible with the existing structures on the farm to ensure that there is no adverse visual impact on the surrounding area. This will be complimented by the existing and proposed landscaping and the proposed finish to the buildings.

- ***1(1)(5) Physical description of the existing/proposed development***

As the existing house has been well designed and constructed the most efficient systems are in operation on this farm. All systems are well maintained and serviced so as to ensure that they are operating to maximum efficiency. Appendix 2 includes detailed drawings of the proposed development.

Pullet rearing design principles follow a simple template and have not changed significantly over recent years. The type of poultry housing existing on this farm is designed for Pullet rearing and comprises a simple closed building of block and timber/wood construction on an impervious concrete base, thermally insulated with a forced computer controlled ventilation system and artificial lighting. Birds are housed on a solid floor, with litter (wood shavings/chopped straw) spread over the entire floor area. Automated feeding and drinking systems are in operation and are in line with Best Available Techniques (BAT) requirements. A button nipple drinking system is used in the existing house 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. additional pullet rearing house will be of similar design to the existing house, and will also comply with BAT requirements. Birds will be housed on the floor and the house will be open plan with no internal divisions similar to the existing house. The proposed poultry house will be of a timber/steel portal frame construction on a concrete base. Walls will be plastered blockwork / concrete with a tongue and groove and /or pre-fabricated panel construction. The roof cladding will be box profile juniper green (or similar) cladding. The proposed poultry house will be c. 79.7m long by 18.4 m wide internally with an overall height of c. 6 m.

All manure is to be moved off-site by a registered contractor in line with the requirements of S.I.31 of 2014.

The measures outlined as BAT for the Poultry Sector, (in the Integrated Pollution Prevention and Control (IPPC) Reference Document on Best Available Techniques for Intensive rearing of Poultry and Pigs), and in particular this type of production include:

- "the naturally ventilated house with a fully littered floor and equipped with non-leaking drinking systems, or
- The well-insulated fan ventilated house with a fully littered floor and equipped with non-leaking drinking systems.

- ***1(1)(6) Operation of the Existing/Proposed Development***

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

The production process on this farm will be in line with the requirements of the recipient layer farms as agreed directly with the layer farms and/or an intermediary such as Whitaker Poultry. The recipient layer farms/intermediary will arrange for a number of farm inspections to be carried out during the year, so as to ensure that all of their production standards and requirements are being complied with. In addition to the above the applicant will also be subject to inspections from Bord Bia, the Department of Agriculture, Food and Marine, Monaghan Co. Co., and from the Environmental Protection Agency.

All birds will be fed by means of an energy efficient, low maintenance, automated feeding system. Feed will be moved from the external feed storage bins, into the houses. During the production cycle four different diet specifications are used, two starter rations up to 8 weeks and two grower rations from 8 to 16 weeks. Each diet is tailored to meet the birds nutritional requirements for protein/amino acids, energy, minerals and vitamins at that stage of production and to minimise nutrient excretion. This will ensure that birds are healthy and contented and are reared properly so as to produce healthy efficient hens that will produce the maximum number of high quality nutritious eggs. Total Feed Consumption/annum for the proposed development is expected to be c. 1,275t, All feed to be used on this farm will be supplied from specialised feed suppliers such as Corby Rock Mill Ltd., Monaghan, AW Ennis Virginia etc.

The applicant is responsible for the maintenance and preparation of the houses, management of the birds, feeding, water and ventilation systems and for ensuring that all of the required records are maintained for each flock. The stock for this farm will be brought from the hatchery as day olds, and will remain in the houses until c.15-16 weeks when they will be caught by specialist bird catchers and transported by HGV to the designated layer farm.

The proposed house will operate in an all in - all out basis to maintain a single age profile, and to maintain the health status of the birds.

The poultry manure from this farm is/will be removed off site by an authorised contractor, Eamon Fitzpatrick Contractors, on behalf of the applicant. The contractor provides the machinery and labour necessary for cleaning out the houses and is responsible for cleaning of the houses, arranging transport and making arrangements for the receipt of this material. Eamon Fitzpatrick Contractors carry out this function for a number of poultry farmers so as to provide a consistent, reliable service to all farmers and to provide a consistent supply of manure to the compost yards/recipient farmers.

The estimated manure production as a result of the proposed development will be c.

- 0.39m^3/'000 birds/week
  (Data used taken from Department of Agriculture and Rural Development N.I. FMNS4, as no equivalent data available in S.I. 31 of 2014)

or a total of 1,216.8 m^3/annum (c. 480 tonnes).

As previously detailed all manure will be moved off-site by an approved registered contractor in compliance with S.I. 31 of 2014, i.e. the regulations that have given effect to the Nitrates Directive in Ireland. Additional details provided by the contractor have been included as Appendix No. 5.

Soiled water from the proposed development where applicable, will be collected in a dedicated soiled water collection tank, located at the end of each house. Estimated soiled water production will be c. 60 m^3/annum. This soiled water will then be applied to the applicant's farmland in line with S.I. 31 of 2014. A map is included in Appendix 8 indicating the location and extent of farmland available for soiled water.

As previously detailed Mr. Declan Sullivan farms c. 18.78 hectares (including the c. 1.11 ha identified as the site of the proposed development). Soiled Water from the proposed development will be allocated to these farmlands. Mr. Sullivan currently farms an area of c. 18.78 Ha with a bovine stocking rate for 2016 of 156.7 kg Organic N/ha. The application of c. 60 m^3 of soiled water with an estimated N content of 1 Kg Organic N/Ha will increase this organic N loading to c. 160 Kg Organic N/Ha well inside the 170 Kg Organic N/Ha limit.

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

2. Scoping of Environmental Impact Assessment

The scoping of this E.I.A.R. was carried out by the design team in conjunction with the applicant, and was completed in line with previous submissions to the Environmental Protection Agency, Monaghan County Council and other Local Authorities. Other organisations and bodies consulted directly/indirectly include: -

- Geological Survey of Ireland.
- Met Eireann.
- Central Fisheries Board.
- Office of Public Works.
- Department of Agriculture, Food and the Marine
- Department of the Environment, Community and Local Government
- National Parks and Wildlife Service.
- Teagasc, Johnstown Castle.
- Environmental Protection Agency
- Myles O'Reilly Civil Engineering Services

The scope of the Environmental Impact Assessment conducted in respect of the proposed expansion includes the following:

- The requirements of the EU Directive, the *European Communities (Environmental Impact Assessment) Regulations, as amended*, and the *Local Government (Planning and Development) Regulations, 2001 to 2015*
- Draft Revised Guidelines on the Information to be Contained In Environmental Impact Assessment Report s published by the Environmental Protection Agency in September 2015.
- Draft Advise Notes for Preparing Environmental Impact Assessment published by the Environmental Protection Agency in September 2015.
- The requirements of Monaghan County Council, as elaborated in the current *County Development Plan 2013 - 2019*.

- The likely concerns of local residents and other third parties.
- The nature, location and scale of the proposal.
- The existing environment, as well as any vulnerable or sensitive features and current uses.
- The likely and significant impacts of the proposed development on the environment.
- Available methods of reducing or eliminating undesirable impacts.

The *European Union (Environmental Impact Assessment) Regulations,* (as amended) and directive 2014/52/EU prescribe a list of areas of the environment that must initially be addressed in any E.I.A.R. These areas comprise/may comprise of:

- Population and Human Health.
- Bio-Diversity (Flora & Fauna).
- Land and 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.

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 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 demolition (if applicable) and 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
Population / Human Health	≈	✓✓	✓✓
Biodiversity (Flora)	≈	×	≈
Biodiversity (Fauna)	≈	×	≈
Land and Soil	≈	≈	✓✓
Water	≈	×	××
Air	≈	≈	×
Climate	≈	≈	≈
Ambient Noise	≈	×	≈
Cultural Heritage	≈	≈	≈
Landscape	≈	××	×
Material Assets			
▪ Traffic	≈	×	×
▪ Land Use	≈	≈	✓
▪ Employment	×	✓✓	✓

Key:

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

2(1) Data required to identify and assess the main effects that the proposed development is likely to have on the environment

- Knowledge of the environment in which the proposed development, (and the existing farm) is to be sited.
- Knowledge of the processes in the proposed development, and the existing farm.
- The emissions to air.
- The emissions to groundwater.
- Characteristics of the effluent to be treated on site.
- The emissions to surface waters.
- The ambient quality of receiving waters.
- Availability of contractors to transport and treat wastes/by-products sent off-site

This is considered in some detail later in this statement.

2(2) Project Type as per EPA Guidelines

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

Under *Project Type 13* the EPA Guidelines outlines the information to be contained within the Development Description and the description of the Environmental Effects. Appendix No. 4 includes the summary provided in these guidelines for this *Project Type 13*. It outlines possible mitigation options for this type of development. The Guidelines 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 Guidelines 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. 4.

3. Description of Reasonable Alternatives

- ***3(1) Alternative site***

The applicant has reviewed all of the lands available to him prior to selecting the site for the proposed development. The pproposal to expand the applicants existing poultry farm represents a logical approach to the expansion of his poultry farming operations. Use of lands directly adjacent to the existing poultry farm yard allows for the sharing of existing resources to service the proposed expansion. It also allows for more efficient on-site operations so that the operator does not have to move between sites while carrying out his daily work. 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.

It is intended that if and when the proposed development for which permission is being sought is authorised and constructed it will be integrated into the existing farm and farmyard enterprise operated by the applicant. This will ensure that access, services, labour and ancillary equipment can be easily shared. Developing close to the existing site will also take advantage of efficiencies of scale with regard to deliveries, carcass and manure collection etc. and would comply with Monaghan County Council requirements for agricultural buildings as detailed in the County Development Plan.

Accordingly, and notwithstanding the fact that the applicant has additional lands available, development on an alternative site is deemed impracticable and/or less suitable from a management and operational perspective, an alternate site may not be as compliant with the requirements of the County Development, and, as there are no significant environmental and/or other factors supporting the proposed development on an alternate site in preference to the currently proposed site, no other site was considered further.

- ***3(2) Alternative Layout and Design***

As previously stated the layout of the proposed housing was designed to ensure that the proposed developments were integrated into the existing site with minimal, if any, adverse visual impact on the surrounding landscape. The proposed layout was also designed so as to ensure adequate access on site for all traffic associated with the existing and proposed developments, and to ensure that the site is contained, safe and efficient in operation. The layout of the proposed poultry house, to the rear of the existing developments, will minimise any potential adverse visual impact, and is located on a site previously approved by Monaghan Co. Co.

Existing landscaping will be maintained where possible, and strengthened where necessary, along the boundary to further screen the existing farm and proposed developments from view.

As previously stated the design of the proposed housing is in line with BAT requirements. The exterior finish, where practicable will be green or similar in colour to the existing house, and will be sympathetic to the local environment. All roofing materials will be dark in colour. As the

proposed design is in line with BAT requirements and as natural/dark coloured finishes are proposed, no other alternatives were deemed appropriate.

The scale of the proposed development is in keeping with the scale of the existing activities on the site, in terms of both intensity and physical dimensions, and thus is deemed appropriate for the site.

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

- Complies with the requirements of the Nitrates Directive.
- Satisfies the applicants need for efficiencies of scale while not requiring significant additional lands.
- Is in line with BAT requirements, and,
- Will be well integrated into the landscape and existing farmyard with the use of similar construction techniques, natural/dark coloured finishes as proposed, and additional landscaping where required.
- Is not located in an area with any significant environmental and/or other constraints.
- Is located to take advantage of the existing site infrastructure and facilities, notwithstanding the fact that a new entrance is to be provided to improve traffic safety.

4. Environmental Assessment

4(1)(1) Description of the physical characteristics of the proposed development and the land use requirements during construction and operation.

The physical characteristics of the proposed development will comprise;-

- An entrance onto a public road.
- Maintain existing hedgerow plantations along the site boundary, with the exception of those to be removed to facilitate the proposed development. Additional landscaping/hedgerows to be completed where necessary.
- All manure to be moved off site by a registered contractor in line with the requirements of S.I. 31 of 2014.
- The proposed building is of a form, design, colour and materials that are sympathetic to their surroundings, and similar in nature to the existing structures. The proposed poultry house is c. 79.7 m long, 18.4m internally wide and c. 6 m high. The proposed building will be a steel/timber portal frame construction on a concrete base, with pre-fabricated and/or tongue and groove timber panel walls or pvc coated metal cladding on an insulated concrete stub wall. [See engineers drawings contained in Appendix No. 3].
- Underground, concrete soiled water storage tank in which soiled water would be collected and stored pending application to the applicant's farmland.

All of the structures on the site will be screened or blended in to the surrounding landscape by the external finish proposed for the structures, and existing hedgerows where applicable. The external finish to the proposed building will be dark coloured or substantially similar to the existing structures on the farm, unless otherwise advised by Monaghan Co. Co. and/or the E.P.A. Any additional landscaping to be introduced on the site will in accordance with the Dept. of Agriculture, Food and the Marine Specification, S135, as per Appendix No. 15.

During the construction phase, which will extend over a period of about 3 - 4 months, the proposed development area would be a typical farmyard construction site. All of the construction materials and equipment required would be transported in to the site by road. It is planned that all of the soil that would be moved during the laying on of services and site preparation works would be deposited and used within the farm. The construction contractor would be required to remove any construction/demolition wastes other than soil from the site for disposal or recovery in authorised sites elsewhere.

4(1)(2) A description of the main characteristics of the production processes, nature and quantity of materials used.

The production processes which currently/will take place on the existing/proposed site would be:-

- The management, feeding and care of the birds.
- The despatch of all carcasses and other solid waste materials from the site for disposal or recovery at agreed/approved sites and
- The collection of all wash waters generated within or around the site in soiled water collection tanks pending application to adjoining farmland.

The applicant is approved under the Bord Bia approval system, as per the Poultry Products Quality Assurance Scheme (PPQAS), and anticipates that this approval will be extended to incorporate the proposed development, once completed. As part of this approval the daily procedure will follow the Bord Bia Poultry Products Quality Assurance Scheme Producer Requirements.

The following house checklist is included as part of this standard;

House Management Checklist, Minimum Requirement

- Producer _____
- House Identification Number _____
- Week Ending _____
- Age of Birds _____
- Meal Batch Number _____

Checks	Frequency of Check
Water Supply	Daily
Feeding System	Daily
Flock	Daily
Ventilation	Daily
House Temperature Max	Daily
House Temperature Min	Daily
Egg Store Temperature Max	Daily
Egg Store Temperature Min	Daily
Clean and Tidy Egg Store	Weekly
Replace Foot Dips	Weekly
Sweep Floors	Weekly
Dust Cages	Weekly
Check External Bait Points	Weekly
Check Internal Bail Points	Weekly
Inspect for Red Mite	Weekly
Check Alarm Operation	Weekly
Maintenance Check	Weekly
Fly Monitoring Check	Weekly
Belt Inspection Check (if appropriate)	Weekly

A vermin control programme is implemented on site and recorded on a daily/weekly basis.

The main input materials to be used in the licensable activity are water and animal feed. Water for stock and for washing is to be sourced from the Killkitt Water Scheme. Estimated water use will be c. 2,000 – 2,500 m^3 per annum for the activity.

Poultry feed will be specifically formulated rations, formulated and prepared by a specialised poultry feed supplier such as Corby Rock Mill Ltd., AW Ennis etc.. All feeds used will be appropriate to the nutritional requirements of the birds, while at the same time minimising nutrient excretion. As previously stated there are 4 rations used in each production cycle. Please refer to additional information contained in Appendix No. 9. Total feed consumption/annum is expected to be c. 1,275 t.

Electricity would be used to power all the processes and services on the site. A back-up generator is available in the event of a power failure. Estimated electricity usage = c. 0.75 units/bird.

Gas is to be used for heating the houses and houses will be, insulated to ensure that this is used as efficiently as possible. Heating will be by indirect heaters to minimise gas usage and improve the internal environment within the houses. Estimated gas usage = c. 0.025 units/bird.

Wood shavings to be supplied by a local supplier.

4(1)(3) **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 increase proportionately with the increase in scale.

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

Supplementary heating is to be provided by gas burners. The amount of gas used will vary depending on outside climatic conditions. Energy efficiency will be a key deciding factor in the selection of a heating system and modern poultry heating systems are considerablely more efficient than those used in older poultry houses. The amount of gas required has been/will be significantly reduced due to the high insulation standards.

General wastes such as packaging, paper, disposable clothing etc. will be collected regularly by a local contractor and delivered to the Landfill facility. It is intended that the frequency of collection of all wastes produced on site will be in line with E.P.A. and/or legislative requirements in this regard. See additional information which is included in Appendix No 10.

Dead animals and animal tissues will be accumulated in a sealed leak proof container on site for collection by College Proteins at 1 - 2 week intervals for transport to an authorised Animal By-Products facility at Nobber, Co. Meath. It is intended that the frequency of collection will be in line with Monaghan Co. Co. / E.P.A. requirements in this regard. See correspondence which is included in Appendix No 6.

The organic fertiliser / poultry manure from this farm is/will be removed off site by an experienced contractor registered with the Department of Agriculture, Food and The Marine, such as Eamon Fitzpatrick Contractors. The contractor provides the machinery and labour necessary for cleaning out the houses and is responsible for cleaning of the houses, arranging transport and making arrangements for the receipt of this material. The estimated total manure production upon completion of the proposed development will be c. 480 tonnes/annum.

This organic fertiliser is not considered a waste product and is to be utilised as an organic fertiliser in line with S.I. 31 of 2014 and/or in the production of mushroom compost.

Soiled water from the existing and proposed development will be collected in a number of dedicated soiled water collection tanks, located at the end of each house. This soiled water will then be applied to the applicant's landholding in accordance with the Nitrates Regulations.

Normal operations on the site of the proposed development, as for the existing activities, will not cause any pollution of soil.

Noise generated in the proposed/existing development in the site will not exceed legal limits at the site boundary. As detailed in Noise survey data contained in Appendix No. 17 of the E.I.A.R. (relating to a number of other intensive agricultural sites and submitted for comparative purposes only), noise is not expected to cause a nuisance at this site. Extensive experience with the existing site and a large number of other existing sites 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.

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

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 18).

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.

4 (2) 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 adjacent to the applicants existing Pullet rearing house at Drumcreeghan, Latton, Castleblayney, Co. Monaghan.

The existing farm operated by the applicant has been operated as a poultry farm for the last number of years. It consists of 1 No. Pullet rearing house with capacity for c. 28,000 birds, together with all ancillary structures and facilities necessary for the operation of this enterprise.

The proposed development of 1 No. Pullet rearing house will be completed to the side of the existing house, and on the site of a previously approved development, so as to minimise any potential visual impact from same. The capacity of the farm upon completion of all proposed developments will increase from c. 28,000 to c. 60,000 birds. This area is currently an intensively managed agricultural grassland area with limited bio-diversity. Were the proposed development not to proceed, the development site would remain as an intensively managed agricultural area.

4(3) Description of the aspects of the environment likely 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. The potential effects on the environment may be subdivided into effects on population and human health, bio-diversity (flora and fauna), land and soil, water, air, the landscape and material assets including archaeological heritage. There is no known potential for any adverse issues in relation to architectural or cultural heritage.

- ***4(3)(1) Effect on Population and human health***

The proposed development is of average scale by current industry standards but it would add to the economic activity on the farm, with consequent "trickle down" positive effect in the region and the local community, particularly with regard to construction workers, supply of construction materials, and the installation of the required housing, water, feed and ventilation systems, thus helping to stabilise the population of the local area.

Significant effects on population / human heath and/or human beings are not anticipated. There are no third party dwellings close (i.e. within 140 metres) to the proposed development as to be adversely affected by, or experience significant impairment of amenity due to the proposed development. The proposed development is unlikely to generate or release sounds or odours that will significantly impair amenity beyond the site boundary. The experience of other similar sites indicates that the legal limits for such emissions, 55db daytime and 45db night-time are highly unlikely to be exceeded beyond the site boundary. There are no processes proposed which will constantly or regularly release odorous emissions from the site at nuisance levels. Fugitive odour emissions at the site will not be significant and will be limited to times at which birds/manure are being removed from the site. In so far as is possible odour emission is to be managed so as to occur at times when the effect within the site or outside it will be minimal.

The existing farm and site of the proposed development are not located close to and/or likely to adversely impact on any areas of Primary or Secondary Amenity value as detailed in the Monaghan County Development Plan 2013 - 2019. Please refer to Appendix No. 11 in this regard. Based on experience at similar sites elsewhere in the country significant effects are not anticipated. Where nuisance effects occur, people object and under statutory requirements their objections will have to be investigated and have to be corrected if found to be real and justified. This existing development has not received any complaints of this nature to date.

- ***4(3)(2)Effect on Bio-diversity (flora and fauna)***

The site of the proposed development is immediately adjacent to and/or currently forms part of an existing farmyard area, and has previously been approved by Monaghan Co. Co.. The flora and fauna around the site has developed in this context. Much of the site and surrounding area to be developed is improved agricultural grassland. The area to be developed is relatively small and represents an extension to existing site / farm buildings. Ground works and land profiling will be kept to a minimum outside the footprint of the proposed site.

The proposed development is not near to or likely to adversely impact on any areas of primary or secondary amenity value or views from scenic routes. Structures and new paved surfaces will cover a significant fraction of the site. The changes will affect such a small area that any impact will be close to zero or neutral with the local area. The site is not located close to and/or likely to adversely impact on any Natura 2000 sites, the closest being Kilroosky Lough Cluster SAC, some 23+ kms away.

The site of the existing and proposed development is located in the North Western River Basin District. There will be no discharge of soiled water or effluent from the existing and/or proposed development to surface water and so the proposed development will not have any significant impact on surface waters. See Appendix No. 13 for surface water quality data for this area.

The existing rodent control programme in operation on the poultry farm will be extended to include the proposed development. The existing programme as implemented on site is in line with Bord Bia and Department of Agriculture, Food and The Marine requirements and is working satisfactorily. Detailed records regarding bait point location, frequency of baiting and products used are maintained on site. The revisions to this programme will cover the inclusion of the proposed development on the bait point map and designation of a number of bait points around this development. No other pests will be attracted to the site due to the proper storage and disposal of all wastes, proper storage of all feedstuffs and maintaining the houses and external areas in a clean and tidy manner.

Weed control will be carried out around the site as required to reduce any cover for pests. It is considered that the development, managed as is proposed, which will have to operate under License regulations, will have no measurable impact on either flora or fauna outside the site boundary.

Given that the area of the proposed site is an intensively managed agricultural area with poor biological diversity, retaining as much as possible of the existing landscaping/hedgerow around the site boundary, together with any proposed additional landscaping, should maintain biological diversity on the site.

- ***4(3)(3)Effect on Land and Soil***

The structures proposed for the site would be constructed on land that is already part of a farmyard/immediately adjacent to the existing farmyard. There is no significant potential for any effect on soil, outside of the development area, and any land take required to facilitate the proposed development will be minor in terms of the applicants landholding and the wider agricultural area.

If anything there is the potential for some positive benefits on soil on potential customer farmer lands as a result of the production of organic fertiliser by the proposed development. Such organic fertiliser provides a valuable addition to the soil adding nutrients not generally found in chemical fertiliser. Organic matter in soils is generally in decline, particularly on tillage farms and the use of an organic fertiliser is preferable to chemical fertiliser in maintaining

adequate organic matter levels in soils. All organic fertiliser is destined for compost production, or supplied to customer farmers for use as organic fertiliser in accordance with S.I. 31 of 2014 in response to demand.

See Appendix No. 12 for general soil classification for this area. The subsoils in this area are described as Drumlin soils with the site located in Soil association 29 (Gleys (50%), Acid Brown Earths (75%) and InterDrumlin Peat and Peaty Gleys (25%)). Parent material is mostly Mostly Ordovician - Silurian shale – glacial till.

Teagasc Soils

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

Subsoil

Parent Material:	TLPSsS
Subsoil Category:	Till derived chiefly from Lower Palaeozoic rocks
Subsoil Description:	Sandstone and shale till (Lower Palaeozoic)
Category:	Till derived from Lower Palaeozoic sanstones and shales
Legend:	TLPSsS - Till derived from Lower Palaeozoic sanstones and shales

- ***4(3)(4)Effect on Geological & Geomorphological heritage of the area.***

The structures proposed for the site would be constructed on land that is already part of a farmyard/immediately adjacent to the existing poultry farm. There is no significant potential for any effect outside of the development area.

The site of the proposed development is predominantly managed agricultural lands. Given this location adjacent to existing farm structures the proposed development will not have any adverse impact on the geology of the area. In addition as the proposed development will be integrated into the existing farmyard site the proposed development will not have any adverse impact on the landscape and/ or the geomorphological heritage of the area.

- **4(3)(5)Effect on Water**

Adverse effect on *ground water* from the proposed development should be nil, as there will be no process discharge to ground and minimal risk of accidental leakage or spillage of polluting liquid on the site. The proposed development, as per the existing activities, will be carried out on an impermeable concrete base, with proper storm and soiled water separation and collection facilities. It should be noted that the proposed development, will operate on a dry manure basis, whereby the manure will be removed from the houses at the end of each batch. It will be managed as a dry manure thus eliminating the risk of any leak to groundwater. The only soiled water from the proposed development will arise due to washing down of the poultry houses.
The volume of water needed for the farm once the proposed development has been completed will increase proportionately with the increased stock levels. The existing water supply on the farm is from the local water scheme, which will also serve the proposed development.

According to the Geological Survey of Ireland (please refer to Appendix No. 20) the aquifer classification appropriate to the site and the surrounding area is a Poor Aquifer – Generally Unproductive except for local zones (Pl), with a vulnerability rating of Extreme (E) vulnerability. As the proposed development, will operate on a dry manure basis, whereby the manure will be removed from the houses after each batch and transported off site, there is minimal risk to ground water supplies in the area of the site.

Adverse effect on *surface water* from the proposed development should be nil, as there will be no process discharge to surface water and minimal risk of accidental leakage or spillage of polluting liquid on the site. The only discharge from the site to surface waters will be the discharge of rainwater from roofs and clean yards to field drainage, which flows towards the adjacent watercourse (Balladian Stream, a tributary of the Balladian/Dromore River).

The Monaghan County Development Plan sets out a number of polices for the protection of Water. These have been considered in the design of the proposed development and are as follows.

Policies for Protection of Water (as per the Monaghan County Development Plan 2013 – 2019)

WPP 1 - In assessing applications for developments the Council will consider the impact on the quality of surface waters and will have regard to targets and measures set out in the Neagh Bann and North Western International River Basin Management Plans and where appropriate the Blackwater, Glyde, Fane, Woodford and Erne East Water Management Unit Action Plans.

WPP 2 - In assessing applications for development, the planning authority shall ensure compliance with the European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (S.I. No 272 of 2009) and the European Communities Environmental Objectives (Groundwater Regulations, 2010 (S.I. No. 9 of 2010).

WPP 3 - Protect known and potential groundwater reserves in the county. In assessing applications for developments the planning authority will consider the impact on the quality of water reserves and will have regard to the recommended approach in the Groundwater Protection Scheme for County Monaghan. The employment of the methodology identified in the Groundwater Protection Scheme for County Monaghan (available at www.gsi.ie) and Guidance on the Authorisation of Discharges to Groundwater (available at www.epa.ie) will be required where appropriate.

WPP 4 - Require best practice in the design, construction and operation of expanding and new developments to ensure minimum effects on the aquatic environment. Sustainable Urban Drainage Systems, designed to ensure both water quality protection and flood minimisation should be included in developments for commercial, industrial, intensive agricultural, public and institutional premises with significant roof or hard surface areas and multiple residential developments.

WPP 5 - Require submission of a water protection plan and detailed site drainage plans with all planning applications. Maps of sensitive areas and waters and a Water Protection Plan Checklist (Appendix 16) will assist in the preparation of plans at application stage.

WPP 6 - Prevent further degradation of habitat by the promotion of riparian corridors and the prevention of any in stream works, or culverting of waterways unless in accordance with Inland Fisheries Ireland (IFI) guidance document Requirements for the Protection of Fishery Habitat During Construction and Development Works at River Sites. The IFI should be consulted prior to the submission of any plans involving works close to waterways.

WPP 7 - No development shall be permitted within 200 metres of any lake that is the source of a water supply, where that development has the potential to pollute the lake.

WPP 8 - Ensure that industrial or intensive agricultural developments generating manure, organic fertilisers or sludge, that are dependent on off-site recovery or disposal take account of sensitive area mapping including lands with impaired drainage/percolation properties and lands where rock outcrop and extreme vulnerability of groundwater is present. In consideration of the use of imported manure or sludge in sensitive areas, restrictions will apply in relation to water supply source catchments.

WPP 9 - Details of land spreading arrangements of manures or sludge arising from industrial or intensive agricultural development shall be submitted to the planning authority with all planning applications.

WPP 10 - Development within the vicinity of groundwater or surface water dependant Natura 2000 sites (Kilroosky Lough Cluster SAC) will not be permitted where there is potential for a likely significant impact upon the groundwater or surface water supply to the Natura 2000 site. Where appropriate, the applicant to demonstrate with

hydrogeological evidence, that the proposed development will not adversely affect the quality or quantity of groundwater or surface water supply to the Natura 2000 sites.

WPP 11 - Development which would have an unacceptable impact on the water environment, including surface water and groundwater quality and quantity, river corridors and associated wetlands will not be permitted.

WPP 12 - Floodplains and riparian corridors will be maintained free from development to provide flood retention features within these areas.

In order to avoid any reductions in water quality in the area surrounding the proposed development and in order to protect any designated sites, designated species and sensitive surface/ground waters, in the general area of the development and/or further afield, a number of mitigation measures have been planned for that will help to protect the local biodiversity of the surrounding area and to ensure the protection of local wildlife.

During Construction

- It is vital that there is no deterioration in water quality in the watercourses in the vicinity of the development. This will protect both habitats and species that are sensitive to pollution. Therefore, strict controls of erosion, sediment generation and other pollutants associated with the construction process to be implemented. No development works to take place near to any watercourse.
- Surface water run-off from the site (during construction) should be routed to the watercourses via suitably designed and sited settlement areas/filter channels.
- Fuels, oils, greases and hydraulic fluids will be stored in bunded areas well away from drains. Refuelling of machinery, etc., to be carried out in bunded areas.
- Stockpile areas for sands and gravel will be kept to a minimum size, well away from the drains.
- There will be no disturbance to the banks or habitats along local watercourses.
- There will be an amount of excavated soil from site development works which will be used within the site/landholding. Its use will not lead to the loss or damage of any natural or semi-natural habitats elsewhere and will not be spread close to any local watercourse.
- All hedgerows, not directly impacted by the proposed development, should be protected and maintained.
- Any landscaping should involve the planting of native Irish species that are indigenous to the site. The characteristics of newly planted hedgerows should mimic those in the surrounding area.

- Site preparation and construction should adhere to best practice.
- Any bulk fuel storage tank or fuel storage area should be properly bunded with a bund capacity of at least 110% or that of the fuel tank.
- All proposed development works to be in accordance with the Department of Agriculture,
- Food and Marine Minimum Specifications and/or industry standards.

During Operation

- All activities on site to be carried out in accordance with the Department of Agriculture, Food and Marine, Bord Bia, EPA and Monaghan Co. Co. requirements and specifications and/or industry standards
- All organic fertiliser generated on site to be removed by a registered contractor for use elsewhere.
- All soiled water to be appropriately collected, stored and utilised in accordance with the requirements of S.I. 31 of 2014.
- All potentially polluting products (fuels, detergents etc.) to be stored in appropriately bunded areas.
- Stormwater discharge points to be checked and inspected on a weekly basis for any sign of contamination.
- Appropriate measures to be put in place to deal with any accidents etc. that have the potential to cause adverse environmental impact.

- ***4(3)(6)Effect on Air***

The potential effects of the proposed development on air relate to the odour emissions that may be associated with poultry and poultry manure on site. While it would be practically impossible to separate the potential emissions from the proposed development once completed from the emissions out of the existing development on the site, it is safe to say that odorous emissions from the developed site as a whole are not likely to cause nuisance or impair amenity beyond the site boundary, with the possible exception of times when birds and/or manure is being removed from the site, *which will occur at the end of each batch, approximately 3 times/annum.*

A number of management practices will be implemented on site so as to minimise potential odour emissions from the existing and proposed developments,

- Proper storage of all wastes on site, and regular removal of same. Twice daily flock inspections to remove any fatalities from the houses, and stored in proper sealed and covered storage bins.
- Thorough cleaning out of poultry houses, to minimise odour and maintain high health status.
- Regular cleaning of outside areas.
- Immediate removal of manure off site, wherever possible. Transport of manure off site to take place in properly designed and covered trailers.
- Proper stocking rate within the houses.
- Proper management of temperature and humidity controls.

Management of operations on the site to prevent significant pulse releases of odour at times when the effect might be perceptible beyond the site boundary should ensure minimal impact on air in the vicinity of the site. See Appendix No. 14 for met data for this area.

As detailed previously the proposed development is located a significant distance away from any Natura 2000 sites and emissions (incl. gaseous emissions) from the existing/proposed development are unlikely to adversely impact on same and/or on any other sensitive areas.

- ***4(3)(7) Effect on Climate***

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. Met Data details can be found in Appendix No. 14. 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 Clones area is from the south-west. Rainfall in the customer farmlands ranges annually from 800mm -1000mm.

Large livestock populations and nitrogen inputs to soil generate approximately 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.

Organic fertiliser from this farm will be used in compost production or by customer farmers. The fact that the customer farmers utilising organic fertiliser from this farm will allocate it in accordance with the provisions of S.I. 31 of 2014, 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. Dry manures will spread more evenly, and modern rear emptying muck spreaders are likely to be more precise than side discharging machines.

All 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. 31 of 2014 and where possible incorporated/ploughed into the soil as soon as practicable after application.

All practicable steps, such as landscaping, management routines etc., 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 beings. The existing farm has operated with no adverse impact and no complaints from neighbours.

This development will have no significant adverse effect on climate.

- ***4(3)(8)Effect on Visual Aspects and Landscape***

Monaghan Co. Co. have prepared a Landscape Character Assessment, and the following categories have been included in the Monaghan Development Plan 2013-2019. There are nine main Landscape Character Areas (14 Landscape Character Types) within the County.

Landscape Character Areas are the unique individual geographical areas in which landscape types occur. They share generic characteristics with other areas of the same type but also have their own particular identity.

1 Sliabh Beagh Uplands
2 Blackwater Valley & Drumlin Farmland
3 Smithborough Hills
4 Clones River Valley & Farmed Uplands
5 Monaghan Drumlin Uplands
6 Mullyash Uplands
7 Ballybay/Castleblayney Lakeland's
8 Drumlin and Upland Farmland of South Monaghan
9 Carrickmacross Drumlin & Lowland Farmland

Landscape Character Types are distinct types of landscape that are relatively homogenous in character. They are generic in nature in that they may occur in different localities throughout any defined area. Nonetheless, where they do occur, they commonly share similar combinations of geology, topography, land cover and historical landuse. For example, blanket bog uplands are distinct landscape character types and are recognisable as such whether they occur in Monaghan or other counties.

1. Blanket Bog;
2. Drumlin Farmland
3. Drumlin Foothills
4. Farmed Foothills
5. Farmed Lakelands
6. Flat Riverine Farmland.
7. River Valley armland
8. Undulating Farmland
9. Upland Bog with Afforestation
10. Upland Drumlin Farmland
11. Upland Farmland with Afforestation
12. Upland Farmland with Rock Outcrops
13. Upland Plateau
14. Urban

The site of the proposed development is located in an area referred to as the Drumlin and Upland Farmland of South Monaghan (LCA 8), and Upland Farmed Foothills (LCT 4) in the Monaghan Landscape Character Assessment.

LCA 8: Drumlin and Upland Farmland of South Monaghan

This is an upland landscape which extends across the width of the County. It is located immediately south of the Ballybay Lakeland Landscape and extends southward covering a relatively large geographic area that overlooks the lowlands of Carrickmacross.

This area has an elevated landscape containing drumlin hills that are given over to pastoral uses. Strong field pattern evident as defined by hedgerow boundaries with areas of rock outcrops present at the highest elevations. These areas feature more impoverished pasture. Field boundary pattern is broken or lost in these locations with clumps of gorse located in the higher more impoverished areas. Included within this area are frequent medium to large sized loughs, the largest being Lough Egish. The Clarebane River which flows out of Lough Muckno is aligned with the County Boundary.

Long range views can be gained from the more elevated parts of this landscape towards adjacent low lying areas to the north, and there are no major settlements within this area but an extensive regional and minor road system

This upland landscape is associated with the Longford Down Inlier and its elevated topography arises from the folding of rock strata and mountain building period in the geological past. The majority of this area comprises smooth drumlin hills used as pasture. Hedgerows are for the most part uncut and contain many mature deciduous trees. The loughs range in size and the largest of these is Lough Egish. The majority are fringed with reeds and riparian vegetation. Large areas of marshland feature in the inter drumlin hollows and these areas support willow (Salix spp) and alder (Alnus) tree species. Occasional traditional farmhouses are located in this landscape, some rendered in white and some built of stone. The most elevated parts of this landscape are highly remote and feature rock outcrops. Although grazed in part by sheep, the farmland is impoverished and there is no strong field pattern. Boundaries to fields are somewhat fragmented and in many places, hedgerows are replaced by stone walls in variable condition. Occasional plantations of coniferous forestry are located in this landscape.

The landscape at lower elevations is in good condition and would be regarded as only moderately sensitive to development. The lakes and lake environs in particular have a high scenic quality and carry statutory designations and are judged to be highly sensitive to any development changes. In terms of the higher rocky remote landscapes, these would be highly sensitive to any changes involving large developments or tall structures. The relative exposure and scarcity of vegetation is such that sizable developments cannot be easily accommodated here without generating negative visual impacts albeit this area is in somewhat poor condition in terms of quality.

Specific sites that carry landscape and ecological designations are outlined below.

Areas of Secondary Amenity Value

- SA 13: Billy Fox Memorial Park and Environs

Views from Scenic Routes

- SV 18 - SV19: Distant views of Lough Muckno and Slieve Gullion (Routes LS 07830, LS 08141).
- SV 20: Views of Slieve Gullion at Taplagh, Broomfield (Route N2)
- SV 21: Scenic Views of Lough Egish (Route LP04121)
- SV 22: Scenic drive at Beagh, Shantonagh and Corlat (Route LT 40431)
- SV 23: Views of Lough Bawn and County Cavan (Route LT 71111)
- SV 24: Scenic drive Tattybrack (Route R190)

Ecological Designations

– proposed NHAs

- Black and Derrygooney Loughs (NPWS site code 001596)
- Gibson's Lough (NPWS site code 001604)
- Loughbawn House Loughs (NPWS site code 001595)
- Lough Egish (NPWS site code 001605)

The site of the existing poultry farm and site of the proposed development is ***Landscape Character Type 4 – Farmed Foothills***. This landscape type occurs in four locations throughout the County. These include the foothills to Slieve Beagh in the north west, the hilly farmland located to the west of Newbliss, and that located to the south west of the Farmed Lakelands area (LCT 5) and a large area located to the North West of Carrickmacross.

This landscape type has a rolling topography generally with occasional steep sided hills and scattered or isolated Latton, Castleblayneylins. Long ranging views are available as are views towards higher upland pasture and moorland. Where landuses are given over to pasture, the scale of the field sizes is small. Marshy areas are located in low lying ground and are often associated with the margins of peatbogs. Small to medium sized tracts of commercial coniferous forestry are also present particularly in the north of the County. Field boundaries are generally defined by uncut hedgerows, comprising Hawthorn (Crataegus monogyna) and Blackthorn (Prunus spinosa) and containing occasional mature trees. Some of these larger hedgerow trees are in poor condition and covered in Ivy (Hedera helix). Gorse (Ulex spp) is common in the hedgerows across this area.

To the north of the County the Mountain Water River is the principal watercourse running west to east and features riparian wooded vegetation along its course. Traditional stone arched bridge crossings feature along this watercourse.

Settlements are very small and farm buildings tend to be old and in places these are derelict. The corrugated tin green roofs of these structures render them less visually obtrusive in this landscape. By contrast more modern forms of farm buildings and structures are more conspicuous and in places detract from the landscape. Tall steel silos are particularly prominent where these occur. Single residential properties located in remote areas also detract from landscape quality.

Around Newbliss this LCT presents as a series of closely spaced low hills in which pasture is the main landuse. Fields are bounded by hedgerows, many of which are cut of managed to

facilitate farming activities. Generally the field pattern is of a small scale. Hedgerow species include Hawthorn (Crataegu spp), Gorse (Ulex spp) and ash (Fraxinus spp). Scattered mature trees or hedgerow trees are present across the area, ash (Fraxinus spp) being thedominant species. Occasional small crops of commercial forestry are located in this landscape and contrast strongly with clumps of deciduous woodland (beech and oak) and scrub vegetation also present here. This landscape type contains few permanent loughs although streams and smaller watercourses are present and lower lying areas contain marshy wetland grasses.

The proposed development represents an extension to an existing farm yard, in/on an area previously approved by Monaghan Co. Co. for a poultry house development and so will have limited impact on the character of the surrounding landscape. The proposed site being well screened (by the existing development and proposed landscaping) in the landscape will be general visually unobtrusive. It is not considered that the proposed development will have significant impacts on the landscape character of this area. The existing vegetation will help to soften any visual impacts, and, additional landscaping maybe added where considered appropriate.

- ***4(3)(9)Effect on Archaeological & Cultural Heritage***

There are no known archaeological sites within the site boundary and no reason to suspect the presence of such sites within the site of the proposed development. No indication of archaeological sites/features was observed as part of previous developments on this site. In addition, there is no visual evidence of any archaeological feature on the lands adjoining the site. There are no recorded sites within c. 0.4 km of the proposed development site as per the Archaeological Survey database. The closest recorded protected structure is a rath / ring fort located c. 400 m north west of the proposed development site.

As any such sites are located a considerable distance from the proposed development the current proposal will not impact on these recorded sites in any way.

- ***4(3)(10)Effect on 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 on an existing poultry farming site, in a predominantly agricultural area and development at this location has previously been approved by Monaghan Co. Co. The proposed development is surrounded by agricultural farmland in the surrounding area. The proposed development will not interact with any lands outside the confines of the site, except for the production of a valuable organic fertiliser which may be utilized by farmers as a replacement for chemical fertiliser.

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

Poultry farming is already established on the farm, is surrounded by agricultural lands and is located well away from any built up areas and/or development clusters. There are no third party residential dwelling within 140 m of the proposed development site. The development will not impact on adjoining property values if for no other reason than there is an already established poultry farm on the site.

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

The proposed development will require a portion of land upon which the proposed poultry house will be developed; however there will be no adverse impact outside of the development area.

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), gas 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.

4 (4) Description of likely significant effects of the proposed development arising from:-

(i) The construction and existence of the proposed development

The proposed development is of average scale by current industry standards but it would add to the economic activity on the farm, with consequent "trickle down" positive effect in the region and the local community, particularly with regard to construction workers, supply of construction materials, and the installation of the required housing, water, feed and ventilation systems.

Its impact on the landscape will be minimal following the implementation of proposals in relation to location, landscaping, proposed external finish and its integration into the existing site.

The long term impact on traffic on the local road as a result of the proposed development will not have a significant adverse impact. Any short term increase in traffic and/or other potential impacts associated with the construction of the proposed development would be short term in nature and would cease upon completion of the proposed development. Construction traffic for the proposed development would be similar to that previously required for the existing development which caused no significant adverse impact.

Once the proposed development would be completed, there would be additional HGV traffic due to:

- feed deliveries (increasing from c. 1/fortnight to 1 per week), (Feed Lorry capacity 26 tonnes/load)
- manure transport (increasing by c. 2.6 load/batch, from c. 2.4 loads /batch to c. 5 loads / batch on average), (Manure Lorry capacity 30 tonnes/load)
- increased bird collections (increasing by 4 loads/batch on average)

Total = C. an increase of c. 14 loads/batch (or <1 load/week) on average.

All other traffic such as waste collection, delivery of shavings, gas, veterinary inspections, Flock inspections, maintenance etc., will be integrated in so far as is possible into the existing visits to the farm and will be substantially unchanged. Traffic to and from the site will be minimised by optimising load sizes.

While there will be a minimal increase in traffic, this will not adversely impact on the local road network which will be more than adequate to accommodate same. Traffic flows will use existing routes and non-HGV traffic will use the existing site entrance(s) and access route. The site is well serviced by the existing road infrastructure and therefore any proposed increase in traffic will not have an adverse impact on the local area. A new site entrance for HGV traffic is to be created as per the plans and details submitted to facilitate the proposed development.

(ii) The 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. While there are no processes involved that have a high requirement for fuel energy some ancillary heating will be required. Gas heating will be provided during the early stages of each batch and the demand for heat will depend on local weather conditions at the time of stocking. Gas requirements will be minimised by high insulation standards and a modern efficient heating system.

The proposed development will have a definite requirement for a supply of water readily available from the existing water supply serving the existing site, during the construction phase and once completed there will be additional water used on the farm as a result of this proposed development.

The main resource to be consumed would be poultry feed, which is classifiable as a natural resource that is a renewable resource. The use of feed and water will increase proportionately with the increase in stock numbers on the farm.

(iii) The emission of pollutants (noise, vibration, light, heat, radiation etc.,)

Clean storm water will be discharged to the local stream via the discharge points as indicated in the proposed site plan. Such clean water is not an emission. Site management is to be focused on ensuring that all storm water collection surfaces and facilities are maintained in clean and fully functional condition at all times so that the possibility of storm water carrying significant pollution to the stream is effectively eliminated.

The emission of pollutants is to be effectively controlled and prevented by the regular removal of all solid waste materials from the site to authorised disposal/recovery sites elsewhere, and by the removal of poultry manure off site by an experienced contractor. Accordingly, it is expected that there should not be any significant emissions of pollutants from the site and that there should be no perceptible environmental effect arising from emission of pollutants from the site.

With regard to the above and due to the nature of the proposed development, there will be no increase in the amount of wastes/potential pollutants produced or used on the farm, and/or no significant increase in noise, vibration, light, heat and/or radiation, that would lead to a significant adverse environmental impact.

The additional organic fertiliser/poultry manure to be produced will be utilised as a resource ingredient in the mushroom compost industry and/or as an organic fertiliser, and will be removed from the site by an experienced contractor. All soiled water to be allocated to the applicant's landholding.

(iv) The creation of nuisance

The proposed development combined with the existing activities on the farm, which will be carried out in accordance with the management and operational routine proposed, and in line with E.P.A., Department of Agriculture, Food and The Marine, Bord Bia and Monaghan Co. Co. requirements, is not expected to create any significant nuisance.

(v) The elimination and/or disposal/recovery of waste/by-products

The net increase in the volumes of waste/by-product materials to be generated as a result of this proposed development will not cause a significant adverse environmental impact, as all waste streams are to be minimised by implementing good practice measures on-site and any wastes that cannot be eliminated will be disposed/recovered in line with existing requirements including to approved disposal/recovery sites, and/or approved carriers.

The volume of organic fertiliser/manure (by-product) produced will be minimised by efficient cleaning out and the use of high pressure low volume power washers. In any event adequate measures for the collection, storage, management and use of these materials have been identified previously, thus ensuring that there is no adverse environmental impact from same. The opportunity to eliminate any of the waste products does not exist.

The opportunity to reduce the volume of waste materials below, that which are generated under Good Farming Practice and which will be generated on this farm once the proposed development is completed is very small and is near zero. For example, some birds die prematurely in the site. At present the cleaning, hygiene, disease control and restricted access measures that are implemented on site minimise this risk, and these practices will be implemented with regard to the proposed development. Accordingly, the waste that is dead birds cannot be eliminated and cannot realistically be planned to reduce below the level achievable under current best practice.

Similarly, with regard to the hazardous waste in the form of spent fluorescent tubes. The volumes are small and already minimised. While the applicant can be forever conscious of the Reduce, Reuse and Recycle principle in relation to all waste, there is relatively little that can be done to effect significant further gains in this proposed development.

(vi) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters)

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.

(vii) Class A Disease

In the event of a Class A disease many animals will be slaughtered, possibly both on infected farms and in preventative slaughter of dangerous contact and contiguous premises.

There are two major considerations to be taken into account in deciding on the method of disposal to be used for slaughtered animals,

1) Preventing the spread of the disease/virus, and,
2) Mininising damage to the environment.

In respect of environmental damage, the methods of disposal in order of preference are, render, bury and burn. The location and extent of any initial outbreak of a particular disease will determine which method of disposal is used, however this will be dictated by individual circumstances. The disposal strategy to be employed will be decided by the Department of Agriculture, Food and the Marine in consultation with the National Expert Epidemiological Group. The preferred option for the disposal of carcasses from this farm site is rendering.

(viii) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;

Large livestock populations and nitrogen inputs to soil generate c. 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 (i.e. the applicant) are allocating organic fertiliser in accordance with the provisions of S.I. 31 of 2014, 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. Dry manures will spread more evenly, and modern rear emptying muck spreaders are likely to be more precise than side discharging machines.

In addition the proposed development will be designed, managed and operated s as to minimise energy (gas and electricity) use on the farm, thus minimising any green houses gases associated with energy use.

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

4(5) *The forecasting methods used to assess the effects on the environment.*

Forecasting relies heavily on the accumulated experiences of current operations on the existing site, operations in similar developments, and on the knowledge that wastes removed from the site for disposal or recovery elsewhere will have negligible impact on the environment around the proposed development.

The applicant has been involved in poultry farming for a number of years and has had no incidents with regard to the effect of this existing enterprise on the local environment. Taking into account that poultry farming is a traditional and widespread farming activity in Co. Monaghan and that this proposed development will comply with the Nitrates directive, the applicant is fully confident that the proposed development will have no significant adverse effect on the local environment.

4(6) *Cumulative And Transboundary Effects*

This Poultry farm is located in County Monaghan, a county well recognised for its intensive agriculture sector. It is anticipated that the proposed development at this site will not lead to a Transboundary effect due to the distance of the proposed development from any international boundary and the fact that in the main all wastes/by-products will be utilised/disposed of/recovered within the country.

The proposed development will not have a cumulative adverse impact on the local environment. It has been demonstrated by the applicant that the existing farming activities that are carried out on-site are done so with no significant adverse impact on the local environment and in compliance with S.I. 31 of 2014. Due to the fact that all manure is to be moved off site and appropriate measures are in place to address wastes arising on the farm, it is anticipated that this development would not adversely impact on the local environment within the Monaghan area when assessed individually and/or cumulatively with other such developments in this area.

4 (7) Inter-relationships

As a requirement of the European Communities (Environmental Impact Assessment) Amendment Regulations, 1999 (S.I. No. 93 of 1999) (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 beings, flora and fauna, soil, water, air and climatic factors, landscape, material assets and cultural heritage (incl. architectural and archaeological) be assessed.

The aspects of the environment likely to be significantly affected by the proposed poultry house has 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 4.1 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 4.1 Matrix Indicating Inter-relationships between EIA Factors

	Soil	Water	Air & Climate	Landscape & Visual	Noise	Traffic	Flora & Fauna	Human Beings	Cultural Heritage	Material Assets
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
Flora & Fauna	N/a	N/a	N/a	N	N/a	N/a		N/a	N/a	N/a
Human Beings	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		N/a
Material Assets	N/a	N/a	N/a	N/a	N/a	N/a	N/a	Pos	N/a	

Neutral	N
Positive	Pos
Negative	Neg
Not Applicable	N/a

4 (7) (i)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 Beings** – the proposed poultry farm will provide for a supply of poultry manure which is a valuable fertiliser used by customer farmers to offset the cost of purchasing chemical fertiliser, and as a resourse ingredient in the compost industry. The supply of organic manure will result in a financial gain to the recipient farmers and therefore a net positive impact of the proposed development.

- **Impacts of Human Beings on other factors** - The increase in wealth as a result of the operation of the farm would mean that there will be funds available to facilitate improvements through human endeavor in the following factors soil, water, air & climate, landscape & visual, 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 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. The impact on human beings will ultimately result in improvements to material assets.

4 (7) (ii) 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 Soil on Water, Landscape & Visual and 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 customer farmers for use in accordance with S.I. 31 of 2014 and excessive application of this organic fertilizer will not occur. There will be no increase in the grassland stocking rate on this farm.

  The positive impact on soils in the customer farmland areas will potentially see a change in landscape through the improvement in field pastures, this may be viewed as a slightly positive impact overall and any changes will be minimal through compliance with S.I. 31 of 2014, as this organic fertiliser will be used to replace chemical fertiliser. The changes in soil may result in a reduction in diversity of flora & fauna in receiving lands. However 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 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 flora & fauna and flora & fauna in the wider river catchment area. This potential threat has been mitigated through the proposal to allocate all organic fertilizer for use in accordance with S.I. 31 of 2014. This is further mitigated through the provision of an appropriate on site storm water drainage system. 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 Flora & Fauna and Human Beings** – There is a potential threat to Flora & Fauna and Human Beings as a result of any impact on air due to the existing farm. The generation of mal-odour on site may have a slight negative impact on Flora & Fauna and in particular on human beings, however this is mitigated by the fact that the proposed development location is in excess of 140m from any existing third party dwelling. 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.

4 (7) (iii) Potential Impacts and Mitigation Measures

This section presents the significance of potential impacts following the implementation of mitigation measures. The E.P.A. classifies impacts as follows:

Impact	Description
Negative	A change which reduces the quality of the environment.
Positive	A change which improves the quality of the environment.
Neutral	A change which does not affect the quality of the environment.
Temporary	Impact lasting for 1 year or less.
Short-term	Impact lasting for 1 – 7 years.
Medium-term	Impact lasting for 7 – 20 years.
Long-term	Impact lasting for 10 – 50 years.
Permanent	Impact lasting for >50 years.
Slight	An impact which causes changes in the character of the environment which are not significant or profound.
Significant	An impact which by its magnitude, duration or intensity alters an important aspect of the environment.

Interactions between the above environmental factors show the potential effect of the poultry farm on the community and its environs. Human beings are the main impact receptor, flora and fauna being the other. The poultry farm and its production processes will minimally impact upon the landscape, archaeology, terrestrial, water quality and climate described under the heading natural environment.

Traffic, air quality, noise, tourism and material assets are the factors that affect the community directly. This poultry farm with its planned integration into the existing farming activities, and the associated fertiliser substitution programme will have no significant impact on the rural community.

	Category	Potential Environmental Issues/Effects	Potential Impact ~ Site	Potential Impact ~ Customer Lands	Duration	Mitigation	Residual Impact
Natural Environment	Terrestrial						
	Bio-diversity (Flora and Fauna)	Destruction/loss of habitats.	Neutral	Neutral	Long-term	Existing site of no significant ecological importance. Organic fertilizer to replace chemical fertilizer in accordance with S.I. 31 of 2014, no impact. Integration with existing farm enterprise.	None
		Eutrophication	Negative	Neutral	Long-term	High quality development and storm water discharge systems. Nutrient balance / organic fertiliser substitution. Organic fertiliser will replace chemical fertiliser.	slight
	Fresh Water / Groundwater	Risk of contamination	Negative	Neutral	Long-term	Fertiliser planning / Buffer Zones / Codes of Good Practice applied (S.I. 31 of 2014, Customer Farmlands).	Slight
	Landscape	Visual impact	Negative	Neutral	Long-term	Site relatively low set in landscape. Low finished floor level relative to average ground level. Well set back from the local road to the rear of existing farmyard. Properly landscaped.	Slight
	Archaeology	Disturbance of archaeological finds	Neutral	Neutral	Long-term	No archaeological finds within this site. Site not located near to, or likely to impact on any archaeological sites.	Neutral
	Climate	Contribution of greenhouse gases	Positive	Neutral	Long-term	Poultry production is less harmful than ruminant production in terms of methane. Organic manure will replace inorganic fertilisers eliminating manufacturing / transport energy use. Integration with existing farming activities.	None

Human Beings	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	None
	Community	Application of manure	Neutral	Neutral	Long-term	Significant requirement for additional organic fertiliser.	None
		Vermin and pest infestation	Negative	Neutral	Long-term	Control programme to be practiced on farm in line with Bord Bia requirements.	None
		Fire Hazards	Negative	Neutral	Long-term	Fire points / extinguishers / staff training	None
	Traffic	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 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/ Ammenities	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	Site location will ensure that there is no negative impact on the material assets of the area.	None

4 (8) 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/poultry developments and well understood. In addition the main principles are substantially similar to that already in practice on site with the existing development. The technical information on which to base an assessment of impact on environmental parameters is readily available in the public domain.

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. As stated previously, this planning application and Environmental Impact Assessment Report , relate to the proposed development of 1 No. additional poultry house plus all associated site works and ancillary structures.

The operation of the existing farm in conjunction with the proposed development will be carried out in accordance with the requirements of Monaghan Co. Co., The E.P.A., The Department of Agriculture, Food and Marine and Bord Bia to achieve maximum efficiency, flock performance and environmental standards

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

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 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 to properly collect and discharge to field drainage all clean rainwater from roofs and clean surfaces, as described in Appendix No. 3 and Appendix No. 16.

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

(v) The collection and the removal from the site of all manure. All soiled waters to be collected and used on Applicant's farmlands.

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

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

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

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

(ix) Specially formulated diets to maximise performance and reduce nutrient excretion. See Appendix No. 9.

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

(xi) The applicant is a highly skilled, efficient and competent operator of this farm

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.

6. ENVIRONMENTAL MANAGEMENT PROGRAMME

6.1. Introduction

The applicant will implement and maintain a comprehensive monitoring programme on site to provide maximum protection for the environment. This plan will in effect be governed by the requirements of the E.P.A., as detailed in any Licence issued to this farm, and by the applicant's requirements under environmental legislation such as S.I. 31 of 2014. 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 poultry farm. Any recommendations of the planning authority will be complied with in relation to this Environment Management Programme.

6.2. 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. 31 of 2014 are met in full by the applicant. This will include;

- The allocation of fertiliser to a registered specialist contractor for use in accordance with the requirements of S.I. 31 of 2014,
- Proper separation of all clean water on site, and the collection of all soiled water in the soiled water storage tanks.
- Continuous recording of all organic fertiliser transfers off 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.]

6.3. Environmental Monitoring Programme

(i) ***Work schedule for fixed structures.***

- A maintenance programme for all structures and systems to be implemented to ensure that same are operating to maximum efficiency

(ii) ***Monitoring fixed structures for the following:***

- checking soiled water and clean water drainage systems for deterioration, leaks and blockages.

(iv) ***Monitoring and analysis***.

- Storm water emission points to be visually inspected and recorded on a weekly basis.
- Soiled Water Storage Tanks – To be monitored and recorded as required for remaining storage capacity.
- Noise, Odour and Dust emissions not to cause an adverse environmental impact outside of the site boundary. As per previous licences issued by the Agency the EPA license required for this farm will have specific requirements/conditions pertaining to odour/noise and dust to be complied with.

7 Summary

This proposed development involving the construction of 1 no. poultry house together with ancillary facilities has been subject to Environmental Impact Assessment in accordance with requirements under the Planning and Development Regulations 2001-2015. This resulting E.I.A.R. has been prepared in order to provide the planning authority with the necessary information to make a decision on this planning application.

The proposed development as outlined will make a significant positive contribution to the rural economy of Co. Monaghan and will serve to increase employment and secure the viability and competitiveness of the applicants' farm enterprise, as well as the wider poultry farming industry. The development 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. Monaghan. The proposed development will be constructed and operated in accordance with the details laid down in this E.I.A.R. and will adhere to conditions imposed as part of any grant of planning permission and E.P.A. Licence for this farm.

Signed:

Paraic Fay
BAgrSc

22/6/17
Date

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

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

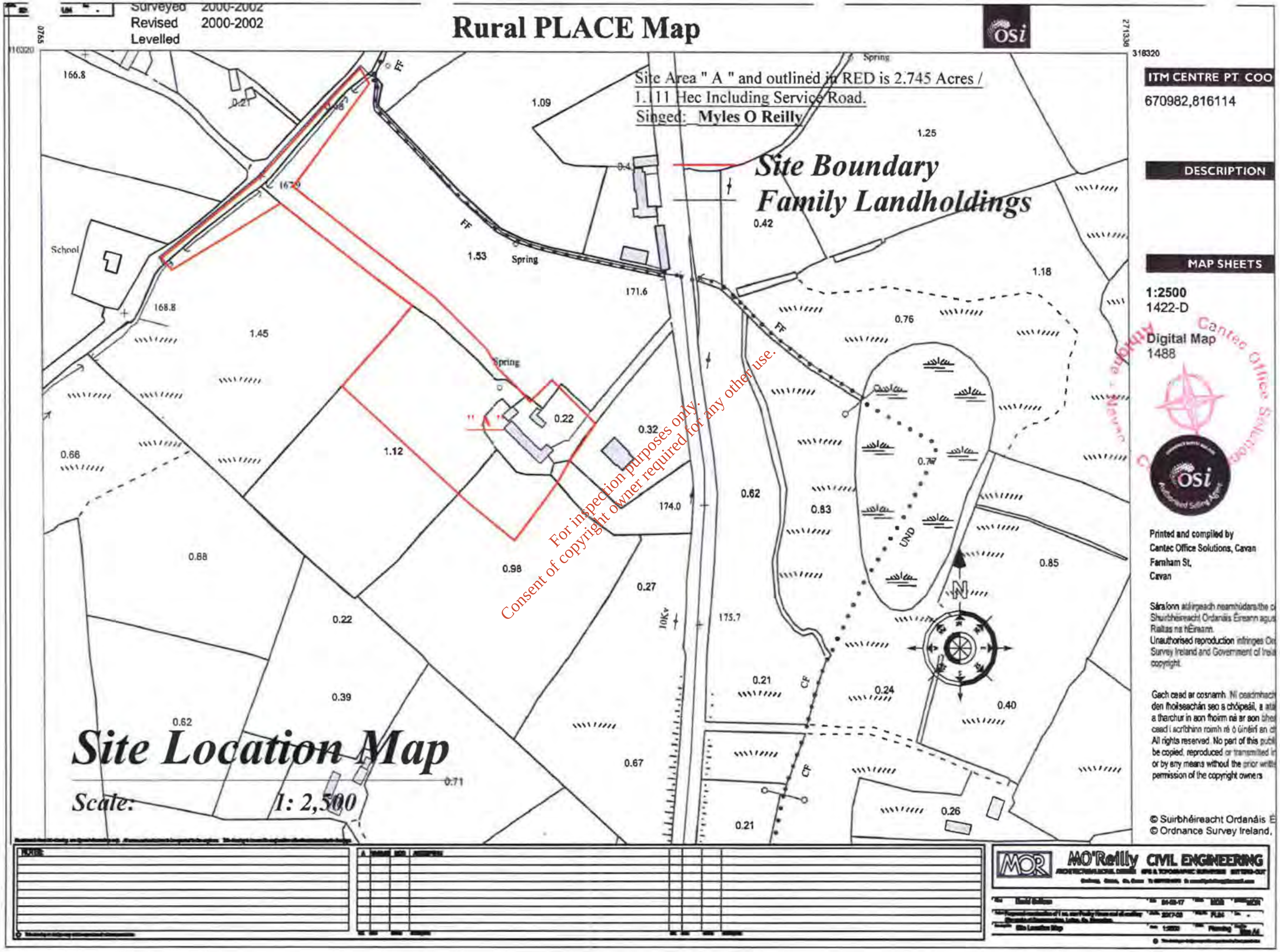
Appendices

Appendix No. 1	~	Site Location Map
Appendix No. 2	~	Site Layout (Not to scale) Location of Proposed and Existing Developments
Appendix No. 3	~	Drawings of Proposed Development (Not to scale)
Appendix No. 4	~	Environmental Protection Agency – Draft Guidelines on EIS – Project Type 13
Appendix No. 5	~	Details of Poultry Litter Contractor
Appendix No. 6	~	Animal Tissue Disposal
Appendix No. 7	~	(Intentionally Blank)
Appendix No. 8	~	Extent and Location of Lands Available for Application of Soiled Water
Appendix No. 9	~	Feed Details
Appendix No. 10	~	General/Mixed Waste Disposal
Appendix No. 11	~	Extracts from Monaghan County Development Plan 2013- 2019

Appendix No. 12	~	*Extract from General Soil Map of Ireland.*
Appendix No. 13	~	*Local Water Quality Data*
Appendix No. 14	~	*Met Data*
Appendix No. 15	~	*Dept. of Agriculture – Minimum Specification for Screening belts for Farmyards and Farm Buildings – S 135*
Appendix No. 16	~	*Water Protection Plan Checklist*
Appendix No. 17	~	*Details relating to a number of noise surveys carried out on intensive farms in the Cavan region.*
Appendix No. 18	~	*(Intentionally Blank)*
Appendix No. 19	~	*European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2014 – S.I. 31 of 2014*
Appendix No. 20	~	*G.S.I. Info.*

Appendix No. 1

Site Location Map


Surveyed 2000-2002
Revised 2000-2002
Levelled
Rural PLACE Map
osi
Site Area " A " and outlined in RED is 2.745 Acres /
1.111 Hec Including Service Road.
Singed: Myles O Reilly
Site Boundary
Family Landholdings
ITM CENTRE PT COO
670982,816114
DESCRIPTION
MAP SHEETS
1:2500
1422-D
Digital Map
1488
Cantec Office Solutions
Printed and compiled by
Cantec Office Solutions, Cavan
Farnham St,
Cavan
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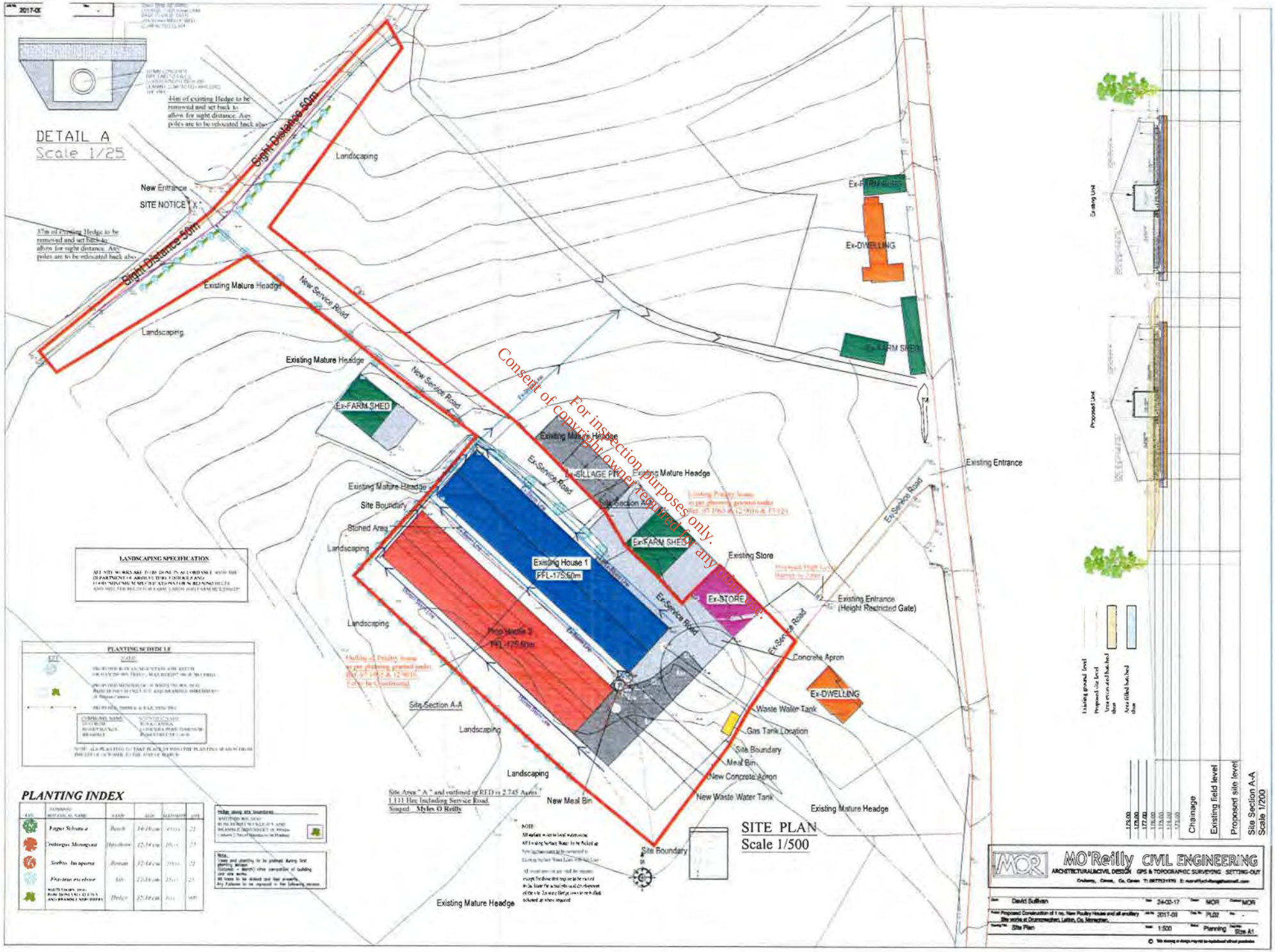
© Suirbhéireacht Ordanáis Éireann
© Ordnance Survey Ireland,
School
Spring
FF
CF
UND
10Kv
N
166.8
168.8
167.9
171.6
174.0
175.7
1.09
1.25
0.42
1.18
0.76
1.53
1.45
1.12
0.22
0.32
0.66
0.68
0.98
0.62
0.83
0.77
0.85
0.27
0.22
0.39
0.62
0.67
0.71
0.21
0.24
0.40
0.26
0.21
Site Location Map
Scale: 1: 2,500
MO'Reilly CIVIL ENGINEERING

Appendix No. 2

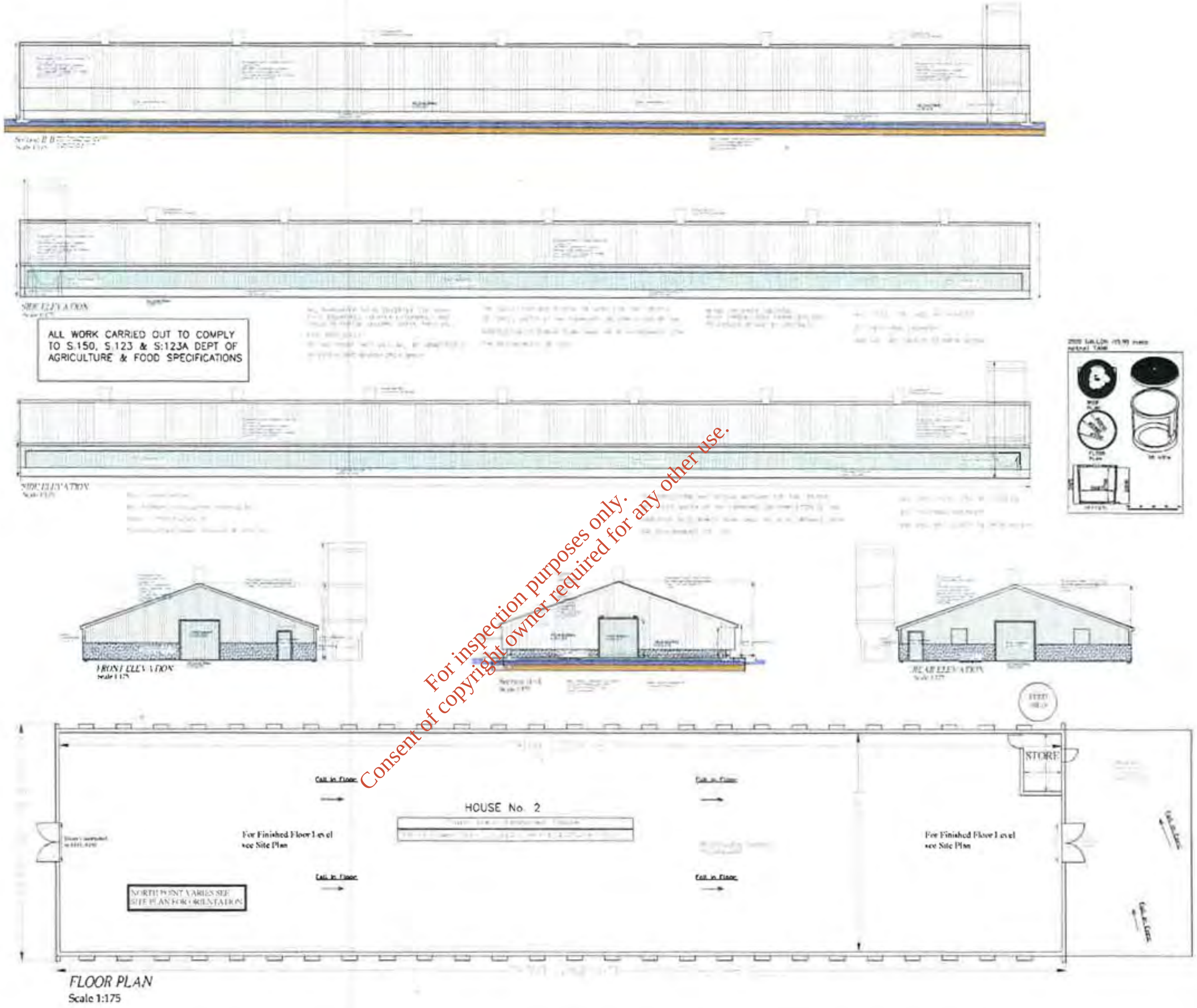
Site Layout
(Not to scale)

Location of proposed and existing developments



Appendix No. 3

Drawings of Proposed Development
(Not to scale)



NOTES

A	12.03.06	MOR	ABCDEFGHIJ

MO'Reilly CIVIL ENGINEERING
ARCHITECTURAL&CIVIL DESIGN GPS & TOPOGRAPHIC SURVEYING SETTING-OUT

David Sullivan	24-02-17	MOR	MOR
Proposed Construction of 1 no. New Poultry House and all ancillary Site works at Drumonaghan, Latton, Co. Monaghan.	2017-09	PL01	-
Existing Plan elevations Section	1:175	Planning	Size A4

Appendix No. 4

Environmental Protection Agency – Draft Guidelines 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:-	▼ Extension of infrastructure (water, power, access); ▼ Site preparation works; ▼ Materials; ▼ Access.
Operation (including relevant alternatives):-	▼ 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):-	▼ Removability of structures; ▼ Long-term contamination.
Growth:-	▼ Potential changes in numbers, types, intensity or methods.
Associated developments:-	▼ 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	▼ 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	▼ Potential effects on vegetation due to eutrophication, effluent seepage/ run-off; ▼ Waste spreading
Soils (and Geology)	▼ Nutrient levels; ▼ Assimilative capacity of soils; ▼ Transmissivity and conductivity of geology

Pig-rearing installations; **Poultry-rearing installations.**	
Water	▼ Leakage of effluent (including during transportation); ▼ Pollution by contaminated run-off; ▼ Disposal of carcasses; ▼ Location and timing of slurry spreading
Air	▼ 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	▼ Gases emitted from slurry/manure; ▼ Methane (contribution to greenhouse gases); ▼ Ammonia (contribution to acidifying gases).
The Landscape	▼ Visibility of structures; ▼ Potential visual impact as a result of water body eutrophication; ▼ Impact of odours on amenities and landscape character.
Material Assets	▼ 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	
	▼ 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. 5

Details of Poultry Litter Contractor

Eamon Fitzpatrick (Agri)
Lisnaroe Clones Co Monaghan
Tel 047 20894 Mobile 087 829 1657

Company DAFM:- EFK

9th June, 2017

To whom it may concern:

RE: Collection and transport of poultry manure

For Declan and Mairead Sullivan
Drumcreeghan, Latton, Castleblaney, Co. Monaghan

This is to confirm that Eamon Fitzpatrick, (Registered Agricultural Contractor Ref. No. EFK) is in a position to collect and remove all
'Boilers' manure'
from the holding of Declan & Mairead Sullivan
Premises situated at:-

Drumcreeghan, Latton, Castleblaney, Co Monaghan

Collections are now projected, in the order of 450 > 500 tonne.

All manure will be transported in covered trailers for use as an organic fertiliser and/or in the production of compost.

Farmers accepting of 'Boiler's manure',shall be notified on Form 3 returns; in keeping with Department's regulations and submitted to DAFM within the time allowed.

All records (Document 3s etc.) shall be submitted to the Dept of Agriculture in accordance with 'nitrate' regulations and (Good Agricultural Practice for the protection of Water).

Should you require any further information please do not hesitate to contact me at the above telephone number.

Yours sincerely,

John McCusker pp.Eamon Fitzpatrick Agri

Appendix No. 6

Animal Tissue Disposal

College Proteins Group

College Proteins

College Road, Nobber, Co. Meath, Ireland.
Tel + 353(0)46 909 6000 Fax + 353 (0)46 905 2062 / 905 2465
Website: www.collegeproteins.ie Email info@collegeproteins.ie

Declan and Mairead Sullivan,
Latton,
Castleblaney,
Co. Monaghan.
03/03/17

To Whom It May Concern:

We wish to confirm that we collect and dispose of poultry from the above named individual on a regular basis. The poultry are 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

ENVIROMENT
IS:EN ISO: 14001 2004
NSAI Certified

UKAS MANAGEMENT SYSTEMS 236

Appendix No. 8

Extent and Location of Lands Available for Application of Soiled Water

Department of
Agriculture, Food and the Marine
An Roinn
Talmhaíochta, Bia agus Mara

For Basic Payment Scheme, Areas of Natural Constraint Scheme and other Area-Based Schemes Purposes only
Year: 2015 **Scale:** 1:5000

Name: Declan Sullivan
Address:

Drumcreeghan
Latton
Castleblayney

Townland Code: R12404
Townland Name: CARGAGHBANE

Parcel	Digitised	MEA*	Claimed
R12404103	1.56	1.56	1.54
R12404110	3.61	3.43	3.43

Exclusions

Parcel	Excl	Area	Red%	Elig	Type
R12404110	X01	0.02	100%	0.00	Rock
R12404110	X02	0.155	100%	0.00	Other
R12404110	X03	0.013	40%	0.01	Scrub

Manual Deductions

Parcel	Red%
R12404103	1.001%

Townland Code: R12411
Townland Name: DRUMCREEGHAN

Parcel	Digitised	MEA*	Claimed
R12411100	0.13	0.12	0.12

Exclusions

Parcel	Excl	Area	Red%	Elig	Type
R12411100	X01	0.0060	100%	0.00	Stream

Townland Code: R12419
Townland Name: MULLANANALT

Parcel	Digitised	MEA*	Claimed
R12419086	1.71	1.70	1.69

Exclusions

Parcel	Excl	Area	Red%	Elig	Type
R12419086	X01	0.0050	100%	0.00	Scrub

Ortho Used: Bing

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

R1240262

Department of
Agriculture, Food and the Marine
An Roinn
Talmhaíochta, Bia agus Mara

For Basic Payment Scheme, Areas of Natural Constraint Scheme and other Area-Based Schemes Purposes only
Year: 2015 **Scale:** 1:5000

Name: Declan Sullivan
Address:

Drumcreeghan
Latton
Castleblayney

Townland Code: R12404
Townland Name: CARGAGHBANE

Parcel	Digitised	MEA*	Claimed
R12404111	6.31	5.91	5.86
R12404112	0.26	0.26	0.26
R12404113	0.11	0.11	0.11

Exclusions

Parcel	Excl	Area	Red%	Elig	Type
R12404111	X02	0.06	100%	0.00	Scrub
R12404111	X03	0.03	100%	0.00	Scrub
R12404111	X04	0.04	100%	0.00	Scrub
R12404111	X05	0.022	100%	0.00	Scrub
R12404111	X06	0.0060	100%	0.00	Scrub
R12404111	X07	0.012	100%	0.00	Scrub
R12404111	X08	0.015	100%	0.00	Scrub
R12404111	X09	0.039	100%	0.00	Scrub
R12404111	X10	0.06	100%	0.00	Scrub
R12404111	X11	0.042	40%	0.03	Scrub
R12404111	X12	0.0060	100%	0.00	Scrub
R12404111	X13	0.155	20%	0.12	Scrub
R12404111	X14	0.04	100%	0.00	Other
R12404111	X15	0.068	100%	0.00	Other
R12404112	X01	0.264	2%	0.26	Scrub
R12404113	X01	0.11	2%	0.11	Scrub

Ortho Used: Bing

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

R1240262
R1240262 2 of 3 - Fri Dec 25 17:18:18 GMT 2015

Department of
Agriculture, Food and the Marine
An Roinn
Talmhaíochta, Bia agus Mara

For Basic Payment Scheme, Areas of Natural Constraint Scheme and other Area-Based Schemes Purposes only
Year: 2015 **Scale:** 1:5000

Name: Declan Sullivan
Address:

Drumcreeghan
Latton
Castleblayney

Townland Code: R12411
Townland Name: DRUMCREEGHAN

Parcel	Digitised	MEA*	Claimed
R12411101	1.06	0.00	0.00
R12411102	5.83	5.77	5.77

Exclusions

Parcel	Excl	Area	Red%	Elig	Type
R12411102	X01	0.061	100%	0.00	Stream
R12411102	X02	0.0020	100%	0.00	Scrub
R12411102	X03	0.0	100%	0.00	Other
R12411102	X04	0.0	100%	0.00	Building

Ortho Used: Bing

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

R1240262
R1240262 3 of 3 - Fri Dec 25 17:18:21 GMT 2015

Appendix No. 9

Feed Details

CORBY ROCK MILL Ltd
leading manufacturers of animal feed products

Tel: +353 (047) 30099
Fax: +353 (047) 71452
info@corbyrock.ie
www.corbyrock.ie

Directors: G.Quinn, M.Quinn
Reg. No. 51890 Reg. Office: Corby Rock, Monaghan.

1st Jan 2012.

Dear Paraic,

At Corby Rock Mill we manufacture layer feeds of the highest quality, these feeds have been formulated to minimise the total waste produced by the hens & in particular with reference to nitrogen & phosphorus emissions.

This is achieved in 3 ways:

1) ***High Quality Raw Materials.***
This increases digestibility & thereby reduces the total volume of waste produced.

2) ***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.

3) ***Enzyme***
By the use of the Enzyme Combizyme the requirement for inorganic phosphate is dramatically reduced & hence the faecal phosphorus emissions are minimised.

I hope this information is to your satisfaction & 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 Corby Rock Mill Ltd.

Damien Duffy
QA Manager.

Appendix No. 10

General/Mixed Waste Disposal

Áras an Chontae, Charleville Road, Tullamore, Co. Offaly
Telephone: 057 9357428

NWCPO
National Waste Collection Permit Office

Waste Collection Permit Details

Permit

WCP Permit Number: NWCPO-12-06461-03
NWCPO Reference: NWCPO-12-06461-03

Exomax (Ireland) Ltd
T/A
Scotch Corner
Anaysile
Castleblaney Co. Monaghan

04780888
Fax:
emmet@mcelvaneywaste.com

Waste Types

List of Waste Code	Description	Hazardous?
02 01 01	sludges from washing and cleaning	
02 01 04	waste plastics (except packaging)	
02 02 03	materials unsuitable for consumption or processing	
02 03 01	sludges from washing, cleaning, peeling, centrifuging and separation	
02 03 04	materials unsuitable for consumption or processing	
02 03 05	sludges from on-site effluent treatment	
02 05 02	sludges from on-site effluent treatment	
03 01 01	waste bark and cork	
04 02 22	wastes from processed textile fibres	
05 01 03*	tank bottom sludges	

1 2 3 4 5 6 7 8 9 10 Page size: 10 100 items in 10 pages

Collection Areas

This permit holder is permitted to collect in

Cavan County

Donegal County

Dublin City

Dun Laoghaire-Rathdown

Fingal

Galway City

Galway County

Kildare County

Laois County

Leitrim County

Longford County

Louth County

Mayo County

Meath County

Monaghan County

Offaly County

Roscommon County

Sligo County

South Dublin

Westmeath County

Wicklow County

Collection Areas

Permit

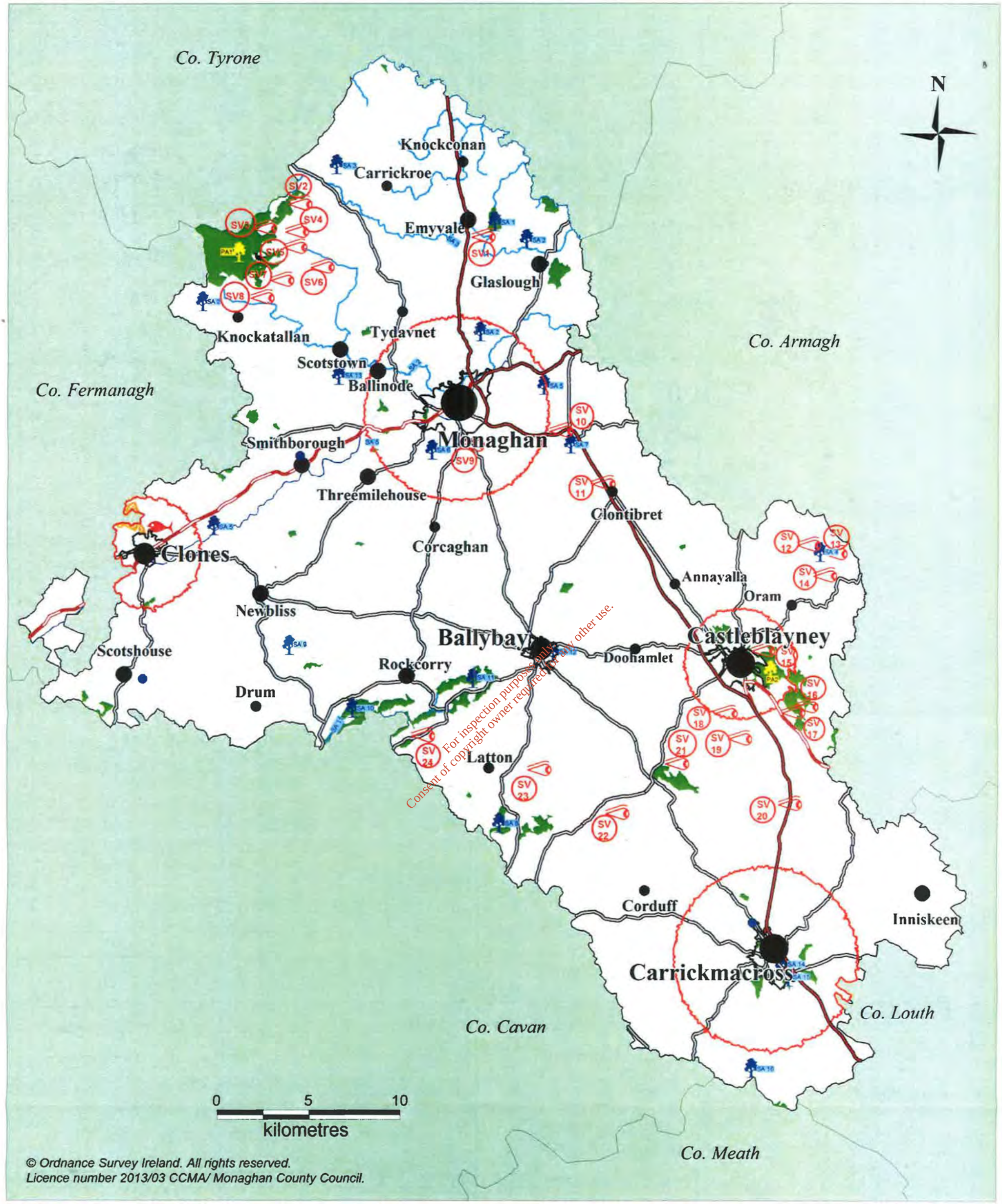
There are no items to be displayed.

Top of Page Print Favourites

NWCPO Áras an Chontae, Charleville Road, Tullamore, Co. Offaly - Tel (057) 9357428

Appendix No. 11

Extracts from Monaghan County Development Plan 2013 - 2019



Map 4.7: County Monaghan Development Constraints

Monaghan County Development Plan 2013-2019

Map 4.1: Sensitive Surface Waters

Monaghan County Development Plan 2013-2019

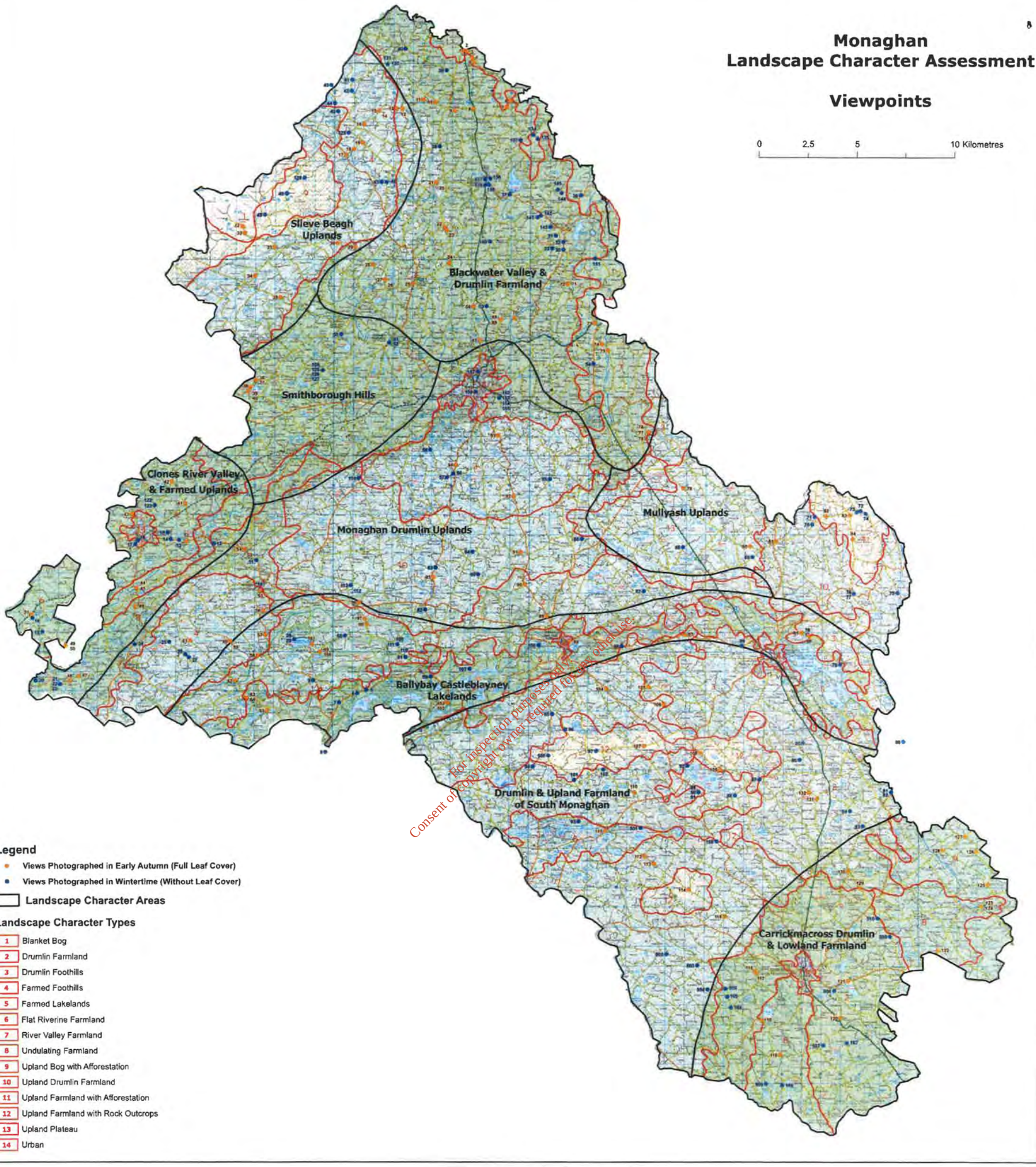
- Public & Private Lake Sources
- Inner Catchment Areas
- Outer Catchment Areas
- Amenity/Bathing Areas
- River Water Supply Source
- Industrial Water Abstraction Points

Monaghan County Council

Monaghan
Landscape Character Assessment

Viewpoints

0 2.5 5 10 Kilometres



Legend

- Views Photographed in Early Autumn (Full Leaf Cover)
- Views Photographed in Wintertime (Without Leaf Cover)

Landscape Character Areas

Landscape Character Types

1. Blanket Bog
2. Drumlin Farmland
3. Drumlin Foothills
4. Farmed Foothills
5. Farmed Lakelands
6. Flat Riverine Farmland
7. River Valley Farmland
8. Undulating Farmland
9. Upland Bog with Afforestation
10. Upland Drumlin Farmland
11. Upland Farmland with Afforestation
12. Upland Farmland with Rock Outcrops
13. Upland Plateau
14. Urban

Appendix No. 12

Extract from General Soil Map of Ireland.

the Controller of H.M.Stationery Office. Smaller islands not surveyed.

Broad Physiographic Divisions	Soil Association			Parent Material	Per cent of total area
	Nos.	Principal Soil	Associated Soils		
Drumlin (Wet Mineral and Organic Soils)	25	Gleys (50%)*	Acid Brown Earths (40%) Interdrumlin Peat and Peaty Gleys (10%)	Mostly Ordovician – Silurian shale sandstone glacial till	2·57 3·66
	26	Gleys (60)*	Acid Brown Earths (40)	Basalt glacial till	— 1·86
	27	Gleys (85)*	Interdrumlin Peat and Peaty Gleys (15)	Mostly Upper Carboniferous limestone and shale – sandstone glacial till	3·77 4·73
Drumlin (Drier Mineral and Organic Soils)	28	Grey Brown Podzolics (60)	Gleys (20), Interdrumlin Peat and Peaty Gleys (20)	Mostly limestone glacial till	3·43 3·23
	29	Acid Brown Earths (75)	Interdrumlin Peat and Peaty Gleys (25)	Mostly Ordovician – Silurian shale – glacial till	1·16 2·73
Flat to Undulating Lowland (Mainly dry Mineral Soils)	30	Grey Brown Podzolics (70)	Brown Earths (20) Gleys (5) Basin Peat (5)	Limestone morainic gravels and sands	2·64 2·18
	31	Minimal Grey Brown Podzolics (80)	Gleys(10) Brown Earths(5) Basin Peat (5)	Limestone glacial till	4·47 3·70
	32	Degraded Grey Brown Podzolics (50)	Peat (15) Brown Earths(15 Gleys (10), Podzols (10)	Mostly limestone glacial till	3·08 2·56
	33	Shallow Brown Earths and Rendzinas (60)	Grey Brown Podzolics(25) Gleys (10) Peat (5)	Limestone till, shallow in places	3·21 2·66
	34	Minimal Grey Brown Podzolics (70)	Gleys (20) Brown Earths (10)	Limestone glacial till	6·02 4·98
	35	Grey Brown Podzolics (80)	Gleys (10) Brown Earths (10)	Stony limestone glacial till	·64 ·53
	36	Grey Brown Podzolics (80)	Gleys (20)	Limestone gravelly till	·70 ·58
	37	Grey Brown Podzolics (75)	Gleys (20), Brown Earths (5)	Limestone and shale glacial till	1·42 1·18
	38	Grey Brown Podzolics (75)	Gleys (25)	Till of Irish Sea origin with limestone and shale	1·14 ·95
Flat to Undulating Lowland (Mainly wet Mineral and Organic Soils)	39	Gleys** (90)	Grey Brown Podzolics (10)	Limestone glacial till	3·27 2·86
	40	Gleys* (80)	Grey Brown Podzolics (20)	Till of Irish Sea origin with limestone and shale	2·07 1·56
	41	Gleys* (75)	Acid Brown Earths (15) Peaty Gleys (10)	Basalt glacial till	— ·22
	42	Gleys* (90)	Grey Brown Podzolics (10)	Glacial muds of Irish Sea origin	·49 ·61
	43	Gleys (60)	Brown Earths (20) Peaty Gleys (20)	Alluvium	1·34 1·15
	44	Basin Peat			5·79 5·08

Prepared and published by the National Soil Survey, An Foras Taluntais.

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

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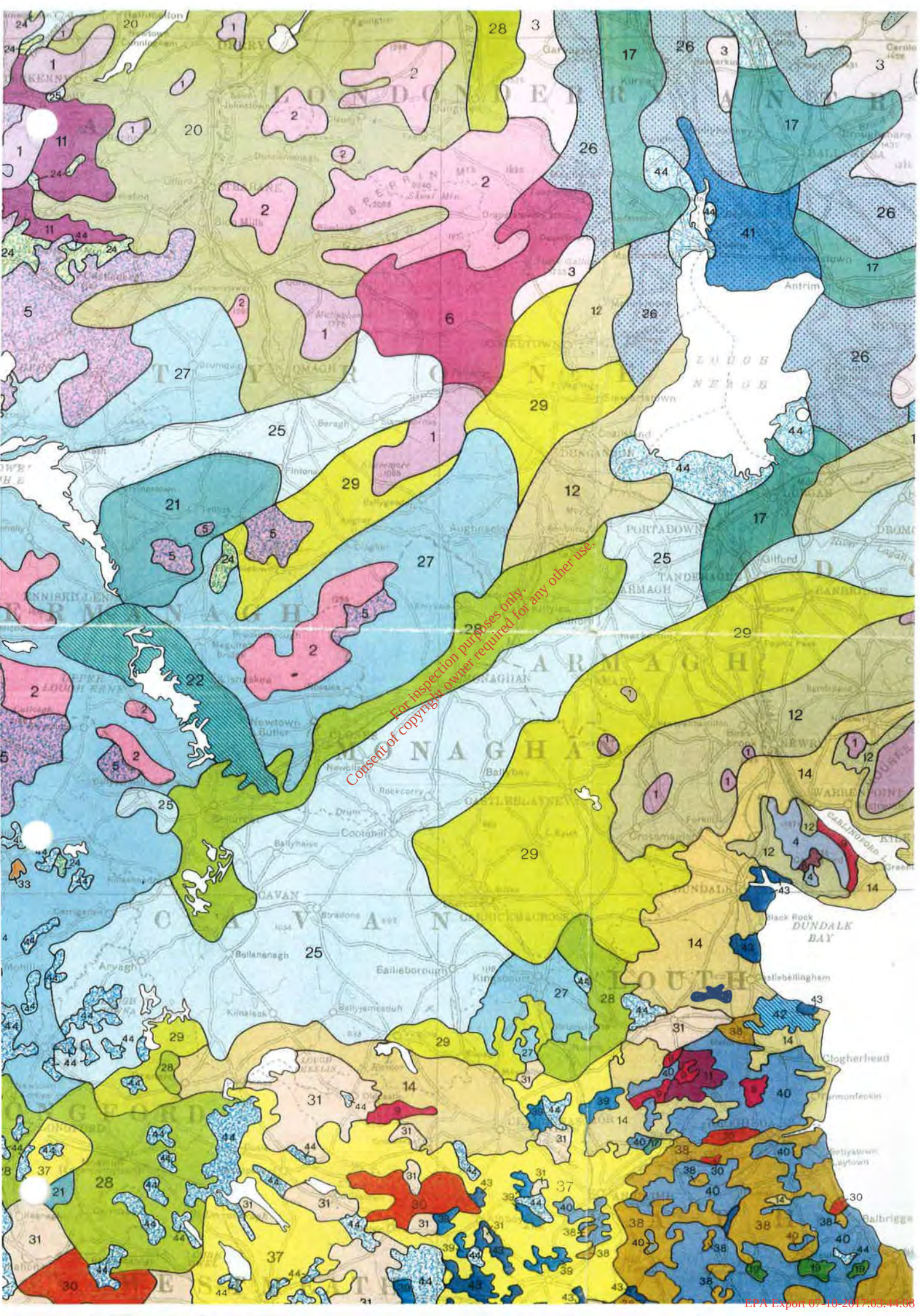

Appendix No. 13

Local Water Quality Data

Environmental Protection Agency

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
Q2, Q1-2	Bad	Seriously 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.

DROMORE

36D02

Date Surveyed (last survey year only): 10/09/14

Biological Quality Rating (Q Values)

Station Code	1971	1977	1980	1982	1984	1986	1989	1990	1993	1997	1998	2001	2004	2007	2010	2013	2014
RS36D020075										3	3	3	4	3-4	3-4	1-2*	3-4*
RS36D020090							1	3	3-4	3-4	3-4	3	3-4		3-4	3-4	
RS36D020100	5	3	3-4	3	2	3-4	2	3				2-3					
RS36D020150			2	2	2	3	2	3	3	3-4	3-4		3	3-4	3-4	2-3	
RS36D020300	4	2	3-4	3-4	3-4	3-4	3		3-4	3	3	3	3	3	3	3	
RS36D020400		4	3-4	3-4	3-4	3-4	3-4		3								
RS36D020500			4	4	3-4	3	3		3	3	3	3-4	3-4	3	3	3-4	
RS36D020600			4	3-4	3-4	3	3									3	
RS36D020700	4-5	2-3	3	4	3	3-4	3		3	3-4	3	3	3	3	3	3	
RS36D020800			4	4-5	4	4											
RS36D020900	4-5	4-5	4-5	4-5	4	4	3-4		4	4	4-5	4	4	3-4	3-4	4	
RS36D020905						4											
RS36D020910					1	4	3-4				3						

Most Recent Assessment:

An increase in status from Bad to Moderate was recorded for the Dromore River at 0075 owing to improvements in channel hydromorphology and river habitat which were significantly impacted by dredging operations undertaken at this location in the recent past.

Station Details

Station Code	Station Location	WFD Waterbody Code	Easting	Northing	Local Authority
RS36D020075	Br SW of Bartley's Grove	IE_NW_36D020075	269058	324264	Monaghan County Council
RS36D020090	DROMORE - Br SE of Edenaferkin	IE_NW_36D020090	269552	322139	Monaghan County Council
RS36D020100	DROMORE - Br NE of Derryvalley Ho	IE_NW_36D020150	269807	321223	Monaghan County Council
RS36D020150	Br in Ballybay	IE_NW_36D020150	271702	320533	Monaghan County Council
RS36D020300	Balladian Br.	IE_NW_36D020300	269584	319747	Monaghan County Council
RS36D020400	DROMORE - Ballycoghill Br	IE_NW_36D020500	266001	317565	Monaghan County Council
RS36D020500	Ballynascarva Br	IE_NW_36D020500	264634	316399	Monaghan County Council
RS36D020600	New Br N of Clementstown	IE_NW_36D020600	259750	315153	Monaghan County Council
RS36D020700	Br. W. of Clementstown	IE_NW_36D020700	259269	314657	Cavan County Council
RS36D020800	DROMORE - Br N of Ashfield Lodge	IE_NW_36D020900	257584	313991	Cavan County Council
RS36D020900	Killycreeny Br (Mid)	IE_NW_36D020900	255719	313124	Cavan County Council
RS36D020905	DROMORE - Killycreeny Br (LHS)	IE_NW_36D020900	255715	313118	Cavan County Council
RS36D020910	DROMORE - Killycreeny Bridge (RHS)	IE_NW_36D020900	255709	313111	Cavan County Council

Appendix No. 14

Met Data

Clones 1978–2007 averages													
TEMPERATURE (degrees Celsius)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
mean daily max	7.2	7.8	9.7	12.1	15.1	17.4	19.2	18.8	16.6	13.1	9.8	7.6	12.9
mean daily min	1.6	1.6	3.0	4.2	6.5	9.5	11.4	11.1	9.2	6.6	3.9	2.3	5.9
mean temperature	4.4	4.7	6.4	8.1	10.8	13.4	15.3	15.0	12.9	9.9	6.8	5.0	9.4
absolute max.	14.8	16.3	16.9	21.5	25.9	29.3	30.5	28.3	25.3	20.1	16.9	14.8	30.5
min. maximum	-3.8	-0.4	2.3	0.0	0.0	10.1	10.7	11.3	10.7	6.2	1.6	-5.7	-5.7
max. minimum	12.0	11.3	11.0	12.1	13.4	16.9	18.7	18.0	17.1	15.4	12.7	12.6	18.7
absolute min.	-12.4	-7.3	-6.8	-3.8	-3.7	1.6	4.6	3.5	0.2	-4.5	-5.4	-11.0	-12.4
mean num. of days with air frost	9.4	8.5	5.0	2.5	0.4	0.0	0.0	0.0	0.0	1.1	4.2	7.4	38.4
mean num. of days with ground frost	17.0	15.0	13.0	11.0	6.0	1.0	0.0	0.0	2.0	5.0	12.0	15.0	97.0
mean 5cm soil	3.5	3.6	5.2	8.1	12.1	14.9	16.4	15.6	12.8	9.3	6.2	4.4	9.4
mean 10cm soil	4.0	4.0	5.3	7.7	11.1	14.0	15.6	15.1	12.7	9.6	6.7	4.9	9.2
mean 20cm soil	4.6	4.6	6.0	8.1	11.3	14.0	15.7	15.5	13.5	10.6	7.6	5.6	9.8
RELATIVE HUMIDITY (%)													
mean at 0900UTC	89.9	88.7	86.6	81.8	77.4	78.8	81.7	84.6	87.3	89.3	90.8	90.9	85.7
mean at 1500UTC	83.3	77.3	72.9	67.5	66.5	68.7	69.6	71.2	72.8	77.3	82.5	85.9	74.6
SUNSHINE (hours)													
mean daily duration	1.5	2.2	3.0	4.6	5.6	4.6	4.4	4.2	3.6	2.8	1.8	1.2	3.3
greatest daily duration	7.5	9.8	11.0	13.1	15.5	16.0	15.2	14.4	12.0	9.6	8.5	6.9	16.0
mean num. of days with no sun	12.1	8.3	6.0	3.8	2.2	2.6	2.2	2.8	4.0	6.9	10.3	13.2	74.3
RAINFALL (mm)													
mean monthly total	87.6	71.0	84.0	61.6	63.4	70.9	70.8	88.7	76.2	102.7	85.1	98.4	960.4
greatest daily total	30.0	26.9	34.0	23.5	37.7	38.1	50.3	74.6	27.1	43.8	33.1	31.9	74.6
mean num. of days with >= 0.2mm	20	17	20	16	16	17	18	18	18	20	19	19	218
mean num. of days with >= 1.0mm	15	12	15	12	12	12	13	13	13	15	14	15	161
mean num. of days with >= 5.0mm	6	5	6	4	4	5	4	5	5	7	6	7	64
WIND (knots)													
mean monthly speed	9.2	9.4	9.4	7.9	7.2	6.7	6.3	6.3	7.0	7.8	8.2	8.7	7.8
max. gust	70	81	69	61	53	50	53	49	57	62	60	72	61.4
max. mean 10-minute speed	46	51	41	34	35	31	30	29	37	37	35	44	37.5
mean num. of days with gales	0.6	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	2.2
WEATHER (mean no. of days with..)													
snow or sleet	4.9	4.7	3.8	1.1	0.3	0.0	0.0	0.0	0.0	0.0	0.6	2.6	18.0
snow lying at 0900UTC	2.8	1.1	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2	6.2
hail	0.8	1.6	2.8	2.3	1.3	0.1	0.1	0.0	0.1	0.6	0.4	0.8	10.8
thunder	0.1	0.1	0.1	0.1	0.8	1.0	0.5	0.8	0.1	0.1	0.0	0.1	3.8
fog	3.7	3.6	2.1	2.2	1.5	1.3	1.6	2.9	4.0	3.5	4.0	4.4	34.8

Appendix No. 15

Dept. of Agriculture – Minimum Specification for Screening belts for Farmyards and Farm Buildings – S 135

MINUMUM SPECIFICATION FOR SCREENING BELTS AND SHELTER BELTS FOR FARMYARDS AND FARM BUILDINGS

The receiving of this specification does not imply approval of a grant application. However, if written approval is issued, then this specification becomes part of the contract between the applicant and the Department of Agriculture, Fisheries and Food.

This is a minimum specification. Where the word "SHALL" is used, then that standard (at least) must be followed in grant-aided buildings. Where a procedure is "RECOMMENDED", this is advice only on good practice.

Note that all references to other Department Specifications are to the current edition of that specification [available on the Department of Agriculture, Fisheries and Food Website (www.agriculture.gov.ie) under Farm buildings]. Similarly, references to Standards are to the current edition of the Irish, British or European Standard, as appropriate.

This specification describes the installation and maintenance of trees to screen or shelter a single farm building, or collection of buildings. **Screening** belts refer to rows or groups of trees planted to hide obtrusive buildings, or to soften their impact, particularly in scenic landscapes. **Shelter** belts may also screen buildings, but have the particular purpose of moderating strong winds around buildings and farmyards.

1. Safety

APPLICANT'S RESPONSIBILITY FOR SAFETY

Applicants are reminded that they have a duty under the Safety, Health, and Welfare at Work Act 2005 to provide a safe working environment on the farm, including farm buildings, for all people who may work on that farm. There is a further duty to ensure that any contractor, or person hired to do building work, provides and/or works in a safe environment during construction. It is the farmer's responsibility to provide a construction stage project supervisor.

SAFETY DURING CONSTRUCTION

Farmer/Applicant Responsibility: Certain construction dangers may be encountered in the course of building or conversion work. Neither the Minister or any official of the Department will be in any way liable for any damage, loss or injury to persons, animals or property in the event of any occurrence related to the development and the applicant shall fully indemnify the Minister or any official of the Minister in relation to any such damage, loss or injury howsoever occurring during the development works.

Dangers: If any or all of the work is undertaken by the applicant/farmer he/she should seek competent advice and undertake all temporary work required to ensure the stability of excavations, superstructure, stanchion foundations and wall foundations,

also to divert any drains, springs or surface water away from the works, and to guard against possible wind damage, or any other foreseeable risk.

Power lines: Farm buildings shall not be constructed under or nearer than 10m to an overhead power supply. If advice is required, or if power lines need to be diverted, it is the applicant's responsibility to contact, in writing, the local ESB supervisor before construction commences, and then to follow the ESB conditions.

Danger to children: It is the applicant's responsibility to prevent children from playing or spending time in the vicinity of any building work.

2. Design and Layout of Screening Belts

Factors which influence the layout and the design of a **screening belt** are:-

- The direction from which obtrusive buildings have the greatest impact. This would frequently be the public road, but could also be a scenic viewing place, a neighbouring house or houses, or even the applicant's farmhouse.
- The fact that buildings are on a height or on a ridge making them highly visible from a distance.
- The likely future development of the farmyard:
  Trees should not block any obvious or useful sites for possible new buildings.
- Possible root damage to structures. Trees should be set about 20 metres or more from buildings, yards, concrete tanks, silos, etc.
- Buildings on adjoining property. No belts of trees should be planted within 30 metres of neighbouring dwellings or farm buildings.

When trying to soften the impact of obtrusive buildings it is not necessary to surround buildings or yards completely. One or two stands of reasonably tall trees can entirely change the appearance of a farmyard, and integrate it into the landscape, even if some buildings remain visible.

A single row of trees is not an effective screen, and usually looks unnatural. Two to three rows of trees should normally be planted, though informal groups of trees can be just as effective. Very long straight lines of trees should, where possible, be avoided by introducing curves or breaks.

3. Design and Layout of Shelter Belts

Factors which influence the design and layout of a **shelter belt** are:-

- The direction of prevailing winds, and of winds, which are particularly strong because of "funnelling" along valleys or around hills.
- The position of buildings or structures, which particularly need shelter (calf or sheep houses, animal yards, etc.)
- Future development of the farm, and distance from existing buildings or neighbouring buildings, as above.

Shelter belts work best when they allow about 50% of the wind to pass through. The wind should be slowed rather than blocked as for instance, by Lawson Cypresses which simply cause turbulence. A mixture of species including spruces, pines, firs, and broad leaves will provide a naturally porous belt, providing good shelter.

Shelter belts should have about five or six rows of trees, though ten or more rows may be necessary where winds are very strongly funnelled. To be effective, shelter belts should extend in both directions well beyond the line of the structure(s) they are protecting.

Unless protection from strong south winds is essential, the area directly to the south of the building(s) should not be planted to ensure adequate sun and light.

4. Site Preparation

The site should be cleared of any scrub and furze and graded to blend with the immediate surroundings. As young trees establish more easily with some initial protection, all existing barriers such as hedges and stone walls should be retained, where possible.

5. What to Plant

The choice of species will be based on the following considerations:-

1. The suitability of different species for physical conditions on the site, i.e. -soil type, drainage, exposure etc.
2. The suitability of different species for the landscape. In general deciduous trees are more appropriate than most evergreens. Very narrow tall evergreens (Leyland and Lawson Cypresses) should not be used. They draw attention to buildings and look alien in the Irish landscape. The best indicator of the most suitable species for an area are the trees already grown there successfully and look well (see appendix attached).
3. For both screening and shelter a mixture of species is recommended. Generally one species should predominate at about, 60-70% of planting, with one or two other species, grouped irregularly, providing the remainder. A mixture of too many species should be avoided, as should the use of different species placed in a regular alternating pattern in a long row.

6. When to Plant

Planting is carried out when the trees are dormant from October to April. Autumn planting is preferred for deciduous trees, while Spring planting March/April is best for evergreens.

7. Handling and Planting

Ensure that all preparatory work is completed before the trees are delivered. Tree roots must never be allowed dry out. Weather permitting; planting should commence immediately the trees arrive.

8. Pit Planting

This method is used on dry mineral soils. The young tree is inserted in a hole 150mm x 150mm x 150mm to the depth it was in the nursery soil. The roots should be teased prior to careful back-filling.

9. Ploughing and Mounting

Here planting is done by making a slit on the inverted sod/ribbon and inserting the tree so that the roots are between the two grass layers.

10. Spacing

Trees are spaced at two metres apart each way. This works out at 2,500 trees per hectare.

11. Fertilizer

Areas enclosed as fields and previously used for intensive farming normally require no further fertilizer. Other poorer areas may require a dressing of 400 kg/ha of rock phosphate. Some midland sites may require 200kg/ha of potash. A top dressing of nitrogen is beneficial to sitka spruce as growth rate is slow.

12. Fencing

All stock must be completely excluded from the new plantings. Fences must conform to specification S148. They should be kept close to the edge of the plantation to reduce their obtrusive impact on the landscape. In order to protect the young trees the fence should consist of a minimum of three strands of barbed wire plus one metre high sheep wire.

13. Maintenance of Screening Belt

It is essential to control growth of grass and weeds around the young trees during the first four years. Unchecked vegetation growth will result in poor tree establishment. Grass and weeds can be controlled by treading or by the use of suitable herbicides. Failures should be replaced each year.

Note: Herbicides shall not be used in close proximity to watercourses, field margins or wildlife habitats.

14. Minimum and Maximum Planting Areas

This specification refers **only** to the screening or shelter of farm buildings and farmyards.

The **minimum** area of planting for which this specification shall be used is 0.2ha. The **maximum** area that will be grant-aided is 2ha.

Shelter belts to protect herds or crops, or other forestry plantings on the farm, come under the responsibility of the Forest Service of this Department.

General Guide to Tree Species for Irish Farm Conditions

NATIVE BROADLEAVES

SPECIES	OPTIMUM SITE	CHARACTERISTICS	TIMBER QUALITY	REMARKS
Pedunculate Oak *Quercus Robur*	Well-aerated deep fertile loams. Will do well on heavier soils	Slow growing, long lived tree once the climax vegetation over most of the country	Very high quality timber suitable for many uses. Subject to timber defects when grown on adverse soils	Major forest species. One of our few native broadleaved trees. Very high amenity value
Sessile Oak *Quercus Petraea*	Tolerates less rich and lighter textured soils than *Q. robur*	Oaks will not produce good timber on excessively drained or sandy soils	Reputedly slightly better timber than *Q. robur* but site should determine choice	Major forest species. Native to Ireland. Now designated as Irish national tree
Ash *Fraxinus Excelsior*	A very exacting species demanding good soil conditions, preferably sheltered, moist well-drained fertile loam soils	A fast growing species regarded as not being suitable for large scale planting	Very high quality timber. Suitable for veneer, furniture and implement handles. High shock resistance	Major forest species. Native tree. Its wide distribution belies the difficulty in producing good quality timber
Wild Cherry *Prunus Avium*	Fertile deep well-drained mineral soils. Preference for slightly acid soils but will do well on deep loams over limestone	Fast growing, light demanding, requiring considerable space. The only commercial broadleaved tree with attractive blossoms	Produces one of the most valuable furniture and veneer timbers with a reddish brown sheen. Also used for quality turnery products	Major forest species. Native tree. High quality timber production requires good silvicultural management. A very good farm forestry tree. May suffer from bacterial canker and aphid attack
Alder *Alnus spp*	Common alder is a very hardy accommodating species suitable for wet sites. Good wildlife species. Grey and Italian alders will tolerate and grow well on drier sites. Italian alder is has a preference for more alkaline sites	Fast growing nitrogen fixing tree. Suitable broadleaf for even the wettest sites	Durable general purpose timber with a course texture. Less used in recent times	Minor forest species. Common Alder is a native tree. Coppices freely and can be used in mixtures on very infertile sites. Valuable shelter tree
Birch *Betula spp*	Pioneer species suited to very acid soils and peats	Fast growing, hardy species, withstands exposure and frost well. Useful as a nurse crop in mixtures but must be kept under control or it will smother a slower growing tree species	Not regarded as a timber tree in Ireland. Is used for pulp in Scandinavia	Minor forest species. Native tree. Young trees coppice freely. May be used as a soil improver. Can be mixed into shelterbelts
Willow *Salis spp*	Useful species for wet sites and streamsides	Fast growing useful for conservation and amenity but rarely for timber production. Willow can be used in a variety of ways as a shelterbelt system	Willow rods are regularly used for basket-making and decorative craftwork	Minor forest species. Native tree. Willow is currently being intensively studies as a suitable species for Short Rotation Forestry (Biomass) as an energy source
Whitebeam *Sorbus Aria*	Most fertile mineral soils	Attractive amenity tree also suitable for shelter	Not a timber tree	Minor forest species. Native tree. Tolerant of exposed and coastal sites
Rowan *Sorbus Aucuparia*	Suitable for lowland and hill acidic sites. Will tolerate even alkaline sites	Hardy tree suitable for exposed sites. Widely used amenity tree	Not a timber tree	Minor forest species. Native tree. Offers good support for wildlife

NON-NATIVE BROADLEAVES

SPECIES	OPTIMUM SITE	CHARACTERISTICS	TIMBER QUALITY	REMARKS
Beech *Fagus Sylvatica*	Well drained, loamy, fertile soils with a preference for soils derived mainly from limestone	Tolerant of shade when young. Creates dense shade and suppresses ground vegetation as it reaches maturity	Excellent timber. Wide range of uses including veneer, furniture, flooring and panelling	Major forest species. Non-native tree. Benefits from a nurse on exposed sites. Useful for under-planting. Grey squirrels can be very destructive particularly to young beech
Sycamore *Acer Pseudoplatanus*	Prefers a moderately fertile free draining soil. Tolerant of calcareous soils	Fast growing tree that seeds easily. Withstands exposure and smoke pollution very well	Tough, durable, white timber with a range of uses. Figured sycamore is much sought after for veneer and furniture manufacture	Major forest species. Non-native tree. Grey squirrels can be very harmful. A windfirm tree. Rich in wildlife value. Valuable for shelter
Poplars *Populus* Hybrid clones	Very exacting species requiring deep, well drained moderately fertile sites	Very fast growing, light demanding tree. Some species susceptible to bacterial canker, select disease resistant clones only	Light hardwood timber with many uses. Suitable for veneer, furniture, joinery, plywood, palletwood and fruit boxes	Potentially major forest species. Non-native tree. Offers great prospects as Short Rotation Forestry species for pulpwood, paper and particle board
Red Oak *Quercus Rubra*	Grows well on poor sandy soils	A fast growing tree, less suited to heavy soils	Yields good pale reddish brown timber, straight grained and easy to cleave but not quite so strong as Q.robur	Minor forest species. Non-native tree. High amenity because of its red and russet colours in the autumn
Horse Chestnut *Aesculus Hippocastanum*	Thrives on all except waterlogged sites but has a preference for fertile soils	An excellent amenity tree used mainly for avenues or as a specimen tree	Timber is soft, weak and of limited use	Minor forest species. Non-native tree
Walnut *Juglans spp*	Deep, well drained, loam textured, moderately fertile soil. Suitable for well sheltered sites with a southerly aspect	J. nigra grows somewhat faster than J regia but timber may not be as highly figured. Worth pruning to give a clean stem	Strong, tough elastic, high value timber. Valuable decorative timber much used for furniture and veneer	Potentially major forest species. Non-native tree. Abnormal growths called "burr walnut" are much sought after for veneer, an example of diseased or malformed wood being more valuable than healthy timber
Lime *Tilia spp*	Grows on a wide range of sites, but prefers moist fertile limestone soils	Relatively fast growing. Suitable for planting as an amenity tree. Attracts swarms of aphids in summertime causing sticky "honeydew" to cover foliage that drips off to ground vegetation	A very soft, light, white or yellow timber of limited use, although can be used for turnery and wood carving	Minor forest species. Non-native tree. Tree flowers are strongly scented and a great attraction for many insects and a rich source of nectar for bees
Norway Maple *Acer Platanoides*	Prefers a deep, moist, alkaline soil. Tolerates less fertile and drier sites than sycamore. Avoid exposed sites and frost hollows	Fast growing tree when young. An attractive amenity tree. Greenish yellow flower makes a beautiful sight in early spring. Brilliant red, green and gold coloured leaves in the autumn	Same as sycamore and used for similar purposes, but slightly inferior and not as attractively grained	Minor forest species. Non-native tree. Grey squirrel can be very damaging

CONIFERS

Species	Optimum Site	Characteristics	Timber Quality	Remarks
Silka Spruce *Picea Sitchensis*	Prefers wet mineral soils and peats with previous agricultural use. Well suited to high rainfall areas. quite tolerant of exposed sites	Very fast growing tree. Avoid low rainfall areas, very dry and frost prone sites. Do not plant in single rows for shelter	Reasonably valuable whitewood. General-purpose timber known as "white deal". Used widely in the general building and construction industry	Major forest species. Non-native tree. An excellent pulpwood tree for paper, fibre and particle-board industries
Norway Spruce *Picea Abies*	Prefers less acid mineral soils and peats	Not as fast growing or as tolerant of poor sites and exposure as sikta. More suitable for planting in hollows than sikta, being more resistant to frost damage	Somewhat superior to sitka making it also suitable for joinery	Major forest species. Non-native tree. Good drainage is important to avoid windthrow. Poor wildlife tree because of its very dense shade. Suitable for shelter
Douglas Fir *Pseudotsuga Menziesii*	Prefers a moist deep well drained soil of moderate fertility	A fast grower on suitable sites. Ideally suited to sheltered valley slopes. Dislikes waterlogged and shallow soils	An excellent timber of good strength and quality, sometimes referred to as "Oregon pine" it is used for building, flooring, joinery and other uses. Much in demand for transmission poles	Major forest species. Non-native tree. Delayed thinning of crop may lead to windthrow. Poor wildlife value
Lodgepole Pine *Pinus Contorta*	Grows on the poorest of mineral and peat soils	A fast growing pioneering species Withstands exposure better than most other species. Up to recent times was widely planted on even the most difficult of sites	A general-purpose timber, suitable for building, joinery and other uses	Minor forest species now. Non-native tree. Suffers greatly from "basal sweep" reducing the quality of the log. One of the best shelter tree species
Larch *Larix spp*	European larch prefers moist, well drained, moderately fertile loams while both Japanese and hybrid larch will tolerate a wider range of sites with a preference for high rainfall areas	Larches are strong, light demanding, deciduous conifers. First generation hybrid is normally faster growing than Japanese and both are faster than European	All larches produce dense valuable commercial timber which is both heavier and stronger than most other softwoods	Major forest species. Non-native tree. Larches have a high amenity and wildlife value. Produces light shade allowing ground vegetation
Scots Pine *Pinus Sylvestris*	Thrives on light textured or sandy soils. Tolerant of acid conditions. Avoid poorly drained or alkaline soils and exposure to coastal winds	A strong, light demanding slow growing tree. Can be used as a nurse species. Unsuitable for high elevations or shelter-belting	Good general-purpose softwood timber referred to as "red deal" in the trade. Suitable for construction, flooring, joinery and other uses	Major forest species. Once native but died out, now comes from imported sources. Regarded as the best conifer for both amenity and wildlife. Attracts insects, birds and red squirrels

CONIFERS

SPECIES	OPTIMUM SITE	CHARACTERISTICS	TIMBER QUALITY	REMARKS
Monterey Pine *Pinus Radiata*	Light to medium textured free draining loam soils. Can be used on infertile sandy soils. Not frost hardy	Very fast growing tree but often of poor coarse branched form. Requires careful attention to seed selection preferably from new Zealand. Early and heavy pruning helps to produce a worthwhile crop	Not much known about quality of Irish grown timber. Widely used general-purpose timber in southern hemisphere, New Zealand, Australia and Chile	Minor forest species. Non-native tree. A species with potential if quality seed stock can be produced. Suitable for shelterbelts in coastal areas
Western Red Cedar *Thuja Plicata*	Requires deep free draining fertile soil. Good on alkaline soils. Avoid poor or very acid soils and exposed sites	Shade tolerant moderately fast growing tree. Useful for under-planting	Produces a lightweight timber of moderate strength. Very durable in outdoor situations, suitable for greenhouses, decking and cladding	Minor forest species. Non-native tree. Regarded as good estate tree suitable for screens, mixtures and game cover
Western Hemlock *Tsuga Heterophylla*	Can tolerate acid mineral soils and the better peats. Suitable for low rainfall areas. Avoid planting on sites where previous conifer crop suffered from butt rots	Moderate growth rates. A strong shade bearer and excellent for under-planting. Probably best established under some shade	Good durable timber suitable for quality building purposes	Minor forest species. Non-native tree which has potential for greater use
Noble Fir *Abies Noblis*	Prefers well-drained mineral soils. Tolerates moderately acid soils and is less frost tender than other firs. Has a wide pH tolerance	A fast growing tree unsuitable for very poor and dry sites. Christmas tree production may require somewhat less fertile soils	Timber may be (unfairly) regarded a being of inferior quality. Now mostly grown for Christmas tree production and foliage	Minor forest species now developing multiple uses. Non-native tree. When grown for Christmas tree production need to be well managed to produce a compact well furnished tree
Corsican Pine *Pinus Nigra var. Maritima*	Wide range of soils from sands to heavy clays. Suitable for coastal areas	Moderate growth rates but a good tree for difficult areas such as exposed areas or sandy soil	Similar to scots pine but not quite as good	Minor forest species. Non-native tree. More resistant to smoke pollution than most conifers. Suitable shelter tree
Cupressus like species *Cupressus* *Chamaecyparis* *Cupressocyparis*	Tolerate a wide range of soils except very acid soils and raw peats	Moderate to fast growth rates but very poor stem form or coarse branching In most cases	General purpose softwood uses	Minor forest species. Non-native tree. Macrocarpa suitable for shelter in coastal areas. **Leyland and Lawson although widely used for shelter-belting and screening are in most cases in-appropriate and an intrusion in the landscape**

Appendix No. 16

Water Protection Plan Checklist

MONAGHAN LOCAL AUTHORITIES
Water Protection Plan Checklist

(To be accompanied by a Site Drainage Plan - Refer to Chapter 4 of Monaghan County Development Plan 2013-2019)

General Site and Water Body Details			
Planning Ref. No.	***N/A***	Applicant	***Declan Sullivan***
Townland	***Drumcreeghan***	Water Supply Source	***GWS***
X Co-ordinate [1]	***270975***	Y Co-ordinate [1]	***316146***
WMU [2]	IE_NW_Woodford	RWB [2]	Bowelk, Trib of Dromore and Erne
WB Status [2]	***Poor***	Objective [2]	***Restore 2021***
Groundwater Vulnerability [3]	***Pl***	Aquifer Importance [3]	***E***
Proximity to nearest watercourse (culverted or open), wetland or lake (meters)			***c. 60 m***

Proposed Development Is the development entirely or part of one of the following? (tick)					
Domestic dwelling		Agricultural (cattle/dairy)		Industrial-food related	
Public Works		Agricultural (mushrooms)		Industrial-non food	
Housing		Agricultural (poultry)	X	Quarrying/extractive industries	
Institutional		Agricultural (piggery)		Transport related	
Commercial/Retail		Other agricultural, specify below		Filling station/Fuel depot	
Mixed Use Development				Other	

Waste Water Production and Treatment Method	
Domestic type waste waters	***N/A***
Waste waters produced from any trade, food, preparation or business [4]	***N/A***
Wheel wash, vehicle wash, cooling waters	***N/A***
Waste waters produced from quarrying etc [4]	***N/A***
Other waste waters [4]	***Soiled water applied to applicant's landholding as per SI 31 of 2014.***
Construction phase waste waters	
Frequently asked questions for septic tanks may assist in the "fit for purpose" assessment refer to http://www.monaghan.ie/en/services/environment/water/waterawareness/faqforseptictanks/	

Fuel or Outdoor Material Storage for Non Domestic Developments	
Number of fuel storage tanks existing or proposed on site?	***Gas Storage Tanks***
Are fuel storage tanks bunded [5]?	***N/A***
Detail liquid / feedstuffs / organic / chemical / waste oil storage on outdoor sites	***Under Ground mass concrete soiled water tank(s)***

Hard Surface and Open Yard Areas for Non Domestic Developments	
Footprint of proposed development including yard areas in m^2	***c. 1,500m2***
Is there potential for soiled yard areas from material, product waste or manure handling, fuel dispensing, silt and soil, yard washing etc.	***Yes***
If yes, are silt trap(s), interceptor(s), soiled water tanks or other control measures shown on drainage plan?	***Yes***
Has the use of SUDS (Sustainable Urban Drainage Systems – http://www.susdrain.org) been considered in the design of this development?	***Yes***

Development History – All Developments	
Have previous pollution prevention planning conditions been complied with [6]?	***Yes***
Does existing development have an up to date (as constructed) site drainage plan?	***Yes***
Is the existing/proposed development sewered or unsewered?	***N/A***
If unsewered, is the existing wastewater treatment system fit for purpose[7]?	***N/A***
Has the storm water drainage system been examined and/or surveyed for misconnections? (Information leaflet available from Environment Section)	***N/A***
Checklist of items to be included on Site Drainage Plan	
Location of lakes, watercourse, wells used for water supply, or karst features on or within 25m of domestic or 100m of non domestic development site	***Yes***
Location of all drainage outfall points	***Yes***
Foul water drainage system (in Red)	***Yes***
Storm water drainage system (in Blue)	***Yes***
Soiled yard area, soiled water drainage and management system, including silt traps, oil interceptor(s) and any SUDS facilities	***Yes***
Location of waste water treatment facilities	***N/A***
Location of fuel storage tank(s)	***(Gas)***
Stream/Lake/Wetland/Riparian Corridors	***N/A***
Footnotes and Useful Information	
[1] Projection in the Irish Grid	
[2] WMU, RWB, WB status. Objectives available on water maps at www.wfdireland.ie	
[3] Available in the public mapping section at www.gsi.ie	
[4] For information leaflets on Business Premises and Proper Use of Drains and information on discharge licensing see: http://www.monaghan.ie/contentv3/services/environment/formsguidesdocumentsdownlands/ http://www.monaghan.ie/contentv3/services/environment/water/waterawareness/leaftletsandguidelines/	
[5] Guidance: www.envirocentre.ie Best practice for Oil Storage (BPGCS05)	
[6] Has certification of installation for previously granted wastewater treatment system been required and if so has it been submitted	
[7] Refer to EPA Guidance at: http://www.monaghan.ie/contentv3/services/environment/water/waterawareness/faqforseptictanks/ and http://www.monaghan.ie/contentv3/media/monaghanie/content/files/pdf/environment/Water Pollution&DrainageSystems.pdf	
[8] Refer to Water Body, Sensitive Waters and Sensitive Land Maps in Chapter 4 of the Monaghan County Development Plan 2013-2019	
Abbreviations	
WMU	Water Management Unit
RWB	River Water Body
WB Status	Water Body Status
IPPC	Integrated Pollution Prevention Control Licence
EIA	Environmental Impact Assessment

For Office Use: Sensitivity of Location	
Is the development located upstream of a high river quality site [8]?	
Is the development located within a good status waterbody [8]?	
Is the development located in the catchment of a water supply source [8]?	
Is the development located within the Source Protection Zone (SPZ) of a groundwater supply source [8]?	
Does the development require a discharge licence to surface or ground waters under the Water Pollution Acts?	
Risk to waters in relation to scale of development, previous planning/environmental history, IPPC or EIA aspects, site management and location in a sensitive area	

Applicant: Declan Sullivan

Agent: CLW Environmental Planners Date 20/06/2017

Appendix No. 17

Details relating to a number of noise surveys carried out on intensive farms in the Cavan region.

Measurement Parameters

L_{eq} Values

L_{eq} (t) values represent the continuous equivalent sound level over a specified time (t). This value expresses the average levels over time and is a linear integral.

Max. P Values

The Max. P value represents the maximum sound pressure level produced by a source during the monitoring period.

L_{90} and L_{10} Values

The L_{90} and L_{10} values represent the sound levels exceeded for a percentage of the instrument measuring time. L_{10} indicates that for 10% of the monitoring period, the sound levels were greater than the quoted value. L_{10} is a good statistical parameter for expressing event noise such as passing traffic. The L90 represents post event sound levels and is a good indicator of background noise levels.

EQUIPMENT USED

Cirrus 705A Type One Sound Level Meter	Serial No. 026818
Calibration Certificate Number	103402
Microphone Type:MK224	Serial No. 970065
Tripod	
Calibrator CR 515A	Serial No. 026602
Calibration Certificate Number	101492

On Site Calibration.

The instrument was calibrated immediately before and after the measurement periods with no drift in calibration level noted.

RESULTS OF MEASUREMENTS – FARM 1 (Day-time)

Location No.	L_{eq} dB(A)	Max.P.dB(A)	L_{10} dB(A)	L_{90}dB(A)
N1	65.3	105.6	48.8	39.4
N2	47.1	66.2	43.2	34.9
N3	58.4	57.8	40.0	33.2
N4	46.7	73.3	48.6	43.6
N5	54.6	78.3	42.4	34.0

RESULTS OF MEASUREMENTS – FARM 1 (Night-time)

Location No.	L_{eq}dB(A)	Max.P.dB(A)	L_{eq}dB(A)	L_{90}dB(A)
N1	39.2	45.9	34.2	30.6
N2	37.0	47.2	37.0	36.2
N3	35.1	54.2	36.8	31.6
N4	40.2	51.4	43.6	35.0
N5	31.5	45.2	31.5	30.6

RESULTS OF MEASUREMENTS – FARM 2 (Day-time)

Location No.	L_{eq}dB(A)	Max.P.dB(A)	L_{eq}dB(A)	L_{90}dB(A)
N1	44.2	63.6	45.1	41.9
N2	44.6	60.8	45.4	41.7
N3	52.1	64.8	56.0	42.8
N4	47.5	63.8	48.2	42.8
N5	73.8	89.0	77.1	42.7

RESULTS OF MEASUREMENTS – FARM 2 (Night-time)

Location No.	L_{eq}dB(A)	Max.P.dB(A)	L_{eq}dB(A)	L_{90}dB(A)
N1	37.5	58.9	36.2	32.6
N2	41.7	58.8	43.9	37.8
N3	43.0	66.2	45.4	39.2
N4	40.6	69.5	43.8	38.8
N5	42.7	61.9	47.2	35.4

RESULTS OF MEASUREMENTS – FARM 3 (Day-time)				
Location No.	L_{eq}dB(A)	Max.P.dB(A)	L_{10}dB(A)	L_{90}dB(A)
N1	50.4	70.3	43.3	30.6
N2	40.2	75.9	42.0	37.2
N3	37.2	66.2	36.0	31.2
N4	34.9	70.2	36.6	30.6
N5	56.1	72.5	58.1	30.7

RESULTS OF MEASUREMENTS – FARM 3 (Night-time)				
Location No.	L_{eq}dB(A)	Max.P.dB(A)	L_{10}dB(A)	L_{90}dB(A)
N1	39.8	60.1	38.8	31.0
N2	34.8	44.8	39.0	30.8
N3	33.5	47.2	36.8	31.8
N4	34.0	48.1	37.3	32.0
N5	36.2	54.9	38.0	34.2

RESULTS OF MEASUREMENTS – FARM 4 (Day-time)				
Location No.	L_{eq}dB(A)	Max.P.dB(A)	L_{10}dB(A)	L_{90}dB(A)
N1	49.7	69.8	[illegible]	34.7
N2	49.5	66.0	[illegible]	37.4
N3	[illegible]	[illegible]	[illegible]	[illegible]
N4	[illegible]	69.3	51.2	[illegible]
N5	[illegible]	94.4	55.0	40.0

RESULTS OF MEASUREMENTS – FARM 4 (Night-time)				
Location No.	L_{eq}dB(A)	Max.P.dB(A)	L_{10}dB(A)	L_{90}dB(A)
N1	32.8	72.6	35.2	30.8
N2	33.7	82.2	35.5	30.6
N3	36.2	83.0	37.9	31.2
N4	30.5	67.5	34.0	30.7
N5	33.5	80.7	35.5	31.0

RESULTS OF MEASUREMENTS - FARM 5 (Day-time)

Location No.	L_{eq}dB(A)	Max.P.dB(A)	L_{eq}dB(A)	L_{90}dB(A)
N1	61.9	84.5	54.0	40.8
N2	55.7	87.8	58.4	41.6
N3	60.6	64.7	40.0	36.1
N4	49.8	75.4	47.4	36.2
N5	47.6	69.7	48.0	42.5

RESULTS OF MEASUREMENTS - FARM 5 (Night-time)

Location No.	L_{eq}dB(A)	Max.P.dB(A)	L_{eq}dB(A)	L_{90}dB(A)
N1	55.7	84.8	56.8	51.8
N2	52.9	69.5	52.9	50.6
N3	56.6	84.9	56.7	50.6
N4	54.5	88.0	56.4	51.4
N5	54.9	62.6	57.8	54.4

DISCUSSION

CLW Environmental Planners Ltd. are consultants to the five pig rearing units being examined.

As part of the application process, environmental noise resulting from activities associated with the piggeries must be measured at nominated perimeter points and also at the nearest noise sensitive location. Measurements should be made during both day-time and night-time activities at the site.

Environmental noise resulting from activities at the site should not exceed 55.0dB(A) L_{eq} during the day-time (08.00 to 22.00hrs) and 45.0dB(A)L_{eq} during night-time (22.00 to 08.00hrs).

The Leq value for location N1 (Farm 1 – day-time) was above the upper noise limit. However, this position is located adjacent to the piggery entrance and coincided with some movement of slurry tankers in to and out of the unit. This was also the reason for the relatively high Max. P value. When the L_{eo} term, which effectively filters out the effects of the short term tractor noise, is considered as the indicator, then the noise level is considerably below the limit value.

Location N3 (Farm 2 – day-time) was above the limit but noise levels here were entirely associated with traffic on the adjacent national road.

At Farm 3, the L_{eq} value at location N3 was marginally above the limit. However, passing traffic was a considerable noise source.

Location N3 at Farm 4, when measured during day-time, was affected by intermittent hedge-cutting on the adjoining road.

Location N1 at Farm 5 is also situated along a road and traffic from it was a source of noise.

All measurements made during night-time were below the 45dB(A) limit value.

Based on the results, as recorded during the monitoring events, it is not considered that noise levels resulting from activities at any of these piggeries will have any significant impact on the local environment.

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Construction and Demolition Waste Management Plan

For

Proposed Development
On Existing Poultry Farm

At

Drumcreeghan,
Latton,
Castleblayney,
Co. Monaghan.

Date: 22nd June 2017

Applicant:

Mr. Declan Sullivan
Drumcreeghan,
Latton,
Castleblayney,
Co. Monaghan.

Proposed Development:

Construction of 1 no. poultry house together with all ancillary structures and site works associated with the above development on the site of existing poultry farm at

Location:

Drumcreeghan,
Latton,
Castleblayney,
Co. Monaghan.

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.

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. poultry house and associated works.

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 building 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.

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, is 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 poultry farm developments.

Demolition Plan:

Not Applicable as no Demolition Proposed

Site - Development Plan:

The proposed development is to be completed on a brown field area and/or a Greenfield area, in close proximity to the existing poultry farm structures. This will involve excavating the site of the proposed developments to facilitate site leveling requirements and the construction of 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 farm. In the interim, all excavated soil will be stored on the farm well removed from drainage ditches.

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 this site and/or other similar poultry 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 and projected disposal/recovery routes:

- Metal and Electrical - To be removed, segregated and stored for re-use on the farm or recycling – McElvaney Waste and Recycling – **WCP/MH/5/0089/01**
- Fluorescent Tubes - McElvaney Waste and Recycling subsequently sent to Enva Ireland Ltd. **WCP-DC-08-1116-01**, Clonminam Industrial Estate, Portlaoise, Co. Laois.
- Insulation/Timber - Excess to be removed off-site by McElvaney Waste Recycling – **WCP/MH/5/0089/01**
- General Waste` To be removed offsite by McElvaney Waste Recycling – **WCP/MH/5/0089/01**
- Soil/Stone - To be used as infill material as part of proposed site works.

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 house off-site. The operator is greatly experienced at overseeing similar developments on this, and other poultry 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: **22/06/2017**

Appendix No. 19

European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2014 – S.I. 31 of 2014

STATUTORY INSTRUMENTS.

S.I. No. 31 of 2014

EUROPEAN UNION (GOOD AGRICULTURAL PRACTICE FOR PROTECTION OF WATERS) REGULATIONS 2014

S.I. No. 31 of 2014

EUROPEAN UNION (GOOD AGRICULTURAL PRACTICE FOR PROTECTION OF WATERS) REGULATIONS 2014

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S.I. No. 31 of 2014

EUROPEAN UNION (GOOD AGRICULTURAL PRACTICE FOR PROTECTION OF WATERS) REGULATIONS 2014

I, PHIL HOGAN, Minister for the Environment, Community 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 1991[1], Directive 2000/60/EC of 23 October 2000[2], Directive 2003/35/EC of 26 May 2003[3], Directive 2006/11/EC of 15 February 2006[4], Directive 2006/118/EC of 12 December 2006[5] and Directive 2008/98/EC of 19 November 2008[6] 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 2014.

(*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.

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 provide a basic level of protection against possible adverse impacts to waters arising from the proposed agricultural expansion under Food Harvest 2020.

Revocations

3. The European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2010 are hereby revoked.

Interpretation

4. (1) In these Regulations, save where the context otherwise requires—

[1]O.J. No. L 375/1, 31 December 1991.
[2]O.J. No. L 327/1, 22 December 2000.
[3]O.J. No. L 156/17, 25 June 2003.
[4]O.J. No. L 64/52, 4 March 2006.
[5]O.J. No. L 372/19, 27 December 2006.
[6]O.J. No. L 312/3, 22 November 2008.

Notice of the making of this Statutory Instrument was published in "Iris Oifigiúil" of 31st January, 2014.

"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 the Environment, Community 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 International organisation for standardisation (ISO);

"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 or silage pits 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 or silage pits 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 dungsteads, farmyard manure pits or silage pits 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 dungsteads, farmyard manure pits or silage pits 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.

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) (*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 five years or more has elapsed after the taking of a soil test in relation to soil 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.

(3) Without prejudice to the generality of sub-article (1) and subject to sub-article (4), the amount of available nitrogen or available phosphorus applied to promote the growth of a crop specified in Table 12, 13, 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.

(4) 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.

(5) (*a*) In the case of a holding on which grazing livestock are held, the amount of available nitrogen and available phosphorus supplied to the holding by manure from such livestock shall (save insofar as such manure is exported from the holding) be deemed to be the relevant

proportion of the amount of available nitrogen and available phosphorus contained in the total manure produced by such livestock.

(*b*) In paragraph (*a*), the "relevant proportion" means the proportion of a year as is represented by the storage period specified in Schedule 3 in relation to 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 100m^3 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 10m^3 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,

(*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 10m^3 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 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 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 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, specify a greater distance to that specified in sub-articles (2) or (3) where, following prior investigations, the 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 as soon as may be practicable, following prior investigations and following consultation with the Agency, 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 $10m^3$ or more of water per day, or serving 50 or more persons, where—

(*a*) on the basis of the results of monitoring carried out for the purposes of Article 7 of the European Communities (Drinking Water) (No. 2) Regulations 2007 (S.I. No. 278 of 2007), 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 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 requirements under sub-article (10) shall apply in the case of each public water supply and supplies for which the local authority has supervisory authority.

(12) The Agency may issue advice and/or direction to 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 a local authority shall comply with any such advice or direction given.

(13) 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.

(14) 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 $10m^3$ 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,

(*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*)).

(15) Farmyard manure shall not be held in a field at any time during the periods specified in Schedule 4 as applicable to that substance.

(16) Silage bales shall not be stored outside of farmyards within 20m of waters or a drinking water abstraction point in the absence of adequate facilities for the collection and storage of any effluent arising.

(17) No cultivation shall take place within 2m of a watercourse identified on the OSI 1:10560 map except in the case of grassland establishment or the sowing of grass crops.

(18) Supplementary feeding points shall not be located within 20m of waters and shall not be located on bare rock.

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.

(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*) 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 or silage pits 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 of these Regulations 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 Agency or a local authority.

(4) The Minister for Agriculture, Food and the Marine shall make available to 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 cause to be carried out an assessment of the capacity of livestock manure storage facilities, in the context of potential agricultural expansion in accordance with Food Harvest 2020.

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 2017 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 2017 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 subarticles (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 and the relevant local authorities 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, the co-ordinating local authority in the relevant river basin district 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 furnish to the Department of Agriculture, Food and the Marine and such other persons as it considers appropriate a report of an inspection or inspections carried out for the purposes of these Regulations where non-compliance has been detected.

(6) A local authority shall maintain a register of prior investigations carried out, 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 spent mushroom compost or manure produced by pigs or poultry, and

(*b*) the excess amount does not exceed the amounts specified in Schedule 2, Table 22 of these Regulations from the prescribed dates, and

(*c*) such compost or manure, as the case may be, is produced on a holding on which activities were being carried out which gave rise to spent mushroom compost or manure from pigs or poultry and there has not been an increase in the scale of such activities on the holding since 1 August 2006, and

(*d*) suppliers of spent mushroom compost or manure produced by pigs and poultry retain records of the movement of such fertilisers off the holding in accordance with the requirements of Article 23, and

(*e*) the occupier of the holding on which the phosphorus is applied to land holds records which demonstrate compliance with paragraphs (*a*), (*b*), (*c*) and (*d*).

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 8 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.

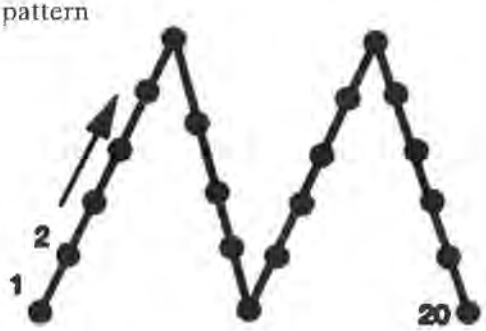
(*c*) Any unusual spots such as old fences, ditches, drinking troughs, dung or urine patches or where fertiliser or lime has been heaped or spilled shall be avoided.

(*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



Article 8

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]				
Water:meal ratio changing for finishers only	2.0:1	2.5:1	3.0:1	3.5:1	4.0:1
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

[1]An 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

[1]An 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

[1]Allowance 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

Table 5 Storage capacity required for effluent produced by ensiled forage Article 9

Crop	Minimum storage requirement (m^3/100 tonnes)	
	Short Term Storage[1]	Full Storage
Grass	7	21
Arable silage	7	21
Maize	4	10
Sugar beet tops	15	50

[1]Only permitted where a vacuum tanker or an irrigation system is available on the holding.

Article 14 and 20

Table 6 Annual nutrient excretion rates for livestock

Livestock type	Total Nitrogen	Total Phosphorus
	kg/year	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

Article 15 and 20

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 m^3 = 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 as 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

[1]The 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 available nitrogen on grassland

Grassland stocking rate[1]	Available nitrogen[2]
(kg/ha/year)	(kg/ha)
⩽ 170	226
Grassland stocking rate greater than 170 kg/ha/year[3]	
171-210	306
211-250	279
>250	279[4]

[1]Total 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.

[2]The 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.

[3]This 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).

[4]The 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 13 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	31	21	11	0
86 — 130	36	26	16	0
131-170	41	31	21	0
Grassland stocking rate greater than 170 kg/ha/year[4,5]				
171-210	46	36	26	0
211-250	51	41	31	0
>250	51	41	31	0

[1]Total annual nitrogen (kg) excreted by grazing livestock averaged over the eligible grassland area (grazing and silage area). Stocking rate refers to grassland area only.

[2]The fertilisation rates for soils which have more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils.

[3]Manure 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.

[4]The 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.

[5]This 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).

[6]An 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

[1]The fertilisation rates for soils which have more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils.
[2]The fertilisation rates apply to grassland where there is no grazing livestock on the holding.
[3]The 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	170	145	120	95
Potatoes: Early	155	130	105	80
Potatoes: Seed	155	130	105	80
Maize	180	140	110	75
Field Peas/Beans	0	0	0	0
Oilseed 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

[1]Where 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.
[2]Where milling wheat is grown under a contract to a purchaser of milling wheat, an extra 30 kg N/ha may be applied.
[3]Where 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

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]	45	35	25	0
Spring Wheat[2,3]	45	35	25	0
Winter Barley[2,3]	45	35	25	0
Spring Barley[2,3]	45	35	25	0
Winter Oats[2,3]	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	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	35	30	20	0
Linseed	35	30	20	0
Swedes/Turnips	70	60	40	40
Kale	60	50	30	0
Forage Rape	40	30	20	0

[1]The fertilisation rates for soils which have more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils.
[2]Where proof of higher yields is available, an additional 3.8kg P/ha may be applied on soils at phosphorus indices 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.
[3]Where pH is greater than or equal to 7, 20kg P/ha may be applied on soils at phosphorus index 4.
[4]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)	100	100	100	100	
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	110	100	90	120
Cauliflower (Winter and Spring)	75	50	25	0	150
Cauliflower (Summer and Autumn)	120	80	40	0	120
Carrots	90	75	55	40	
Celery	120	85	65	50	180
Courgettes	140	125	105	90	
Leeks	100	90	80	70	100
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	50
Peas (Market)	0	0	0	0	0
Rhubarb	100	90	80	70	200
Spinach	140	125	105	90	100
Swede (Horticultural)	70	45	25	0	
Swede (Transplanted crops)	80	52	29	0	

Table 19 Maximum fertilisation rates of phosphorus on vegetable crops

Crop	Phosphorus Index			
	1	2	3	4
	Available Phosphorus (kg/ha)[1]			
Asparagus (Establishment)	40	25	15	10
Asparagus (Maintenance)	27	17	10	7
Broad Beans	60	45	35	20
French Beans	60	45	35	20
Beetroot	60	45	35	20
Brussels Sprouts	60	45	35	20
Spring Cabbage	60	45	35	20
Other Cabbage	60	45	35	20
Broccoli	60	45	35	20
Cauliflower (Winter and Spring)	60	45	35	20
Cauliflower (Autumn)	60	45	35	20
Carrots	60	45	35	20
Celery	88	65	55	28
Courgettes	60	45	35	20
Leeks	60	45	35	20
Lettuce	60	45	35	20
Onions	60	45	35	20
Scallions	60	45	35	20
Parsley	60	45	35	20
Parsnip	60	45	35	20
Peas (Market)	60	45	35	20
Rhubarb	60	45	35	20
Spinach	60	45	35	20
Swede	70	60	45	35

[1]The 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

	Available Nitrogen (kg/ha)
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 (Desert)	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
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

[1]The 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(3)

Date	Total available phosphorus (kg/ha)
1 January 2013	5
1 January 2015	3
1 January 2017	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, 17and 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 is 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.

L.S.

GIVEN under the Official Seal of the Minister for the Environment, Community and Local Government,
28 January 2014.

PHIL HOGAN,
Minister for the Environment, Community 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, 2010.

These Regulations, which give effect to Ireland's 3rd 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).

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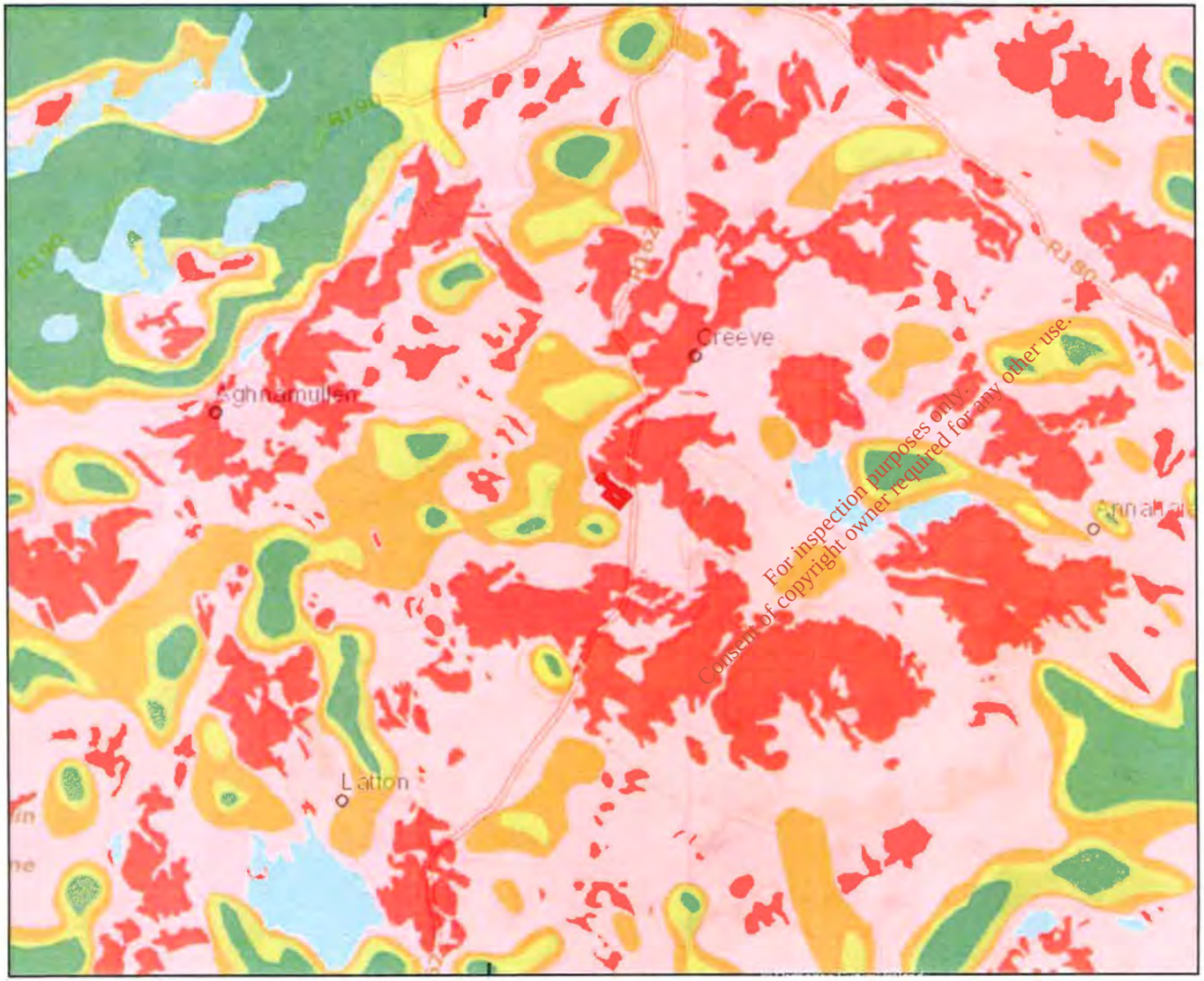
Appendix No. 20

G.S.I. Info.

Geological Survey
Suirbhéireacht Gheolaíochta
Ireland | Éireann

D. Sullivan Aquifer Vulnerability



Legend

Groundwater Vulnerability

- X - Rock at or near surface or Karst
- E - Extreme
- H - High
- M - Moderate
- L - Low
- W - Water

Scale: 1:45,257

Geological Survey Ireland

Geological Survey of Ireland

N W E S

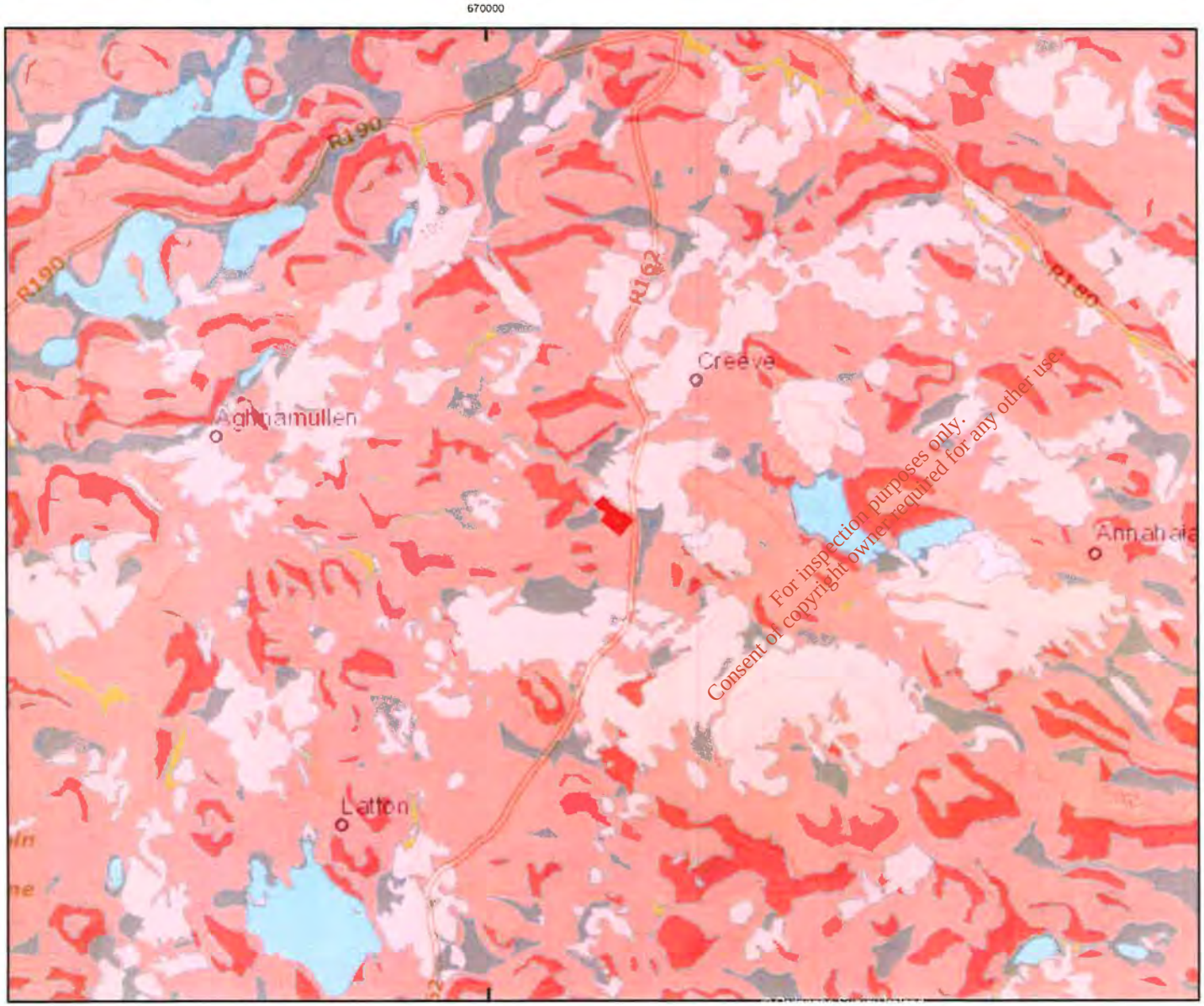
0 0.325 0.65 1.3 mi

0 0.5 1 2 km

Map Centre Coordinates (ITM) 670,814 816,181

Snapshot Date: June 7, 2017

D. Sullivan Soil Type



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Teagasc Soils

- AminDW - Deep well drained mineral (Mainly acidic)
- AminPD - Mineral poorly drained (Mainly acidic)
- AminPDPT - Peaty poorly drained mineral (Mainly acidic)
- AminSW - Shallow well drained mineral (Mainly acidic)
- AminSP - Shallow poorly drained mineral (Mainly acidic)
- AminSPPT - Shallow peaty poorly drained mineral (Mainly acidic)
- AminSRPT - Shallow, rocky, peaty/non-peatymineral complexes (Mainly acidic)
- BminDW - Deep well drained mineral (Mainly basic)
- BminPD - Mineral poorly drained (Mainly basic)
- BminPDPT - Peaty poorly drained mineral (Mainly basic)
- BminSW - Shallow well drained mineral (Mainly basic)
- BminSP - Shallow poorly drained mineral (Mainly basic)
- BminSPPT - Shallow peaty poorly drained mineral (Mainly basic)
- BminSRPT - Shallow, rocky, peaty/non-peatymineral complexes (Mainly basic)
- BktPt - Blanket peat
- FenPt - Fen peat
- RsPt - Raised Peat
- Cut - Cutover/cutaway peat
- AlluvMIN - Alluvial (mineral)
- AlluvMRL - Alluvial (marl)
- Lac - Lacustrine type soils
- Scree - Scree
- AeoUND - Aeolian undifferentiated
- MarSands - Marine sand and gravel
- MarSed - Marine/estuarine sediments
- Made - Made ground
- Water - Water
- Unclass

Scale: 1:45,257

Geological Survey Ireland

Geological Survey of Ireland

N W E S

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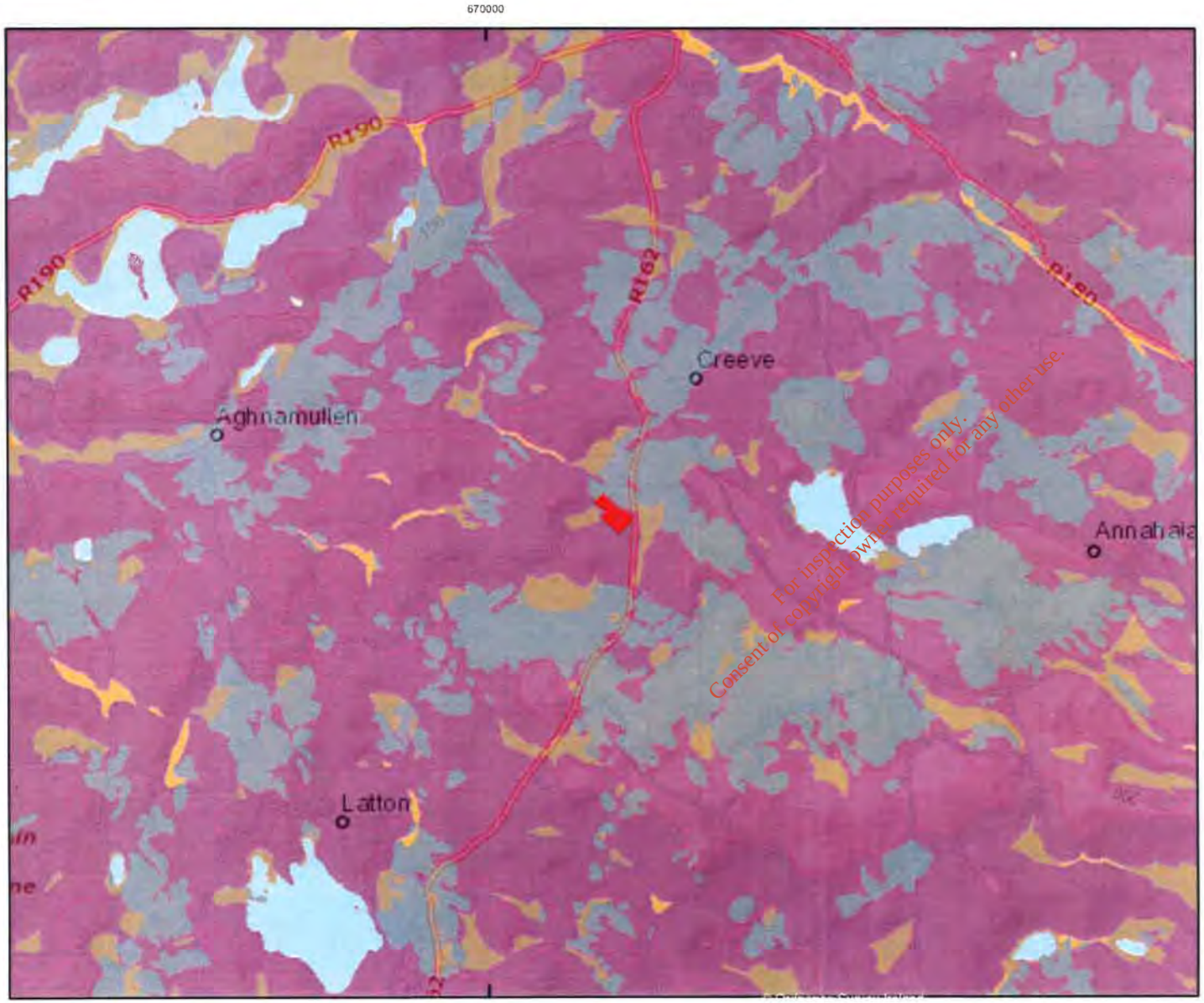
0 0.5 1 2 km

Map Centre Coordinates (ITM) 670,814 816,181

Snapshot Date: June 7, 2017

D. Sullivan Subsoil Type



Legend

Teagasc Subsoils

- A - Alluvium
- Ac - Alluvium (clayey)
- Ag - Alluvium (gravelly)
- Asi - Asi
- BklPt - Blanket peat
- FenPt - Fen peat
- RsPt - Raised peat (intact)
- Cut - Cutover raised peat
- AcEsk - Esker comprisnd of gravels of acidic reaction
- BasEsk - Esker comprised of gravels of basic reaction
- GBi - Gravels derived from basic igneous rocks
- GCh - Gravels derived from cherts
- GCSs - Gravels derived from Cambrian sandstones
- GCSsS - Gravels derived from Cambrian sandstones and shales
- GDCSs - Gravels derived from Devonian and Carboniferous sandstones
- GDSs - Gravels derived from Devonian sandstones
- GLPDSs - Gravels derived from Lower Palaeozoic and Devonian sandstones
- GLPS - Gravels derived from Lower Palaeozoic shales
- GLPSs - Gravels derived from Lower Palaeozoic sandstones
- GLPSsS - Gravels derived from Lower Palaeozoic sandstones and shales
- GLs - Gravels derived from limestones
- GNSSs - Gravels derived from Namurian sandstones and shales
- GMp - Gravels derived from metamorphic rocks
- GGr - Gravels derived from granites
- GQz - Gravels derived from quartzites
- Rck - Bedrock outcrop or subcrop
- KaRck - Karstified bedrock outcrop or subcrop
- Scree - Scree
- L - Lacustrine sediments
- Lc - Lacustrine clays
- Ls - Lacustrine sands
- Lsi - Lacustrine silts
- Mrl - Lake marl
- MGs - Marine gravels and sands (often raised)
- Mhs - Marine beach sands
- Msi - Marine silts
- Mc - Marine clays
- Mesc - Estuarine silts and clays
- Marsh - Marsh
- TdMr - Tidal marsh
- Aeo - Aeolian sediments
- Ws - Windblown sands
- Wsd - Windblown sands in dunes
- Made - Made ground
- IrSTAv - Irish Sea Till derived from acid volcanic rocks
- IrSTCSsS - Irish Sea Till derived from Cambrian sandstones and shales
- IrSTDSs - Irish Sea Till derived from Devonian sandstones
- IrSTLPSsS - Irish Sea Till derived from Lower Palaeozoic sandstones and shales
- IrSTLs - Irish Sea Till derived from limestones
- TAv - Till derived from acid volcanic rocks
- TBi - Till derived from basic igneous rocks
- TCh - Till derived from cherts
- TCSsCh - Till derived from Carboniferous sandstones and cherts
- TCSsS - Till derived from Cambrian sandstones and shales
- TDCSs - Till derived from Devonian and Carboniferous sandstones
- TDCSsS - Till derived from Devonian and Carboniferous sandstones and shales
- TDSs - Till derived from Devonian sandstones
- TGr - Till derived from granites
- TLPDSs - Till derived from Lower Palaeozoic and Devonian sandstones
- TLPS - Till derived from Lower Palaeozoic shales
- TLPSs - Till derived from Lower Palaeozoic sandstones
- TLPSsS - Till derived from Lower Palaeozoic sandstones and shales
- TLs - Till derived from limestones
- TMp - Till derived from metamorphic rocks
- TNSSs - Till derived from Namurian sandstones and shales
- TNCSSs - Till derived from Namurian and Carboniferous sandstones and shales
- TOz - Till derived from quartzites
- Water

Scale: 1:45,257

Geological Survey Ireland

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0 0.325 0.65 1.3 mi

0 0.5 1 2 km

Map Centre Coordinates (ITM) 670,814 816,181

Snapshot Date: June 7, 2017