

**ENVIRONMENTAL IMPACT STATEMENT
(E.I.S.)**

RELATING TO

**DEVELOPMENT ON EXISTING
PIG ENTERPRISE
AT**

**DRUMSCRUDDAN
(BREEDING SITE),
CROSSERLOUGH,
CO. CAVAN.**

&

**FINAWAY,
(FINISHING SITE)
BALLYJAMESDUFF,
CO. CAVAN.**

FOR

**BOGUE PIGS,
DREENAN,
CAVAN,
CO. CAVAN.**

C.L.W. ENVIRONMENTAL PLANNERS LTD.

JULY 2014

Table of Contents

	<i>Page</i>
1. Non - Technical Summary	1
2. Introduction	14
2.1. National Policy	14
2.2. Context	15
2.3. Farm Background	17
2.4. County Cavan Development Plan, 2014 - 2020	17
2.5. Organisations and Bodies Consulted	19
2.6. References / Publications Consulted	20
 3. Description of Development	 21
3.1 Objective of this development	22
3.2 Size and Scale of the Development	25
3.3 Operation of the Farm	26
3.3.1 Production	26
3.3.2. Feeding	27
3.3.3. Water Supply and Use	27
3.3.4. Heating and Ventilation	27
3.3.5. Housing	28
3.4 Manure Storage Structures and Capacities	29
3.5 Process of Production	30
3.6 Procedures of Production	30
 4. Data Required to Assess the Effects of the Development	 31
4.1. Organic Fertiliser / Manure Production	31
4.2. Manure Storage Capacity	32
4.3. Allocation of Organic Fertiliser / Manure	32
4.4 Location of Potential Customer farmlands	34
4.5. Farmlands identified for the receipt of organic fertiliser	34
4.6. Organic Fertiliser/Manure Application Rates	34
4.7. Surface Water and Ground Water	35
4.8. Animal Carcasses and Animal Tissue Waste	35
4.9. Veterinary Waste	35
4.10. General Waste/Fluorescent Tubes/ Construction and Demolition (C&D) Waste	35
4.11. Services	36
4.12. Fly and Pest Control	36
4.13. Difficulties encountered in compiling the required information	36
 5. Description of Alternatives	 37
5.1. Alternative Sites Considered	37
5.2. Alternative Layout And Design	38
5.3. Alternative Processes Considered	38
5.4. Alternative Management of By-Products	39

6. Description of the existing environment	40
6.1. Soil and Subsoil Geology	40
6.1.1 Topographic Features and Solid Geology	40
6.1.2 Soil Geology	41
6.2. Ground Water	42
6.3. Surface Water	42
6.3.1 Overall Trend in River Water Quality Cavan	44
6.3.2 Lake Water Quality	45
6.3.3 Beneficial uses of surface waters in the Catchment areas.	46
6.4. Air	46
6.5. Climate	47
6.6. Visual Aspects and Landscape	47
6.7. Noise Levels	47
6.8. Traffic	48
6.9. Flora and Fauna	49
6.10. Special Policy Areas	50
6.11. Population/Employment	53
6.12 Tourism	54
6.13 Cumulative Effects	55
7. Description of Impacts and Mitigation Measures	57
7.1. Soil and Subsoil Geology	57
7.2 Ground Water	58
7.3. Surface Water	60
7.4. Air	61
7.5. Climate	61
7.6. Landscape and Visual Impacts	62
7.7. Noise	63
7.8. Traffic	63
7.9. Flora and Fauna	64
7.10. Special Policy Areas	64
7.11. Population / Employment	66
7.12 Tourism	66
7.13 Cumulative Effects	67
8. Interaction of Effects	70
9. Environment Management Programme	76
9.1. Introduction	76
9.2. Manure Management Programme	76
9.3. Environmental Monitoring Programme	76
10. Summary	77

Figures/Attachments

Appendixes

1. Non - Technical Summary

Introduction

This Environmental Impact Statement (E.I.S.) has been prepared by Mr. Paraic Fay B.Agr.Sc, and Mr. Oliver Leddy B.Agr.Sc. of C.L.W. Environmental Planners Ltd. with the assistance of persons and bodies referred to hereafter. This E.I.S. has been prepared after an Environmental Impact Assessment (E.I.A.) of the existing and proposed development in accordance with the Planning and Development Acts 2000-2013, Planning & Development Regulations 2001-2013 and the Protection of Environment Act 2003.

The proposed farm developments to be completed by the applicant are to be completed on two geographically separate, but inter-related and interdependent, existing pig farm sites at;

1. **Drumscruddan, Crosserlough, Co. Cavan (Breeding site), (National Grid Reference: E 291413 N 248647),**

This part of the farm houses all of the breeding stock (i.e. sows, served gilts, maiden gilts and boars) and all of the pigs born on the farm until they reach a liveweight of c. 35kg's. The existing farm consists of a number (c. 14) of pig houses and ancillary structures for the housing of the stock. The proposed development will involve the demolition of all existing pig houses and the construction of 2 No. dedicated Dry Sow/Gilt houses, 1 dedicated Farrowing house and 2 dedicated Weaner houses together with all ancillary structures and associated site works.

and,

2. **Finaway, Ballyjamesduff, Co. Cavan (Finisher site) (National Grid Reference: E 288975 N 249921),**

This part of the farm houses all of the pigs produced on the breeding site on transfer to the farm at 35 kg's until they reach a live weight of c. 110 - 115kg's, at which time they are moved off site to the abattoir.

The existing farm as per the site map below consists of a number (c. 16) of pig houses and ancillary structures for the housing of the stock. The proposed development will involve the demolition of a number of existing pig houses and the construction of 5 No. dedicated finishing houses and 1 No. extension to an existing finishing house together with all ancillary structures and associated site works. As part of the overall development of this site 4 No. existing houses are to be retained and upgraded.

The two sites (while currently destocked) operate as an integrated pig farm. The pigs are produced on the breeding side and transferred to the finishing site to be reared to market weight (c. 110 - 115kg's). The Drumscruddan Site is located c. 2.7 km's north east of the Finaway site. The proposed developments as outlined hereafter will seek to comprehensively re-develop and modernize both pig farm sites so as to ensure that they are welfare compliant, and achieve the highest standards in terms of environmental protection, animal performance and efficiency.

To properly assess the potential impact of the proposed developments it was determined that this would be best addressed by the completion of one Environmental Impact Statement, to appropriately address the cumulative impact of the overall development, as well as the inter-action between the two sites and the interaction of these sites with other aspects of the environment.

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

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

These sites / this farm previously operated as a c. 1,510 Sow integrated unit. Sow numbers as specified in the Licence No. P0427-01 issued by the E.P.A. on 3rd January 2001. It is the applicant's intention to re-develop these sites and operate the farm as a c. 1,250 Sow Integrated unit, therefore **it must be born in mind that the currently proposed developments will not seek to allow for any intensification of activities on the farm(s), and will provide for a c. 15% reduction in sow numbers.**

This E.I.S. will form part of 2 No. planning applications to be submitted to Cavan County Council on behalf of Bogue Pigs, Dreenan, Cavan, Co. Cavan, for permission to carry out the following proposed developments;

- **Breeding Site @ Drumsgraddan:** Demolish all existing pig houses and associated ancillary structures and construct 5 No. Pig houses, along with all ancillary structures and associated site works on the site of an existing pig farming enterprise (National Grid Reference: E 291413 N 248647).
and,
- **Finisher Site @ Finaway:** Demolish c. 12 No. Existing Pig Houses and construct 5 No. Pig houses and an extension to 1 No. existing pig house, along with all ancillary structures and associated site works on the site of an existing pig farming enterprise (National Grid Reference: E 288975 N 249921).

Although the applicant has split this pig farm between a breeding and a finisher site (in line with the previous operation of this farm) to improve the health status of the sow herd, pig performance and overall efficiency of the farm, these two sites are interdependent and effectively operate/will operate as an "integrated pig unit, i.e. a pig unit in which pigs are bred and reared to market weight".

Therefore for the purposes of this E.I.S. these two sites will be referred to hereafter as the pig farm.

The existing farm operates/operated as a c. 1,510 sow breeding unit at Drumsgraddan with the pigs produced there transferred to the finisher unit c. 2.7 Km's away at Finaway. The application relates to a planned re-development of this existing farm, and a reduction in scale to a c. 1,250-sow integrated pig production farm.

It is proposed to develop and operate this pig farm as a fully integrated c. 1,250 sow farm finishing pigs at c. 110 - 115 kg's live weight, while retaining the current structure of a designated breeding site and a designated finisher site. The proposed developments are deemed necessary for the future viability of this farm to ensure that it becomes more competitive in order to survive into the future. The proposed developments will be completed in compliance with animal welfare regulations (known as S.I. No. 14 of 2008) and the Nitrates Regulations, (known as S.I. 31 of 2014), and allow for a re-development, and modernisation of the existing pig farming activities.

The farm, and site of the proposed developments are split between two number subject sites located c. 2.7 Km's apart, in south west Co. Cavan.

1. The breeding site extending to c. 3.15 Ha. is located in the townland of Drumsgraddan. The site access is onto a local third class road, which is in turn c. 2.25 Km from the Regional Route the R 194 between Ballyjamesduff and Granard. The site is located, c. 3 km's west of Ballyjamesduff, and c. 4 Km's east of Kilnaleck.
2. The finisher site extending to c. 2.52 Ha. is located in the townland of Finaway. The site access is onto a local third class road, which is in turn c. 0.5 Km from the Regional Route the R 194 between Ballyjamesduff and Granard. The site is located, c. 3 km's southwest of Ballyjamesduff, and c. 3.5 Km's northeast of Mountnugent.

Description of Development

The application relates to a planned re-development of 2 No. interdependent pig farm sites. The proposed developments will involve the demolition of a significant proportion of the structures on both pig farms sites and their replacement with modern, purpose designed pig buildings. The proposed development will result in a reduction in stock numbers on the farm from c. 1,510 sows integrated to c. 1,250 sows integrated. The proposed development and subsequent operation of the farm will be carried out in an environmentally friendly, sustainable and welfare compliant manner.

This proposed development is essential to achieve improved efficiencies from all of the investments on-site and in order to ensure the future viability and competitiveness of this farm. Improvement in production efficiencies and performance are dependent on provision of adequate top quality housing and welfare in tandem with modern feeding and ventilation systems.

The purpose for which this Environmental Impact Statement has been completed is in support of planning applications for the proposed developments on both sites as required by the planning and development regulations, as these proposed developments are in excess of the thresholds as specified in Schedule 5 Part 2 of the Planning and Development Regulations 2001. The E.I.S. will also be submitted to the Environmental Protection Agency (E.P.A.) as part of the Licensing procedures to be completed for this farm.

It is the intention of the applicant to operate the farm with the uppermost regard for environmental protection while at the same time implementing modern welfare and environmentally friendly management processes on the farm. Modernisation/consolidation is an essential part of viable and sustainable pig production. The structures for which permission is being sought incorporate modern design concepts in the areas of animal welfare, labour efficiency, manure storage, insulation, ventilation and environmental protection in the operation of the farm. Improvement in performance in pig production is dependent on provision of adequate top quality housing and welfare in tandem with modern feeding and ventilation systems and top quality genetics.

Bogue Pigs **propose** to complete the following works on the existing farmyard

1. Breeding Site at Drumsraddan.

Demolish existing farmyard complex and construct 5 No. Pig houses, along with all ancillary structures and associated site works on the site of an existing pig farming enterprise (National Grid Reference: E 291413 N 248647).

To provide the required housing, manure storage facilities and ancillary structures for c. 1,250 sows in a breeding unit rearing pigs to 35-40kg's, together with all associated breeding stock.

2. Finisher Site at Finaway

Demolish c. 12 existing pig houses and construct 5 No. Pig houses and an extension to 1 No. existing pig house, along with all ancillary structures and associated site works on the site of an existing pig farming enterprise (National Grid Reference: E 288975 N 249921).

To provide the required accommodation to rear all pigs from the proposed sow herd from 35/40 kg's to market weight.

The proposed developments will be located on the site of, and/or adjacent to the existing pig farm structures, and are as highlighted on the accompanying drawings.

These proposals are being sought to,

- Ensure compliance with animal welfare recommendations with regard to stocking densities etc.
- Provide adequate space in order to rear pigs to suitable weights.
- Improve the health status of the pig herd by allowing time for a batch type production system (i.e. all in/all out) and weekly routine washing procedures in the farrowing/weaner / finisher accommodation.
- To improve the housing conditions on the farm.
- Re-develop and consolidate this farm so as to ensure that pig production at this farm is carried out in an economically/financially viable fashion and in an environmentally friendly manner well into the next decade.
- Optimise manual labour requirement and make stockmanship the key to efficient welfare conscious production.

The current average Irish pig farm is in the region of c. 560 sows fully integrated (i.e. pigs reared from birth to market weight), and increasing, and the average size pig farm in Co. Cavan is slightly larger at 600 sows fully integrated. The proposed development on each site, when considered independently, could be deemed to be similar in scale to the average sized Cavan pig farm.

It is the intention of the applicant to operate the farm with the uppermost regard for environmental protection while at the same time implementing modern welfare and environmentally friendly management processes on the farm. Modernisation/consolidation is an essential part of viable sustainable pig production. The structures for which permission is being sought incorporate modern design concepts in the areas of animal welfare, slurry storage, insulation, ventilation and environmental protection in the operation of the farm.

Improvement in production efficiencies and performance is dependent on provision of adequate top quality housing and welfare in tandem with modern feeding and ventilation systems and top quality genetics.

Organic Fertiliser Production and Storage

The storage of organic fertiliser and the efficient use of the nutrients contained therein is a major factor in developing pig enterprises. Organic manure production based on the occupancy rate of c. 1,510 sows integrated, equals c. 31,250.96 m³ per annum, as per S.I. 31 of 2014. This will reduce to c. 25,870 m³ upon completion of the proposed developments. Manure output will be reduced, when compared to the previous operating scale as a result of the proposed developments, and this will be managed in a sustainable, environmentally and welfare friendly manner.

The net organic manure storage capacity on the farm will increase to c. 30,000m³ on completion of the proposed developments (c. 14 months manure production). This storage capacity will ensure that organic fertiliser produced on the farm is spread only under favourable soil and climatic conditions, and is well in excess of the 6 months storage as required by S.I. 31 of 2014.

Organic fertiliser / manure produced on the farm will be utilised on agricultural land that has an agronomic requirement for this fertiliser. All new manure storage structures will be constructed to Department of Agriculture, Food and The Marine Standards, and in line with Cavan County Council requirements. Should there be any discrepancy between the buildings as proposed, and the Dept. of Agriculture, Food and the Marine or Cavan Co. Co. requirements, the latter shall take precedence. Due to the mitigation measures to be implemented on site, i.e. the quality and adequacy of manure storage facilities and the significant demand for organic fertiliser, manure produced on this site will not have a significant adverse environmental impact on the site and/or surrounding area.

Utilisation of Organic Fertiliser

The manure from this farm will be used by the customer farmers in accordance with the European Nitrates Directive, as enacted in Ireland by S.I. 31 of 2014 or any subsequent amendment to and/or derogation from same. In line with S.I. 31 of 2014, all farmers are entitled to fertilise their farmland with a fertiliser source of their choice, subject to the requirements and stipulations of this directive.

Bogue Pigs have an excellent knowledge of the demand for organic fertiliser in the area due to a long number of years experience within this industry. The applicant has also participated in a two day intensive Teagasc Manure Management Course in Ballyhaise College completed on February 27th and March 6th 2007. Bogue Pigs has identified a number of customer farms that may receive organic fertiliser from this farm. These customers have, at present, a requirement for c. 150 % of the proposed organic fertiliser/manure production on the farm however this list may be complimented with additional customers as they arise.

All information pertaining to the potential customer farmers and all other information as required by this directive will be maintained on-site and will be made available for inspection as required. This is in line with the requirements and stipulations of S.I. 31 of 2014, (European communities (Good Agricultural Practice for Protection of Waters) Regulations i.e. The Nitrates Directive.

Application of Organic Fertiliser

Farmers will be advised as to their legal requirements to be complied with when applying organic fertilisers to land. In addition Bogue Pigs will ensure that all information required to be forwarded to the customer farmers upon receipt by them of organic fertiliser from this farm, is forwarded as soon as practicable thereafter. These requirements including the requirements pertaining to the application of animal manures to land are as outlined in S.I. 31 of 2014. Odour nuisance will be minimised and surface and ground waters protected by using the correct application rates, spreading at the correct times under suitable conditions and strict adherence to cordon sanitaires and the Codes of Good Practice for manure spreading, as outlined in S.I. 31 of 2014. This fertiliser planning will result in fertiliser substitution, not addition.

Soil

The adequacy and quality of storage to be provided and the allocation and utilisation of all fertiliser to be produced on this farm in accordance with S.I. 31 of 2014 will ensure that this farm has no negative impacts on farmland. This storage capacity will ensure that organic fertiliser is spread only under the most favorable soil and climatic conditions, preventing any soil structural damage. Hydraulic and chemical loading will not be exceeded due to the fact that all organic fertiliser is to be applied in accordance with S.I. 31 of 2014 thus preventing nutrient accumulation. As part of this Bogue Pigs will ensure that all farmers receive a copy of all relevant information as required by, and referred to in S.I. 31 of 2014.

Surface and Ground Water

The pig farm is located in Hydrometric Area No. 26, the Shannon catchment. This farm is located in the Inny Water Management Unit catchment area, and is drained by tributaries of the Mountnugent River.

Customer farmers are obliged to farm in accordance with S.I. 31 of 2014 or any subsequent amendment to/derogation from same and this will also apply to the organic fertiliser utilised by them from Bogue Pigs's pig farm, or that produced on their own farms. This will have a long-term benefit ensuring that there is no adverse impact on water quality in these areas. The E.P.A., Cavan Co. Co., and/or the local fisheries board carry out water quality monitoring on an ongoing basis in the area.

The proposed developments will result in a reduction in the scale of activity on the farm, and compliance with S.I. 31 of 2014 and S.I. 14 of 2008 will ensure that the applicant meets all of his requirements with regard to animal welfare and nitrates regulations. The proposed developments will be completed to the highest standards and in line with Cavan Co. Co., E.P.A. and Department of Agriculture, Food and The Marine requirements. Surface and ground waters will remain protected due to the exclusion of any unsuitable land, spreading only at suitable times and adherence to the Codes of Good Practice for manure spreading as outlined in S.I. 31 of 2014.

Clean storm water will discharge into a tributary of the Mountnugent River, which in turn is a tributary of Lough Sheelin. Soiled water will be directed into the manure storage tanks. Surface and ground waters around the pig farm will remain protected, and will not be affected by the proposed development due to the quality and adequacy of storage to be provided on-site, and the separation of clean and soiled waters. The proposed new housing will be built to current Department of Agriculture, Food and The Marine standards, and will have modern feeding and ventilation systems in the house, and will serve to improve the overall quality and quantity of manure storage structures on the farm. All new manure storage tanks will have leak detection systems installed.

Air / Climate

All practicable steps, such as washing routines etc., have been planned for and will be taken so as to minimise odour from the site. The rural setting of the proposed developments, and, location distant from local residences (> c. 200m Drumsgraddan Site and >c. 300m Finaway site - with the exception of dwelling(s) belonging to the Maguire family – previous operators of this farm) will ensure no effect on human beings. This development will have no significant adverse affect on climate.

Visual Aspects and Landscape

The farm, and site of the proposed developments are split between two number subject sites located in south east Co. Cavan.

1. The breeding site extending to c. 3.15 Ha. is located in the townland of Drumsruddan. The site access is onto a local third class road, which is in turn c. 2.25 Km from the Regional Route the R 194 between Ballyjamesduff and Granard. The site is located, c. 3 km's west of Ballyjamesduff, and c. 4 Km's east of Kilnaleck.
2. The finisher site extending to c. 2.52 Ha. is located in the townland of Finaway. The site access is onto a local third class road, which is in turn c. 0.5 Km from the Regional Route the R 194 between Ballyjamesduff and Granard. The site is located, c. 3 km's southwest of Ballyjamesduff, and c. 3.5 Km's northeast of Mountnugent.

The proposed developments are to be carried out on and/or adjacent to the existing pig farm structures. This pig farm is rurally located, 3 km's from the nearest town. Farming activities, bovine and swine have been carried out on and/or adjacent to this proposed site since the nineteen sixties.

The existing pig farm is on a relatively level site(s). The proposed development will replace a significant proportion of the existing farmyard structures and will be integrated into the landscape by the mature hedgerows adjoining the site. This will be complimented and enhanced by the proposed landscaping. This will ensure that there will be no visual impact on the local environment from the proposed development. The site is not located near to or likely to affect any Protected views, Areas of High Amenity, N.H.A.'s, S.A.C.'s, S.P.A's or monuments/places of Archaeological interest as listed in the Cavan County Development Plan 2014 - 2020.

Noise/Traffic

Scientific measurements of noise levels generated on a number of other pig farms were previously carried out on behalf of C.L.W. Environmental Planners Ltd. In all cases the readings were below the acceptable rural activity threshold. It is not anticipated that noise at this site will have any adverse impact on the local environment.

There is 1 No. dwelling belonging to the Maguire family located adjacent to the Finaway site, with 2 No. additional dwellings located further away. There are no third party dwellings located within 200m of the Drumsruddan site and/or 300m of the Finaway site.

Traffic to and from the site will increase due to the proposed development, as a result of the construction activities to be carried out on site (temporary). As there is a reduction in the operational capacity of the farm due to the reduction in the scale of activity on the farm and due to improved efficiencies in the operation and management of the farm, there will be an overall reduction (in excess of c. 15%) in the operational traffic associated with this farm (permanent).

Weekly Traffic associated with the farm will be due to;

	Drumscruddan	Finaway
Feed Deliveries	3 per week	4 per week
Organic Fertiliser 25m³/load	c. 12.5 per week	c. 14 per week
Stock Transport	2 Loads out/week	2 loads in/week 3 loads out/week

- and transport of materials and staff to and from the farm.

The volume of traffic to and from the site can be minimised by optimising load sizes. All other traffic such as vets, advisors, consultants etc. will remain at, or below, previous operating levels. This pig farm has existed for c. 45 – 50 years and there has been no indication of an adverse impact, environmental or otherwise, due to the traffic flows.

Transport of dead animals from the farm to a rendering plant will occur weekly/fortnightly. The remainder of the traffic will be associated with staff movement to and from the site.

The breeding site is located in the townland of Drumscruddan. The site access is onto a local third class road, which is in turn c. 2.25 Km from the Regional Route the R 194 between Ballyjamesduff and Granard. The site is located, c. 3 km's west of Ballyjamesduff, and c. 4 Km's east of Kilnaleck.

The finisher site is located in the townland of Finaway. The site access is onto a local third class road, which is in turn c. 0.5 Km from the Regional Route the R 194 between Ballyjamesduff and Granard. The site is located, c. 3 km's southwest of Ballyjamesduff, and c. 3.5 Km's northeast of Mountnugent.

Flora and Fauna

The organic fertiliser produced on this farm will be allocated to farming lands that have traditionally and/or are currently receiving animal manures (be they bovine, ovine, porcine and/or avian in origin) and chemical fertilisers to maintain soil fertility and ensure satisfactory grass/crop production. The organic fertiliser produced on this farm will be used to replace the imported inorganic chemical fertiliser that would otherwise have to be, and is currently being, used.

All habitats within these lands such as wooded areas; scrubland etc. would be excluded from receiving organic fertiliser from this farm due to the requirements of S.I. 31 of 2014, commonly known as the nitrates directive. A planned pest control programme to Bord Bia Quality Assurance Scheme standard will be developed to incorporate the proposed development.

The development is planned on and/or adjacent to an existing pig farm/brownfield site(s), thus it can be seen that the proposed development will have no significant adverse impact on flora and/or fauna in the area. This existing site and adjoining area has been an agricultural farmyard for a long number of years and thus has a poor level of plant diversity and is of no significant ecological importance.

Special Policy Areas

-N.H.A.'s, S.P.A.'s and S.A.C.'s

The proposed development, which is essentially a replacement of existing facilities on the farm for the rearing of pigs, along with a reduction in the scale of activities on the farm, is not located within or likely to affect any of these areas.

-Amenity Areas

The pig farm site is not located close to and/or likely to adversely impact on any forest or other parks, Lakeside or Riverside Amenity areas as listed in county Cavan County Development Plan 2014 - 2020.

-Archaeological Features

The pig farm site is not located near, and/or likely to impact on any Special Heritage sites as identified in archaeological features as listed in the County Cavan County Development Plan 2014 - 2020, or any area as listed in the Archaeological Survey of Ireland. The proposed development is located c. 400 m from any features recorded on the Archaeological Survey of Ireland. As the proposed development is, a re-development of existing brownfield sites, and, as it is a significant distance away, it is not anticipated that this development will adversely impact on the archaeological features of the area. This proposed development will have no impact on archaeological features within the areas of the customer farmlands as strict buffer zones will be applied to any archaeological features such as ring forts that are identified.

-Walking Routes / Areas of High Landscape Value / Major Lakes and Lakeside Areas / Scenic Routes / Scenic Viewing Points.

The pig farm site is not located near to and/or likely to adversely impact on any of the Walking Routes, Areas of High Landscape Value, Major Lakes and Lakeside Areas, Scenic Routes or Scenic Viewing Points as listed in County Cavan County Development Plan 2014 - 2020.

Wastes Generated on-site

All wastes generated on site, such as animal tissue waste, veterinary waste, general packaging etc., will be stored and disposed of/recovered in accordance with applicable regulations and in accordance with Cavan County Council and /or E.P.A. requirements.

Population / Employment

This pig farm has had, and will continue to have, a positive effect on population in the area. The pig farm will employ 6-8 people directly, leading to an indirect employment nationally of c. 50 - 60 people. The farm will result in additional employment during the construction of the proposed development. The farm profitability of the customer farmers receiving pig manure is boosted by cheap fertiliser nutrients replacing imported energy demanding inorganic nutrients. This farm will have no adverse effect on tourism in the area of the site due to good environmental management practices operated on the farm, the farm's rural location and its long tradition as a pig farm.

Agriculture is the mainstay of the local economy, and as an industry has greater importance in Co. Cavan than in many other counties. Within the county the pig industry is a key component of this. The overall value of the pig industry in Cavan is estimated to be c. €105 million/annum in farm sales alone. The pig industry in Cavan provides an important source of employment including local pork processing facilities, feed mills, equipment supply companies, haulage contractors and other service industries.

Bogue Pigs / Mr. Luke Bogue are an important supplier to the local processing plant in Cavan Town (c. 16km's from the farm). This processing plant presently slaughters circa 5,700 pigs weekly. The viability of this plant is dependent on increasing throughput.

Cumulative Effects.

Within the County;

This farm is located in County Cavan, a county well recognized for its pig population. It is anticipated that the proposed development at this site will not lead to a negative cumulative impact on the local environment. While the proposed development will lead to a sustainable re-instatement of activities on the farm, it will be on a reduced scale and will help ensure that existing and proposed activities on the farm are carried out in an environmentally sustainable and welfare friendly manner. The mitigation measures proposed will ensure that there is no significant adverse environmental impact on the surrounding area.

The proposed development will result in a reduction in stock numbers on the farm, from c. 1,510 Sows integrated, as it previously operated, to c. a 1,250 sows integrated pig unit. Pig farming activities have been carried on the sites for in excess of the past c. 50 years with no significant negative impacts. As previously detailed the operation of this farm will be divided between two locations as follows,

1. **The Breeding site** - The breeding site at Drumsgraddan will consist of the buildings and ancillary facilities necessary to accommodate the breeding herd of c. 1,250 sows along with all boars and replacement breeding stock (served gilts and maiden gilts) necessary for the operation of this breeding herd and all pigs produced on the farm until they are moved off-site at c. 12 weeks of age, weighing c. 35-40 kg's.
2. **The Finisher site** - The grower site at Finaway will consist of the buildings and ancillary facilities necessary to accommodate the finisher pigs from the breeding herd of c. 1,250 sows as referred to above. All pigs will be transferred to the farm at c. 35 – 40 Kg's and reared on the farm until they reach factory weight, c. 110 - 115/110 - 115 kg's.

The pig farming activities previously carried out on-site were done so with no significant adverse impact on the local environment. The proposed development will provide additional benefits with regard to the quality and quantity of manure storage capacity. It is anticipated that this development would not adversely impact on the local environment around the pig farm site. Organic fertiliser / manure allocation from this farm to customer farms would not lead to a cumulative impact as this fertiliser will be used as required by

S.I. 31 of 2014, to replace inorganic imported chemical fertiliser that would otherwise have to be, and is currently being used. Due to the additional mitigation measures planned to be implemented on the farm, there should be no adverse impact on the local area.

The proposed activities will result in the production of a significant amount of organic fertiliser, however, it is significantly below that required by the customer farmers to maintain optimum soil fertility. It will have no significant adverse impact within the local area and/or county at large.

The applicant has planned the proposed development in such a way that;

- Replaces the majority of the existing pig accommodation on the farm so as to increase the quality of the existing building stock and slurry storage capacity on the farm.
- Demonstrates that there is adequate demand for organic fertiliser for use in compliance with the Nitrates Directive, as implemented by S.I. 31 of 2014.
- Satisfactory arrangements for storage, management and allocation of slurries are proposed, in line with the Department of Agriculture, Food and The Marine, E.P.A. and Cavan Co. Co. requirements.
- This development will occur on an existing farmyard complex / pig farm, well removed from existing settlements and development clusters.

The reduction in employment in other sectors of the economy has had a significant adverse impact on the Irish economy. Productive, efficient and sustainable agricultural activities, such as the proposed development, and the jobs dependant thereon, will be critical to the local and wider Irish economy.

Within the Local Area;

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

The proposed development will result in a reduction in operating stock numbers on the site, from c. 1,510 sows integrated to c.1, 250 sows integrated. Pig farming activities have been carried on the site for in excess of the past c. 45-50 years with no significant negative impacts. The impact of the proposed development within the local area will be minimised by integrating it successfully within the local environment, proper management and storage of all wastes produced on the site and the utilisation of all organic fertiliser in accordance with S.I. 31 of 2014. The purpose of the proposed development is the replacement of a significant proportion of the existing pig houses on the farm with modern pig accommodation.

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

Difficulties encountered in compiling the required information

The processes and technology involved in the construction and operation of the proposed development are standard for agricultural and in particular pig farm developments and well understood. In addition the principles are already in practice on 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/existing farm.

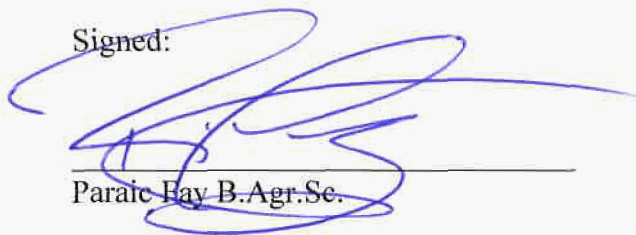
Summary

The proposal as outlined will make a significant positive contribution to the rural economy of Co. Cavan. It will serve to increase employment in the locality, and replace the jobs that were previously provided by this farm. It will also secure the viability of the applicant's existing farming activities and that of his feed suppliers, pork buyers and other such dependant businesses. Simultaneously, it will integrate seamlessly with the existing farming activities carried out by the customer farmers to the mutual benefit of both, in an environmentally friendly and sustainable manner.

The new farm buildings will integrate successfully with their surroundings and will not give rise to any significant environmental effects. The replacement of existing aged structures with modern pig accommodation and the provision of improved manure storage facilities, with leak detection facilities should be seen as a positive development and an improvement in the attributes of the existing farm.

The granting of permission to the proposed development would strongly accord with the provisions of the County Development Plan and will provide a boost to the economy of Co. Cavan. The proposed development will operate under the conditions imposed as part of any grant of planning permission for this farm and in line with Department of Agriculture, Food and The Marine requirements, specifically as specified in S.I 31 of 2014 and S.I. 14 of 2008 and will operate under the conditions imposed as part of any revised licence for this farm issued by the E.P.A.

Signed:



Paraic Fay B.Agr.Sc.

22/07/2014
Date

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2. INTRODUCTION

2.1 National Policy

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

On a national scale the pig industry represented almost 6% of gross output at producer prices in 2012 with a value of €423 million. When account is taken of added value at processing level, the sector has a total value of around €750 million, of this total, exports amounted to some €525 million in 2013. Ireland represents less than 1.1% of EU (27) production (2013). This enterprise conforms to Irish national policy on the pig industry based on the Development Plan for the Irish Pig Industry announced by the Minister for Agriculture and Food on the 10th of July 1987, the Pig Production Group Report of 1988 and the Pig Industry in Ireland, Strategic Study, 2000. The pig industry in Ireland has been through a number of tough economic years. On an island basis it is essential that the present level of production is at least maintained, as a critical mass of circa. three million pigs per annum is essential for the efficiency of the few processing plants remaining.

According to the Food Harvest 2020 report, pig meat consumption worldwide is expected to grow steadily between now and 2020. The Food Harvest report details that it is government policy to target a 50% increase in pig meat production/exports. It is envisaged that a significant proportion of this expansion in the pig industry will occur on existing pig farm sites. This report also confirms that while the number of farmers producing pigs is expected to decrease over this period, the farm size is likely to increase.

An intensive pig rearing industry has developed in County Cavan arising from the need to provide additional wealth in an area where more traditional farming practices are difficult. Agriculture is the mainstay of the local economy, and the county has a well organised agri-business sector. Pig production in Cavan accounts for circa. €105 million annually in farm sales and 1,300 jobs in the county are directly dependent on the pig industry. On a national scale this stands at in excess of 7,500 jobs directly dependant on the pig industry. This industry also provides a source of organic fertilisers for farmers in the area. Due to the ever increasing costs associated with chemical fertiliser, organic manures such as pig manure are becoming ever more sought after by tillage/livestock farmers in order to reduce their fertiliser costs.

Cavan has a breeding herd of some 28-30,000 sows, accounting for approximately 18-20 % of the national pig herd, and has its own pig processing factory located in Cavan Town. Mr. Luke Bogue is one of the thirty or so suppliers to this processor, who depends heavily on local pig farmers for his primary product. Local feed mills, haulage contractors and other service industries rely heavily on the Cavan pig industry.

This Environmental Impact Statement and associated planning application represents a proposed re-development of an existing c. 1,510 Sow integrated pig farm. While the farm has not operated for a couple of years, the current proposal seeks to redevelop the majority of the existing pig housing located on the farm at Drumsruddan and Finaway, and reduce the overall numbers to c. 1,250 Sows Integrated.

The goal of the development is to establish a modern purpose designed pig farm that will operate to the highest environmental and welfare standards while at the same time providing a reasonable return for the applicant. This proposed development will improve animal welfare on the farm, ensuring that the pig farm operates in accordance with Bord Bia quality assurance standards and animal welfare regulations. It will also improve the quality and quantity of manure storage capacity on the farm..

Within the pig industry, the trend is towards larger scale pig farms reflecting,

- 1) The concentration of resources in terms of skilled labour and capital,
- 2) Domestic and more increasingly international welfare standards, and,
- 3) Economies of scale.

Due to rising input costs, additional environmental and welfare requirements and the reduction in pig prices (in real terms) Irish pig farmers need to improve efficiencies wherever possible. Irish producers are amongst the top producers in the E.U. in terms of pig numbers per sow, but carcass weight is still lower than most of our competitors. There is room to increase efficiencies in this area through small improvements in genetics, quality and quantity of housing, and slaughter weights etc.

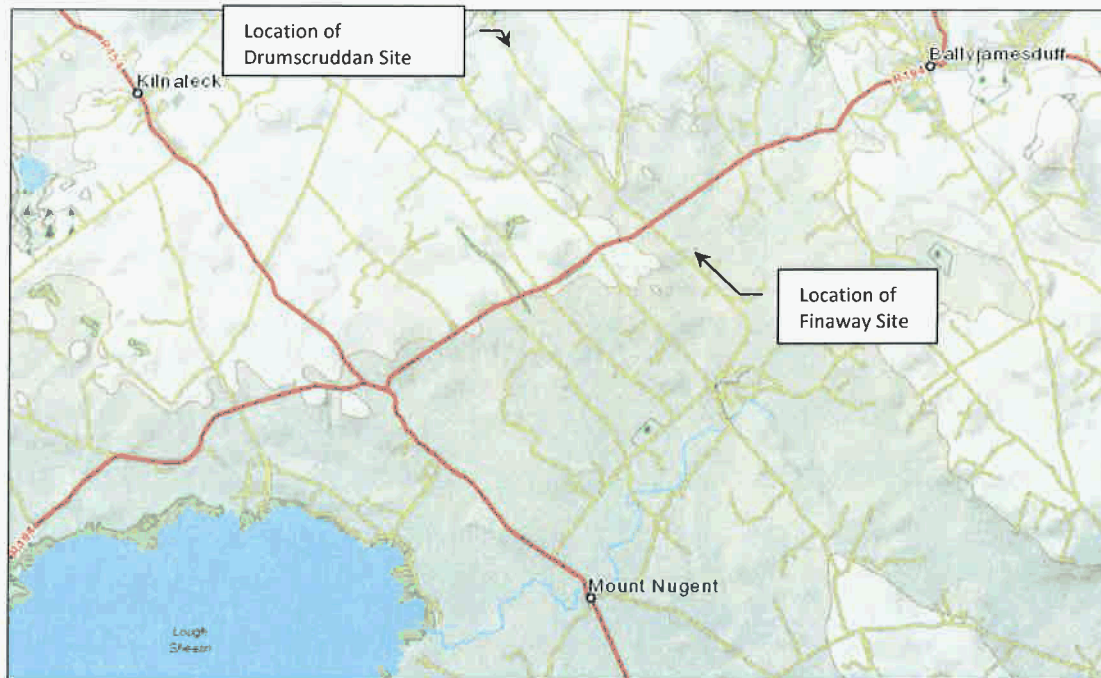
2.2 Context

This Environmental Impact Statement was prepared in conjunction with a planning application to Cavan County Council to;

- **Breeding Site @ Drumsruddan:** Demolish all existing pig houses and associated ancillary structures and construct 5 No. Pig houses, along with all ancillary structures and associated site works on the site of an existing pig farming enterprise (National Grid Reference: E 291413 N 248647).
- and,
- **Finisher Site @ Finaway:** Demolish c. 12 No. Existing Pig Houses and construct 5 No. Pig houses and an extension to 1 No. existing pig house, along with all ancillary structures and associated site works on the site of an existing pig farming enterprise (National Grid Reference: E 288975 N 249921).

The farm is currently designed to operate as a c. 1,510 Sow integrated farm, which will be reduced to c. 1,250 places upon completion of the proposed developments. As part of the re-development of this farm, an application for a revised E.P.A. licence will have to be completed to facilitate the changes arising from this proposed development. This process will be developed with the E.P.A. upon completion of the planning permission process with Cavan Co. Co.

Figure 2.1 Site Location



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The proposed developments will be located on the site of, and/or adjacent to the existing pig farm structures, and as highlighted on the accompanying drawings. Although the proposed developments are located on two separate sites, located c. 2.7 km's apart, these sites operate/will operate as one single inter dependant and integrated pig farm.

These proposals are being sought to:

- Ensure compliance with animal welfare recommendations with regard to stocking densities etc.
- Provide adequate space in order to rear pigs to suitable weights.
- Improve the health status of the pig herd by allowing time for a batch type production system (i.e. all in/all out) and weekly routine washing procedures in the farrowing/weaner / finisher accommodation.
- To improve the housing conditions on the farm.
- Re-develop and consolidate this farm so as to ensure that pig production at this farm is carried out in an economically/financially viable fashion and in an environmentally friendly manner well into the next decade.
- Optimise manual labour requirement and make stockmanship the key to efficient welfare conscious production.

This Environmental Impact Statement (E.I.S.) has been prepared in connection with European Communities Directive 85/337/EC as amended by 97/11/EC and 2003/35/EC, as implemented in Ireland by S.I. 349 of 1989, and now referred to as European Communities (E.I.A.) Regulations 1999 – 2001, as amended by S.I. 659 of 2006 European Communities (E.I.A.) (Amendment) Regulations 2006, the Local Government Planning and Development Acts 2000 to 2013, Planning and Development Regulations 2001 – 2013, and the Protection of the Environment Bill 2003.

2.3 Farm Background

Farming activities have been carried out on this farm for c. 45 – 50 years. The farm was originally started by Mr. Bernard Maguire, and while it has been out of production for a couple of years, has recently been bought/taken over by Bogue Pigs.

Planning permission has previously been granted by Cavan Co. Co. for a partial upgrade on both of these sites, however these works were not completed and this permission has since expired. A licence was granted by the E.P.A. to Mr. Maguire on 3rd January 2001, Reg. No. P0427-01. This licence details the maximum number of Sows at 1,510.

Mr. Luke Bogue (Director Bogue Pigs) has worked in pig farming for a long number of years following completion of his agricultural qualifications in Ballyhaise Agricultural College, and has completed a number of professional development courses in manure management, pig welfare etc., organised by Teagasc. Bogue Pigs is a client of the Teagasc Pig Development Department and hold a Certificate in Pig Welfare Management. They have also participated in the Teagasc Pig Welfare Workshop and a two day intensive Manure management course run by Teagasc at Ballyhaise Agricultural College.

Bogue Pigs consistently operate their pig farm in a manner that is,

1. Beneficial to the local community in terms of direct employment (office and pig farm staff, advisors and consultants) and indirect employment (animal feed and pig processing industries, agricultural contractors, haulage contractors), (local farmers also benefit from cheap fertiliser nutrients), and,
2. Without adverse impact on the local environment.

2.4 County Cavan Development Plan, 2014 - 2020

The County Development Plan is the central document of the planning system and sets out the Local Authorities view of the future development of the county. The strategy of the county development plan is based around facilitating the economic development of the county while conserving the natural and built environment of the county and improvement of its physical infrastructure. Cavan is, and will remain, an agriculturally based economy with a large rural population. It is the objective of the planning authority to ensure that development in rural areas is located and designed so that it is not visually detrimental.

This existing development is located in a rural agricultural area, where such developments are to be facilitated by the local authority, and it is not located near any scenic walks or viewing points. The location of this proposed development, adjacent to, integrated into and/or replacing a significant proportion of the existing pig farm complexes, and with mature hedgerows and proposed landscaping adjacent to the site, will help to obscure this farm from view and incorporate it into the local environment, with no adverse visual impact.

The proposed development of replacement pig housing and ancillary structures on an existing, temporarily occupied pig farm site complies with Cavan County Council's policies and objectives on Agriculture as detailed below;

Agriculture Policies

EDP1 To implement at county level provisions set out in 'Harvest 2020' subject to environmental carrying capacity constraints.

EDP2 To facilitate and encourage the sustainable development of agricultural enterprises, agri-tourism projects and farm diversification and other suitable proposals that supports the development of alternative rural enterprises.

EDP3 To promote sustainable agricultural development whilst ensuring that development does not have an undue negative impact on the visual amenity of the countryside.

EDP4 To support the development of on-farm tourism enterprises including the provision of tourism facilities such as the renovation of farm buildings for tourism purposes, and the development of walking, cycling, angling, pony trekking and bird watching, subject to the principles of proper planning and sustainable development. Proposed developments shall not adversely affect protected habitats and species.

Agriculture Objectives

EDO1 To promote the continued development and expansion of the Agri-Food Sector.

EDO2 To encourage and facilitate agricultural diversification into agri-businesses such as organic foods, rural/agri- tourism, farmhouse accommodation, pet-farms, horse trekking centres and small to medium sized enterprises subject to the retention of the holding for primarily agricultural use and the proper planning and sustainable development of the area.

EDO3 To support the horticulture and nursing stock industry as a means of diversifying agriculture and contributing to the maintenance of population in the rural area.

EDO4 To ensure that all agricultural activities comply with legislation on water quality, such as the Phosphorous Regulations, Water Framework Directive and Nitrates Directive.

EDO5 To encourage the development of environmentally sustainable agricultural practices, to ensure that development does not impinge on the visual amenity of the countryside and that watercourses, wildlife habitats and areas of ecological importance are protected from the threat of pollution.

EDO6 To recognise and support the role of farmers as custodians of the natural resources of the countryside and of rural landscapes which are valuable to existing and future generations. Ensure that development does not have an undue negative impact on the visual or scenic amenity of the Countryside. Protect soil, groundwater, wildlife habitats, conservation areas, rural amenities and scenic views from adverse environmental impacts as a result of agricultural practices.

EDO7 To support agricultural development as a contributory means of maintaining the population in the rural area and sustaining the rural economy, whilst maintaining and enhancing the standing of the rural environment and through application of the Water Framework and Habitats Directive.

2.5 Organisations and Bodies Consulted

The scoping exercise for this E.I.S. was carried out in consultation with Cavan County Council, C.L.W. Environmental Planners Ltd., and Bogue Pigs. Other organisations and bodies consulted directly/indirectly include:

- Geological Survey of Ireland
- National Parks and Wildlife Service
- Dúchas - The Heritage Service
- Environmental Protection Agency.
- Met Éireann
- Department of Agriculture, Food and Marine
- Department of Environment, Community and Local Government
- Teagasc Pig Development Department
- Irish Farmers Association (I.F.A.)
- Bord Na Móna Environmental Consultancy Division
- Kepak /McCarren & Co.
- Jetwash Ltd.

2.6 References / Publications Consulted

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

- Advice Notes on Current Practice in the preparation of Environmental Impact Statements
- Agri-Environmental Specifications for R.E.P.S. 2000, *Department of Agriculture, Food and The Marine, Food and Rural Development.*
- Archaeological Inventory of County Cavan.
- Cavan County Council Measures Report, Local Government (Water Pollution) Act, 1997 (Water Quality Standards for Phosphorous) Regulations, 1998, S.I. No. 258 of 1998, *Cavan County Council July 1999*
- Centralised Anaerobic Digestion in County Cavan, Feasibility Study, *C.L.W. Environmental Planners Ltd. December 2000.*
- Code of Good Agricultural Practice to Protect Waters from Pollution by Nitrates, *Dept. of Agriculture Food and Forestry (D.A.F.F.) and Dept. of Environment (D.o.E.)*
- County Cavan Development Plan (2014 - 2020)
- County Cavan, The Need for Inward Investment, *Cavan County Council 1999*
- Explanatory Bulletin to the Soil Map of Ireland, *Teagasc 1980.*
- Guidelines on the information to be contained in Environmental Impact Statements.
- Protecting our Freshwaters, Nutrient Management Planning Guidelines for Local Authorities, *Dept. of Environment and Local Government.*
- Protection of the Environment Bill 2003.
- Suitable Development: A Strategy for Ireland, *Department of Environment*
- *Teagasc, Nutrient and Trace element Advice for Grassland, Tillage, Vegetable and Fruit Crops - 2nd Edition 2004.*
- The Quality of River and Lake Water in County Cavan, A Report for the Year 2012, *Cavan County Council August 2013.*
- Eastern River Basin District Management Plan 2009 - 2015
- Water Quality in Ireland 1998 – 2000, Second (Revised) Edition, *Environmental Protection Agency 2002.*
- European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2014 (SI No. 31 of 2014)
- www.epa.ie/
- www.agriculture.gov.ie
- www.cavancoco.ie
- www.myplan.ie

3. DESCRIPTION OF DEVELOPMENT

This proposed farm development(s) will ensure that a high standard of animal welfare and environmental protection are achieved by this farm enterprise. The proposed development of replacement pig accommodation will be built to exacting Department of Agriculture, Food and The Marine specifications, and will further improve standards on this farm. The farm is situated in a rural location where agriculture is the main industry. The site is not visible from any major road or housing complex. The proposed pig farm buildings will be well integrated into the site.

This c.1,510 sow integrated pig farm comprises separate breeding and finisher sites, with:

1. **The breeding site extending to c. 3.15 Ha. located in the townland of Drumsraddan.**

This part of the farm houses all of the breeding stock (i.e. sows, served gilts, maiden gilts and boars) and all of the pigs born on the farm until they reach a liveweight of c. 35kg's. The existing farm as per the site map below consists of a number (c. 14) of pig houses and ancillary structures for the housing of the stock.

Significant attention is to be paid to the management and care of the pigs to ensure high welfare standards, maximum fertility in the sow herd, maximum vitality in the pigs born and high performance and low mortality thereafter. The pigs born on this site are to be moved to the Finaway Finishing site at c. 35 – 40 kg's liveweight.

The proposed development will involve the demolition of all existing pig houses and associated ancillary structures and the construction of 2 No. dedicated Dry Sow/gilt houses, 1 dedicated farrowing house and 2 dedicated weaner houses and all ancillary structures and associated site works.

Figure 3.1 a Existing Breeding Site Layout



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2. The finisher site extending to c. 2.52 Ha. is located in the townland of Finaway.

This part of the farm houses all of the pigs produced on the breeding site from there they are transferred to the farm at 35-40 kg's until they reach a liveweight of c. 110 - 115kg's, at which time they are moved off site to the abattoir.

The existing farm as per the site map below consists of a number (c. 16) of pig houses and ancillary structures for the housing of the stock.

Significant attention is to be paid to the management and care of the pigs to ensure high welfare standards, high performance and low mortality thereafter.

The proposed development will involve the demolition of c. 12 existing pig houses and ancillary structures and the construction of 5 No. dedicated finishing houses and 1 No. extension to an existing finishing house and all ancillary structures and associated site works. As part of the overall development of this site 4 No. existing houses are to remain and be upgraded.

Figure 3.1 b Existing Finishing Site Layout



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3.1 Objective of this development

The objective of this planning application is to ensure that this farm can operate productively and economically into the future and in line with Cavan Co. Co., E.P.A. and Department of Agriculture, Food and The Marine requirements, and, environmental and animal welfare regulations.

This farm as it exists is designed to operate as a c. 1,510 sow integrated pig unit, and in theory the applicant could have decided to re-commence pig farming within the existing structures. However it is felt that the current layout and structure of the facilities on the farm is not appropriate to modern, welfare compliant, environmentally friendly and sustainable pig farming. It is proposed to provide for a substantial investment to re-develop this farm and provide new buildings for the accommodation of all stock on the farm to ensure the future efficiency and viability of this pig farm. In addition it is proposed to consolidate activities on the farm and reduce numbers to a c. 1,250 Sow Integrated pig unit.

The objective of this development is three fold.

➤ **Primarily To utilise the existing resource, i.e. the existing pig farm site(s).**

The existing pig farm sites, although not operating at present, provide a valuable resource in that they are already developed sites with all of the required access, services etc. laid on. Although needing substantial investment, once completed these should be modern and efficient farms operating to the highest standards.

➤ **Secondly, To develop a modern pig farm that complies with Cavan Co. Co., E.P.A. and legislative requirements**

It is intended that this development will ensure that this farm can be modernised by the replacement of the majority of the existing aged structures, and upgrading of the existing remaining structures where appropriate, to improve the quality of building stock and manure storage capacity in relation to the existing/proposed activities. It is intended to provide the required accommodation to improve the health and hygiene routines on the farm and ensure that all pigs are produced as efficiently as possible, in a welfare compliant, environmentally friendly and sustainable manner.

➤ **And finally the proposed development is to allow for the consolidation of this farm with satisfactory accommodation to rear pigs to current market requirements, and to make provision for the required washing routines and all in/all out production system. The applicant is seeking to develop a farm that is of a sufficient scale to operate as a viable and sustainable farm, while at the same time permitting a consolidation of farming activities.**

It is currently proposed to operate this farm as a c. 1,250 Sow integrated pig unit upon completion of the proposed developments

At a time in the Irish pig industry when margins are extremely tight it is essential that every pig farm is run and managed as efficiently as possible. This is achieved with the efficient use of inputs and optimising animal performance.

In the assessment of any impact from this proposed development it is essential to remember that, the applicant, Bogue Pigs, could have, in theory re-commenced, pig farming in the current structures, however it is anticipated that the proposed development will improve the efficiency and thus the economic viability of this farm by,

- Consolidating animal numbers on the farm by reducing the scale of the farm to a 1,250 Sow integrated pig farm.
- Implementing a significant array of measures such as c. 14 months storage capacity; underground leak detection facilities; surface water, ground water and leak detection monitoring; and landscaping etc. to help mitigate against any potential and/or perceived potential adverse impact from the proposed development,
- Providing an improved standard of housing for the pigs thus improving the performance. This increased performance will be as a result of improved health and housing conditions, and will help increase the feed efficiency of the pigs, thus less feed will be consumed and less slurry produced/unit of pig meat. The improved health status will also reduce mortality, medication needs and associated waste.
- Providing welfare compliant accommodation in line with the requirements of S.I. 14 of 2008.
- Improvement in the quality and quantity of manure storage structures.

This farm will also have to apply for and operate under a revised licence from the E.P.A. While the existing farm had been operating without any significant adverse impact on the surrounding environment, and without any complaint from local residents and/or the local authority, the proposed developments will significantly improve the operation of this farm and its interaction with the local environment.

The buildings submitted for planning permission are slatted floor pig houses with mass concrete storage tanks underneath. These tanks will be constructed in line with the Department of Agriculture, Food and the Marine standards for such structures, and will have leak detection systems underneath. This development will improve the quality of the building stock on the farm and increase the capacity of slurry storage facilities.

The proposed developments will be located on the site of, and/or adjacent to the existing pig farm structures, and as highlighted on the accompanying drawings. Although the proposed developments are located on two separate sites, located c. 2.7 km's apart, these sites operate/will operate as one single inter dependant and integrated pig farm.

These proposals are being sought to,

- Ensure compliance with animal welfare recommendations with regard to stocking densities etc.
- Provide adequate space in order to rear pigs to suitable weights.
- Improve the health status of the pig herd by allowing time for a batch type production system (i.e. all in/all out) and weekly routine washing procedures in the farrowing/weaner / finisher accommodation.
- To improve the housing conditions on the farm.
- Re-develop and consolidate this farm so as to ensure that pig production at this farm is carried out in an economically/financially viable fashion and in an environmentally friendly manner well into the next decade.
- Optimise manual labour requirement and make stockmanship the key to efficient welfare conscious production.

3.2 Size and Scale of the Development

The following details should be read in conjunction with the engineers's drawings provided in Appendix 2, 3 & 4. Appendix 2 contains a site location map(s) (1:2,500 + 1:50,000). Appendix 3 contains a site layout plan. Appendix 4 contains the cross-sections, plans and elevations of the structures for which planning permission is sought.

The proposed development is situated on the site of, and/or adjacent to, the existing pig farm facility. The pig farm is currently designed as a c. 1,510 sow integrated pig farm.

This current planning application seeks to:

- **Breeding Site @ Drumsgraddan:** Demolish all existing pig houses and associated ancillary structures and construct 5 No. Pig houses, along with all ancillary structures and associated site works on the site of an existing pig farming enterprise (National Grid Reference: E 291413 N 248647).

and,

- **Finisher Site @ Finaway:** Demolish a number (c. 12) of and construct 5 No. Pig houses and an extension to 1 No. existing pig house, along with all ancillary structures and associated site works on the site of an existing pig farming enterprise (National Grid Reference: E 288975 N 249921).
- **And finally,** to provide all of the necessary ancillary structures and services, thus further improving the efficiencies in the production chain.

The proposed development will permit a sustainable re-development of farming activities as a 1,250 Sow Integrated pig farm which will be completed in a welfare compliant and environmentally friendly manner.

Ancillary structures on site may/will include but are not limited to; feed silos, over ground storage tanks, diesel storage tank(s), water storage tanks etc. Upon completion of the proposed development, pig production at any one time will comprise of c. 1,250 sows (i.e. a female pig after its first farrowing) fully integrated. Stock numbers on-site may vary +/- 10% on occasion.

3.3 Operation of the Farm

Operating Hours

Staff operating hours are, and will be, primarily 06.00 to 18.00 Monday to Friday and 07.00 to 13.00 on Saturday and Sunday, however automatic feeding and ventilation systems will be operating outside of these hours. This farm is operated in such a way that only essential activities are carried out outside of these hours. The pig farm manager/owner, Mr. Luke Bogue will be available at all times should any emergency arise regarding this farm. In addition Mr. Luke Bogue will retain overall responsibility for the day to day running of the farm.

3.3.1 Production

This proposed 1,250 sow fully integrated farm will produce finisher pigs at circa. 110 - 115 kg live-weight intended for sale to the pigmeat processing sector. The breeding herd at Drumscredan will hold the breeding herd of sows, boars and replacement gilts. All pigs born on the unit will be reared up to 12 weeks of age; they are then moved off-site, weighing c. 35 - 40kg.

These pigs are and will be transferred on a weekly basis to the finisher site at Finaway and will remain on this farm until they reach the target weight of c. 110 - 115 kg's. In order to ensure that the maximum performance is achieved from this farm with the minimal amount of inputs significant attention is paid to the genetics of the pigs produced. The programme to be carried out on the breeding farm will ensure that only pigs with the top performance in terms of growth rate and feed efficiency are produced.

High health status is, and will remain, a priority on this unit. The proposed management team will be highly trained and experienced, and this will be complemented with additional personnel where required. All in – all out movement of pigs is/will be practised on this farm. Each age group of pigs have a different level of immunity and even in high health status herds it is important not to mix pigs of different age groups. Hygiene routines are carefully planned and monitored. The rooms will be carefully washed and rested between batches.

The applicant is committed to providing a system on-site that ensures adequate time for cleaning and resting the rooms between batches. One of the objectives of the proposed development is to allow improvements to this hygiene and washing routine. Adequate accommodation will mean that there is more time allowed between emptying the farrowing / weaner / finisher accommodation and re-filling of these rooms with the next batch of pigs. This will allow more comprehensive washing, soaking, cleaning and drying out. The proposed development has been designed to facilitate this improved hygiene and washing routine at the proposed stock levels. Pens will be adequately soaked prior to washing to reduce water and energy usage associated with this practice.

3.3.2 Feeding

Pigs will be fed with a computerised wet feeding system and/or a probe feeding system. Feed will be supplied to the farm from a specialist feed supplier (such as Kiernan Milling), and mixed with water/whewy etc. in the computerised wet feeding tank. From here it is pumped to each of the houses. It is proposed to encourage the use of this pig manure on tillage lands outside of the immediate area, to the benefit of all client farmers.

Ad libitum water is supplied to the pigs via water nipples in these feeders as per welfare legislation. Feed to be used is calculated on an industry standard average feed consumption on the farm on an annual basis divided by the number sows/served gilts on the farm giving an estimated figure of c. 7 tonnes per sow/served gilt.

3.3.3 Water supply and use.

Water is to be supplied from a private well located/to be located on each site. The local public supply will be available as a back up in cases where the well supply is disrupted. Water is to be stored in an over-ground water storage tank(s) with a capacity of @ least 24 hours supply at the both sites. The estimated water used per annum is 30,000 m³. All animal drinking appliances are regularly maintained to ensure that there is no leakage to the slurry storage structures.

Water on this pig farm is used for the following:

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

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

The farrowing/weaner/finisher houses are proposed to be washed after each batch, as the pigs are moved in an "all in / all out" system through their growth cycle. The pressure of the power washer is c. 3,000 psi. Water throughput per hour = c. 1.08 m³. The power washer will be in use for 8/12 hours per week. A weekly total of c.10 m³ of water will be required.

3.3.4 Heating and Ventilation

Energy supply to the farm will be an electric 3-phase supply @ 220 and 380 volts. A standby generator is to be provided at each site in the event of a disruption to the power supply.

(a) **Heating**

Farrowing House: - Piglets are born into an environment of 20 - 24 degrees centigrade; but require a temperature of > 30 degrees centigrade. This is supplied by under floor heating with electric heat pads. Weaker pigs may receive extra and beneficial heat from an infrared lamp, hung over them.

1st Stage Weaner House: - These rooms are to be artificially heated with electric heaters. The floors are to be slatted with plastic slats. The air temperature and freshness is to be climatically controlled by sensors and computers.

2nd Stage Weaner House: - These rooms will receive no artificial heating. The floors are to be slatted, and the air temperature and freshness is climatically controlled by sensors and computers.

Fattening, Gilt/Sow Houses: - These houses will receive no artificial heating. All new houses are to be totally slatted. The existing houses to remain on the Finaway site have partially slatted floors.

(b) Ventilation

All ventilation on this farm is/will be Computer controlled mechanical ventilation, or Automatically Controlled Natural Ventilation.

3.3.5 Housing

The proposed houses are of A-roof design with a maximum height of c. 7 meters above floor/slat level. Plans of all proposed buildings are contained in Appendix No.'s 3 & 4 of this E.I.S. The pigs are to be housed in the existing and/or proposed purposely designed and constructed pig houses as detailed on the site plan.

Sow/ Gilt Houses (Drumscrudan Site):

Currently all dry sow and served gilt accommodation is provided on the Drumscrudan Site. Planning permission has previously been approved for a number of developments on this farm to provide replacement accommodation; however this permission has now lapsed.

The currently proposed development of loose dry sow accommodation will result in the construction of two purposely designed Loose Dry Sow/Gilt houses, so as to ensure that the proposed sow herd can be accommodated in welfare compliant animal housing. The gilts are bought in or selected from the finisher pens (Finaway site) at c. 100 kg and moved to the gilt pens (Drumscrudan Site), to mature over a 8 – 10 week period. They are vaccinated against all major-breeding diseases. At 140 kg they are moved to the service area and enter the breeding herd on service.

The farrowing sows are proposed to be housed in one number new farrowing house.

Weaner Houses (Drumscrudan Site):

There will be c. 750 pigs weaned weekly at an average of 28 days of age. These are stocked at stocking rates of 0.25 m² per pig. As the pigs get older the numbers per pen are reduced and the area allowed per pig increases up to 0.41m²/pig. There will be 8 - 10 weeks accommodation here in total between heated first stage and unheated second stage weaner accommodation.

The currently proposed development will involve the construction of 2 No. dedicated weaner houses.

Finishing Houses (Finaway Site):

There will be c. 13 week's finishing accommodation available on this pig farm. Pigs enter finishing accommodation at a weight of c. 35-40 kg's, and are stocked at stocking rates of c. 0.75 - 1 m² /pig. Pigs will grow until they reach sale weight of c. 110 - 115 Kg live-weight, and/or are selected as replacement gilts.

There will be 5 No. dedicated finisher houses, and an extension to 1 No. existing pig house to be constructed on the Finaway Site, which will operate in conjunction with 4 No. existing houses on the farm.

Once the proposed development has been completed there will be an average of 1,250 sows and progeny on the farm, with average stock numbers based on an occupancy rate of c. 90%. Pigs are transported from the breeding site to the weaner/finisher farm at c. 35 - 40kg's, and remain until they reach sale weight of c. 110 - 115 Kg live-weight. Additional space has been proposed to be provided to allow for the washing and drying routines to be carried out, and to provide a number of isolation/recovery pens for any sick/injured animals. Down time between batches of up to 7 days has been recommended by Bogue Pigs veterinarian to maintain high health status in the herd.

All ventilation on this farm is/will be Computer controlled mechanical ventilation, or Automatically Controlled Natural Ventilation.

3.4 Manure Storage Structures and capacities

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

Appendix No. 3 contains a site layout, and Appendix No. 5 contains a table indicating proposed manure storage capacity on the farm. It also includes information showing the total manure storage capacity in each house and the net manure storage capacity in each house after the required freeboard allowance has been removed. A freeboard allowance of 200mm has been allowed on all covered underground manure storage tanks, and 300mm on all uncovered tanks, in accordance with S.I. 31 of 2014.

The manure storage capacity on the farm will provide c. 14 months storage capacity at the existing herd size.

3.5 Process of Production

The production process involves / will involve breeding, rearing and fattening pigs to a proposed live weight of c. 110 - 115 kg for slaughter. An average of 750 pigs are to be moved from the breeding farm at Drumscredan to the weaner/finisher farm at Finaway on a weekly basis at c. 35 – 40 kg's.

The young are born in the farrowing rooms. Piglets remain suckling on the sows for an average of 28 days. At day 15, creep is introduced in minute quantities as the sow's milk quality begins to decrease. It is also important to build up the piglet's ability to receive solids, thus preparing them for weaning onto a diet of solid feed. The suckling period for the sow is 28 days on average. The sow is then weaned back into the service area where she is fed ad lib until she returns to cycle approximately 5-7 days later. Gestation period being 114-116 days, the pre-farrowing sow is moved to the farrowing rooms 6-7 days before parturition.

At weaning the pigs are moved from the farrowing house aged 28 days, weighing approximately 7/8 kg, to the weaner houses, also on the Drumscredan site. The piglets remain here on a complex diet until 85 - 90 days of age. They then leave this area and move to the finishing houses on the Finaway site at circa 35 - 40 kg.

3.6 Procedures of Production

Once operational the applicant will seek approval under the Bord Bia approval system. The daily procedure follows / will follow the Bord Bia Code of Practice for pig welfare and consists / will consist of the following procedures:

Dry Sow/Gilt House(s).

- * ensure all sows/gilts have adequate feed and water
- * check health status and treat accordingly
- * check sows/gilts returning to cycle after service
- * scrape excess faeces from behind sows/gilts.

Farrowing House(s).

- * ensure all sows have adequate feed and water
- * check the health status of this area and treat as required.
- * check house temperature and heat pad temperature
- * check and record births and deaths.
- * remove excess faeces, farrowing debris, dead and mummified pigs at the time of farrowing for hygiene purposes.
- * manually remove all faeces at weaning to reduce water waste at power washing

Weaner House(s).

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

Finishing House(s) - as for weaners above. It is also important to take note of appropriate withdrawal periods of all medicines used and keeping accurate records of all pigs treated.

4. DATA REQUIRED TO ASSESS THE EFFECTS OF THE DEVELOPMENT.

The pig farm operation will result in the production of 2 saleable products; 1) market pigs for the pork/pig meat processing industry, and, 2) organic fertiliser for customer farmers. In addition a number of waste streams are also generated, and these may include, pig carcasses, medical waste and paper bags/general waste. The quantities of the various wastes generated, their storage and their ultimate disposal are detailed in the following sections. The only remaining emission from this farm is clean storm water from roofs and yards which will be discharged directly to the nearest watercourse(s).

4.1 Organic Fertiliser/Manure Production

The annual estimated production of organic fertiliser/manure from the farm is calculated in Figure 4.1.1. This estimation is based on calculations using S.I. 31 of 2014. The manure production at this farm, based on 1,510 Sows Integrated is calculated as 31,250.96 m³, which will reduce to c. 25,870m³ upon completion of the proposed developments.

Figure 4.1.1 Organic Fertiliser/Manure Production

Existing Annual Manure Production.				
Animal Type Existing	Number	Manure Production/place m³/week*		Total M3
Sows Integrated	1,510	0.398	52	31,251
Total				31,251

Proposed Annual Manure Production.				
Animal Type Existing	Number	Manure Production/place m³/week*		Total M3
Sows Integrated	1,250	0.398	52	25,870
Total				25,870

*Data taken from European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2014 (S.I. No. 31 of 2014)

4.2 Manure Storage Capacity

The tank capacities and the total manure storage on the pig farm are outlined in Appendix 5. The net manure storage capacity on this farm will equal c. 30,000 m³ once the proposed works have been completed. The annual slurry produced will be 25,870 m³, (See Figure 4.1.1). Freeboard allowance space, (*i.e.* the space between the top of the manure and the underside of the slat), of 200mm on covered tanks and 300mm on uncovered tanks, has been incorporated in these calculations. The required manure storage capacity based on S.I. 31 of 2014, is 6 months.

4.3 Allocation of Organic Fertiliser/ Manure

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

The current potential customer list details c. 20 customer farmers with an area in excess of 1,800 ha. These farms have a requirement for c. 150 % of the organic fertiliser production on the farm upon completion of the proposed developments. There is the potential for additional customer farmers in the area to utilise organic fertiliser from this development. These farms may be supplied, in addition to the existing potential customer list, subject to the requirements of S.I. 31 of 2014. The proposed development once completed can only supply c. 66 % of the fertiliser P required and significantly less of the fertiliser N required, by the existing customers. It is intended that organic fertiliser from this farm will be allocated to customer farmers for application to land, upon which grass/ crops are grown in order to utilise the nutrients contained therein.

This organic fertiliser will replace chemical fertiliser that would otherwise have to be, and is currently being used. Due to the ever increasing costs associated with chemical fertiliser, organic manures such as pig manure are becoming ever more sought after by farmers in order to reduce their fertiliser costs. In this regard farmers, such as the potential customer farmers, currently identified in the customer list (Contained in Appendix No. 1), are keen to secure a source of organic fertiliser to fertilise their lands. This will ensure that customer farmers receive a cheaper source of fertiliser, while at the same time ensuring that there is a stable and consistent market for the organic fertiliser produced in the existing/proposed development.

The fertiliser from the farm will be allocated to customer farmers that have determined that they have an agronomic need for additional fertilizer, in line with the requirements of S.I. 31 of 2014. Manure production at the existing development scale is the equivalent of c. 30 load/week on average during the spreading season (15th Jan (Meath)/1st February (Cavan) – 14th October inclusive). This will be reduced by c. 3.5 loads per week to c. 26.5 loads per week on average during the year upon completion of the proposed development. This is roughly split 50:50 between both sites or an average of 2 loads/site /day in the spreading season

Organic fertiliser from the site would be supplied for use in accordance with the Nitrates directive. In line with the requirements of, S.I. 31 of 2014, (European communities (Good Agricultural Practice for Protection of Waters Regulations 2014) i.e The Nitrates Directive, all relevant information pertaining to the potential customer farmers and all other information as required by this directive will be maintained on-site and will be made available for inspection as required. Please refer to Appendix No. 's 1 & 6 for further details with regard to the current customer list, and general location of the currently proposed customer farmers.

This farm will supply c. 66% of the calculated Phosphorous requirements, and significantly less of the Nitrogen requirements, of the identified customer farmlands when at full operational capacity. A significant amount of additional organic/chemical fertilisers will still have to be applied to these lands to achieve optimum crop yields. The applicant is entitled to supply organic fertiliser to his potential customer farmers who want it and are not prohibited from using it. The use of animal manure to fertilise farmland is subject to statutory control under S.I. 31 of 2014, and all records as required by same will be maintained by the applicant.

Application to land is the one practical economic means of utilising the nutrients in pig manure. Organic fertiliser from this farm will be used as an alternative to imported artificial fertiliser. Manure will be allocated to those customer farmers with a recognised need for additional fertiliser. The machinery to be used for this activity has been changed and modernised over the years to make this process more environmentally friendly. To this end all farmers are advised that manure from this development should be applied to land in as accurate and uniform a manner as is practicably possible. All farmers will be advised that in order to minimise any potential adverse environmental impact and to ensure that they get maximum fertiliser benefit from the organic fertiliser, that all manure from this farm should be stored, managed and applied in accordance with S.I. 31 of 2014. It is intended that, where practicable, all organic fertiliser from the existing and proposed development will be transported to customers in 25m³ consignments.

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

As stated in Cavan County Council's Measures Report produced in July 1999, the annual fertiliser value of pig manure produced in County Cavan is significant. The value of bovine manure produced is significantly greater. Previously the tendency may have been to undervalue these products, however it is considered that significant benefit would arise in developing procedures whereby encouragement would be provided to fully utilise the nutrient value of animal manures as a substitute for commercial fertiliser. The proposed development actively supports this philosophy by encouraging farmers to substitute imported chemical fertilisers with organic fertilisers. Pig (and other) manures can reduce tillage/grassland production costs and improve soil structure, soil organic matter and soil organic status.

The fertiliser value of 1 m³ of pig manure has been estimated at €6.44, (Teagasc 2014). The total fertiliser value to the customer farmers from the manure produced in the expanded development is in the region of €160,000.

4.4. Location of Potential Customer Farmlands

A significant number of the potential customer farmers currently identified are located in County Cavan, with the remaining farms located in Co.'s Meath, Westmeath and Longford. The geographic location of the farm facilitates customers in these counties, and the applicant has their own transport system in place to facilitate these customer farmers. Customer farmers will utilise the pig manure for efficient grass (grazing and forage conservation) and/or tillage production. This is primarily an agricultural area with low population densities.

Please refer to Appendix No. 6 for details pertaining to the general location of the potential customer farmers already identified. It is anticipated that any other customer farmers that arise in this area, or within a reasonable distance from this pig farm can be supplied with organic fertiliser for use in accordance with S.I. 31 of 2014.

4.5. Farmlands identified for the receipt of organic fertiliser.

All information pertaining to the potential customer farmers and all other information as required by this directive will be maintained on-site and will be made available for inspection as required. This is in line with the requirements and stipulations of, S.I. 31 of 2014, (European Communities (Good Agricultural Practice for Protection of Waters Regulations 2010) i.e The Nitrates Directive. In addition each customer farmer will receive a copy of all applicable information as required by S.I. 31 of 2014.

Included in Appendix No. 1 is a customer list detailing the potential customers (by reference numbers) for organic fertiliser from this farm as identified as part of the preparatory exercise carried out on behalf of Bogue Pigs by C.L.W. Environmental Planners Ltd,. This format, in conjunction with Appendix No. 6, details the general location and size of the farmland area and the requirement for additional fertiliser, as dictated by S.I. 31 of 2014. Additional information will be maintained on-site for inspection as required. Additional potential customers may be supplied with organic fertiliser from this farm as and when they arise.

4.6. Organic Fertiliser/Manure Application Rates

Organic fertiliser from this farm will be allocated for use in accordance with the requirements of S.I. 31 of 2014 and in line with crop requirements. This will ensure utilisation of the nutrient content of the pig manure, which is as follows:

Nitrogen*	4.2 kg/m ³
Phosphorous*	0.8 kg/m ³

*(S.I. 31 of 2014).

The customer farmlands will greatly benefit from receiving organic fertilisers and this will reduce the amount of imported energy in-efficient fertiliser that would otherwise be used.

4.7. Surface Water and Ground Water

Uncontaminated water from the roofs of the buildings and clean paved areas within the farm is to be collected separately and discharged to the existing and/or upgraded storm water drainage system. The applicant and/or other appointed person will inspect these points on a regular basis, and a record will be maintained of same. Any soiled water coming of pig walkways etc. will be directed into the slurry storage tanks.

4.8 Animal Carcasses and Animal Tissue Waste

Animal carcasses/tissues arise as a result of mortalities on the pig farm. While a certain level of mortality is unavoidable this is minimised due to a high health status and the provision of a high quality environment for the animals. All such waste is to be disposed of at an approved rendering plant. Temporary storage of this waste will be provided at the farm by means of a covered skip. Arrangements have been made with a rendering plant, College Proteins, for the carcasses to be disposed at their premises.

Animal carcasses are to be transported by College Proteins from this farm on a fortnightly basis. Please refer to Appendix No. 9 for further information in this regard. In the event of an outbreak of a disease requiring de-stocking this will be in accordance with and controlled by Department of Agriculture, Food and The Marine supervision and Batneec Guidelines, in order to avoid any detrimental impacts on the local environment.

4.9 Veterinary Waste

Veterinary waste arises as a result of spot treatment of sick animals. This waste comprises spent veterinary products, including antibiotics and vaccinations, out of date veterinary products, needles and syringes. It is proposed that this waste will be stored in Sharp disposal bins, and that SRCL Ltd., 430 Beech Road, Western Industrial Estate, Naas Road, Dublin 12, or other approved waste contractor, will be contracted to dispose of this material. Please refer to Appendix 8 for details relating to same.

4.10 General Waste/Fluorescent Tubes/Construction and Demolition (C&D) Wastes

Any paper or other such waste arising on the farm will be stored in an appropriate bin. It is proposed that this will be collected by a local approved waste disposal contractor, such as Wilton Waste Disposal, from the site and brought to an approved site for disposal. The amount of the above waste types would be minimal on this farm.

Spent fluorescent tubes etc. and/or any other wastes generated on site including all construction and demolition waste from proposed development, that is to be moved off-site, will be separated and stored in accordance with Cavan Co. Council guidelines. It will then be transport off site by an authorised contractor(s) for disposal/recovery at an approved disposal/recovery site.

A construction and demolition waste management plan has been prepared for the proposed development and is included as Attachment No. 11.

4.11 Services

4.11.1. Electricity

Mains electricity exists on the farm, with a three phase supply. The electricity is to be used for the following:

- Control systems for automatic feeding systems including augers, mixers and pumps.
- Power for automatic ventilation systems.
- All artificial lighting to pig housing, offices and outside yards
- Power for water pumps, etc.

4.11.2. Water

Water supply will come from a private well located and/or to be located on each site, with a back-up from the public water supply if required. Water is to be stored in an on-site water storage tank with at least 24 hours supply.

Proposed Annual water usage/site = c. 15,000 m³/annum

4.12. Fly and Pest Control

Flies, rats and mice are carriers of some of the infections that are detrimental to pig health. In addition, rats and mice can cause considerable damage to insulation materials and accessible woodwork, thereby reducing buildings thermal efficiencies and longevity. A programme for fly control and rodent control has been implemented on this farm, in line with Bord Bia guidelines.

4.13. Difficulties encountered in compiling the required information

The processes and technology involved in the construction and operation of the existing and proposed development are standard for agricultural, and in particular pig farm developments, and well understood. In addition the principles are 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.

As this is an application for re-development of an existing farm on a brown field site to ensure compliance with animal welfare and environmental regulations, and to develop an efficient modern farm, the assessment of any potential impact is factual as well as perceived. There were no particular difficulties encountered and there is no reason to consider that there is any serious risk of error attaching to plans and projections for the treatment of wastes to be generated in the proposed development.

5. DESCRIPTION OF ALTERNATIVES

5.1. Alternative Sites Considered

Since this E.I.S. is concerned with the re-development of an existing farm, and the associated reduction from an existing 1,510 Sow integrated pig farm, to a 1,250 Sow integrated pig farm, the question of an alternative site(s) does not arise, to the same extent as if the applicant were looking to develop a greenfield site. Pig farming activities have been carried out at this site since the late sixties. The farm had been owned and operated by the Maguire family for the past c. 50 years. While the Maguire family have exited pig farming, the applicant Bogue Pigs, has made the commitment to re-develop this brown field site and construct a modern pig farm.

It is intended to replace existing structures on the farm at this point in time when welfare and environmental requirements, market demands, efficiencies of production and economics are requiring the construction of new accommodation on-site. In addition it is planned to consolidate activities on the farm, and reduce numbers by c. 15%. Bogue Pigs propose to carry out the development to improve efficiencies on the farm and to help ensure that this farm can operate in a competitive and viable manner.

Development on the proposed site will significantly improve efficiencies for the applicant. This existing farm is described as a c. 1,510 sow integrated pig farm located at Drumscredan, Crosserlough, Co. Cavan & Finaway, Ballyjamesduff, Co. Cavan.

The objective of this development is three fold

- ***Primarily To utilise the existing resource, i.e. the existing pig farm site(s).***

The existing pig farm sites, although not operating at present, provide a valuable resource in that they are already developed sites with all of the required access, services etc. laid on. Although needing substantial investment, once completed these should be modern and efficient farms operating to the highest standards.

- ***Secondly, To develop a modern pig farm that complies with Cavan Co. Co., E.P.A. and legislative requirements***

It is intended that this development will ensure that this farm can be modernised by the replacement of the majority of the existing aged structures, and upgrading of the existing remaining structures where appropriate, to improve the quality of building stock and manure storage capacity in relation to the existing/proposed activities. It is intended to provide the required accommodation to improve the health and hygiene routines on the farm and ensure that all pigs are produced as efficiently as possible, in a welfare compliant, environmentally friendly and sustainable manner.

- ***And finally the proposed development is to allow for the consolidation of this farm with satisfactory accommodation to rear pigs to current market requirements, and to make provision for the required washing routines and all in/all out production system. The applicant is seeking to develop a farm that is of a sufficient scale to operate as a viable and sustainable farm, while at the same time permitting a consolidation of farming activities.***

It is currently proposed to operate this farm as a c. 1,250 Sow integrated pig unit upon completion of the proposed developments

This site was chosen by the applicant for the following reasons,

- Existing Pig farm located on the site and area required for the proposed development owned by and/or available to the applicant.
- Suitable area to accommodate the proposed development.
- Existing electricity supply on the farm.
- The site was in a rural location with a relatively low density of housing in the area.
- The required infrastructure such as access is, water, power, already laid on.
- The site is located close to an existing abattoir in Cavan Town, who have a particular focus on looking to secure supplies of local pigs and would have a desire to further expand this into the future.
- It was determined that this development was required to modernise the existing site and to realise the full potential of the site.
- Significant local demand for organic fertiliser from the existing farm.
- Skilled staff available.

5.2. Alternative Layout and Design

The existing layout and designs were researched with the Dept. of Agriculture Pig Specialists and the local County Committee of Agricultural adviser at the time of construction.

The design of the proposed development to be undertaken by the applicant was researched and reviewed with the aid and guidance of the Teagasc pig advisory service, C.L.W. Environmental Planners Ltd. and commercial pig equipment suppliers. It takes into account S.I. No. 14 of 2008, European Communities (Welfare of Farmed Animals) Regulations 2008. See Appendix No. 16.

5.3. Alternative Process's Considered

The Teagasc pig advisory service was set up in the early eighties and Bogue Pigs used this service as an integral part of planning this proposed farm development.

The processes to be carried out in the proposed development will be similar in nature to the previous activities on the farm. Historically alternative systems of production were considered however, due to the land type and long winters outdoor pig farming was dismissed and slatted underground slurry storage was adopted in preference to straw-based English systems of production. One of the deciding factors in this decision was due to the reduced availability of straw in this part of the country.

Utilisation of manure is carried out by allocating manure to those customer farmers with a recognised need for additional fertiliser. The machinery used for this activity has been changed and modernised over the years to make this process more environmentally friendly. To this end all farmers are advised that slurry tankers should be fitted with low trajectory splash plate.

There is no other satisfactory economic or environmentally friendly alternative process for commercial pig production under Irish climatic conditions.

5.4. Alternative Management of By-products

Application to land is the one practical economic means of utilising the nutrients in pig manure. Organic fertiliser from this farm is used in the local area as an alternative to imported artificial fertiliser. The method of manure spreading proposed (i.e. low trajectory splash plate), is very practicable and should minimise odour emission from manure. Existing demand for organic fertiliser in the area is well in excess of that which would be produced by the existing and/or proposed development as observed by the applicant in practice over the last number of years. This will result in a significant economic saving on those grassland /tillage farms that utilise it as a source of fertiliser as opposed to imported, energy demanding chemical fertiliser while at the same time returning additional important trace elements to the soil not provided by the chemical substitutes.

Trial work conducted by EOLAS on alternative disposal/treatment methods for pig manure was carried out in the Sheelin area approximately 20/25 years ago. This project failed to establish an alternative method for manure treatment that was viable at a commercial level.

C.L.W. Environmental Planners Ltd. in their Enterprise Ireland funded feasibility study entitled, Centralised Anaerobic Digestion in County Cavan, has extensively researched alternatives to land application. This study concluded that under the economic, environmental and grants support climate that prevailed at that time, there was no economic alternative to land application.

Teagasc have recently completed a study (Led by Peadar Lawlor, Teagasc, Moorepark, and presented at the Teagasc Pig Farmers Conference 2011) which looked at a number (5) of treatments/partial-treatments for pig manure and compared them to the traditional practice of utilising this organic fertiliser to fertilise land. This study concluded that, at present, there was no other viable alternative for the use of pig manure.

There is no other suitable alternative for the disposal of animal carcasses and tissue waste or veterinary waste.

6. DESCRIPTION OF THE EXISTING ENVIRONMENT

6.1 Soil and Subsoil Geology

The pig farm site is located southeast Co. Cavan. Please refer to Appendix No. 2, for a 1:50,000 map indicating the general location of the pig farm site.

6.1.1 Topographic Features and Solid Geology

(a) Site and immediate area.

The general topography and morphology of **County Cavan** is determined to a large extent by the underlying geology. Topographically the county can be divided into three zones:

- An upland zone stretching from the county boundary near Sherlock through Ballyjamesduff and westward to Ballinagh.
- A lowland zone extending along the valley of the Boyne and its Tributaries
- A mountainous zone in the northwest.

A major strike fault effectively divides Cavan into two distinct geological regions. Ordovician rocks dominate to the north of this feature while to the south of the fault Silurian rocks dominate. Generally the bedrock becomes younger as one moves in a north-westerly direction. Glacial drift deposits cover the bedrock with sediments of varying types and thickness. The drifts are composed predominantly of boulder clays, which give the county its distinctive drumlin landscape. The till deposits have a major influence on soil type and aquifer vulnerability. The thick clay soils will provide aquifers with protection from surface pollution. Gleys occur most extensively throughout the county and are found over approximately 66% of the land area. Gleys are soils in which the effects of drainage impedance dominate.

Groundwater investigations, (ref. *Groundwater Resources in the NE(RDO) Region, WR/C57, An Foras Forbarthe & GSI, 1981*), within Cavan and its neighbouring counties indicate that the Silurian rocks are very poor aquifers, while the Carboniferous Limestones can provide usable supplies of groundwater.

- See Fig. 6.1.a Principal Soils of County Cavan
- See Fig. 6.1.b Land use Classification for County Cavan
- See Fig. 6.1.c Potential risk From Agriculture Map
- See Fig. 6.1.d Run-off Risk Map

(b) Proposed customer farmlands.

Due to the nature of the customer farmland areas, they cover/will cover a significantly larger area than the site of interest, i.e. the site of the proposed development. As a result the topographic features and solid geology will be more varied and are deemed to be beyond both the scope and requirement of this E.I.S. Due to the nature of the activities to be carried out on these farms, i.e. the application of organic fertilisers (from this pig farm) and inorganic fertilisers (from the local co-op) the customer farmland areas will be governed by the requirements of the nitrates directive on each individual customer farmer, i.e. the requirement not to spread on steep slopes where there is a risk of pollution, the

requirement not to spread on, or within 15 m of exposed bedrock and/or other vulnerable features, not to apply excess fertilisers etc.

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

6.1.2 Soil Geology

(a) Site and immediate area

The *pig farm site* is located in the area identified as soil association

- 25 on the General Soil Map of Ireland (Drumscruddan Site) . Soil association 25 comprises Gleys (50%), Acid Brown Earths (40%), Interdrumlin Peat and Peaty Gleys (10%). The soils of this association occur mainly in counties Cavan, Monaghan, west Mayo, Longford, Clare, Donegal and Leitrim. The parent material consists of mostly Ordovician – Silurian shale, sandstone glacial till. Topography is gently rolling with uniform slopes,

and,

- 14 on the General Soil Map of Ireland (Finaway Site). Soil association 14 comprises Gleys (15%), Acid Brown Earths (75%), Brown Podzolics (10%). The soils of this association occur mainly in counties Waterford, Wexford, Kilkenny, Tipperary, Meath, Louth, Longford as well as Cavan (ant to a lesser extend in some other counties. They are formed from glacial till of predominantly Palaeozoic shale composition. Topography is gently rolling with uniform slopes,

The profile and extent of this soil association is shown in Appendix No. 14. (Ref: General Soil Map of Ireland, and Soil Associations of Ireland and their Land use Potential, Explanatory Bulletin to Soil Map of Ireland 1980)

(b) Proposed customer farmlands.

Due to the nature of the customer farmland areas, they cover/will cover a significantly larger area than the site of interest, i.e. the site of the proposed development. As a result the soil geology will be more varied and are deemed to be beyond both the scope and requirement of this E.I.S. Due to the nature of the activities to be carried out on these farms, i.e. the application of organic fertilisers (from this pig farm) and inorganic fertilisers (from the local co-op), the customer farmland areas will be governed by the requirements of the nitrates directive on each individual customer farmer, i.e. the requirement not to spread on waterlogged, frozen, snow covered ground, not to apply excess fertilisers etc. thus protecting soils from chemical and hydraulic loading and other physical damage. Mitigation measures where applicable are discussed in Section 7.1.

6.2 Ground Water

(a) Site and immediate area

The groundwater adjacent to the site is deep and overlain by a considerable depth of overburden. Reference to the G.S.I. indicates that the pig farm site (Drumscruddan and Finaway) has an aquifer classification of **PI** (Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones). The Aquifer Vulnerability Classification for this area (Drumscruddan and Finaway) is rated as Low (L). As can be seen from the soil profile for the area concerned, any ground water sources in the area are afforded protection due to the nature of the soils, and their associated characteristics.

(b) Proposed customer farmlands.

Soils are the basic resource for the production of commercial food crops and rearing of livestock. In order to achieve the required crop/animal yield from soils additional fertiliser, such as the organic fertiliser from this farm, must be applied. As all fertiliser from this farm is to be allocated for use in accordance with S.I. 31 of 2014, the groundwater resources in the relevant areas will be afforded the required protection. As previously detailed there will be no increase in organic fertiliser production on the farm as a result of the proposed development.

Mitigation measures where applicable are discussed in Section 7.2.

6.3 Surface Water

(a) Site and immediate area

The pig farm is located in an area south of Cavan Town in Hydrometric Area No. 36, the Shannon catchment. This farm is located in the Inny Water Management Unit catchment area, and is drained by tributaries of the Mountnugent Rivers. Please refer to the following figures for illustrations and statistics;

- 6.3 River Basin Districts

In addition to this see Appendix No. 10 for details on local water quality data.

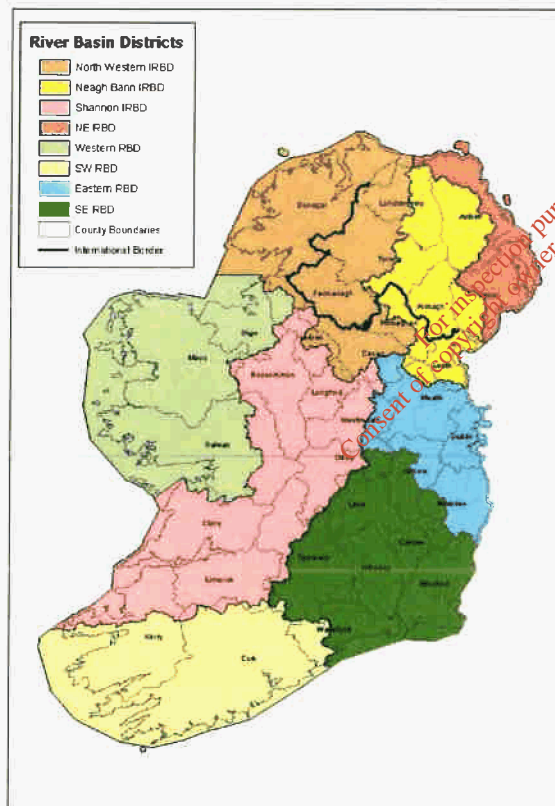
(b) Customer farmlands.

Soils are the basic resource for the production of commercial food crops and rearing of livestock. In order to achieve the required crop/animal yield from soils additional fertiliser, such as the organic fertiliser from this farm, must be applied. This organic fertiliser will replace imported chemical fertiliser that would otherwise have to be used. As all fertiliser from this farm is to be allocated for use in accordance with S.I. 31 of 2014, the surface water resources in the relevant areas will be afforded the required protection. As previously detailed there will be a reduction in organic fertiliser production on the farm when compared to the previous operating capacity.

The protection and improvement of water quality in Ireland is to be co-ordinated on the basis of the areas known as river basin districts, established for the purposes of the EU Water Framework Directive (2000/60/EC).

The Water Framework Directive, or WFD, came into force on 22 December 2000 and established a new, strengthened system for the protection and improvement of water quality and water-dependent ecosystems. It provides for co-ordinated water quality management based on natural river basins (i.e. catchments). It aims at preventing any deterioration in the status of any waters and at achieving at least “good status” for all waters by 2015. The status of waters will be determined by chemical and ecological criteria for surface waters and chemical and quantitative criteria for ground waters. It requires the carrying out of numerous preparatory tasks leading to the adoption by December 2009 of river basin management plans and their implementation, review and updating on a six-year cycle. The Draft River Basin Management Plan for the Shannon River Basin District Catchment was published in *December 2008*, and was available for consultation until June 2009. This River Basin Management Plan 2009 -2015 for the Shannon River Basin District was published in July 2010.

Figure 6.3 Ireland's River Basin Districts



The Water Policy Regulations, together with the corresponding legislation for Northern Ireland, established a total of eight RBDs in relation to the island of Ireland in accordance with the proposals set out in the joint North / South consultation paper “Managing Our Shared Waters” (March 2003). One of these RBDs is situated wholly in Northern Ireland, four are situated wholly in the Republic of Ireland and three relate to cross-border areas and are known as International River Basin Districts (IRBDs). This site of the proposed development is located in the Shannon River Basin District, See Figure 6.3a for details of River Basis Districts.

Water Classification System and Beneficial Uses

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

**Unpolluted Waters
Class A**

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

**Slightly Polluted Waters
Class B**

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

**Moderately Polluted Waters
Class C**

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

**Seriously Polluted Waters
Class D**

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

6.3.1 Overall Trend in River Water Quality County Cavan

The history of this activity as regards surface water quality in the immediate area of the site has been good. The customer farmlands that will potentially utilise organic fertiliser from this farm have been farmed well, with due care to waterways, spreading rates and nutrient requirements, and this will continue in line with the requirements of S.I. 31 of 2014.

Please refer to Appendix 10 for details relating to water quality in the area of the pig farm. As previously stated the surface water quality in the area of the customer farmers lands where organic fertiliser from this pig farm is used, (be that in County Cavan and/or further a field), will not be affected as this organic fertiliser will replace chemical fertiliser that would otherwise have to be used. All organic fertiliser is to be allocated for use in accordance with the Nitrates directive, S.I. 31 of 2014, and there will be a reduction in the overall potential volume of organic fertiliser produced as a result of the proposed development.

The overall trend in river water quality for County Cavan is shown below.

Extract taken from Cavan County Council, The Quality of River and Lake Water Quality in County Cavan, A Report for the year 2010 (Published June 2011)

River Water Quality

Because the monitoring programme for the WFD is significantly different from that of the previously used Phosphorous Regulations (a decreased number of samples are required in the new monitoring programme), it is difficult to compare previous years data with the current data. However, a better understanding of the information may be obtained by comparing like with like. Therefore, 'biological only' data for Co. Cavan are shown below in table 1.

	Q 95-97 (%)	Q 98-00 (%)	Q 01-03 (%)	Q 02-04 (%)	Q 03-05 (%)	Q 04-06 (%)	Q 05-07 (%)	Q 06-08 (%)	Q 07-09 (%)	Q 08-10 (%)
Class A	49.3	47.8	51.8	56.8	53.31	54	43.9	42.3	44.6	47.2
Class B	24.5	29.6	27.4	26.8	30.1	29.8	39.5	41.9	39.5	36.8
Class C	26.2	21.1	20.8	16.4	15.1	16.1	16.6	15.8	15.84	15.1
Class D	0	1.3	0	0.1	<0.1	<0.1				0.8

Details taken from “The Quality of River and Lake Water Quality in County Cavan, A Report for the year 2011 & 12” are contained in Appendix 10.

6.3.2 Lake Water Quality

There are three hundred and nineteen lakes in total in County Cavan each with their own individual ecology. Cavan County Council monitors eight lakes on a monthly basis. These eight lakes are those assigned a baseline trophic status in the E.P.A.'s “1995 – 1997 Water Quality in Ireland” report. Previous, monitoring results indicate that all eight lakes are subject to eutrophication of some degree.

This pig farm is located in the catchment area of Lough Sheelin. According to The Quality of River and Lake Water Quality in County Cavan, 2012, water quality in Lough Sheelin is classed as Moderate status, phosphorous levels encouraging.

6.3.3 Beneficial uses of surface waters in the Catchment Areas.

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

These include,

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

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

6.4 Air

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

- The pig farm
- The manure spreading operation.

The pig farm is located in an entirely agricultural hinterland where typical levels of farm odour are to be found and expected. This odour arises from farmyards and lands during the day to day operations such as silage feeding, manure agitation and manure spreading. The existing farm, operated without a significant effect on the environment and the proposed developments will ensure that the applicant will continue to strive to minimise all environmental impacts. Well maintained, properly ventilated, slatted floor, pig farms are practically odour free, outside the confines of the site.

The rural setting of the proposed developments, and, location distant from local residences (> c. 200m Drumscredan Site and >c. 300m Finaway site - with the exception of dwelling(s) belonging to the Maguire family) will ensure no effect on human beings.

This pig farm site is located in a sparsely populated rural environment and hence the pig farm will cause no nuisance. The existing mature hedgerow and proposed landscaping adjacent to the site will help screen the pig farm view. Please refer to Met Data contained in Appendix No. 12.

Bogue Pigs has/will advise all farmers receiving organic fertiliser from their farm that the low trajectory splash-plate method of spreading should be used and that adherence to the Teagasc Codes of Good Practice and S.I. 31 of 2014 will help them maintain a good working relationship with their neighbours. The application of organic fertiliser in accordance with S.I. 31 of 2014 ensures that excessive application of manure, which may lead to extra odour from surface soil saturation, will be avoided.

Mitigation measures where applicable are discussed in Section 7.4.

6.5. Climate

Climate information is useful for predicting the likely impacts that the pig farm operation and the spreading of slurry in the catchment will have upon the residents. Details of annual rainfall and wind direction can be found in Appendix 12. Wind direction at the site is critical to odour movements and rainfall is one of the critical factors in the application of slurry. The prevailing wind in the Cavan area is from the south-west. Rainfall in the customer farmlands ranges annually from 800mm -1000mm.

Mitigation measures where applicable are discussed in Section 7.5.

6.6. Visual Aspects and Landscape

The pig farm is located on 2 separate but inter-dependant sites;

1. c. 3.15 hectares of agricultural land in the town land of Drumsgraddan, and
2. c. 2.52 hectares of agricultural land in the town land of Finaway.

The existing farmyard complex, proposed landscaping and mature hedgerow will help to screen the piggery from the local view and help integrate it into the surrounding landscape. The existing farm has been developed on a site that is not intrusive on the landscape. The proposed pig houses are grey/green in colour with grey cement fibre/dark coloured roofs and approximately 5 - 6 metres in height. The circular feed silos are c. 8 -10 metres high and are grey in colour. The proposed development essentially seeks to replace existing aged and to a certain, extent dilapidated structures.

This area is outside of any areas identified as Areas of Especially High Scenic Amenity and/or views & Prospects as identified in the Cavan County Development Plan 2014 - 2020. This is an area of predominantly agricultural activity.

The integration of the proposed buildings into the existing sites, the finishes to the proposed buildings, the proposed/existing landscaping and existing hedgerows will help to screen the developments from the local view and help integrate them into the surrounding landscape. The existing sites have developed on a relatively level area that is not intrusive on the landscape. The proposed development is to be completed mainly on the site of the existing pig farm buildings. The proposed pig houses are grey/green in colour with dark coloured roofs and not more than c. 7 metres in height, above slat level.

Mitigation measures where applicable are discussed in Section 7.6.

6.7. Noise Levels

Noise levels are measured in decibels and a weighting factor (A) is applied to approximate the frequency response of the human ear. This weighted decibel scale, dB (A), correlates well with human sensations of loudness, disturbance and annoyance. Background noise levels in rural areas of Ireland are in the 45-50 dB (A) range.

The peak noise periods on pig farms are at feeding times. Since all growing / finisher pigs are to be ad libitum fed, these peaks in noise levels will be avoided. The proposed development of modern buildings with high insulation standards will minimise any potential adverse impact. Given that the proposed development also involves demolishing a significant proportion of the existing pig housing structures this will significantly improve the operation of the farm. Due to its rural location and the relatively low population density in the area, this pig farm will not create a disturbance or annoyance to anyone. The new structures will be well integrated into the existing farmyard complex.

A summary of the results of a number of noise surveys that were carried out by Bord Na Mona on behalf of C.L.W. Environmental Planners Ltd. is contained in Appendix 15. These results confirm that noise emissions from this pig farm, as it is planned, will have no detrimental impact on the local environment. To date, there is no evidence of complaints of noise pollution regarding the existing pig farm. The proposed development will be managed in a similar fashion to the existing one. Where possible all traffic into or out of the site will be during the normal working day and will cause no disturbance. Mitigation measures where applicable are discussed in Section 7.7.

6.8. Traffic

The farm, and site of the proposed developments are split between two number subject sites located in south west Co. Cavan.

1. The breeding site extending to c. 3.15 Ha. is located in the townland of Drumsruddan. The site access is onto a local third class road, which is in turn c. 2.25 Km from the Regional Route the R 194 between Ballyjamesduff and Granard. The site is located, c. 3 km's west of Ballyjamesduff, and c. 4 Km's east of Kilnaleck.
2. The finisher site extending to c. 2.52 Ha. is located in the townland of Finaway. The site access is onto a local third class road, which is in turn c. 0.5 Km from the Regional Route the R 194 between Ballyjamesduff and Granard. The site is located, c. 3 km's southwest of Ballyjamesduff, and c. 3.5 Km's northeast of Mountnugent.

Traffic to and from the site will increase due to the proposed development, as a result of the construction activities to be carried out on site (temporary). As there is a reduction in the operational capacity of the farm due to the reduction in the scale of activity on the farm and due to improved efficiencies in the operation and management of the farm, there will be an overall reduction (in excess of c. 15%) in the operational traffic associated with this farm (permanent), when compared to the previous operating level.

Adequate on-site space has been provided / proposed to ensure that the turning movements of all vehicles associated with the farm as proposed can be facilitated. Sufficient parking has been provided on-site for all vehicles associated with the farm. See Fig 6.8 County Cavan Roads Network.

Traffic associated with the existing farm scale would be due to;

- Feed deliveries to the site (c. 4 - 5 load/week/site)
- The transport of organic fertiliser/manure from the farm (c. 2-3 load/day/site [@ 25m³/load] in the spreading season, [i.e. 39 weeks],
- The transport of pigs to/from the farm (c. 3 load between the farms and 3 load/week off-site from Finaway)
- Transport of materials and staff to and from the farm.
- Ancillary traffic such as vets, advisors, consultants, Waste Disposal etc.

The volume of traffic to and from the site can be minimised by optimising load sizes.

This pig farm has existed for a long number of years and there has been no indication of an adverse impact, environmental or otherwise, due to the traffic flows. Transport of dead animals from the farm to a rendering plant occurs fortnightly. The remainder of the traffic will be associated with staff movement to and from the site.

Mitigation measures where applicable are discussed in Section 7.8.

6.9 Flora and Fauna

(a) Site and immediate area

As previously described the proposed development is to be carried out on an existing pig farm site(s). The lands directly adjoining,

- The Drumsruddan Site have been afforested a number of years ago (15 – 20) with a mix of Ash and spruce.
- The Finaway site lands are mainly agricultural grass land with a small proportion of the area afforested.

The majority of the lands in the surrounding area are/have been used for agricultural production. The flora and fauna associated with this site has developed accordingly as the site has developed and changed over the years from grassland to a pig farm site.

There are no specific unique habitats, flora and/or fauna on this site that require specific protection.

(b) Customer farmlands

The customer farmland is/will be agricultural land. As governed by the Nitrates directive organic fertiliser from this pig farm can only be applied to agricultural lands where a crop response, be it grassland/tillage/Maize etc., is anticipated. The local land for receipt of organic fertiliser from this farm is used for grassland (grazing or cut for silage) and/or tillage production. Traditionally animal manure has been applied to these lands as a source of fertiliser, and to replace energy inefficient inorganic fertiliser.

Mitigation measures where applicable are discussed in Section 7.9.

6.10 Special Policy Areas

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

These Special Policy Areas include:

(A) Nationally Designated Environmental areas.

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

The basic designation for wildlife is the National Heritage Area. This is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. To date, 75 raised bogs have been given legal protection, covering some 23,000 hectares. These raised bogs are located mainly in the midlands. A further 73 blanket bogs, covering 37,000ha, mostly in western areas are also designated as NHAs. In addition, there are 630 proposed NHAs (pNHAs), which were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated. These sites are of significance for wildlife and habitats. The pNHAs cover approximately 65,500ha and designation will proceed on a phased basis over the coming years.

Prior to statutory designation, pNHAs are subject to limited protection, in the form of:

- Agri-environmental farm planning schemes such as Rural Environment Protection Scheme (REPS 3 and 4) and Agri Environmental Options Scheme (AEOS) continue to support the objective of maintaining and enhancing the conservation status of pNHAs. The farm plans operate for a period of 5 years. REPS 4 plans will continue to operate until 2014.
- Forest Service requirement for NPWS approval before they will pay afforestation grants on pNHA lands.
- Recognition of the ecological value of pNHAs by Planning and Licencing Authorities.

Under the Wildlife Amendment Act (2000), NHAs are legally protected from damage from the date they are formally proposed for designation.

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

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

As birds migrate long distances the EU Birds Directive provides for a network of sites in all Member States to protect birds at their breeding, feeding, roosting and wintering areas.

It identifies species which are rare, in danger of extinction or vulnerable to changes in habitat and which need protection. In Ireland, we have 25 of these species regularly occurring. They include Bewicks and Whooper Swan, Greenland White-Fronted and Barnacle Geese, Corncrake, Golden Plover, Bar-Tailed Godwit, five species of tern, birds of prey including Hen Harrier, Peregrine, Merlin as well as the Nightjar, Kingfisher and Chough.

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

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

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

121 SPAs have been designated since 1985. 25 other sites enjoy legal protection and will be designated as SPAs. It should be noted that many existing and future SPAs overlap with SACs. The Irish SPAs join a total of around 3,000 sites across the European Union.

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

Special areas of conservation are prime wildlife conservation areas considered to be important on a European level as well as an Irish Level. The legal basis on which Special Areas of Conservation are selected and designated is the EU Habitats Directive (92/43/EEC), transposed into Irish law in the European Union (Natural Habitats) Regulations, 1997. These regulations have been amended twice with SI 233/1998 and SI 378/2005.

The Directive lists certain habitats and species that must be protected within SACs. Irish habitats include raised bogs, blanket bogs, turloughs, sand dunes, machair (flat sandy plains on the north and west coasts), heaths, lakes, rivers, woodlands, estuaries and sea inlets. The 25 Irish species which must be afforded protection include Salmon, Otter, Freshwater Pearl Mussel, Bottlenose Dolphin and Killarney Fern.

The areas chosen as SAC in Ireland cover an area of approximately 13,500 square kilometers. Roughly 53% is land, the remainder being marine or large lakes. Across the EU, over 11,335.06 sites have been identified and proposed, covering 420,000 sq. Km. of land and sea, an area the size of Germany. S.P.A.'s and S.A.C.'s collectively form part of 'Natura 2000', a network of protected areas throughout the European Union.

An Appropriate Assessment Screening Report in line accordance with Guidance Notes provided by the Department of Environment, Heritage and Local Government *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*, has been completed and is contained in Appendix No. 13.

The nearest designated Natura 2000 site to the existing farm, and site of the proposed developments, is the Lough Sheelin SPA (NPWS Site Code 004065) which is located approximately 3.85 km to the south west of the existing farm. Lough Kinnale and Derragh Lough SPA (NPWS Site Code 004061) is located 12.5km also to the southwest. The River Boyne and River Blackwater SAC (NPWS Site Code 002299) is located 14.1km from the subject site at its closest point.

Other sites located some bit further from the pig farm is the Lough Oughter Complex SPA (NPWS Site Code 004049) and the Lough Oughter and Associated Loughs SAC (NPWS Site Code 000007) which is located approximately 16.4 km from the subject sites at its closest point and is considered outside the zone of potential impacts for the purpose of this Appropriate Assessment Screening.

It was concluded in the Screening Report that the proposed development will not have any significant adverse impact on the above mentioned sites. Please refer to Appendix 13 for the completed report. Activities at this site have not had any adverse affect on the conservation of these areas and the wildlife contained therein.

The proposed developments will not adversely impact on the surrounding environment for the following reasons,

- The proposed development is essentially a refurbishment / replacement of existing pig farming structures with a consequential 15% reduction in sow numbers.
- Significant mitigation measures including leak detection under all new structures, surface and ground water monitoring, significant excess manure storage capacity etc., have been provided for to minimise any potential adverse impact.
- The pig farm is located a reasonable distance away from any such areas, as identified in the County Development Plan.
- The proposed development will involve a significant investment in the upgrade of existing structures on the farm to improve the quality of building stock and manure storage capacity associated with the existing development.
- There will be a reduction in sow numbers/intensification on site as a result of the proposed development, which will be carried out in a sustainable manner in compliance with animal welfare and environmental legislation and Cavan Co. Co. requirements and will operate under a licence from the E.P.A.
- The proposed development will improve the housing and manure storage facilities on the farm thus helping optimise manure management practices on the farm.
- All organic fertiliser arising from this farm is to be allocated in accordance with S.I. 31 of 2014.

See Fig.No. 6.10 A1, A2 and A3 for further details of the aforementioned areas.

(B) Amenity Areas

The pig farm site is not located near any of the amenity areas as listed in the Cavan County Development Plan. See Fig. 6.10 B. The closest such area is Lough Sheelin c. 4 km from the farm.

These areas include;

- Forest and other Parks.
- Lakeside Amenity Areas.
- Riverside Amenity Areas

(C) Archaeological Features

According to the Cavan County Development Plan and/or the Archaeological Survey of Ireland there are no areas of Archaeological, Historical, Scientific, Architectural and Cultural interest listed close (i.e. within c. 350-400m) to and/or likely to be adversely impacted by the pig farm site. The pig farm site is not located close to and/or likely to affect any areas as listed in the Archaeological Survey of Ireland. Please refer to Appendix 18 for further details.

(D) Walking Routes / Areas of High Landscape Value / Major Lakes and Lakeside Areas / Scenic Routes / Scenic Viewing Points.

The pig farm site is not located near and/or likely to affect any of the Walking Routes, Areas of High Landscape Value, Major Lakes and Lakeside Areas, Scenic Routes or Scenic Viewing Points as listed in the Cavan County Development Plan. See Fig. 6.10 B and 6.10 C.

Mitigation measures where applicable are discussed in Section 7.10.

6.11 Population / Employment

Traditionally the economy of the county has been driven by agriculture and agriculture related activities, much of our history and cultural identity is connected with farming and rural areas. The most recent Farm Census which is held every 10 years indicated that the number of farms in county Cavan has fallen from 5,491 in 2000 to 5,282 in 2010 while the average farm size has increased from 25.2ha in 2000 to 26.4ha in 2010. It also found that the numbers employed in agriculture had risen from 9,457 in 2000 to 9,899 in 2010. Although agriculture and related process and services have changed significantly over the past, it still remains a very important part of the economy and life of the county and makes a significant contribution to employment within the county. County Cavan remains strong in the dairying, pig and poultry sectors.

It is widely acknowledged that Agriculture will be a crucial driver in restoring Ireland's economic growth and creating employment over the next number of years, particularly in the food processing areas. Cavan County Council will continue to support initiatives to promote agricultural employment in the county whilst the agricultural sector undergoes challenges posed by modernisation, restructuring, market development and the increasing importance of environmental issues.

Cavan is and will remain an agriculturally based economy with a large rural population. Cavan is heavily dependent on agriculture as a source of employment. The county has a highly developed Agri-Food Business, making it one of the largest manufacturing employers in the county.

The pig farm site is located well away from any of the larger settlement areas in the county See Fig. 6.11 A and 6.11B.

Mitigation measures where applicable are discussed in Section 7.11.

6.12 Tourism

Bogue Pigs is very aware of the beneficial impact that tourism is having on the local economy of the Ballyjamesduff and wider Cavan area. The local tourism industry in this area is based primarily around the numerous lakes and rivers in the region and associated ancillary businesses, and in particular Lough Sheelin. Cavan Town has hosted a number of festivals in recent years (including the Fleagh Ceoils) which have been a significant tourist benefit to the area.

The pig farm site itself will not affect the tourism industry in the area due to the standard of management of environmental practices on the farm, it's rural location, the adequacy of screening from public view, and it's location away from any areas frequented by tourists. As the proposed pig farm development is to occur on an existing pig farm site, there will be significantly less potential adverse impact were this to be proposed on a Greenfield site.

Bogue Pigs will try, to the best of their ability, to minimize any potential effects on the local environment and tourism while still maintaining their good relationship with the permanent residents of the area. It is the farmers of the area who have the responsibility of looking after the countryside and maintaining the local environment. Bogue Pigs will inform all customer farmers, of the requirements of the Nitrates directive (S.I. 31 of 2014) in relation to spreading of animal manure's and overall good farming practice so as to at least maintain, if not improve, this balance.

Mitigation measures where applicable are discussed in Section 7.12.

6.13 Cumulative Effects

Within the County;

The density of pigs in Ireland is relatively low, especially in comparison to our E.U. counterparts. This pig farm is located in County Cavan, a county producing one fifth of Ireland's pig meat. While south eastern county Cavan is the most densely populated area of Ireland in terms of its pig population/km², this proposed development seeks to refurbish and replace existing pig farm structures, while reducing the numbers of sows to be housed on-site.

Pig density in Cavan pales in comparison to the concentration of pig production in the more intensive areas of our E.U. neighbours such as Brittany, The Netherlands, Denmark, south western Germany or north eastern Spain. The proximity of the existing developments to the customer farmers lands, and the extent of the requirement for the pig manure produced/to be produced on the farm, will be a significant competitive advantage to the enterprise.

This development will also facilitate a complete upgrade and modernisation of the 2 sites which make up this pig farm and will involve the demolition of a significant proportion of the existing pig housing, which will be replaced by the proposed development. This will help the applicant to comply with his requirements under animal welfare and environmental regulations, while at the same time improving animal performance and efficiency on the farm.

Given the reduction in employment in other sectors of the economy, productive, efficient and sustainable agricultural activities, such as the existing and proposed developments, and the jobs dependant thereon, will be critical to the Irish economy.

This is a significant development in terms of pig farm developments and the level of investment required. It will also be a significant boost to local employment in this area, and the local construction industries.

Within the Local Area;

It has been demonstrated that the proposed development will have little or no adverse cumulative impact within the county. The proposed development will result in a recommencement of activities on this farm albeit at a reduced capacity and in significantly improved structures/facilities. This will be carried out in an environmentally friendly and sustainable manner and in compliance with animal welfare regulations.

A number of measures have been provided for so as to mitigate against any adverse cumulative impact, including the replacement of a significant proportion of the existing pig housing on the farm with modern pig houses. This in conjunction with any requirements placed on the proposed development by Cavan Co. Co. and/or the E.P.A. as a result of planning permission and/or Licence conditions will ensure that this proposed development will have no adverse environmental impact on the immediate area.

It is anticipated that the proposed development will not lead to a negative cumulative impact on the local environment due to the array of mitigation measures proposed and/or implemented, and the overall reduction in the operational capacity of the farm.

Mitigation measures where applicable are discussed in Section 7.13.

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7. DESCRIPTION OF IMPACTS AND MITIGATION MEASURES

7.1. Soil and Subsoil Geology

(a) Site and Immediate area

The proposed development will have a significant effect in the development area, given the nature of the development, i.e. construction of the proposed development. However as the proposed development is to be completed on existing pig farm sites/ brown field areas, this activity will have no significant adverse environmental impact on the environment at large and no adverse impact outside of the site boundary, and thus there are no specific mitigation measures that can be carried out or are deemed to be required. There are no habitats, flora, fauna, protected sites and/or other notable sensitive/valuable features within the boundary of the proposed site that are deemed to require special protection.

(b) Customer farmlands

The customer farmlands areas are eminently suitable for grass/crop production, and environmentally safe for the application of organic fertilisers at the levels permitted by, and in accordance with the requirements of S.I. 31 of 2014.

All fertiliser from this pig farm is to be allocated for use in accordance with S.I. 31 of 2014. All areas that are environmentally sensitive, as detailed in S.I. 31 of 2014, will be removed and/or an adequate buffer-zone applied to them. The principal impacts on the soil arise from,

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

In relation to hydraulic loading, the maximum rate of application proposed at present is c. 40m³ /ha. This rate is minimal in relation to the permeability and infiltration capacity of the soils, which are also more than adequate to percolate the most intensive rainfalls. It is anticipated that there will be no surface run-off due to the omission of steeply sloping lands and strict adherence to the cordon sanitaires and application rates, ground and weather conditions at the time of application.

In relation to chemical loading of the soils, this development is promoting nutrient substitution rather than addition. The organic fertiliser from this farm will satisfy the growth requirements of the grassland/other crops. All organic fertiliser from the existing / proposed pig farm will be allocated for use in accordance with S.I. 31 of 2014, thus avoiding over enrichment of the farmland areas with nutrients.

As part of the assessment of the requirement for organic fertiliser in the area, a number of potential customer farmers have been identified at present. These current potential customer farms cover a net area in excess of 1,800 Ha and can utilise c. 150 % of the organic fertiliser proposed to be produced on this farm.

All specific details in this regard have been completed and are maintained on site for inspection by authorised person(s) in line with the requirements of S.I. 31 of 2014. These details will be updated on a regular basis to include any additional customers.

The copper content of pig slurry is c. 30mg/L; at an application rate of 30m³/ha it is only 8% of that permitted by EC Directive 86/278. There are no apparent negative impacts on the soil from the application of pig manure at the above rates.

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

- In the period 15th Oct – 31st January. (Cavan area)
- In the period 15th Oct – 15th January. (Meath area)
- When soils are waterlogged and when ground/weather conditions are unsuitable.

These are the times of year when the majority of soil structure damage can occur.

7.2 Ground Water

(a) Site and Immediate area

As previously stated the main potential threat to ground water in the vicinity of the pig farm site is due to the storage of a relatively large volume of animal manures on the farm. In order to ensure that the proposed development does not impact on the groundwater adjacent to the pig farm site the following measures have been implemented.

1. The proposed structures will be constructed to Department of Agriculture, Food and The Marine Standards for the construction of farm buildings.
2. All new manure storage structures will be provided with leak detection systems.
3. The proposed development will see the replacement of the majority of the aged structures on the farm with modern pig houses constructed as per point No.'s 1 and 2 above.
4. The farm will operate in accordance with all Welfare and Environmental requirements and in line with the requirements of Cavan Co. Co. and the E.P.A.
5. The provision of a substantial amount of excess slurry storage capacity, well above the 6 month minimum requirement will ensure that organic fertiliser is managed to the highest possible standard on the pig farm.
6. Ground water monitoring on both sites will be carried out on an annual basis in line with E.P.A. requirements.

(b) Customer farmlands

All organic fertiliser from this farm is to be allocated for use in accordance with the Nitrates directive, S.I. 31 of 2014. This legislation which is applicable to all farmers in the country with regard to the application of all organic and inorganic fertilisers places certain requirements on farmers with regard to the application of fertilisers to farmland.

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

- Maximum limits with regard to the application of organic and inorganic fertilisers, thus ensuring that there is no leaching of nutrients through the soil.
- Organic fertiliser or soiled water shall not be applied to land within—
 - (a) 200m of the abstraction point of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 100m³ or more of water per day or serving 500 or more persons,
 - (b) 100m of the abstraction point (other than an abstraction point specified in paragraph (a)) of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m³ or more of water per day or serving 50 or more persons,
 - (c) 25m of any borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified in paragraph (a) or (b),
 - (d) 20m of a lake shoreline,
 - (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.
- Organic fertiliser shall not be applied to land within the prohibited periods as applicable.

Proper manure management on the site and on the customer farmlands as planned will result in little or no impact on the ground water in this area. Bogue Pigs will ensure that all potential customer farmers are aware of the requirements of the nitrates directive with regard to the application of organic fertiliser to their farmland.

7.3 Surface Water

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

(a) Site and Immediate area

As previously stated (Section 6.3(a)) all surface water from this farm will discharge through one or more storm water discharge points. All points will be visually inspected on a weekly basis for any signs of contamination i.e. visual and or odour, and sampled as required by the conditions of any Licence that may be granted to this farm.

The proposed development has been designed so as to minimise the amount of soiled water generated on the farm. The main area associated with the unloading and loading of pigs entering and leaving the proposed houses will be an enclosed concreted area ensuring that all soiled water enters the manure storage tanks while at the same time ensuring that there is no possibility of contaminated storm water entering the clean storm water system.

(b) Customer farmlands

All organic fertiliser from this farm is to be allocated for use in accordance with the Nitrates directive, S.I. 31 of 2014. This legislation which is applicable to all farmers in the country with regard to the application of all organic and inorganic fertilisers places certain requirements on farmers with regard to the application of fertilisers to farmland. The measures referred to in this directive include, but are not limited to the following,

- Maximum limits with regard to the application of organic and inorganic fertilisers, thus ensuring that there is no overland flow of nutrients.
- All fertiliser to be applied in a uniform manner ensuring an even spread.
- Organic fertiliser shall not be applied to land that is waterlogged, flooded or likely to flood, snow covered or frozen, when heavy rain is forecast within 48 hours, or, where the ground slopes steeply and taking into account factors such as proximity to waters, soil condition, ground cover and rainfall, there is a significant risk of causing water pollution.
- Organic fertiliser shall not be applied by the use of an upward facing splash plate or a rain gun.
- Organic fertiliser shall not be applied within 20 m of a lake shoreline.
- Organic fertiliser shall not be applied within 5 m of a surface watercourse.
- Organic fertiliser shall not be applied to land within the prohibited periods as applicable.

Proper manure management on the site and on the customer farmlands as planned will result in little or no impact on the surface water in this area. Bogue Pigs will ensure that all potential customer farmers are aware of the requirements of the nitrates directive with regard to the application of organic fertiliser to their farmland. Independent water monitoring in this catchment is and it is envisaged will be conducted on an on-going basis by Cavan County Council, the E.P.A. and/or the Regional Fisheries Board(s).

Stormwater monitoring on both sites will be carried out on a quarterly basis (and/or as agreed) in line with E.P.A. requirements.

Results (where available) relating to surface water quality for the relevant watercourses in close proximity to the pig farm are detailed in Appendix 10.

7.4. Air

The proposed/existing customer farmlands and pig farm are rurally based. The rural residents are accustomed to agricultural smells such as animal manure spreading, silage and silage effluent spreading. The farm has existed at this site for a long number of years. The rural location of this farm remote from neighbouring dwellings and potential odour sensitive locations, and its long history as a pig farm site, make this an ideal site for the purposes of the existing/proposed development.

The present standard of management is high and will be improved upon as a result of the proposed development. The weaner houses will be continuously washed, disinfected and rested between batches, stocked at optimum levels and adequately ventilated, ensuring minimal odour emissions. Should technical advances be made in odour reduction Bogue Pigs will adopt any economically viable practices. Odours and emissions from modern well-managed pig farms are insignificant outside the confines of buildings and adjoining yards. Since manure will be removed only by vacuum there will be no odours created during manure withdrawal.

In addition to the mitigation measures already referred to, i.e. the use of low trajectory splash plates, and the proper and even allocation of organic fertilisers Bogue Pigs will recommend to all customer farmers that organic fertiliser from this farm should not be applied to lands adjacent to neighbouring dwellings/potential odour sensitive locations. A recommended set back distance of 100 meters from an isolated dwelling and/or 200 meters from a potential odour sensitive location/group of dwellings will be recommended.

The rural setting of the proposed developments, and, location distant from local residences (> c. 200m Drumscredan Site and >c. 300m Finaway site - with the exception of dwelling(s) belonging to the Maguire family) will ensure no effect on human beings.

Please refer to Appendix No. 13 for additional met. Data.

7.5. Climate

The rainfall levels are low in this region; the annual rainfall for Clones Station is 960mm. The average percentage of dry days is 40%, a value to be measured against the national average of 32-48%. The adequacy of storage circa 14 months, proposed, will ensure that slurry is allocated only at a time that is acceptable to the inhabitants of the catchment, and the regulatory authorities, i.e. Cavan County Council and the Department of Agriculture, Food and The Marine.

Large livestock populations and nitrogen inputs to soil generate one-third of all greenhouse gases in Ireland. The amount of *methane* emitted by livestock is a lot higher for ruminants such as cattle and sheep versus non-ruminants such as 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 farmers in the proposed customer farmer list will allocate organic fertiliser in accordance with the provisions of S.I. 31 of 2014, particularly with regard to volumes applied, weather and ground conditions at the time of spreading, splash plate type, etc. This will ensure that emissions generated are kept to an absolute minimum. This farm will have no significant effect on the climate in the area due to the above.

Please refer to Appendix No. 13 for additional met. Data.

7.6 Landscape and Visual Impacts

The farm, and site of the proposed developments are split between two number subject sites located in south east Co. Cavan.

1. The breeding site extending to c. 1.15 Ha. is located in the townland of Drumsruddan. The site access is onto a local third class road, which is in turn c. 2.25 Km from the Regional Route the R 194 between Ballyjamesduff and Granard. The site is located, c. 3 km's west of Ballyjamesduff, and c. 4 Km's east of Kilnaleck.
2. The finisher site extending to c. 2.52 Ha. is located in the townland of Finaway. The site access is onto a local third class road, which is in turn c. 0.5 Km from the Regional Route the R 194 between Ballyjamesduff and Granard. The site is located, c. 3 km's southwest of Ballyjamesduff, and c. 3.5 Km's northeast of Mountnugent.

The applicant has proposed buildings similar in design, nature and finish to the existing buildings on the farm so as to integrate them into the site and with the existing remaining structures. These will be completed in line with the Department of Agriculture, Food and The Marine specifications for Agricultural buildings. Should the local planning authority request more suitable colours for the proposed buildings, Bogue Pigs will be happy to oblige. This development is not located in or likely to adversely impact on any area listed as a scenic viewing point, scenic route or area of high landscape value as listed in the County Cavan Development Plan. See Fig. 6.10D and 6.10E. This farm will have no impact on the landscape or visual/scenic characteristics of this area.

7.7 Noise

The noise from the development will be limited to that arising from the operation of ventilation equipment, blowers on feed delivery trucks and the noise generated by the pigs. Noise monitoring was carried out at a number of pig farms by Bord Na Mona Environmental division on behalf of C.L.W. Environmental Planners Ltd. The results are contained in Appendix 15. Based on the results, as recorded during the monitoring events, it is not considered that noise resulting from activities at this site, at the current stocking rates, will have any significant impact on the local environment. While the proposed development will increase noise on the site in the short term due to construction activities on the farm, this increase will be insignificant outside of the confines of the site boundary.

Environmental noise resulting from activities at the site should not exceed 55dB (A) Leq during daytime (08.00 to 22.00hrs) and 45dB(A) Leq during night-time (22.00 to 08.00hrs). Due to its rural location and the relatively low population density in the area, this pig farm will not create a disturbance or annoyance to anyone. All traffic and movements into and out from the site will predominantly occur during the normal working day.

7.8 Traffic

There will be a temporary increase in the traffic to and from the site due to the proposed development, as a result of the construction activities to be carried out on site. As there will be a reduction in the scale of activity on the farm there will be also be a permanent reduction in the traffic volume to and from the farm, thereafter. The volume of traffic to and from the site can be minimised by optimising load sizes.

Traffic associated with the re-developed farm will be due to;

- Feed deliveries to the site (c. 3 - 4 load/week/site)
- The transport of organic fertiliser/manure from the farm (c. 2 load/day/site [@ 25m³/load] in the spreading season, [i.e. 39 weeks],
- The transport of pigs to/from the farm (c. 2 load between the farms and 3 load/week off-site)
- Transport of materials and staff to and from the farm.
- Ancillary traffic such as vets, advisors, consultants, Waste Disposal etc.

The existing farm operated without any significant adverse impact on the local road network, and without complaint from the local residents and/or the Local Authority. This pig farm has existed at this site for a long numbers of years and there has been no indication of an adverse environmental impact due to the traffic flows.

7.9 Flora and Fauna

(b) Site and immediate area

As previously described the site and adjoining area are agricultural lands that have been managed and developed as such over a long number of years. The area of the proposed development is located on/within an existing agricultural farmyard/pig farm with the lands directly adjoining the Drumsruddan site having been afforested and the majority of the lands adjoining the Finaway site being agricultural grassland.

The majority of the land in the surrounding area is used for agricultural production. The flora and fauna associated with this existing site has developed accordingly as the site has developed and changed over the years from grassland to a pig farm site. The site of the proposed development is intensively managed agricultural land, and/or is located immediately adjacent to the existing pig farm and thus has a poor level of ecological diversity. There are no specific unique habitats on this site that require specific protection.

(b) Customer farmlands

The customer farmland is/will be agricultural land. As governed by the Nitrates directive organic fertiliser from this pig farm can only be applied to agricultural lands where a crop response, be it grassland/tillage/maize etc., is anticipated. The local land for receipt of organic fertiliser from this farm is used for grassland (grazing or cut for silage) and/or tillage land. Traditionally animal manure has been applied to these lands as a source of fertiliser, and to replace energy inefficient inorganic fertiliser.

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

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

7.10. Special Policy Areas

(A) Nationally Designated Environmental Areas

The location of the pig farm site, located away from Nationally Designated Environmental Areas, ensures that this pig farm will not have an adverse environmental impact on same. All customer farmland in receipt of slurry from this farm will allocate organic fertiliser in accordance with S.I. 31 of 2014 so as to ensure that there is no adverse significant impact on any of these areas.

The attached screening report (see Appendix 13) concludes that there should be no negative impact on such areas from activities associated with this development. It will be advised to the customer farmers that organic fertiliser spreading operations should be carried out in accordance with Codes of Good Practice.

(B) Amenity areas

This farm is not located near to any amenity areas as listed in the Cavan County Development Plan. All farmers will be informed that spreading of slurry from this farm should not occur near such areas, especially at weekends or holiday periods.

(C) Archaeological Features

The farm and/or the proposed development is not located close to and/or likely to adversely impact on any archaeological monuments, historic houses, etc. Please refer to Appendix 18 showing position of the pig farm site in relation to areas listed in the Archaeological Survey of Ireland.

(D) Walking Routes / Areas of High Landscape Value / Major Lakes and Lakeside Areas / Scenic Routes / Scenic Viewing Points.

The pig farm site is not located near any of the Walking Routes, Areas of High Landscape Value, Major Lakes and Lakeside Areas, Scenic Routes or Scenic Viewing Points as listed in the Cavan County Development Plan. See Fig. 6.10 D and 6.10 E.

7.11. Population / Employment

This proposed pig farm will lead to the direct permanent employment of 6 - 8 people in this area, in addition to the construction jobs involved in the completion of the proposed works. The proposed development will provide direct employment to the local construction industry. Employment external to the pig farm for building contractors, repairmen, nutritionists, veterinarians, pork processors, hauliers and sales personnel are a spin-off of this development. For each 100 sows, 5 people are employed directly or indirectly in Ireland.

Cavan is heavily dependent on agriculture as a source of employment. This sector, which is in decline nationally and internationally, currently accounts for a significant proportion of those employed in the county. This activity contributes to the employment in rural communities and which therefore help stabilise the rural population.

The local farmers will benefit from low cost fertiliser as a result of the Fertiliser Management Programme. This pig farm is an example of intensive agricultural activity situated in a rural environment. The Cavan County Development Plan encourages the development of appropriate agricultural enterprises; however appropriate activities will be required to have a minimal negative impact on the landscape and physical environment.

The mitigation measures already taken with regard to site design, and the proposed mitigation measures to be taken as part of the planned operation of this farm, in addition to the requirements of Cavan Co. Co. and the Environmental Protection Agency as detailed in the conditions attached to any grant of planning permission or Licence that may issue, will ensure that this farm operates with no negative impact on the landscape and/or physical environment.

7.12. Tourism

Agriculture and tourism are the two most important industries to the economy of this area. A significant proportion of the rest of the economy of the area has arisen as ancillary services/businesses to these two main industries. It is of extreme importance therefore that these two industries can coincide and develop together for the good of everyone in the area.

Once manure spreading activities are carried out in accordance with the Codes of Good Practice and S.I. 31 of 2014, there will be no adverse environmental impact, except for the possible impact of odour. The odour impact associated with the application of animal manures (porcine or bovine) is a transient one that only lasts for 2-3 days. It has been ensured that there will be no allocation of organic fertiliser from this farm to customer farmlands in close proximity to areas frequented by tourists, during holiday periods.

Agriculture is an all year round industry whereas tourism is mainly a seasonal one with the majority of the trade occurring in late spring, through the summer and into early autumn. The pig farm site itself will have no impact on tourism in the area, however, the activity of manure/organic fertiliser spreading needs to be carefully controlled and properly carried out according to all the Codes of Good Practice. Bogue Pigs has identified customer farmers whose lands are away from areas frequented by tourists or areas with a higher population density.

7.13. Cumulative Effects

The pig farm has been operating on this site for in excess of 50 years and activities at this site have not had a significant adverse affect on the local environment, either independently, or, when assessed cumulatively with other activities in the area. The farm which had been well maintained over the years, albeit without any substantial investment in new structures, has now got into a state of dis-repair and requires almost total re-furbishment / re-development, in order to develop it as a modern efficient and welfare compliant pig farm.

While there will be a considerable amount of physical re-development on the farm, it is proposed to consolidate/reduce stock numbers from 1,510 sows to 1,250 Sows. This together with a more efficient layout and operation of the farm, will ensure that the activities on the farm can and will be completed and carried out in a sustainable, welfare and environmentally compliant manner.

It is not expected that the additional agricultural activities existing on this farm (i.e. bovine farming activities on lands at Finaway) will combine to have, or have had a significant cumulative effect on the environment because Bogue Pigs is making all possible efforts to minimise any potential impact. This process will be maintained and upgraded. While organic fertiliser from this pig farm will be allocated to the adjoining lands making up the bovine enterprise this will be carried out in accordance with the requirements of S.I. 31 of 2014.

Bogue Pigs has more customers for pig manure than they can currently and/or will be able to supply. Therefore the proposed development will not have any adverse cumulative impact on the local environment. The provision of the proposed development will help optimise manure management practices on the farm. All manure produced on this farm is and will, **replace** artificial fertiliser that would otherwise have to be used on these customer farmlands. As a result of this the customer farmers would view this as a positive effect as they can avail of a cheaper source of nutrients. Overspreading on lands will not occur because of strict adherence to S.I. 31 of 2014. Bogue Pigs will provide all necessary assistance and advice to all customer farmers in this regard.

All requirements with regard to monitoring/recording that are requested by Cavan County Council as part of the conditions that may be attached to any subsequent grant of planning permission, and /or the Department of Agriculture, Food and The Marine will be complied with in full, in addition to the monitoring provisions already allowed for.

A number of measures have been instigated to mitigate against adverse cumulative impact,

- The proposed development provided for a reduction in numbers on this farm from c. 1,510 sows integrated to 1,250 Sows integrated.
- The site was selected so as to utilise an existing developed area (as opposed to a green field site), screen the pig farm from view and mitigate against any adverse visual impact. Essentially the proposed development will replace the existing structures on the sites, and the overall development foot print may be slightly reduced, by a more optimum layout.

- The proposed development is planned so as to organise the allocation of organic fertiliser to the grass/tillage lands in accordance with S.I. 31 of 2014. The proposed development will not have an adverse cumulative impact as all of the organic fertiliser is proposed to be used by the customer farmers to replace chemical fertiliser.

Due to the significant increases in fertiliser price, and resulting demand in the local area (c. 150 % of proposed organic fertiliser production), it is envisaged additional customers as they arise, may be supplied with fertiliser from the proposed development. In any event all fertiliser allocations will be in line with S.I. 31 of 2014, whereby organic fertiliser will be used to replace chemical fertiliser, thus eliminating the potential for an adverse cumulative impact.

- Excess manure storage facilities are to be provided. Greater than 14 months manure storage facilities are to be provided (minimum 6 months required).
- A proper stormwater/soiled water, separation, collection and drainage system is to be installed as part of the new development so as to prevent any potential adverse impact on surface water quality in the area of the farm.

This in conjunction with any requirements placed on the proposed development by Cavan Co. Co. and/or the E.P.A. as a result of planning permission and/or I.P.P.C. Licence conditions will ensure that this proposed development has no adverse environmental impact on the immediate/wider area.

As previously detailed Bogue Pigs have;

- **identified a significant number of farmers with in excess of 1,800 ha (c. 4,500 acres) of land requiring c. 150 % of the organic fertiliser to be produced on this farm.**

This represents a significant demand in the local area for organic fertiliser to replenish the nutrients and organic matter, which have been removed so as to ensure efficient, sustainable and environmentally friendly agriculture.

- **Proposed a significant amount of mitigation measures to ensure the appropriate management, storage and allocation of the organic fertiliser;**
 - (a) Including 14 months manure storage capacity, as opposed to the 6 months required, to ensure excess storage capacity.
 - (b) Excess customers for the organic fertiliser thus helping to ensure that no customers will use excess.
 - (c) All new manure storage structures to be completed in line with Department of Agriculture, Food and The Marine Specifications (S123) with leak detection systems. These systems will have a monitoring chamber which will be inspected on a weekly basis and recorded in line with I.P.P.C. Licence requirements.
 - (d) Replacing the majority of existing pig houses with modern pig accommodation, and modernising and upgrading 4 No. pig houses which are to remain.
 - (e) All organic fertiliser to be allocated for use in accordance with S.I. 31 of 2014.

- *Located the proposed development on and/or adjacent to an existing pig farm site well away from existing settlements and development clusters.*

This development will have a positive effect on population in the area. The re-developed pig farm will replace the jobs previously employed directly/indirectly by the existing farm. The farm profitability of the customer farmers receiving pig manure is boosted by cheap fertiliser nutrients replacing imported energy demanding inorganic nutrients. This farm will have no adverse effect on tourism in the area of the site due to its rural location and comprehensive management and operational practices.

The agricultural and associated added value industries that have developed on the back of the Irish Agri-Food sector are of significant importance to the local and Irish economy and provides a significant source of employment. Within this the pig industry is a key component. The sector is a significant employer in rural Ireland with over 8,000 people employed. The recently published Food Harvest 2020 report has detailed that there is potential to develop the pig industry in Ireland and increase production by up to 50%.

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8. Interaction of Effects

Human Beings, flora, fauna, soils, water, air, climatic factors, landscape, material assets and cultural heritage.

8.1 Inter-relationships

As a requirement of the European Communities (Environmental Impact Assessment) Amendment Regulations, 1999 (S.I. No. 93 of 1999) 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 development on this pig farm have been considered in detail in the relevant Chapters of the EIS. In order to demonstrate the areas in which significant interactions occur a matrix has been prepared, see figure 8.1 below.

Where any environmental element in the top row of the matrix (the receptor) is likely to be affected in any way by any element in the left most column (the impactor), which contains the list of aspects of the environment likely to be significantly affected by the proposed expansion these have been indicated. A distinction has been made between positive, negative and neutral impacts in this matrix.

Figure 8.1 Matrix Indication Inter-relationships between EIA Factors

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

Neutral	N
Positive	Pos
Negative	Neg
Not Applicable	N/a

8.1.1 Discussion – Positive Impacts

The following details the rationale for concluding that there is a net positive impact as a result of the inter-relationship between the factors listed below.

- Impacts of soil on Human Beings** – the proposed re-development of this existing pig farm will provide for a fully integrated c. 1,250 sow farm wholly contained within the two separate sites. This proposed development will provide a supply of pig manure which is a valuable fertiliser used by customer farmers to offset the cost of purchasing chemical fertiliser. The supply of organic manure will result in a financial gain to the recipient farmers and therefore a net positive impact of the development.
- Impacts of Human Beings on other factors** - The increase in wealth as a result of the proposed project would mean that there will be funds available to facilitate improvements through human endeavor in factors 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.

8.1.2 Discussion – Neutral Impacts

The following details the rationale for concluding that there is a neutral impact as a result of the inter-relationship between the factors listed below.

- Impacts of 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. The area of customer farmland identified is more than sufficient to utilize the resource that is the volume of organic manure generated. The positive impact on soils will potentially see a change in landscape through the improvement in field pastures, this may be viewed as a slightly positive impact overall and any changes will be minimal through compliance with S.I. 31 of 2014. The changes in soil may result in a reduction in diversity of flora & fauna in receiving spreadlands. 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 (albeit a smaller volume of organic fertiliser) all organic fertilizer for use in accordance with S.I. 31 of 2014. This is further mitigated through the provision of appropriate on site storm water drainage system and the provision of sufficient organic manure storage. These mitigating measures are sufficient to ensure that there is no negative impact on Flora & Fauna as a result of its relationship with water.
- **Impacts of Air & Climate on 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 proposed project. 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 developments are to occur on existing pig farm sites. Adequate mitigating measures have been described in this EIS to ensure that this threat does not materialise and thereby ensuring the potential impact is neutral.
- **Impacts of Traffic on Air & Climate, Noise and Human Beings** – The traffic generated as result of the proposal will have some impact on Air & Climate, Noise and Human Beings. However the change in traffic will be minimal and in fact will be reduced in line with the reduction in sow numbers and as a result of more efficient work and logistic practices. It is not anticipated that the proposal will generate levels of additional traffic that would adversely impact on the environment and therefore the impact is considered neutral.
- **Impacts of Flora & Fauna on Landscape & Visual** – A reduction in Flora & Fauna as a result of the proposed development could impact on Landscape & Visual. Many habitat areas such as stands of trees, scrub or hedgerow are important landscape features. These enclose and form our landscape and are critical to retain the unique characteristics of the Cavan landscape. The mitigating measures provided for in this EIS will ensure that no significant landscape features will be altered or removed as a result of this proposal, indeed the proposed landscaping etc. to be completed may actually provide additional habitat areas..
- **Impacts of Human Beings on Traffic** – an increase in prosperity as a result of the proposed development could see some small increase in traffic. This is slight in nature, and will be offset by the reduction in operational traffic associated with the operation of the pig farm. The overall any impact of Human Beings on Traffic is considered neutral.

8.2 Potential Impacts and Mitigation Measures

This section presents the significance of potential impacts following the implementation of mitigation measures. The E.P.A. classify 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 pig farm on the community and its environs. Human beings are the main impact receptor, flora and fauna being the other. The pig farm and its production processes will minimally impact upon the landscape, archaeology, terrestrial, water quality and climate described under the heading natural environment.

Traffic, air quality, noise, tourism and material assets are the factors that affect the community directly. This pig farm with its planned fertiliser substitution programme and its daytime work operation will have no significant impact on the rural community. There are a number of positive features associated with this pig farm:

- Employment in a rural area.
- Encourages customer farmers to utilise a locally produced source of organic fertiliser as opposed to energy inefficient chemical fertiliser.
- Cheap fertiliser for these farmers.

	Category	Potential Environmental Issues/Effects	Potential Impact ~ Site	Potential Impact ~ Customer Lands	Duration	Mitigation	Residual Impact
Natural Environment	Terrestrial						
	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. Consolidation / reduction in scale.	None
		Eutrophication	Positive	Neutral	Long-term	High quality of manure storage and storm water discharge systems. Nutrient balance / organic fertiliser substitution. Organic fertiliser will replace chemical fertiliser. Replacement of aged housing/manure storage facilities with new.	slight
	Fresh Water / Groundwater	Risk of contamination	Positive	Neutral	Long-term	Improved Storage & Routine Monitoring (Site) Fertiliser planning / Buffer Zones / Codes of Good Practice applied (S.I. 31 of 2014, Customer Farmlands). Replacement of aged housing/manure storage facilities with new. Leak detection under all new storage tanks.	Slight
	Landscape	Visual impact	Positive	Neutral	Long-term	Replacing existing dilapidated structures. Site screened by existing farmyard buildings, existing hedgerows and proposed landscaping.	Moderate
	Archaeology	Disturbance of archaeological finds	Neutral	Neutral	Long-term	No archaeological finds in previous site works carried out. Site not located near to, or likely to impact on any archaeological sites. No increase in site footprint.	Neutral
	Climate	Contribution of greenhouse gases	Neutral	Neutral	Long-term	Pigmeat production is less harmful than ruminant production in terms of methane. Organic manure will replace inorganic fertilisers eliminating manufacturing / transport energy use.	None

Human Beings	Agriculture and land use	Fertiliser substitution	Neutral	Positive	Long-term	Improves profitability by reducing costs and improving output. Additional manure storage will help optimize manure usage	None
	Community	Application of manure	Neutral	Neutral	Long-term	Significant requirement for additional organic fertiliser. Low trajectory spreading / limited volumes per Ha / strict adherence to Codes of Practice.	None
		Vermis and pest infestation	Negative	Neutral	Long-term	Control programme practiced on farm.	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 during working hours. Minimise traffic volume by optimising load sizes. Additional Short term peak during construction.	Slight
	Noise	Stock Noise at feeding/moving. Feed deliveries, slurry removal	Neutral	Neutral	Short-term	Stock movement, feed deliveries and slurry extraction only during working hours. Remote Location.	None
	Air	Generation of Odours	Neutral	Neutral	Short-term	Adherence to Code of Good Practice to Reduce Odour Emissions at Spreading. Low spread rates ensure short term odours on customer farmlands. Provision of slatted accommodation and washing between batches. Buffer zones from sensitive dwellings / areas.	None
	Tourism/ Amenities	Landscape	Neutral	Neutral	Long-term	Site location will result in no adverse impact on the environment.	None
		Water Quality	Positive	Neutral	Long-term	Improved Storage / Quality spreading plant / Fertiliser planning / Buffer Zones / Codes of Good Practice applied / Monitoring	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. Long established (> 50 years) pig farm site.	None

9. ENVIRONMENTAL MANAGEMENT PROGRAMME

9.1. Introduction

The applicant will implement and maintain a comprehensive monitoring programme on site to provide maximum protection for the environment. This plan will involve maintaining an organic fertiliser register and visual inspection of all storm water outlets.

Implementing this programme will ensure that there are no negative environmental impacts from the activities associated with the operation of the pig farm. Any recommendations of the planning authority will be complied with in relation to this Environment Management Programme.

9.2. Slurry 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.

9.3. Environmental Monitoring Programme

(i) Work schedule for current fixed structures.

- Pig walkways are to be covered and/or concreted where possible ensuring that there is a separate clean and dirty water system.

(ii) Monitoring fixed structures for the following:

- checking slurry storage facilities where possible for leaks, cracks, etc
- checking soiled water and clean water drainage systems for deterioration, leaks and blockages.

(iv) Monitoring and analysis.

- Storm water emission points to be visually inspected on a weekly basis.

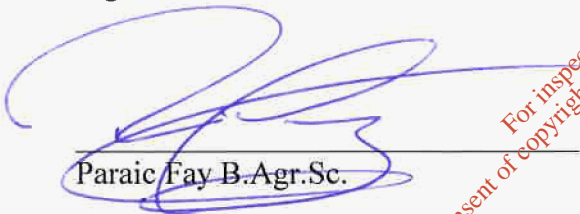
10. Summary

Summary

The proposal as outlined will make a significant positive contribution to the rural economy of Co. Cavan and will, serve to increase employment in the local construction industry, utilise the resource that is the 2 No. existing pig farm sites, and secure the viability of Bogue Pigs's existing farming activities, as well as the wider agricultural industry.

The new farm buildings/structures as proposed will integrate successfully with their surroundings and will not give rise to any significant environmental effects. The granting of permission to the proposed development would strongly accord with the provisions of the County Development Plan. The proposed development will operate under the conditions imposed as part of any grant of planning permission and revised licence issued to this farm and in line with Department of Agriculture, Food and The Marine, Cavan Co. Co. and E.P.A. requirements.

Signed:



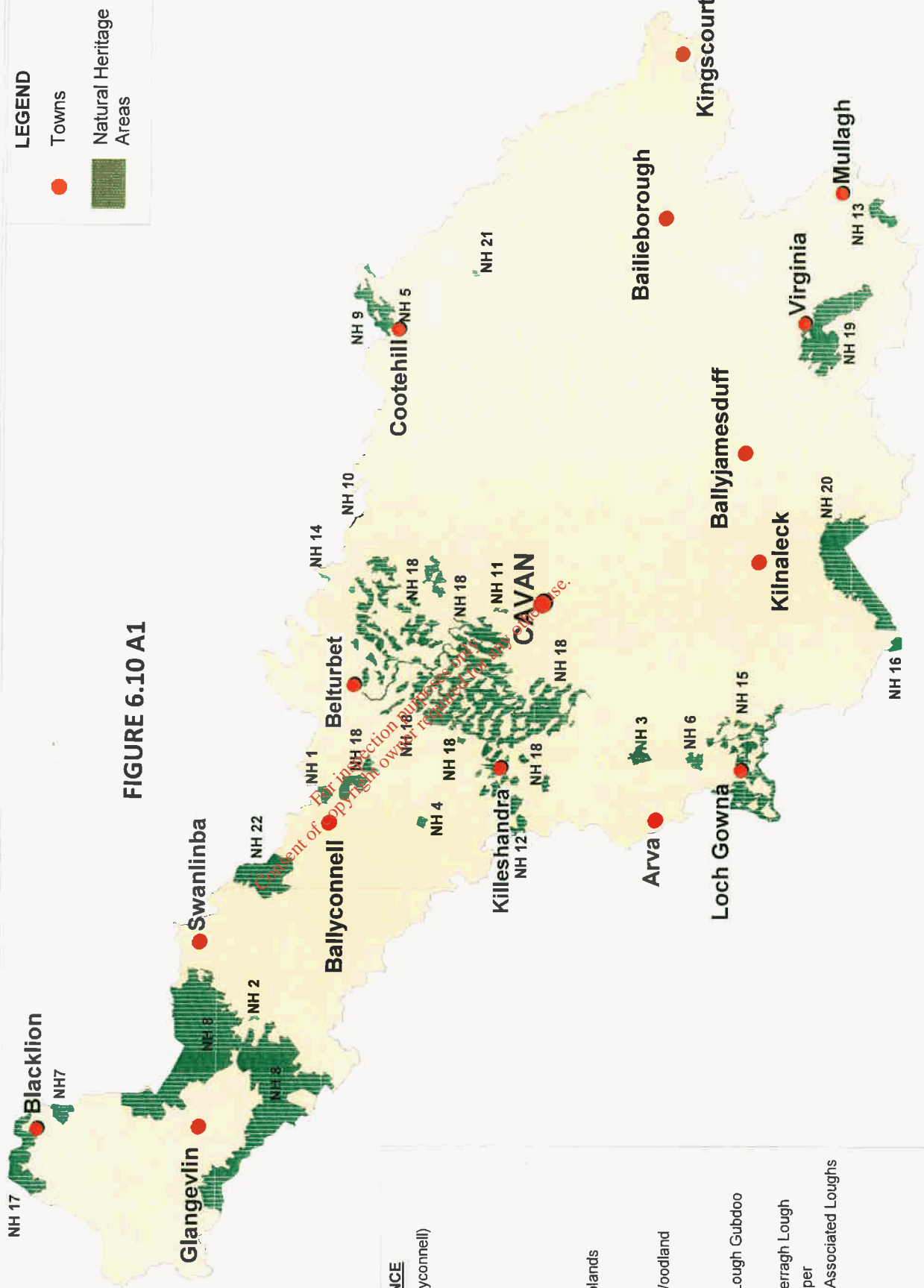
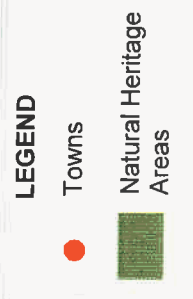
Paraic Fay B.Agr.Sc.

Date

22/07/2014

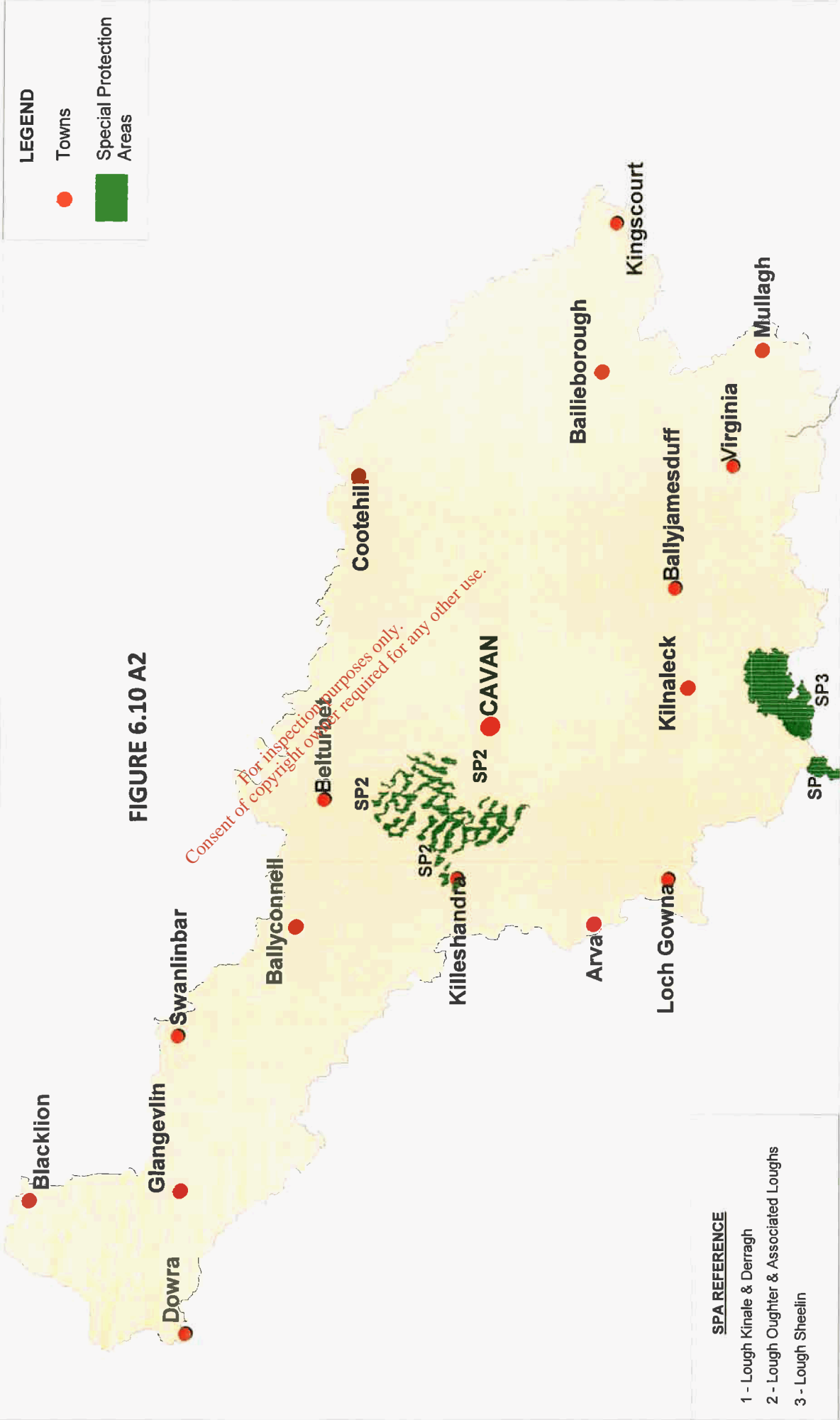
C.L.W. Environmental Planners Ltd.
The Mews,
23 Farnham St.,
Cavan Town,
Co. Cavan.

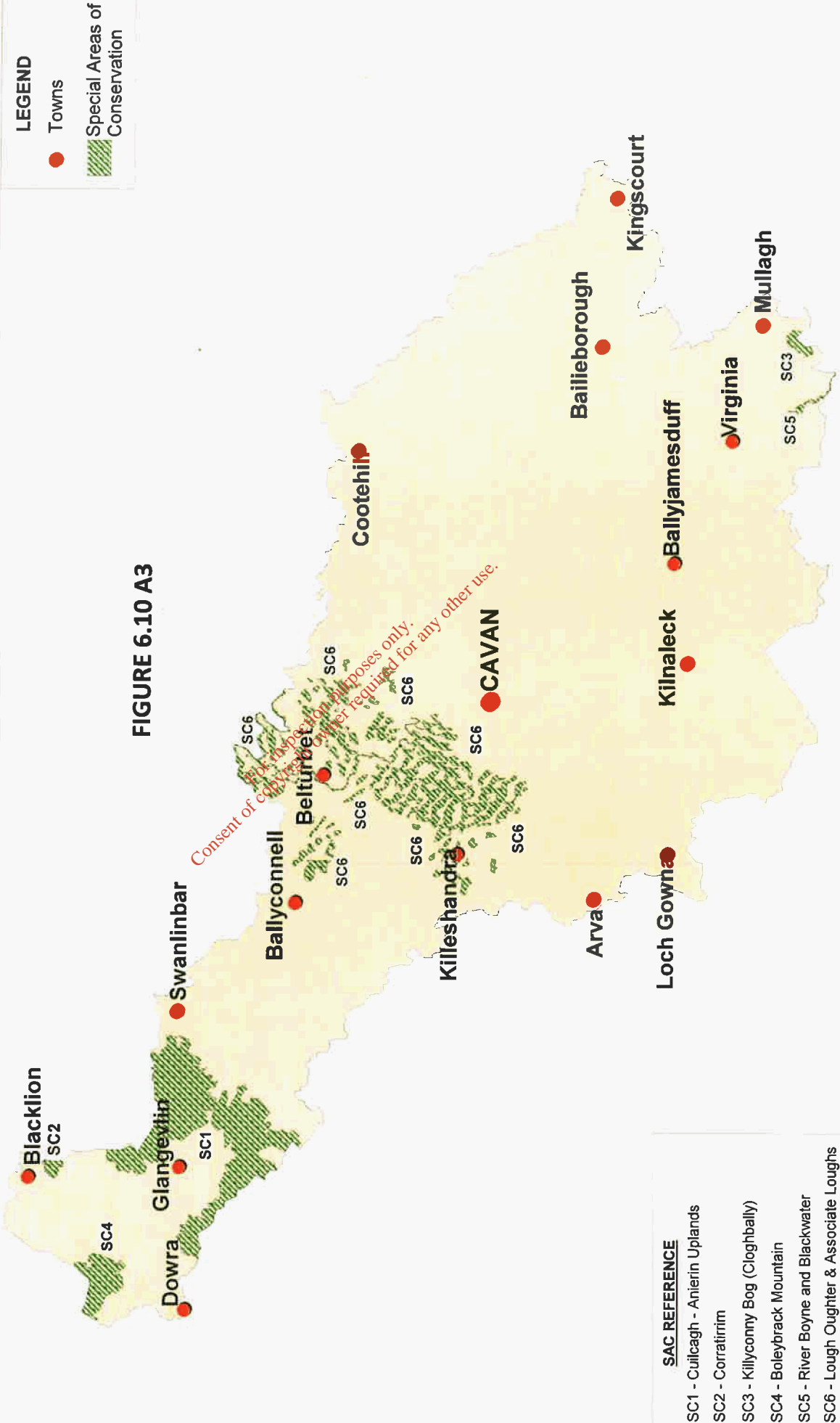
Tel: 049-4371451
Fax: 049-4371447
Email: paraicfay@eircom.net

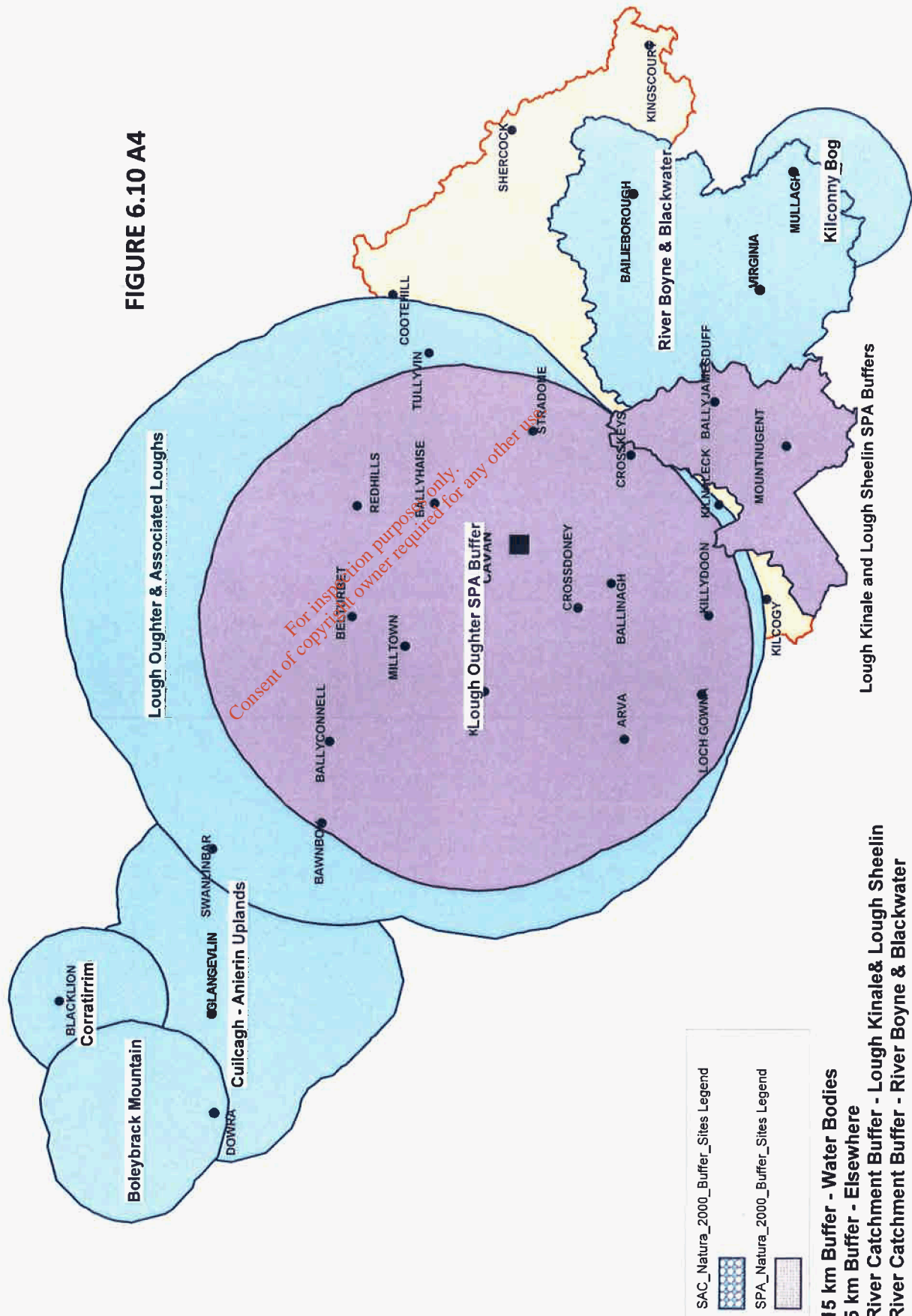


NHA REFERENCE

- NH 1 Annagh Lough (Ballyconnell)
- NH 2 Blackrock's Cross
- NH 3 Bruse Hill
- NH 4 Clonty Lough
- NH 5 Cootehill Church
- NH 6 Cordonaghy Bog
- NH 7 Corratirim
- NH 8 Cuicagh-Anieran Uplands
- NH 9 Dromore Lakes
- NH 10 Drumcor Lough
- NH 11 Drumkeen House Woodland
- NH 12 Glasshouse Lake
- NH 13 Kilconny Bog
- NH 14 Lough Garrow and Lough Gubdoo
- NH 15 Lough Gowra
- NH 16 Lough Kinale and Derragh Lough
- NH 17 Lough MacNea Upper
- NH 18 Lough Oughter and Associated Loughs
- NH 19 Lough Ramor
- NH 20 Lough Sheelin
- NH 21 Maudabawn Marsh
- NH 22 Slieve Rushen Bog







COUNTY CAVAN

FOREST PARKS AND OTHER PARKS
REFERENCE

- P1 - Killykeen Forest Park, Lough Oughter
- P2 - Dun a Ri Forest Park, Kingscourt
- P3 - Con Smith Park, Cavan
- P4 - Bellamont Forest, Cootehill

LAKESIDE AMENITY AREAS
REFERENCE

- L1 - Killykeen Forest Park, Lough Oughter
- L2 - Dun a Ri Forest Park, Kingscourt
- L3 - Annagh Lake, Butlersbridge
- L4 - Rann Point, Lough Oughter
- L5 - Town Lough, Killeshandra
- L6 - Greenlough, Cavan
- L7 - Lavey Strand (N.3)
- L8 - Annafarney, Shercock, Lough Sillan
- L9 - Town Park, Bailieborough Lake
- L10 - Cloone, Lough Gowna
- L11 - Dernaferst, Lough Gowna
- L12 - Kinahard, Lough Sheelin
- L13 - Crover, Lough Sheelin
- L14 - Tonagh, Lough Sheelin
- L15 - Virginia Town, Lough Ramor
- L16 - Old Quay, Corronagh, Lough Ramor
- L17 - Mullagh Lough, Mullagh

RIVERSIDE AMENITY AREAS
REFERENCE

- R1 - Annalee (Butlersbridge Riverside Walk)
- R2 - Annalee (Ballyhaise Amenity Park)
- R3 - Annalee (Corriok Bridge Amenity Park)
- R4 - Shannon, Dowra (Proposed Riverside Park)
- R5 - Erne (Belturbet Riverside Park)
- R6 - Woodford River (Erne-Shannon Canal Link) Towpath Amenity

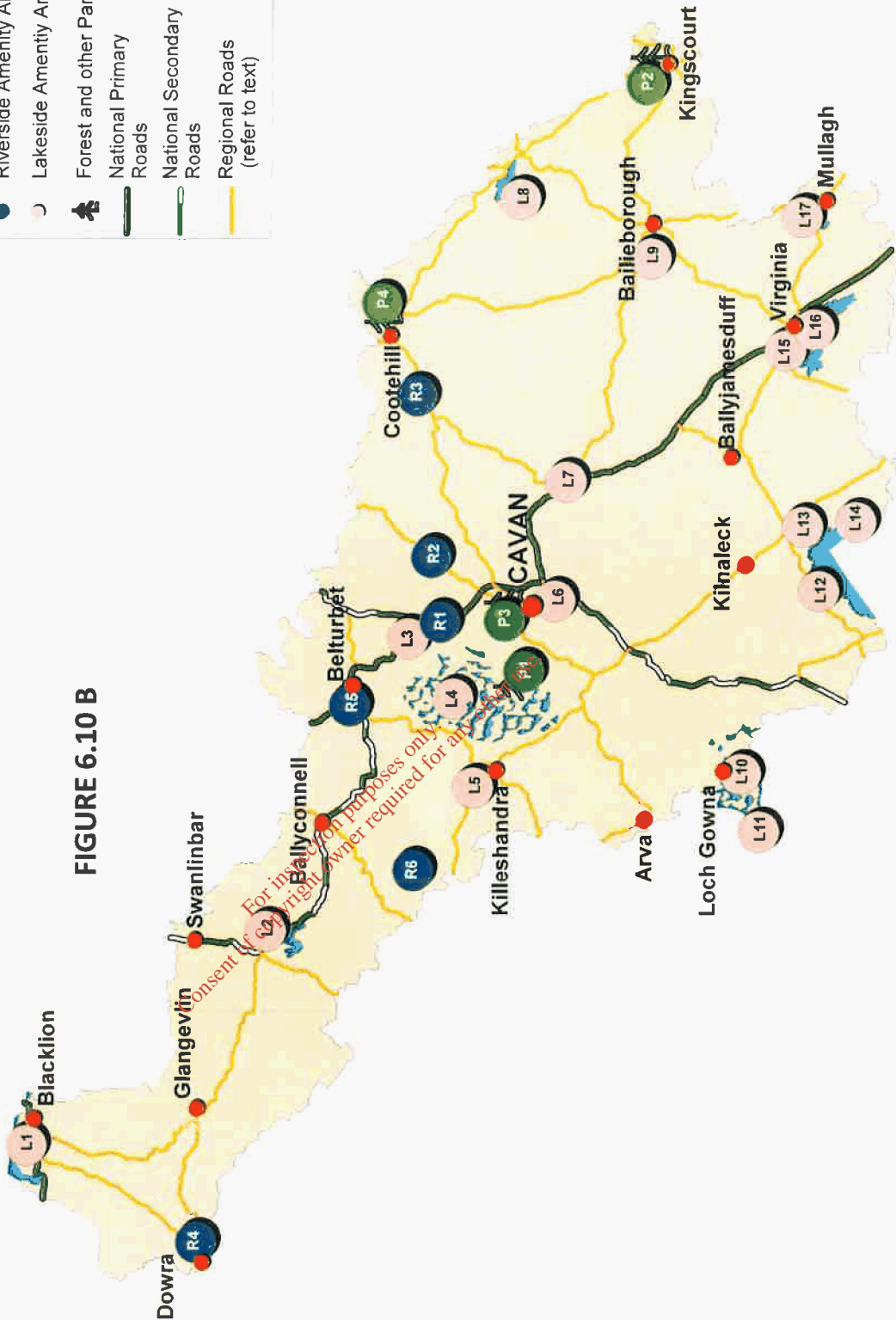
RIVER/LAKESIDE AMENITIES AND PARKS

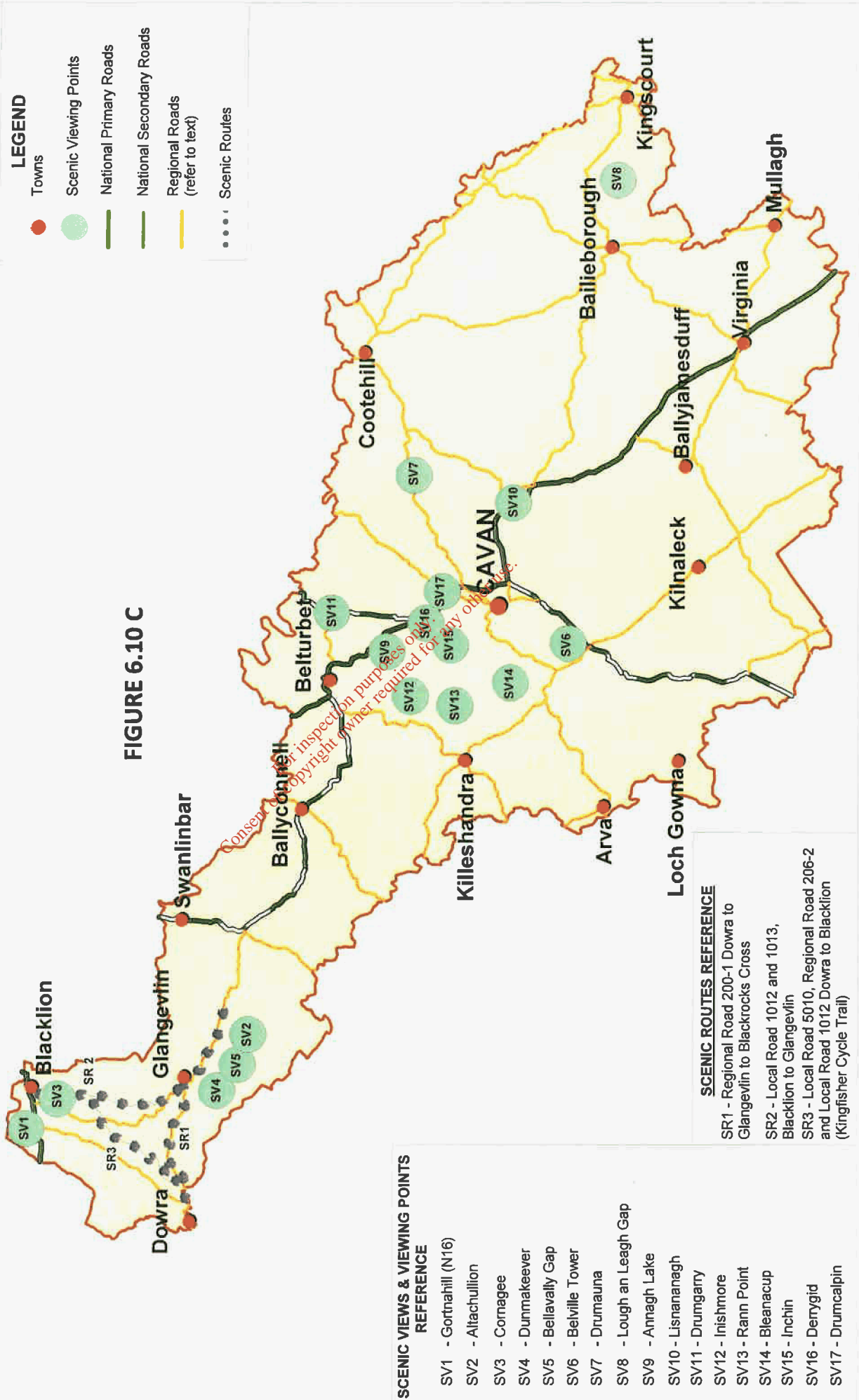
MAP 11

LEGEND

- Towns
- Riverside Amenity Areas
- Lakeside Amenity Areas
- Forest and other Parks
- National Primary Roads
- National Secondary Roads
- Regional Roads (refer to text)

FIGURE 6.10 B





Appendixes

- Appendix No. 1 ~ Customer Farmland Details**
- Appendix No. 2 ~ Site Location Map (1:2,500)**
- Appendix No. 3 ~ Site Layout, Engineers Drawings (Not to scale) Drumsruddan Site**
- Appendix No. 4 ~ Site Layout, Engineers Drawings (Not to scale) Finaway Site**
- Appendix No. 5 ~ Legend for Engineers Drawings Slurry Storage Capacity**
- Appendix No. 6 ~ Location of Potential Customer Farmland Areas**
- Appendix No. 7 ~ Domestic Waste Disposal**
- Appendix No. 8 ~ Veterinary Waste Disposal**
- Appendix No. 9 ~ Animal Tissue Disposal**
- Appendix No. 10 ~ Local Water Quality Survey**
- Appendix No. 11 ~ Construction and Demolition Waste Management plan.**

- Appendix No. 12 ~ Met Data**
- Appendix No. 13 ~ Screening Report - Article 6(3) & (4) of the habitats directive 92 / 43/EEC Appropriate Assessment of a proposed project**
- Appendix No. 14 ~ Extract from General Soil Map of Ireland. Profile of Soil Association No. 14 & 25**
- Appendix No. 15 ~ Details relating to a number of noise surveys carried out on pig farms in the Cavan region.**
- Appendix No. 16 ~ European Communities (Welfare of Farmed Animals) Regulations 2008 – S.I. 14 of 2008**
- Appendix No. 17 ~ Copy of Nitrates Directive – S.I. 31 of 2014**
- Appendix No. 18 ~ Location of Pig Farm site in relation to Archaeological features as outlined in the Archaeological Survey of Ireland.**

APPENDIX No. 1

Customer Farmland Details

*For inspection purposes only.
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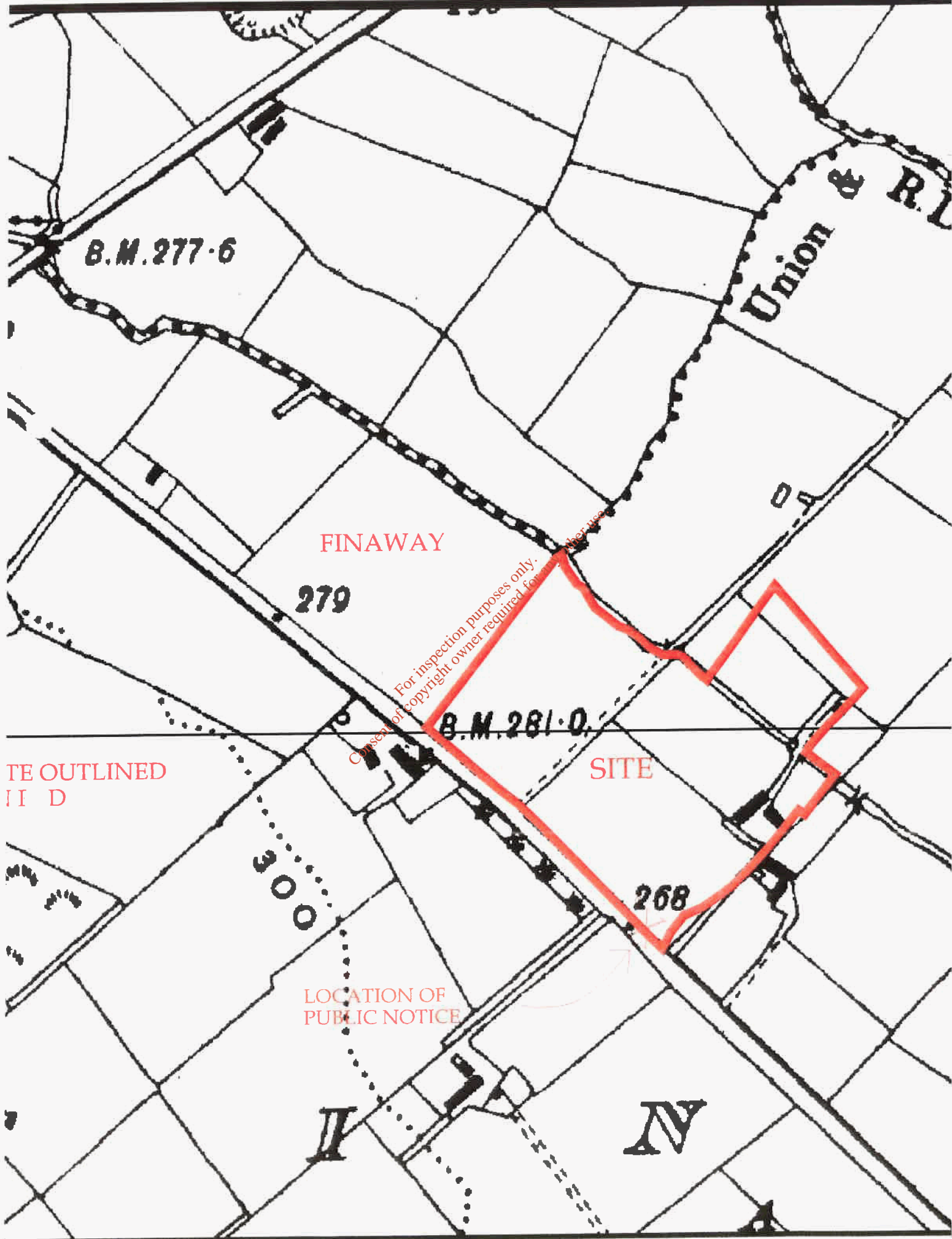
Bogue Pigs - Drumsruddan/Finaway Fertiliser Plan

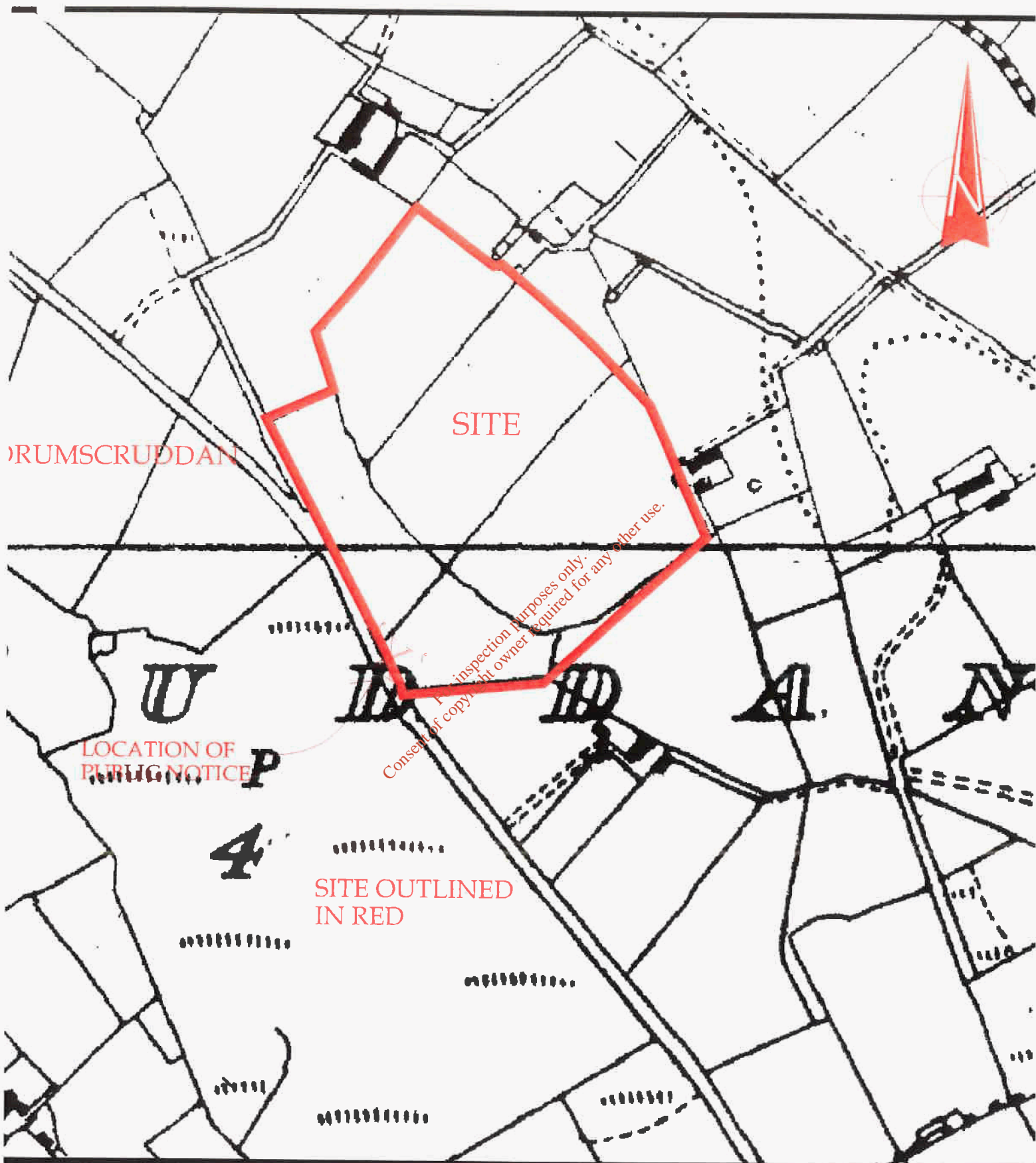
<u>Farm No.</u>	<u>Area (Ha)</u>	<u>Stocking rate kgN/ha</u>	<u>m3 Pig Manure</u>
1	82.93	53.0	805.0
2	53.04	64.0	463.0
3	52.56	146.0	305.0
4	57.33	150.0	274.0
5	85.41	0.0	2,669.0
6	479.6	0.0	14,608.0
7	361.01	0.0	11,774.0
8	115.48	0.0	2,856.0
9	81.24	147.0	455.0
10	67.55	97.0	861.0
11	50.15	118.0	620.0
12	39.898	115.0	511.0
13	19.45	68.0	164.0
14	29.94	103.0	364.0
15	11.48	82.0	81.0
16	74.06	125.0	787.0
17	12.69	46.0	140.0
18	63.44	136.0	510.0
19	33.02	37.0	378.0
20	69.2	56.0	634.0
Total	1,839.48		39,259.0
Estimated production 1250 sows integrated			25870
Capacity			151.7549285

Appendix No. 2

Site Location Map (1:2,500)

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Site Location Map

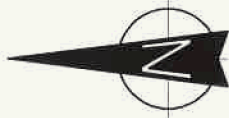
OS. Digital Sheet No.1998

Scale 1:2500

Appendix No. 3

Site Layout, Engineers Drawings (Not to scale) Drumsruddan Site

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- S1 = Proposed Dry Sow
- S2 = Proposed Dry Sow
- S3 = Proposed Farrowing
- S4 = Proposed 1st Stage Weaner
- S5 = Proposed 2nd Stage Weaner
- 1-14 = Demolish Sheds Green Hatch
- 15 = Existing Store
- 16 = Existing Office
- 17 = Existing Office
- 18 = Existing ESB Store
- 19 = Existing Open Excavation

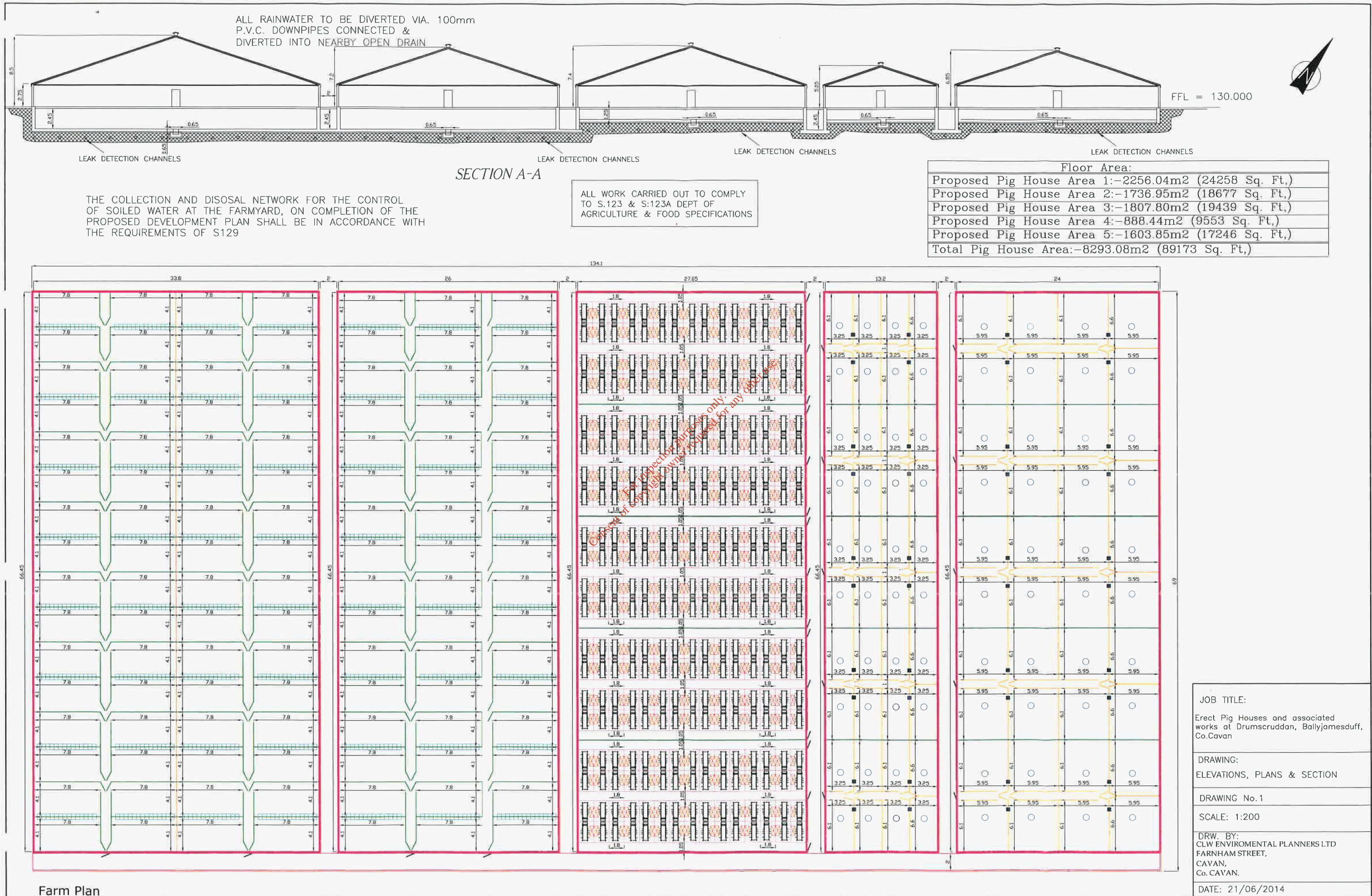
SITE AREA
(Area = 7.79 Acres)
(Area = 3.15 Hectares)

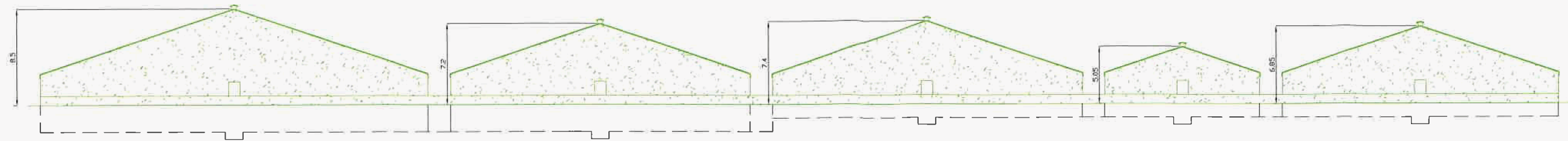
Storage Areas		
S1 - 2266.04m ²	4963m ³	2.4
S2 - 1736.96m ²	3821m ³	2.4
S3 - 1807.80m ²	1808m ³	1.2
S4 - 888.44m ²	888m ³	1.2
S5 - 1603.86m ²	1604m ³	1.2
PV - 287.90m ²	566m ³	2.4

JOB TITLE: Proposed Pig Units & associated works at Drumsgraddan Ballyjamesduff, Co.Cavan
DRAWING: Site Plan & Location Map
Drawing No. 2
O.S Digital No.
SCALE: 1:500
DRW. BY: CLW ENVIRONMENTAL PLANNERS LTD FARNHAM STREET, CAVAN, Co. CAVAN
DATE: 21/06/2014

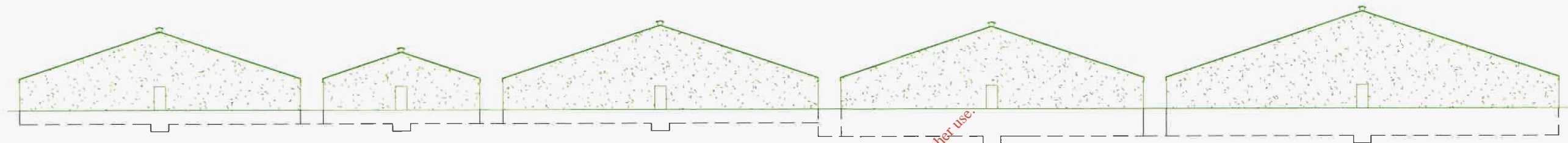
NOTE:
SITE OUTLINED
IN RED

Site Plan
Scale: 1/500.

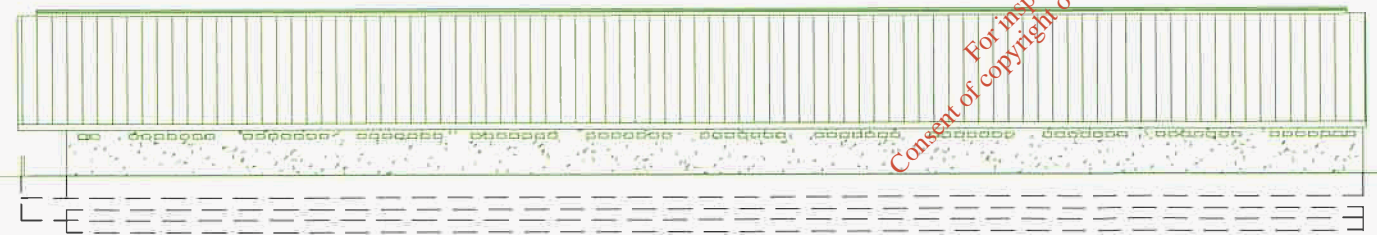




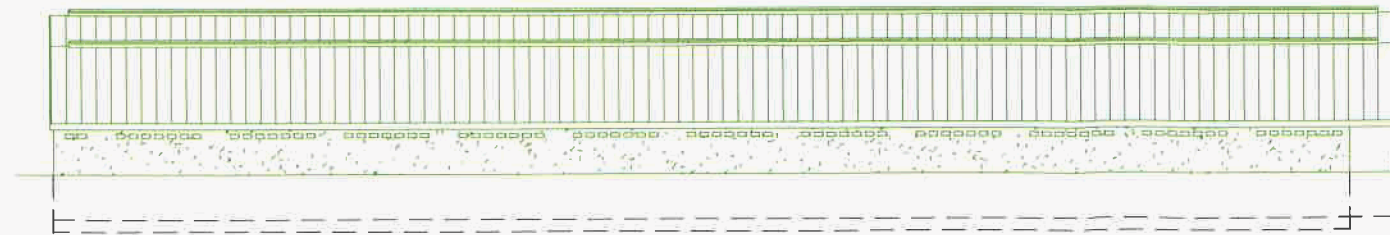
FRONT ELEVATION



REAR ELEVATION



SIDE ELEVATION



SIDE ELEVATION

THE COLLECTION AND DISPOSAL NETWORK FOR THE CONTROL OF SOILED WATER AT THE FARMYARD, ON COMPLETION OF THE PROPOSED DEVELOPMENT PLAN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF S129

ALL RAINWATER TO BE DIVERTED VIA. 100mm P.V.C. DOWNPIPES CONNECTED & DIVERTED INTO NEARBY OPEN DRAIN

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

Floor Area:
Proposed Pig House Area 1:-2256.04m2 (24258 Sq. Ft.)
Proposed Pig House Area 2:-1736.95m2 (18677 Sq. Ft.)
Proposed Pig House Area 3:-1807.80m2 (19439 Sq. Ft.)
Proposed Pig House Area 4:-888.44m2 (9553 Sq. Ft.)
Proposed Pig House Area 5:-1603.85m2 (17246 Sq. Ft.)
Total Pig House Area:-8293.08m2 (89173 Sq. Ft.)

JOB TITLE:

Erect Pig Houses and associated works at Drumscredan, Ballyjamesduff, Co Cavan

DRAWING:

ELEVATIONS, PLANS & SECTION

DRAWING No.1

SCALE: 1:200

DRW. BY:
CLW ENVIRONMENTAL PLANNERS LTD
FARNHAM STREET,
CAVAN,
Co. CAVAN.

DATE: 21/06/2014

Floor Level 130.000

Datum 128.000m

No Vertical Exageration

Chainage	6.613	12.958	18.979	32.864	39.326	55.446	59.244	60.393	65.748	90.059	93.953	100.122	112.148	146.100
NEW Elevation	128.436	128.409	128.364	128.439	129.356	130.694	131.159	131.140	131.104	130.890	130.887	130.552	130.006	129.237

SECTION A-A

Not to Scale

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JOB TITLE:	Erect Pig Houses and associated works at Finaway, Ballyjamesduff, Co.Cavan
DRAWING:	Section Through Site
Drawing No.8	
SCALE: 1:250	
DRW. BY:	CLW ENVIROMENTAL PLANNERS LTD FARNHAM STREET, CAVAN, Co. CAVAN.
DATE: 28/06/2014	

Appendix No. 4

Site Layout, Engineers Drawings (Not to scale) Finaway Site

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	Storage Area	Area
F1-1573.89m2	3445m3	2.4
F2-1573.89m2	3445m3	2.4
F3-1573.89m2	3445m3	2.4
F4-1573.89m2	3445m3	2.4
F5-1573.89m2	3445m3	2.4
F6-1573.89m2	3445m3	2.4
F11-530.16m2	1272m3	2.4
F12-108.95m2	281m3	2.4
F13-157.10m2	377m3	2.4
F14-154.83m2	371m3	2.4

JOB TITLE:	Proposed Pig Units & associated works at Finaway, Ballyjamesduff, Co.Cavan
DRAWING:	Site Plan & Location Map
Drawing No. 2	
O.S. Digital No. 1998 & 2057	
SCALE: 1:500	
DRW. BY:	CLW ENVIRONMENTAL PLANNERS LTD FARNHAM STREET, CAVAN, Co. CAVAN.
DATE: 21/06/2014	



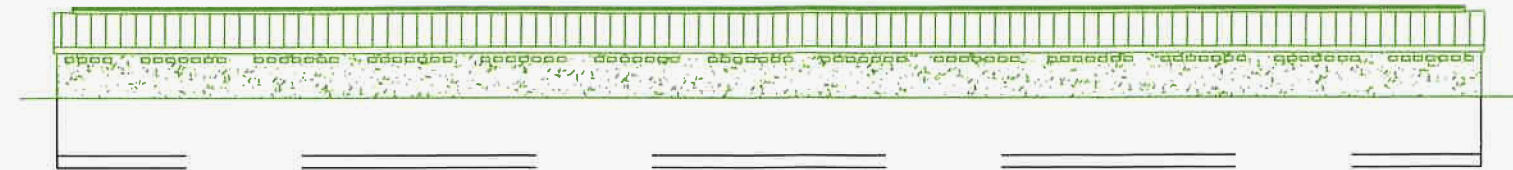
FRONT ELEVATION



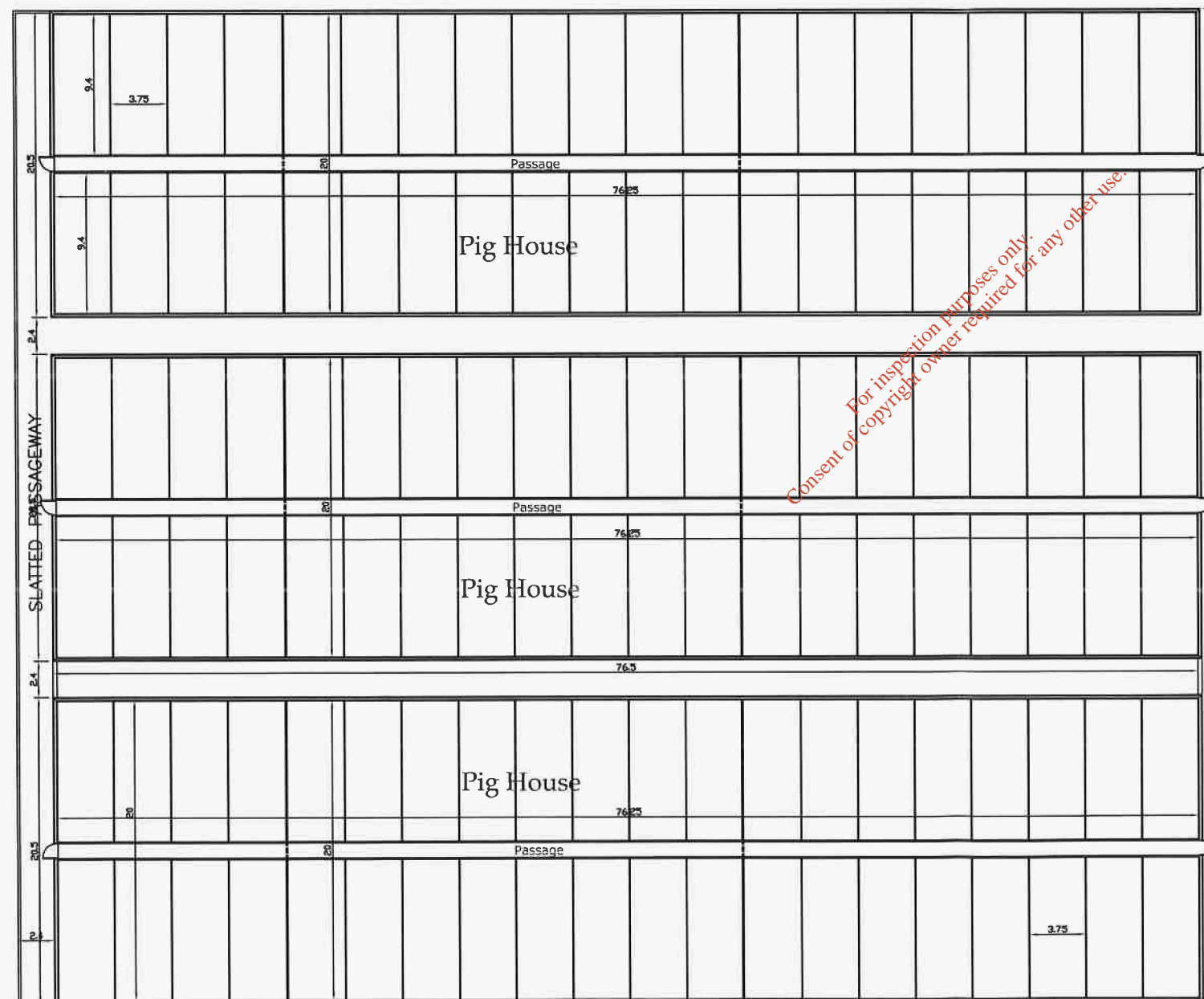
REAR ELEVATION



SIDE ELEVATION

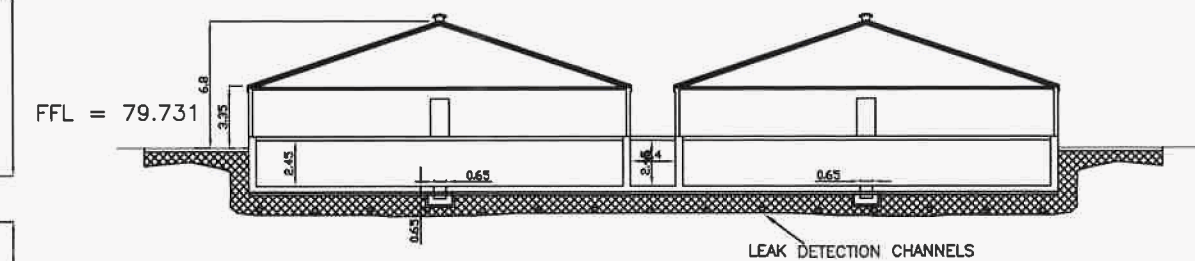


SIDE ELEVATION



FLOOR PLAN

Floor Area:	
Proposed Pig House Area 1:-	1573.89m2 (16923 Sq. Ft.)
Proposed Pig House Area 2:-	1573.89m2 (16923 Sq. Ft.)
Proposed Pig House Area 3:-	1573.89m2 (16923 Sq. Ft.)
Total Pig House Area:-	4721.67m2 (50771 Sq. Ft.)



SECTION A-A

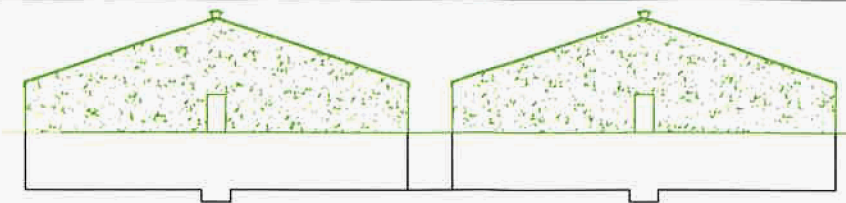
THE COLLECTION AND DISPOSAL NETWORK FOR THE CONTROL OF SOILED WATER AT THE FARMYARD, ON COMPLETION OF THE PROPOSED DEVELOPMENT PLAN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF S129

ALL RAINWATER TO BE DIVERTED VIA. 100mm P.V.C. DOWNPIPES CONNECTED & DIVERTED INTO NEARBY OPEN DRAIN

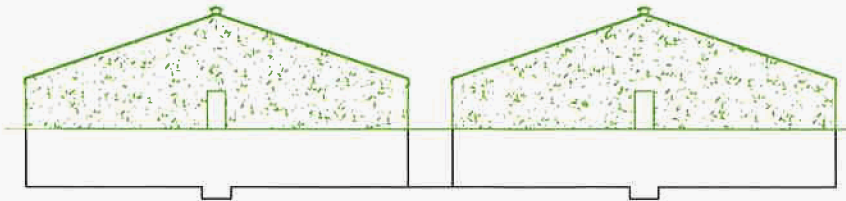
ALL WORK CARRIED OUT TO COMPLY TO S.123 & S.123A DEPT OF AGRICULTURE & FOOD SPECIFICATIONS



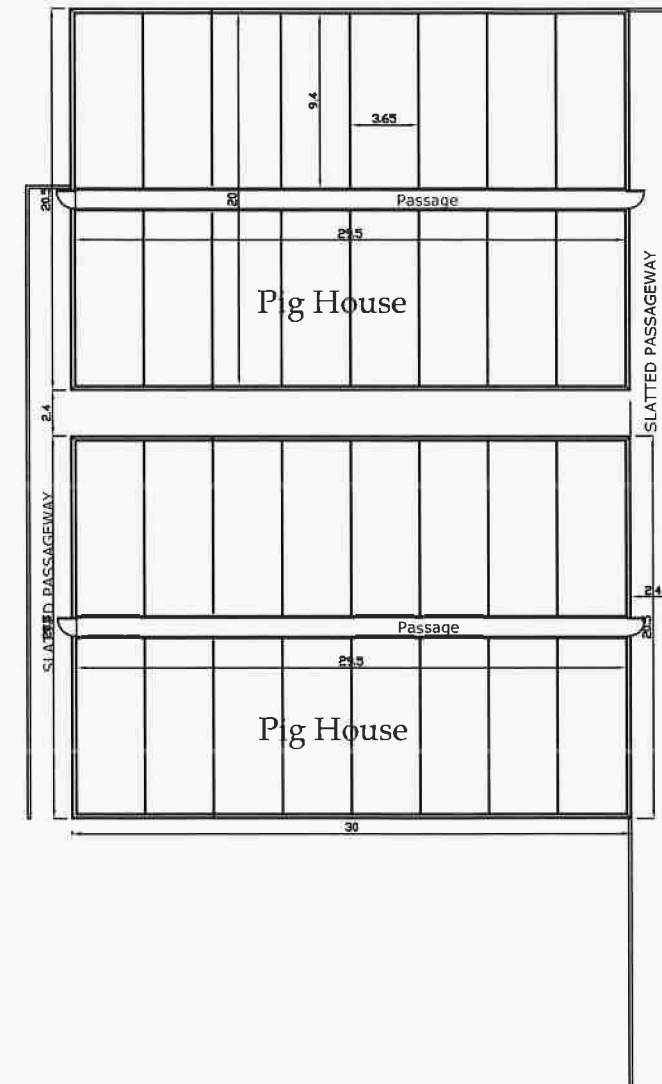
JOB TITLE:	Erect Pig Houses and associated works at Finaway, Ballyjamesduff, Co.Cavan
DRAWING:	ELEVATIONS, PLANS & SECTION
DRAWING No.1	
SCALE:	1:200
DRW. BY:	CLW ENVIROMENTAL PLANNERS LTD FARNHAM STREET, CAYAN, Co. CAVAN.
DATE:	21/06/2014



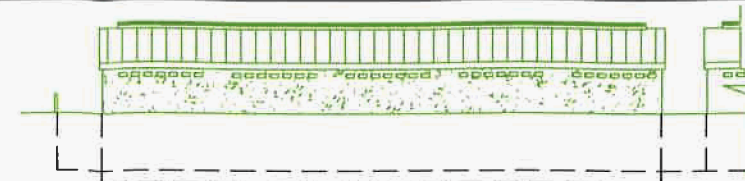
FRONT ELEVATION



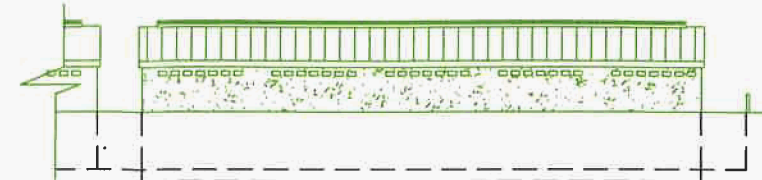
REAR ELEVATION



FLOOR PLAN

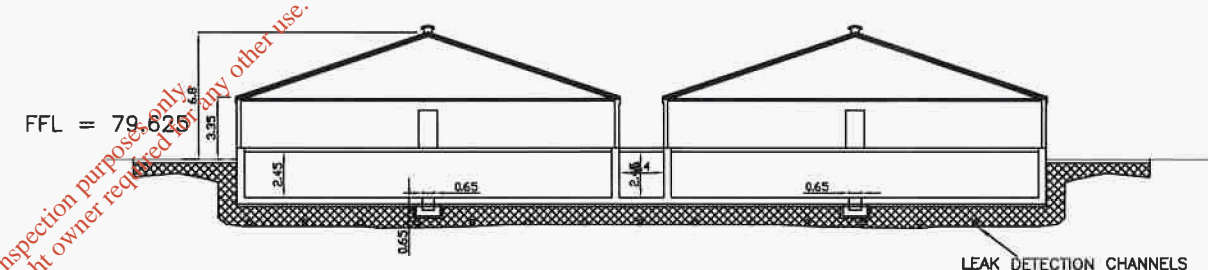


SIDE ELEVATION



SIDE ELEVATION

Existing Buildings



SECTION A-A

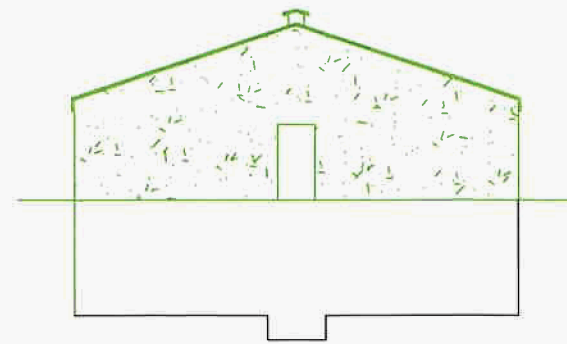
THE COLLECTION AND DISPOSAL NETWORK FOR THE CONTROL OF SOILED WATER AT THE FARMYARD, ON COMPLETION OF THE PROPOSED DEVELOPMENT PLAN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF S129

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

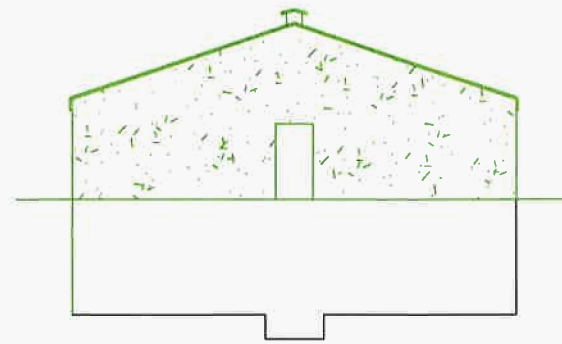
ALL RAINWATER TO BE DIVERTED VIA. 100mm P.V.C. DOWNPIPES CONNECTED & DIVERTED INTO NEARBY OPEN DRAIN

Floor Area:
Proposed Pig House Area 1:-589.60m2 (6340 Sq. Ft.)
Proposed Pig House Area 2:-589.60m2 (6340 Sq. Ft.)
Total Pig House Area:-1179.20m2 (12680 Sq. Ft.)

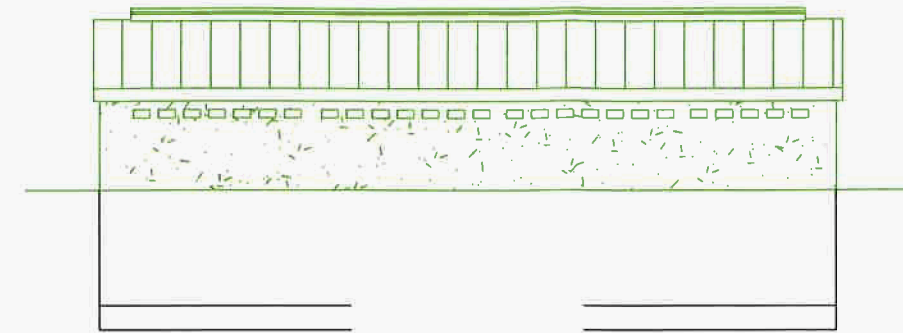
JOB TITLE: Erect Pig Houses and associated works at Finaway, Ballyjamesduff, Co.Cavan
DRAWING: ELEVATIONS, PLANS & SECTION
DRAWING No.1
SCALE: 1:200
DRW. BY: CLW ENVIROMENTAL PLANNERS LTD FARNHAM STREET, CAVAN, Co. CAVAN.
DATE: 21/06/2014



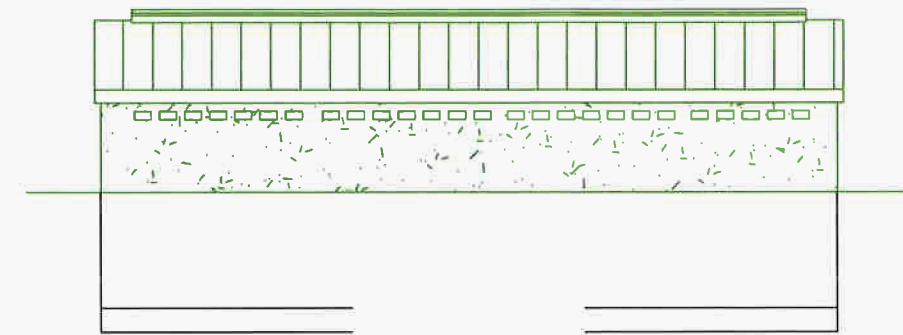
FRONT ELEVATION



REAR ELEVATION



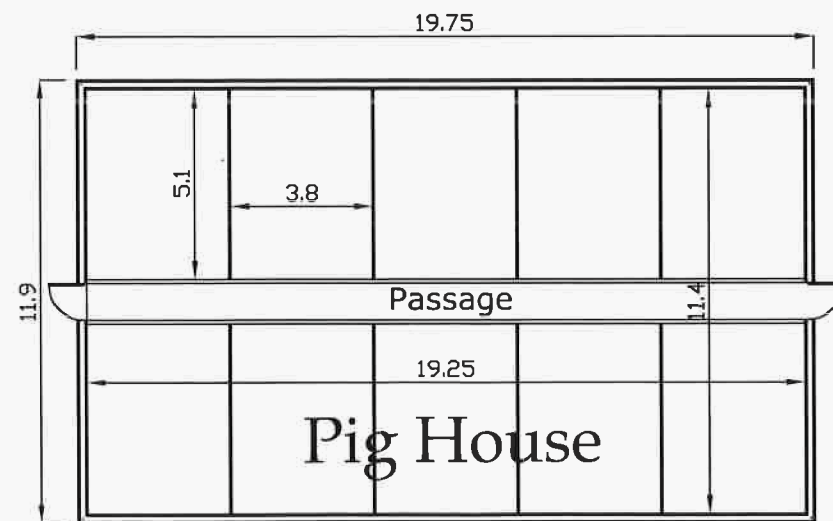
SIDE ELEVATION



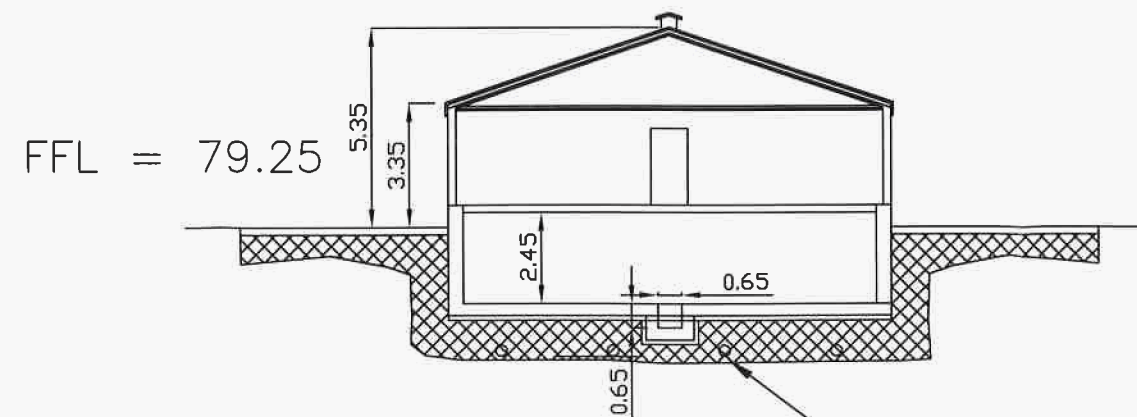
SIDE ELEVATION



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PLAN



SECTION A-A

JOB TITLE:

Erect Pig Houses and associated works at Finaway, Ballyjamesduff, Co.Cavan

DRAWING:

ELEVATIONS, PLANS & SECTION

DRAWING No.1

SCALE: 1:100

DRW. BY:

CLW ENVIROMENTAL PLANNERS LTD
FARNHAM STREET,
CAVAN,
Co. CAVAN.

DATE: 21/06/2014



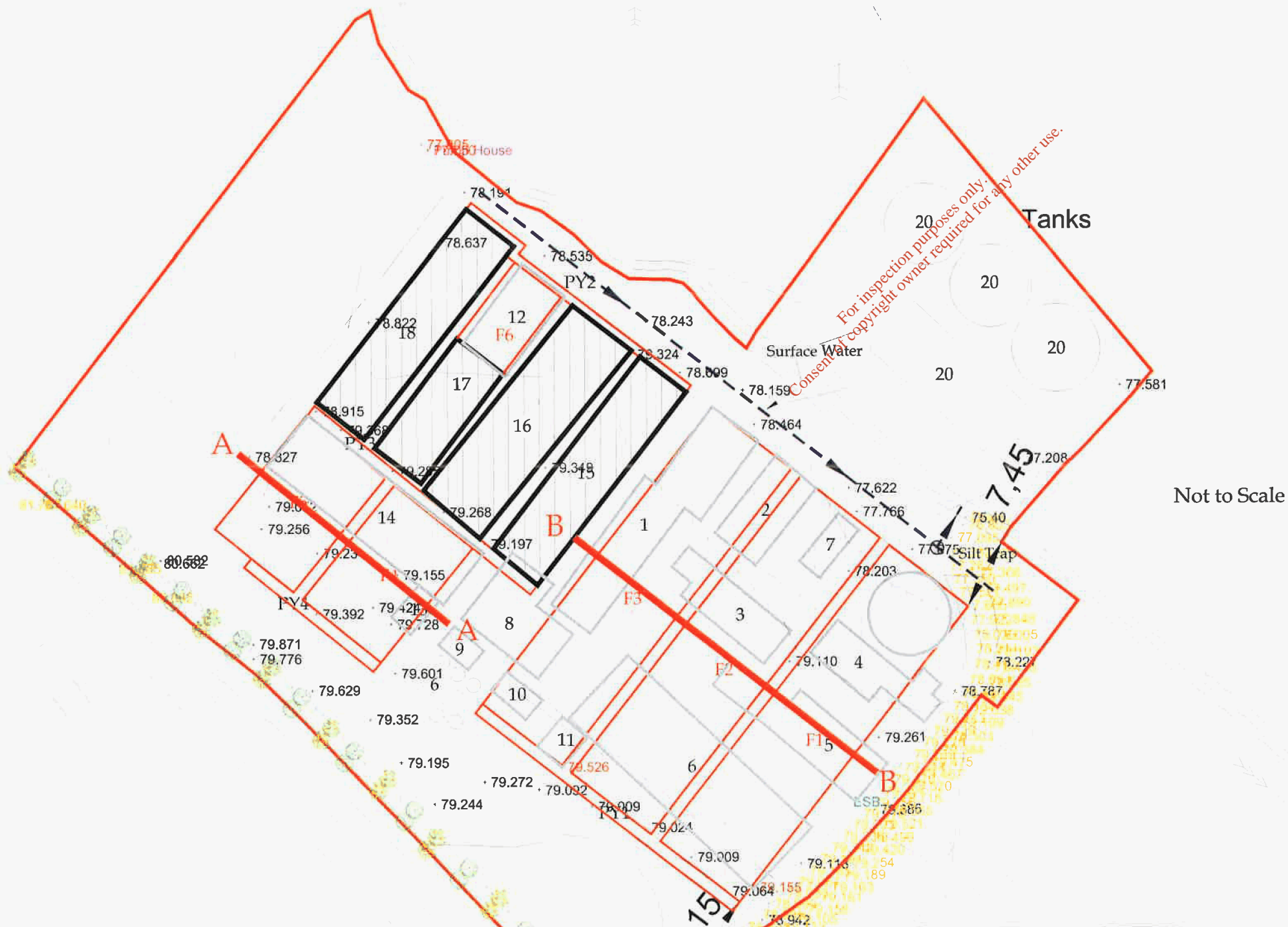
SF2 Elevation		Chainage	
79.064	0.000		
78.892	1.566		
78.877	2.176		
78.862	3.107		
78.861	3.624		
79.119	12.043		
79.269	22.213		
79.247	25.668		
79.167	38.432		
79.188	40.806		
79.223	41.411		
79.565	47.574		
79.413	52.012		
79.364	55.375		

SECTION A-A

Floor Level 79.731

	Station	Elevation	Chainage	Remarks
Datum	74.000m			
No Vertical Exaggeration				
Chainage	0.000		27.195	
SF2 Elevation	79.242			
		79.141		
		79.095	48.264	
		79.097	49.845	
		79.094	51.608	
		79.159	58.394	
		79.197	62.199	
		79.279	75.346	
		79.408	78.300	

SECTION B-B



JOB TITLE:

Erect Pig Houses and associated works at Drumscredan, Ballyjamesduff, Co Cavan

DRAWING:

Section Through Site

Drawing No.8

SCALE: 1:250

DRW. BY:

CLW ENVIROMENTAL PLANNERS LTD
FARNHAM STREET,
CAVAN,
Co. CAVAN.

DATE: 28/06/2014

Appendix No. 5

Legend for Engineers Drawings Slurry Storage Capacity

*For inspection purposes only.
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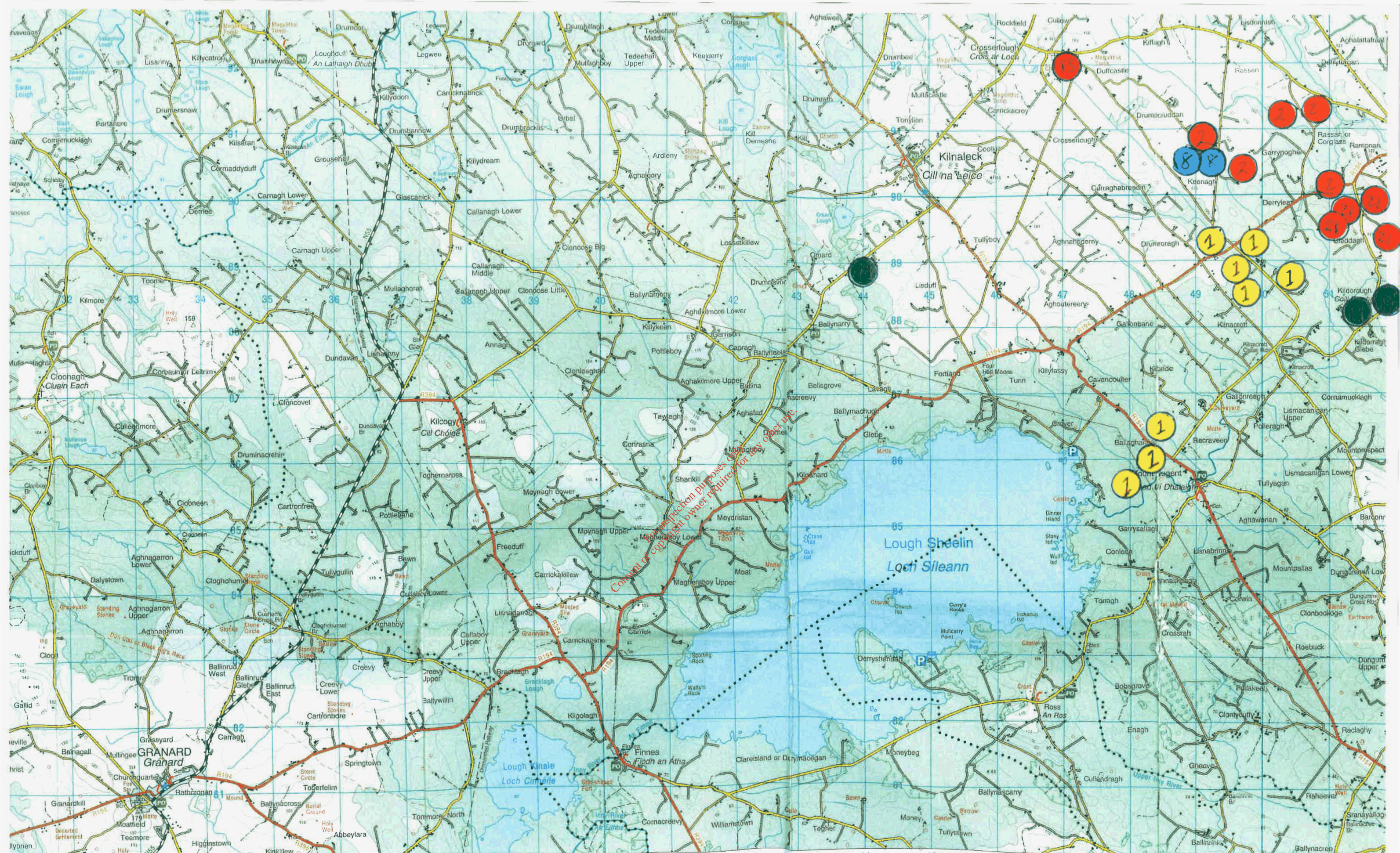
Environmental

Slurry Storage Capacity					
House Ref. No.	Gross Slurry Storage (M ³)	Overall Tank Depth	Freeboard m	Net Slurry Storage (m3)	
S1	5414.496	2.40	0.2	4,963	
S2	4168.68	2.40	0.2	3,821	
S3	2,169.36	1.20	0.2	1,808	
S4	1,066.13	1.20	0.2	888	
S5	1,924.62	1.20	0.2	1,604	
PY	642.96	2.40	0.2	589	
F1	3,777.34	2.40	0.2	3,463	
F2	3,777.34	2.40	0.2	3,463	
F3	3,777.34	2.40	0.2	3,463	
F4	1,414.78	2.40	0.2	1,297	
F5	1,414.78	2.40	0.2	1,297	
F12	501.60	2.40	0.2	460	
F15	98.00	1.00	0.2	78	
F16	98.00	1.00	0.2	78	
F17	98.00	1.00	0.2	78	
F18	98.00	1.00	0.2	78	
Slatted Passageways	2,282.02	2.40	0.2	2,092	
Total	32723.42			29,520.73	
Proposed Annual slurry Production =				25,870.00	
Proposed Available Slurry Storage Capacity (months) =				13.69	
Note 1: A freeboard allowance of 200mm on roofed slatted tanks and 300mm on open tanks in accordance with S.I. 31 of 2014, has been allowed.					

Appendix No. 6

Location of Customer Farmland Areas

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Co. WESTMEATH
Co. na hIarmhí
20'

Co. MEATH
Co. na Mí
Long. 07° 15'W

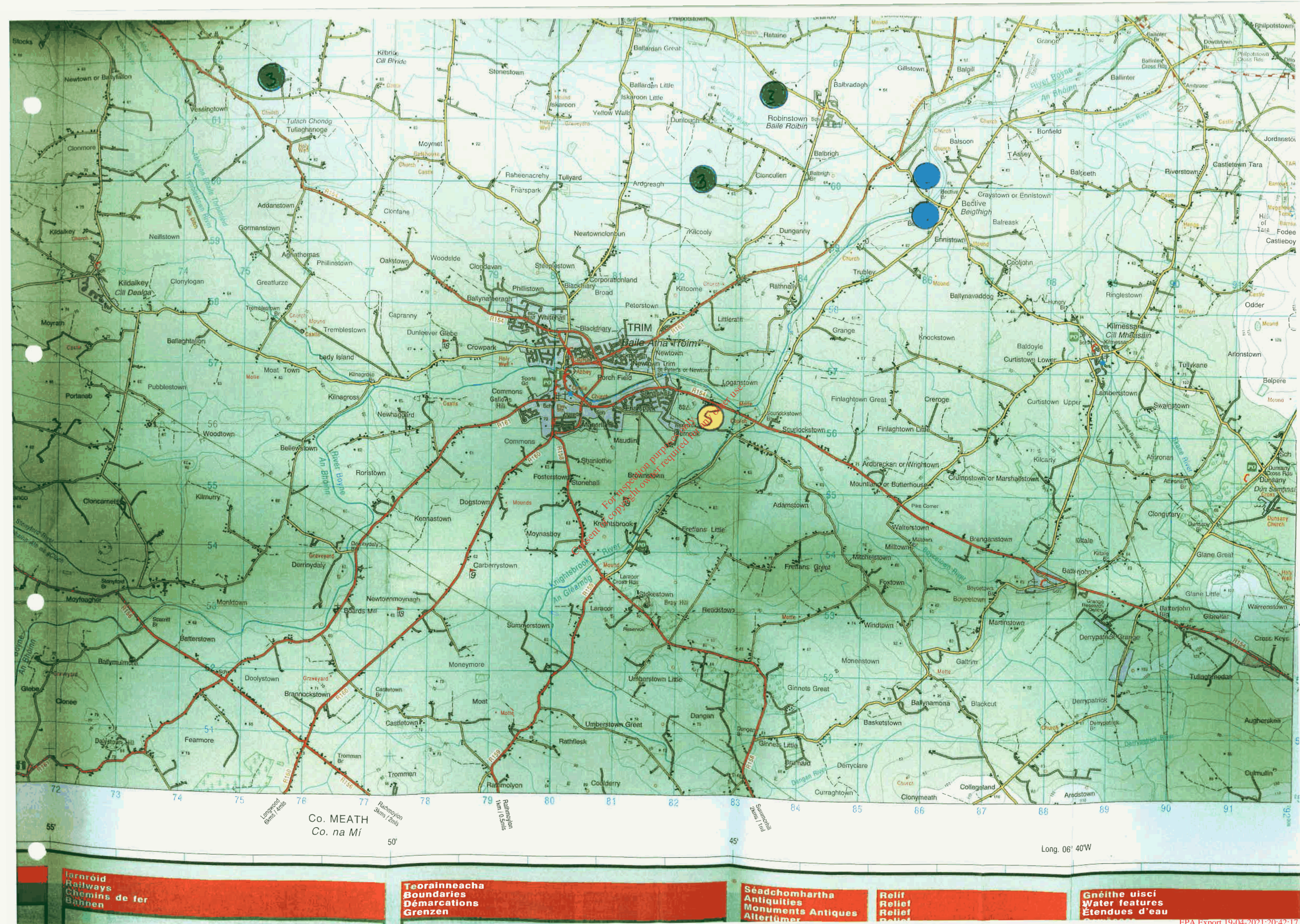
Iarnróid
Railways
Chemins de fer

Teorainneacha
Boundaries
Démarcations

Séadchomhartha
Antiquities
Monuments Antiques
Altstätten

Relif
Relief
Relief
Relief

Gnólthe uisce
Water features
Étendues d'eau
Gewässer



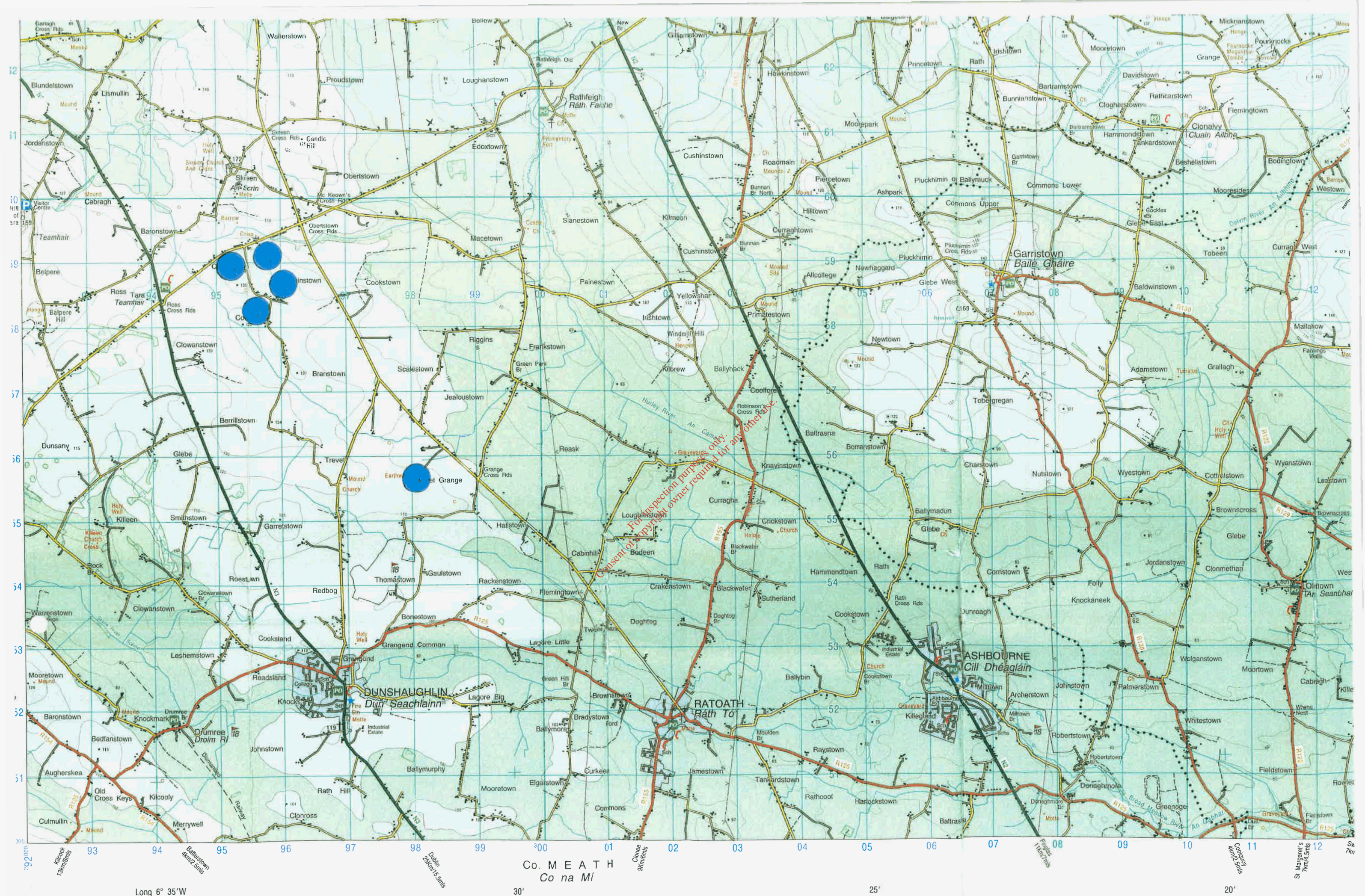
Iarnróid
Railways
Chemins de fer
Bahnen

Teorainneacha
Boundaries
Démarcations
Grenzen

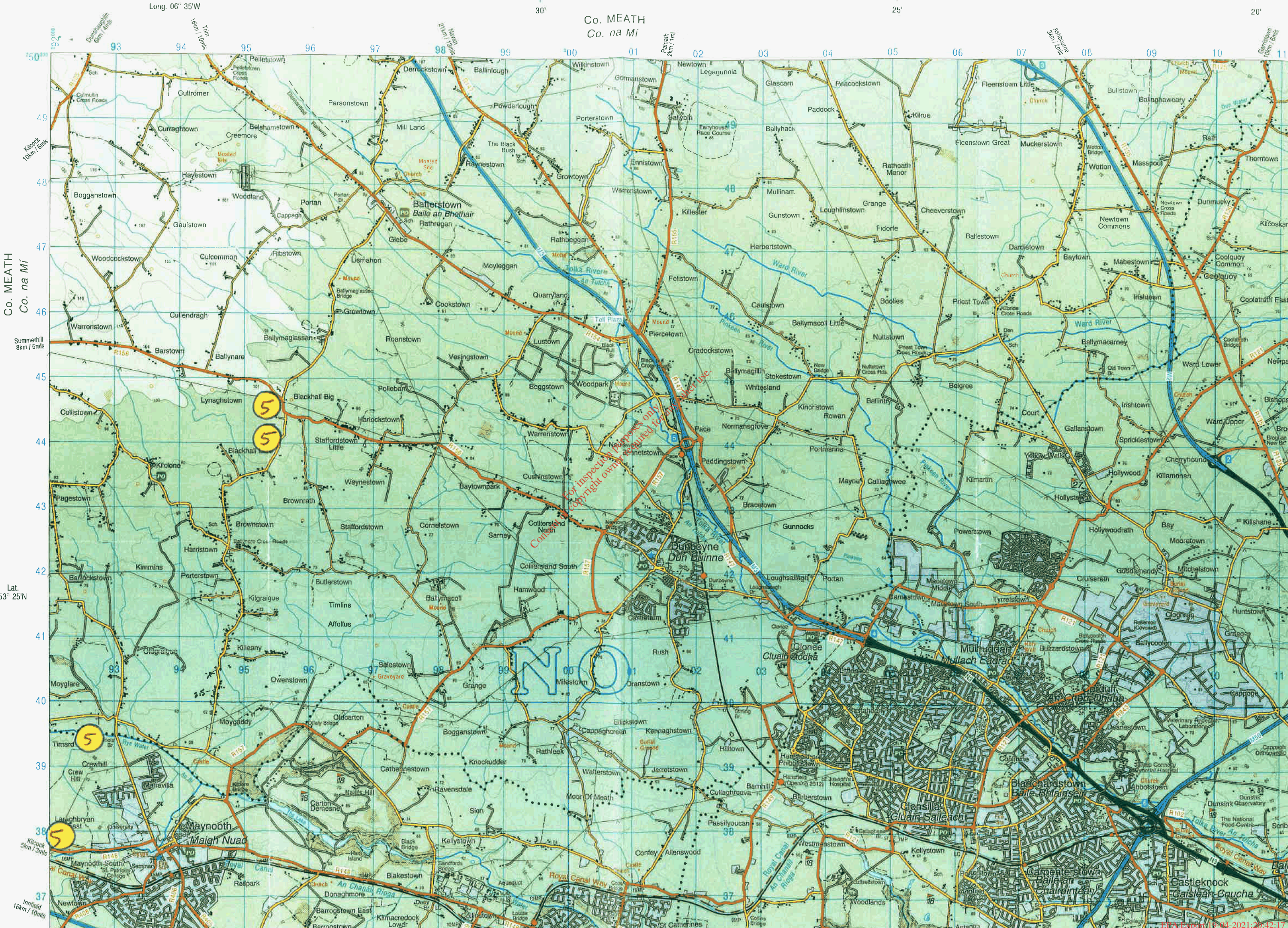
Séadchomhartha
Antiquities
Monuments Antiques
Altertümer

Relif
Relief
Relief

Gnéithe uisci
Water features
Étendues d'eau



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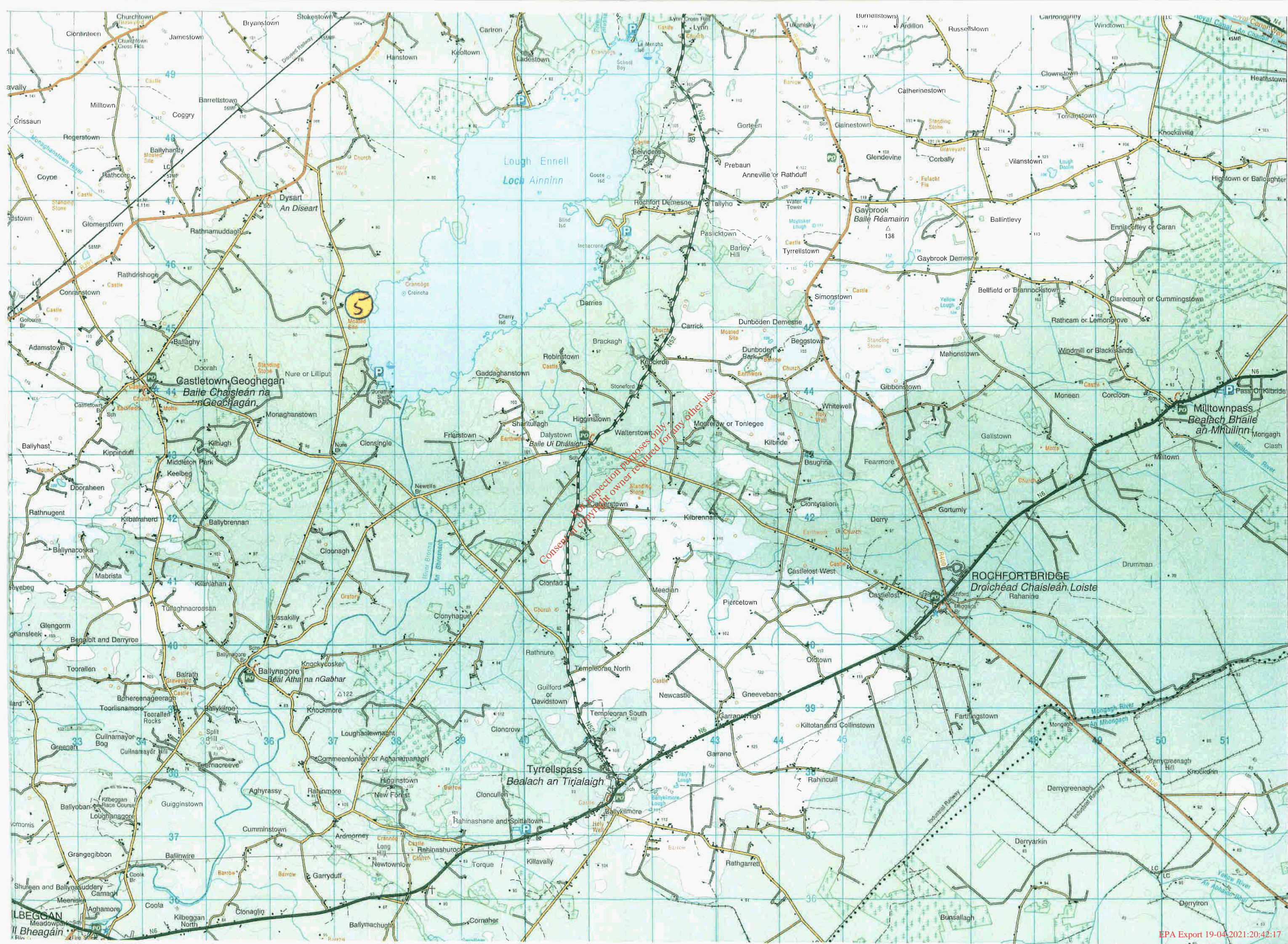
Co. MEATH
Co. na Mí

Long. 06° 35'W

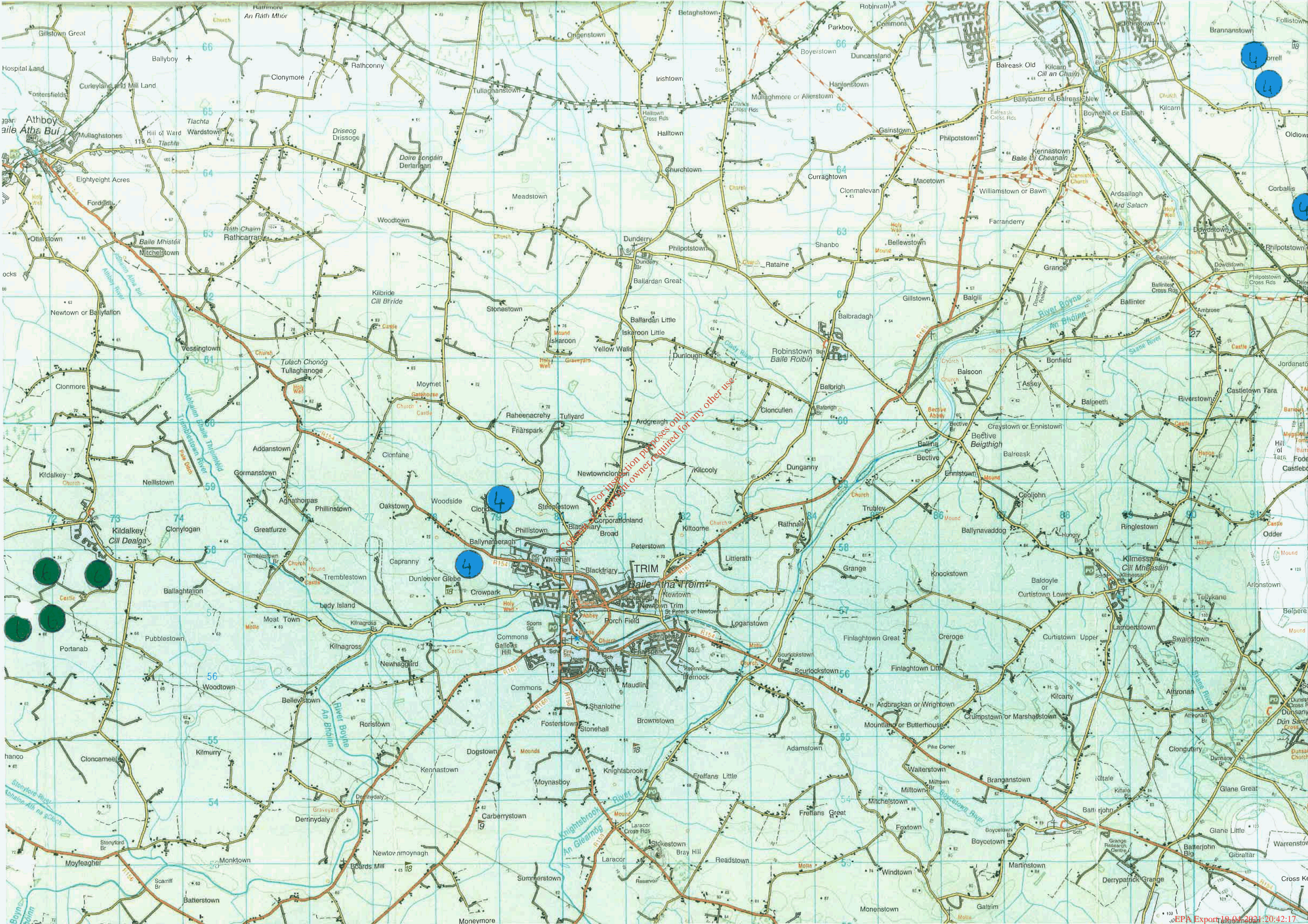
Lat. 53° 25'N

Copyright 1994-2021: 20.42.17

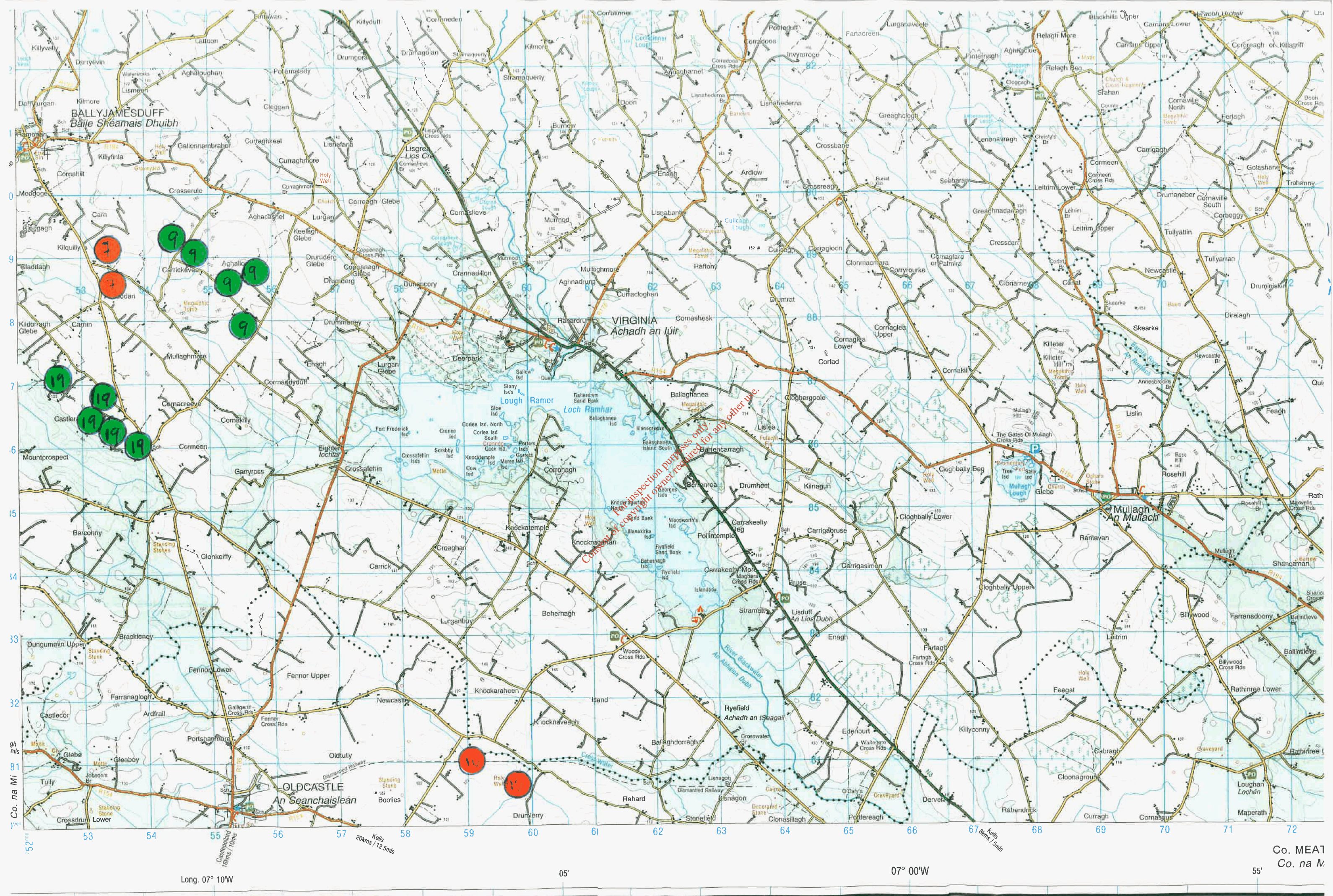








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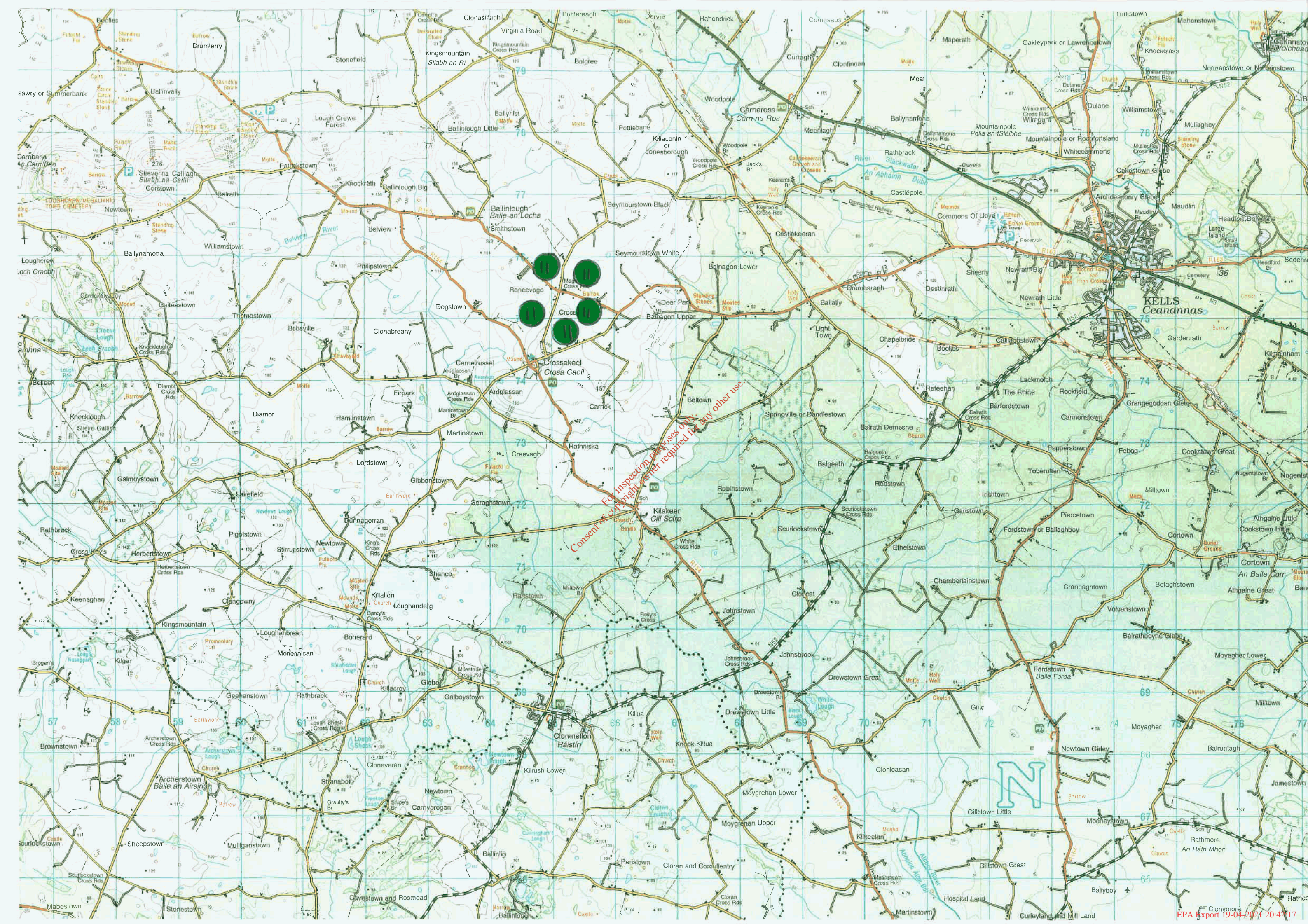
Co. MEATH
Co. na M

Long. 07° 10'W

05'

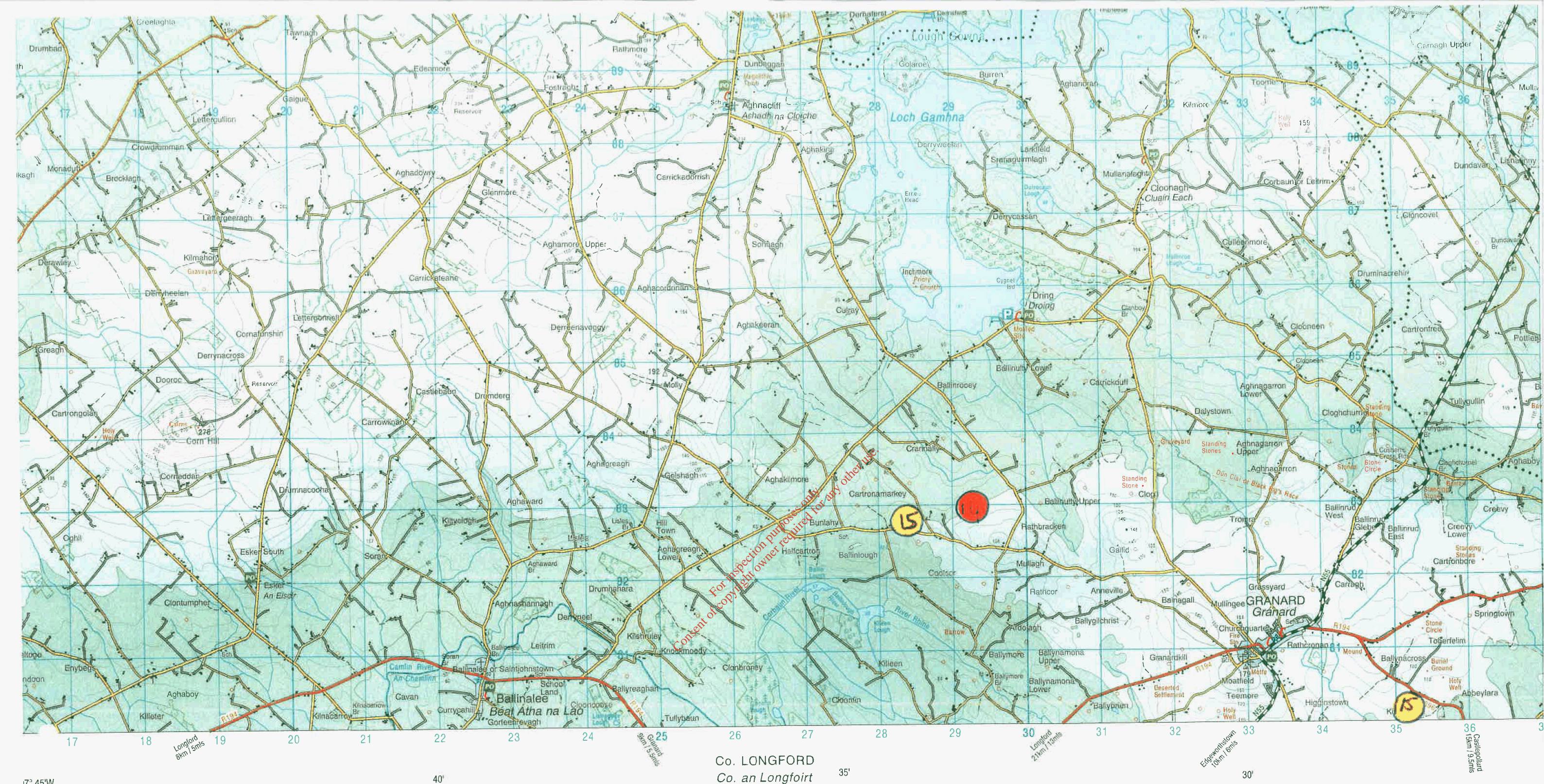
07° 00'W


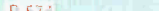


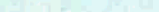
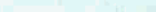
























55'



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Gnéisithe ginearálta General features Généralités Signaturen		Iarnróid Railways Chemins de fer Bahnen	
 Mótarbhealach Motorway (Junction number) Autoroute (Numero de l'échangeur) Autobahn (Nummer der Anschlussstelle)	 R 574	 LC	Crosaire com Level Crossing Passage à niveau Bahnübergang
 Bóthar príomha náisiúnta National Primary Road Route nationale principale Nationalstraße erster Ordnung	 A 1000 100 Bóthar den tríú grád Third Class Road Route de troisième classe Straße dritter Ordnung		Stáisiún trae Station Gare Bahnhof
 Bóthar lánasteach náisiúnta National Secondary Road Route nationale secondaire Nationalstraße zweiter Ordnung	 K 1000 100 Boithre de chineál eile Other Roads Autres routes Andere Straßen	 Ferry V	Bád fartha (feithiclí) Ferry (Vehicle) Bac (véhicules) Fähre (Fahrzeuge)
 Carrbhealach dubaillte Dual Carriageway Route à quatre voies Zweispurige Schnellstraße	 PO Garda Síochána Police Polizei	 Ferry P	Bád fartha (páisiréirí) Ferry (Passenger) Bac (Passagers) Fähre (Passagiere)
 Foirgnimh le hais a chéile Buildings grouped Bâtiments groupés Bebautes Gebiet	 Stáisiún cumhachta (uisce) Power Station (Hydro) Centrale électrique (hydraulique) Kraftwerk (Wasser)	 Eaglais no séipéal Church or Chapel Église ou chapelle Kirche oder Kapelle	 Bealach rothlar Cycle route Circuit à bicyclette Radwanderweg
 Aerfort Airport Aéroport Flughafen	 Stáisiún cumhachta (breosla iontaiseach) Power Station (Fossil) Centrale électrique (fossile) Kraftwerk (fossile Brennstoffe)	 Ardeaglais Cathedral Cathédrale Kathedrale	 Siúlbealach le comharthaí; gan comharthaí Waymarked Walks; Unmarked Itinéraires de promenade balisés; non balisés Beschilderte Wege; Unbeschilderte
 Aerpháirc Airfield Aérodrome Flugzeuglandeplatz	 Líne tarchurtha leictreachais Electricity Transmission Line Câble de transmission électrique Elektrische Überlandleitung	 Cuaille triantánachta Triangulation Pillar Pilier de triangulation Triangulationsgerät	 Bád fartha (feithiclí) Ferry (Vehicle) Bac (véhicules) Fähre (Fahrzeuge)
 PO Garda Síochána Police Polizei	 Oifig phoist Post office Bureau de Poste Post	 Trasnú cliathráin Graticule Intersection Intersection du quadrillage Gradnetz	 Bád fartha (páisiréirí) Ferry (Passenger) Bac (Passagers) Fähre (Passagiere)
 ★ Garda Síochána Police Polizei	 19 18 27 Golfchúrsa, machaire gailf Golf Course or Links Terrain de Golf Golfplatz oder Golfbahnen		

EPA Export 19-04-2021:20:42:17



Appendix No. 7

Domestic Waste Disposal

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WASTE COLLECTION PERMIT

Waste Management (Collection Permit) Regulations, 2007 Waste Management (Collection Permit) (Amendment) Regulations 2008

Offaly County Council as the National Waste Collection Permit Office being a nominated authority under Section 34(1)(aa) of the Waste Management Act 1996, has granted a waste collection permit to:

Applicant Name: Wilton Waste Recycling Ltd (herein called the permit holder)

Permit Number: NWCP0-12-11001-01

Address: Kiffa Crosserlough Co. Cavan

Valid From: 25/6/12

Valid to and Expires on: 24/6/17

The permit holder may appeal the decision of Offaly County Council as the National Waste Collection Permit Office, to grant this waste collection permit, in accordance with Section 34(9)(a) of the Waste Management Act 1996, to the judge of the Tullamore District Court being the District Court in which the principal offices of Offaly County Council is situate, within one month of the date of this permit.

Offaly County Council as the National Waste Collection Permit Office, may at any time review, and subsequently amend the conditions under Section 34(6) of the Waste Management Act 1996 and the Local Authority will give notice in writing of such intention to the permit holder. Otherwise an application for a review of this permit shall be made at least 60 working days prior to the expiry date of this permit to the National Waste Collection Permit Office, Offaly County Council, Áras an Chontae, Charleville Road, Tullamore, Co. Offaly. This permit may be revoked under Article 29 of the Waste Management (Collection Permit) Regulations, 2007 and the Waste Management (Collection Permit) (Amendment) Regulations, 2008.

The permit holder, subject to the attached schedule of conditions is authorised by this permit to only collect the waste type(s) specified in Appendix A within the Local Authority areas specified in Appendix D, and to transfer waste to the facilities outlined in Appendix B, using vehicle(s) specified in Appendix C.

Signed:

I. Mallon
Al Senior Staff Officer

Date:

25/6/12

Appendix No. 8

Veterinary Waste Disposal

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WASTE COLLECTION PERMIT

Waste Management (Collection Permit) Regulations, 2007 Waste Management (Collection Permit) (Amendment) Regulations 2008

Offaly County Council as the National Waste Collection Permit Office being a nominated authority under Section 34(1)(aa) of the Waste Management Act 1996, has granted a waste collection permit to:

Applicant Name: **SRCL Limited** (herein called the permit holder)

Trading As: **Veterinary Environmental Management**

Permit Number: NWCP0-09-01178-02

Address: 430 Beech Road Western Industrial Estate Naas Road

Valid From: 5th September 2012

Valid to and Expires on: 4th September 2017

The permit holder may appeal the decision of Offaly County Council as the National Waste Collection Permit Office, to grant this waste collection permit, in accordance with Section 34(9)(a) of the Waste Management Act 1996, to the judge of the Tullamore District Court, being the District Court in which the principal offices of Offaly County Council is situate, within one month of the date of this permit.

Offaly County Council as the National Waste Collection Permit Office, may at any time review, and subsequently amend the conditions under Section 34(6) of the Waste Management Act 1996 and the Local Authority will give notice in writing of such intention to the permit holder. Otherwise an application for a review of this permit shall be made at least 60 working days prior to the expiry date of this permit to the National Waste Collection Permit Office, Offaly County Council, Áras an Chontae, Charleville Road, Tullamore, Co. Offaly. This permit may be revoked under Article 29 of the Waste Management (Collection Permit) Regulations, 2007 and the Waste Management (Collection Permit) (Amendment) Regulations, 2008.

The permit holder, subject to the attached schedule of conditions is authorised by this permit to only collect the waste type(s) specified in Appendix A within the Local Authority areas specified in Appendix D, and to transfer waste to the facilities outlined in Appendix B, using vehicle(s) specified in Appendix C.

Signed:



Administrative Officer

Date:

5th September 2012

Appendix No. 9

Animal Tissue Disposal

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College Proteins

College Road, Nobber, Co. Meath, Ireland.

Tel.: + 353 (0) 46 9096000 Fax: + 353 (0) 46 9052062 / + 353 (0) 46 9052465

Website: www.collegeproteins.ie email: cpl@collegeproteins.ie

**Bogue Pigs,
Ballyjamesduff,
Co Cavan.**

16th July 2014

To Whom It May Concern:

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

pp Carline Greene

Ita Brady

Transport Manager

Appendix No. 10

Local Water Quality Survey

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River: **Mountnugent**

Catchment: **Shannon**

WFD Status

Station Location	Station Number	Water Body Code	Current Ecological Status RWB	Target Ecological Status RWB	Target Date
Br. Near Rockville	0040	SH_26_2264	Poor	Good	2021
bridge se Rockville	0120	SH_26_2264	Poor	Good	2021
Br.near Derrylea	0200	SH_26_2742	Moderate	Good	2021
Br. At Kildorra	0300	SH_26_2742	Moderate	Good	2021
Br E of Killnacrot House	0350	SH_26_2742	Moderate	Good	2021
Mountnugent br.	0500	SH_26_2742	Moderate	Good	2021

Sampling Stations and Biological Quality Ratings

Station Number	Station Location	Q'87	Q'92	Q'96	Q'99	Q'02	Q'05	Q'08	Q'11
0040	Br. Near Rockville	-	4	4-5	3-4	4	4	-	
0120	bridge se Rockville	4	4	3	1/0	-	-	2-3	3
0200	Br.near Derrylea	1	4	3-4	3	4-5	4	3-4	3
0300	Br. At Kildorra	-	-	-	-	-	-	3-4	3-4
0350	Br E of Killnacrot House	3	3-4	3-4	3-4	3-4	3-4	-	
0500	Mountnugent br.	3	3-4	3-4	3-4	4	3-4	3-4	3-4

MRP results

Station	1999 Med (µg P/l)	2000 Med (µg P/l)	2001 Med (µg P/l)	2002 Med (µg P/l)	2003 Med (µg P/l)	2004 Med (µg P/l)	2005 Med (µg P/l)	2006 Med (µg P/l)	2007 Med (µg P/l)	2008 Med (µg P/l)	2009 Med (µg P/l)	2010 Med (µg P/l)	2011 Med (µg P/l)	2012 Med (µg P/l)
0040	-	-	39	24	16	23	14	11	21	-	-	-	-	-
0120	-	-	32	28	35	32	25	22	38	78	98	41	67	70
0200	40	33	33	24	29	24	18*	11	43	45	43	25	42	66
0300	28	24	29	33	43	48	32	21	57	103	192	146	176	119
0350	-	-	26	19	19	22	16	13	36	39	54	48	44	43
0400	23	21	-	-	-	-	-	-	-	-	-	-	-	-
0500	22	24	35	20	18	21	17	12	33	40	46	42	46	38

Assessment

Unsatisfactory, all stations are classified as poor status.

Change from 2012

Increase in Phosphorus levels at bridge near Derrylea. Some reduction in Phosphorus levels at stations 0300.

Lake: **Lough Sheelin**

Catchment: **Shannon**

WFD Status

Lake water body code	Current status	Target Ecological Status	Target Date
SH 26 709	Moderate	Good	2021

Annual status

Year	Average Annual Total P(ug/l)	Maximum Chlorophyll
2000	32	36
2001	23	34
2002	28	32
2003	31	46
2004	32	62
2005*	25	14
2006	25	8
2007	18	24
2008	28	14
2009	26	12
2010	30	4
2011	29	12
2012	16	36

*includes one sample from January 2006

Assessment

Moderate status.

Change from 2011

Phosphorus levels are encouraging.

Appendix No. 11

Construction and Waste Demolition Management Plan

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CLW Environmental Planners Ltd.

The Mews,
23 Farnham Street,
Cavan,
Co. Cavan

Phone: 049-4371447/9

Fax: 049-4371451

E-mail: info@clwenvironmental.i

Construction and Demolition
Waste Management Plan

For

Proposed Development
On Existing Pig Farm

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At

Drumscrudan, Crosserlough Co. Cavan
&
Finaway, Ballyjamesduff, Co. Cavan.

Date: 15th July 2014

Applicant:

Bogue Pigs,
Dreenan,
Cavan,
Co. Cavan

Proposed Development:

To decommission existing pig houses and to construct new pig housing in accordance with animal welfare regulations, together with all ancillary structures and all associated site works, on the site of existing pig farm at Drumsruddan, Crosserlough, Co. Cavan and Finaway, Ballyjamesduff, Co. Cavan.

Location:

Drumsruddan, Crosserlough Co. Cavan
&
Finaway, Ballyjamesduff, Co. Cavan.

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 3 areas of work for the purposes of this plan;

1. Demolition/Decommissioning of multiple Existing Pig Houses and ancillary structures.
2. Site Development
3. Construction of new pig housing, ancillary structures and site 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.

As the proposed works related to the demolition of existing structures, 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 arisings.

Renovation of existing buildings has already been considered in terms of the overall development of the site. However it has been determined that the buildings selected for demolition are not suitable for renovation.

As a result renovation of the remaining buildings cannot be explored any further in the context of this Demolition Waste Management Plan.

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:

There are a number of established markets available for the beneficial use of 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 applicant, 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 pig farm developments.

Demolition Plan:

This phase of the proposed development will involve the demolition / decommissioning of multiple existing Pig Houses and ancillary structures. (Each house may/may not be demolished at different times.)

It is important to emphasise the potential for certain procedures to contribute to a reduction in excessive material wastage on site. The demolition of the buildings will be carried out in the following way;

1. Emptying of all feed storage bins and implementation of rodent control programme on site. (Follow Bord Bia approved rodent control programme that was implemented when the building was operational).
2. Removal of any remaining slurry/soiled water from the pig manure storage tanks and allocation of same to customer farmers in accordance with S.I. 31 of 2014 as per normal agricultural practice.
3. Disconnection of services (E.S.B., Water etc.)
4. Identification of any Hazardous wastes on site. This would include Asbestos and Fluorescent light tubes. (If Present)
5. Identification, removal and segregation of any re-usable and/or saleable equipment/fixtures/fittings.
6. Removal of any remaining fixtures and fittings (incl. electrical) and segregation into recyclable and/or disposal.
7. Removal and appropriate handling and storage of roof sheeting prior to removal off site / re-use. Should asbestos be found to be present appropriate precautions to be taken in the removal, handling, packaging and disposal of this material.
8. Removal of Building superstructure and separation into timber, steel, rubble and other (insulation etc.).

Note: Designated skips/storage areas to be provided for different waste streams.

**Demolition waste Types and
projected disposal/recovery routes:**

- | | | |
|-----------------------------------|---|---|
| ➤ Cement Roof sheeting | - | To be stored on site and used in the repair of existing roofs. |
| ➤ Asbestos Roof sheeting (if Any) | - | Oxigen Environmental
WCP-DC-08-1106 |
| ➤ Internal fixtures and fittings | - | Pig feeding systems, troughs, piping, ventilation systems, etc. to be re-used and/or sold. |
| ➤ Metal and Electrical | - | To be removed, segregated and stored for re-use on the farm or recycling –
Wilton Waste Recycling –
NWCPO-12-11001-01 |
| ➤ Fluorescent Tubes | - | Corranure Recycling Centre
Returned to Supplier |
| ➤ Insulation/Timber | - | To be used in current building Works and/or repairs to existing buildings. Excess to be removed off-site by
Wilton Waste Recycling –
NWCPO-12-11001-01 |
| ➤ General Waste` | - | To be removed offsite by
Wilton Waste Recycling –
NWCPO-12-11001-01 |
| ➤ Clean Rubble/Concrete | - | To be used as infill material as part of proposed building works. |

Site - Development Plan:

The proposed development is to be completed on a brown field area and/or a Greenfield area, in close proximity to, and/or on the site of the existing pig farm structures. This will involve excavating the site of the proposed developments to facilitate site leveling requirements and the construction of underslat manure storage tanks. This will involve the excavation of a certain amount of spoil. Where possible a significant proportion of this will be used to level low-lying parts of the site and as back fill around the tanks with any remaining soil to be used elsewhere on the farm. In the interim, all excavated soil is to be stored on the site.

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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 regular shaped buildings, similar, and in some cases identical construction methods to that previously completed on this site and/or other similar pig farms, will minimise the amount of waste material on the site. A significant amount of materials can be manufactured to the required size off site. In order to minimize wastage and other adverse impacts;

- where possible all concrete and aggregates will be ordered and supplied to exactly meet requirements.
- Slats will be made to order off site, for the proposed houses, eliminating any potential waste.
- 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.

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 operator is greatly experienced at overseeing similar developments on this, and other pig farms and will be in charge of the management of the construction and demolition waste management plan.

Appropriate records are to be maintained of all materials sent off site for recycling/disposal.

Signed: _____

Mr. Paraic Fay

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Date: 15/07/2014

Appendix No. 12

Met Data

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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 ≥ 0.2 mm	20	17	20	16	16	17	18	18	18	20	19	19	218
mean num. of days with ≥ 1.0 mm	15	12	15	12	12	12	13	13	13	15	14	15	161
mean num. of days with ≥ 5.0 mm	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. 13

Screening Report - Article 6(3) & (4) of the habitats directive 92 /43/EEC Appropriate Assessment of a proposed project

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**STATEMENT FOR SCREENING – ARTICLE 6(3) & (4) OF THE HABITATS
DIRECTIVE 92/43/EEC APPROPRIATE ASSESSMENT OF A PROPOSED PROJECT**

in respect of

**A PROPOSED DEVELOPMENT
ON EXISTING PIG FARM**

located at

**Drumscruddan, Crosserlough, Co. Cavan
&
Finaway, Ballyjamesduff, Co. Cavan.**

Prepared on behalf of the Applicant

Bogue Pigs

by

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16th July 2014

SCREENING REPORT

ARTICLE 6(3) & (4) OF THE HABITATS DIRECTIVE 92/43/EEC APPROPRIATE ASSESSMENT OF A PROPOSED PROJECT

-REDEVELOPMENT AND MODERNISATION OF EXISTING PIG FARM-

1.0 INTRODUCTION

This Report details an *Appropriate Assessment Screening* carried out as part of an application for planning permission to Cavan County Council for the redevelopment of an existing pig farm located on two geographically separate sites at Drumscredan, Crosserlough, Co. Cavan (Breeding site), (National Grid Reference: E 291413 N 248647), and Finaway, Ballyjamesduff, Co. Cavan (Finisher site) (National Grid Reference: E 288975 N 249921).

CLW Environmental Planners Ltd. have been retained by Bogue Pigs, to undertake an *Appropriate Assessment Screening Report* for potential significant environmental effects on Natura 2000 sites with reference to an application to Cavan County Council for planning permission for a development on an existing pig farm at Drumscredan, Crosserlough, Co. Cavan and Finaway, Ballyjamesduff, Co. Cavan. The report relates to a proposal to demolish c. 14 no. pig houses and construct 5 no. pig houses at the breeding site and demolish c. 12 no. pig houses and construct 5 no. pig houses and an extension to 1 no. existing pig house at the fattening site.

This *Appropriate Assessment Screening Report* should be read in conjunction with an Environmental Impact Statement prepared to accompany this planning application. This Screening Report has been prepared in accordance with Guidance Notes provided by the Department of Environment, Heritage and Local Government *Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities*.

The purpose of this *Screening Report* is to ascertain whether or not an Appropriate Assessment under Article 6(3) and 6(4) of the *Habitats Directive* is necessary by examining:

1. whether a plan or project can be excluded from AA requirements on the basis that it is directly linked with or necessary to the management of the Natura 2000 site, and
2. the potential effects of a project or plan either alone or in combination with other projects or plans, on a Natura 2000 site in view of its conservation objectives and considering whether these effects will be significant.

As point one does not apply in this case this Screening Report focuses on the effect this project might have on any Natura 2000 sites.

1.1 Summary of Conclusions of Appropriate Assessment Screening

This Appropriate Assessment Screening Report of a proposed redevelopment of an existing pig farm located on two geographically separate sites Drumscredan, Crosserlough, Co. Cavan and Finaway, Ballyjamesduff, Co. Cavan has concluded the following:

- The *Appropriate Assessment Screening* Report has identified no direct potential significant adverse effects on three no. Natura 2000 sites identified within the wider area of the subject site.
- This *Appropriate Assessment Screening* Report has identified potential for secondary indirect adverse effects on two Natura 2000 Sites, namely the Lough Sheelin SPA (NPWS Site Code 004065) and the Lough Kinnale and Derragh Lough SPA (NPWS Site Code 004061) as a result of organic fertiliser generated on this site. While the proposed development will be located within the water catchment of these SPA's there will be no impact on the Natura 2000 sites as a result of this proposal as all additional organic fertiliser is to be allocated for use in accordance with S.I. 31 of 2014 *European Communities (Good Agricultural Practice for the Protection of Waters) Regulations 2014*. Given its considerable distance from the site and the lack of a direct pathway connecting it to the site, the River Boyne and River Blackwater SAC (NPWS Site Code 002299) will not have potential for impact as a result of the proposal.
- This Report concludes that, given the distance of the subject site from the two Natura 2000 sites at in excess of 3km at the closest point and the fact that only clean surface water will be discharged to local watercourses and all organic fertiliser generated by the proposed development will be stored and utilised appropriately, there will be no secondary adverse impacts on the identified Natura 2000 sites. All organic fertiliser will be allocated for use in accordance with the requirements of the Nitrates Directive and S.I. 31 of 2014 ensuring no potential pollution of surface or ground water.
- It is our recommendation that there is no requirement for a *Stage II Habitats Directive Assessment* to be carried out in respect of the proposed redevelopment of the existing pig farm at Drumscredan and Finaway, Ballyjamesduff, Co. Cavan.

2.0 DESCRIPTION OF PROPOSED DEVELOPMENT

2.1 Site Description

The site of proposed farm developments to be completed by the applicant are to be completed on two geographically separate, but inter-related and interdependent, existing pig farm sites at;

1. Drumscredan, Crosserlough, Co. Cavan (Breeding site), (National Grid Reference: E 291413 N 248647), and,
2. Finaway, Ballyjamesduff, Co. Cavan (Finisher site) (National Grid Reference: E 288975 N 249921),

The two sites are currently destocked but it is proposed to resume operations as an integrated pig farm. Pigs have been and will continue to be produced on the breeding side (Drumscredan) and reared to c. 35 – 40 Kg's, at which time they are transferred to the finishing site (Finaway) to be reared to market weight (c. 115kg's).

The Breeding Site at Drumscredan is located c. 2.7 km's north east of the Finaway site. The site extends to c. 3.15 Ha. The site accesses onto a local third class road, which is in turn c. 2.25 Km from the Regional Route the R 194 between Ballyjamesduff and Granard. The site is located c. 3 km's west of Ballyjamesduff, and c. 4 Km's east of Kilnaleck.

The finisher site extending to c. 2.52 Ha, is located in the townland of Finaway. The site access onto a local third class road, which is in turn c. 0.5 Km from the Regional Route the R 194 between Ballyjamesduff and Granard. The site is located, c. 3 km's southwest of Ballyjamesduff, and c. 3.5 Km's northeast of Mountnugent.

2.2 Proposed Development

2 No. planning applications are to be submitted to Cavan County Council on behalf of *Bogue Pigs* for permission to carry out the following proposed developments;

- **Breeding Site @ Drumscredan:** Demolish all existing pig houses and associated ancillary structures and construct 5 No. Pig houses, along with all ancillary structures and associated site works on the site of an existing pig farming enterprise (National Grid Reference: E 291413 N 248647).

and,

- **Finisher Site @ Finaway:** Demolish c. 12 No. Existing Pig Houses and construct 5 No. Pig houses and an extension to 1 No. existing pig house, along with all ancillary structures and associated site works on the site of an existing pig farming enterprise (National Grid Reference: E 288975 N 249921).

As these sites operate as a single entity this appropriate assessment will examine both planning applications in tandem in terms of their impacts on Natura 2000 sites.

The EIS outlines that these planning applications will not seek to allow for any intensification of activities on the farm(s). These sites have previously operated as a c. 1,510 Sow integrated unit as per sow numbers specified in the Licence No. P0427-01 issued by the E.P.A. on 3rd January 2001. The Breeding Site planning application will provide the required housing, manure storage facilities and ancillary structures for c. 1,250 sows in a breeding unit rearing pigs to 35-40kg's, together with all associated breeding stock. While the Finishing Site planning application will provide the required accommodation to rear all pigs from the proposed sow herd from 35/40 kg's to market weight

Figure 2.1 Site Location

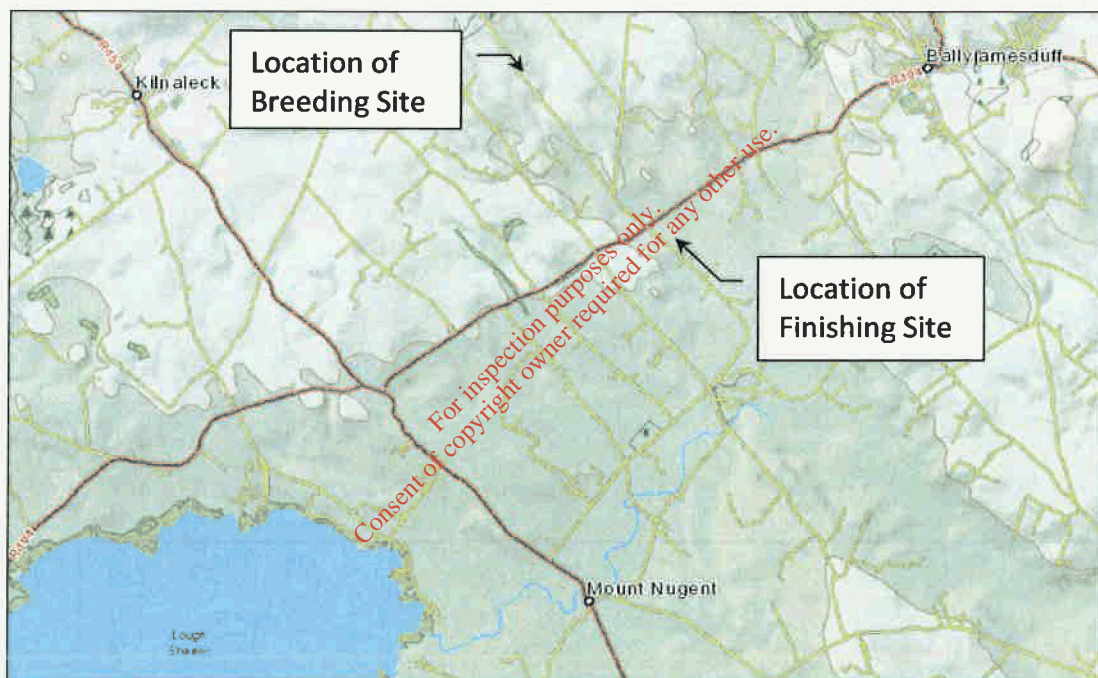


Figure 2.2 The Breeding Site at Drumscredan and Finishing Site at Finaway



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2.2.2 Allocation of Organic Fertiliser

The manure from this farm will be used by the customer farmers in accordance with the European Nitrates Directive, as enacted in Ireland by S.I. 31 of 2014 or any subsequent amendment to and/or derogation from same. S.I. 31 of 2014 entitles farmers to use organic fertilise on their farmland as a replacement for chemical fertiliser within specified limits based on crop demands.

Given the nature of the proposed development the relevant issue which has potential to impact on designated sites is the potential for pollution of surface and ground water as a result of the proposed activities on this site. It should be noted that the proposed development will reduce stock numbers on site and will result in a significant improvement in onsite organic manure storage. The EIS concludes that the improved facilities along with the additional storage capacity will reduce any potential risk to ground and surface water as a result of the farming activities on site.

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3.0 NATURA 2000 SITES IDENTIFIED

The Natura 2000 network in Ireland is made up of European Sites which include

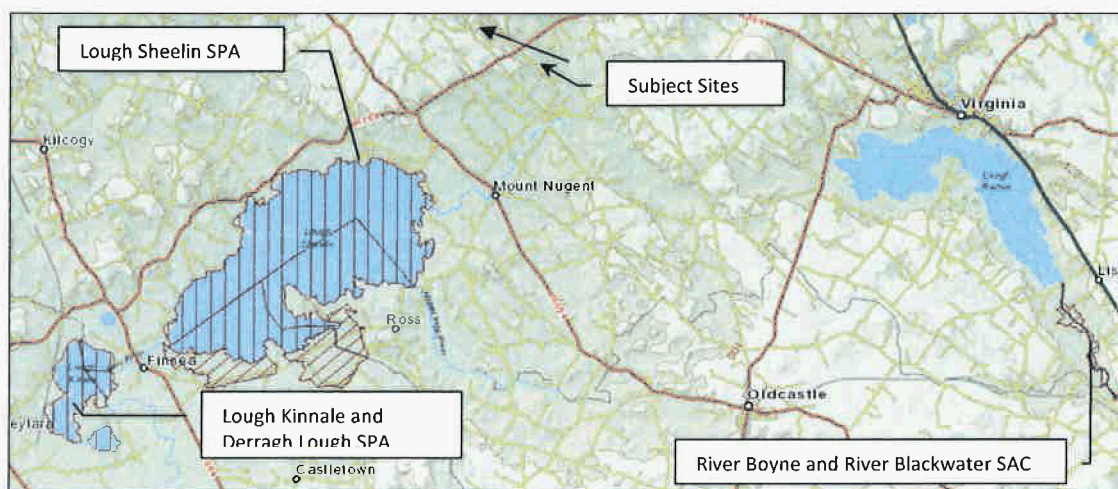
- Special Areas of Conservation (SAC)
- Special Protection Areas (SPA)
- Candidate Special Areas of Conservation (cSAC)
- Proposed Special Protection Areas (pSPA)

The nearest designated Natura 2000 site to the existing farm, and site of the proposed developments, is the Lough Sheelin SPA (NPWS Site Code 004065) which is located approximately 3.85 km to the south west of the existing farm. Lough Kinnale and Derragh Lough SPA (NPWS Site Code 004061) is located 12.5km also to the southwest. The River Boyne and River Blackwater SAC (NPWS Site Code 002299) is located 14.1km from the subject site at its closest point.

Other sites located some bit further from the pig farm is the Lough Oughter Complex SPA (NPWS Site Code 004049) and the Lough Oughter and Associated Loughs SAC (NPWS Site Code 000007) which is located approximately 16.4 km from the subject sites at its closest point and is considered outside the zone of potential impacts for the purpose of this Appropriate Assessment Screening.

As such the relevant designated sites which are considered within the zone of potential impact for the proposed development are the Lough Sheelin SPA, Lough Kinnale and Derragh Lough SPA and the River Boyne and River Blackwater SAC. The Site Synopsis' for these above listed SAC and SPA sites are attached as addendums to this report.

Figure 3.1 Locations of Natura 2000 Sites Assessed in this Appropriate Assessment Screening



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As outlined in the EIS, the sites are located in Hydrometric Area No. 36, the Shannon catchment. The farm is located in the Inny Water Management Unit catchment area, and is drained by tributaries of the Mountnugent Rivers. As such the farm is located within the water catchment area of the Lough Sheelin and Lough Kinnale and Derragh Lough. The site is outside the catchment of the River Boyne and Blackwater SAC. As a result the potential impacts of the development on the Lough Sheelin and Lough Kinnale and Derragh Lough SPA's and the potential for pollution of ground and surface water that would ultimately flow into this Lough system is of most significance.

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4.0 ASSESSMENT OF LIKELY EFFECTS

4.1 Assessment of Likely Effects

A detailed assessment of the impacts, both direct, indirect and cumulative, of the proposed project on Natura 2000 sites based on the description of the project as outlined in Section 2.0 above has been carried out as part of this Appropriate Assessment Screening. This assessment is in addition to the environmental assessment carried out as part of the EIA process. The EIS attached with the planning application provides detailed information on the environmental impacts of the proposed project.

As the proposed development is located outside the boundary of the above listed Natura 2000 sites (in excess of 3.85 km) the possible direct impacts of this proposed development on these designated sites are limited. Potential indirect impacts might include loss of habitat, loss of species, demand on water supply, waste generation and potential impact on ground water. The issue identified as having the most potential for an impact on the Natura 2000 sites was the management of organic fertiliser and potential for pollution of ground and surface water due to loss of nutrients to water. The River Boyne and River Blackwater SAC is located outside the water catchment area of the subject site and as such will not be impacted by any potential water pollution that may emanate from this site. It is considered that there will be no direct or indirect impacts on these sites as a result of the proposed development. The Lough Sheelin SPA and Lough Kinnale and Derragh Lough SPA are potentially vulnerable to potential for contamination as a result of loss of nutrients to surface or groundwater from the existing/proposed development due to the direct pathway via the River Inny.

The current proposal does not allow for an increase in pig production on site rather will see a reduction from 1,510 sows integrated as currently permitted to 1,250 sows integrated. There will be a corresponding reduction in organic fertiliser generated on site. The proposed development will result in a significant upgrade in organic manure storage facilities on site with a significant increase in storage capacity. Newly constructed manure storage tanks build to Department of Agriculture Specifications will replace older tanks. This will see a significant reduction in potential for point source discharges to surface or ground water. In fact the new development will provide for the upgrade and replacement of existing animal housing facilities on site and as a result secure containment of all organic fertiliser produced in these houses. All new manure storage tanks will have leak detection facilities installed.

The site synopsis for Lough SPA identifies water pollution mainly from agricultural sources as a problem for the site. Activities such as run-off from fertiliser and slurry application as well as point discharge from farmyards has been a problem in this area. To mitigate any potential impact from this site all organic fertiliser generated will be exported off site to farms who meet the requirements under S.I. 31 of 2014 *European Communities (Good Agricultural Practice for Protection of Waters)*

Regulations. As a result the export and management of this material will not have an impact on water quality as the nutrients will be recycled as a fertiliser for grass and/or crop production. Based on the assumption that the farm continues to operate in accordance with S.I. 31 of 2014 it is not considered that there will be any secondary indirect adverse impacts on any Natura 2000 sites as a result of the proposed development.

4.2 Assessment of 'In Combination Effects'

Given the location of this site within Co. Cavan it is likely that there are other pig farms located upstream of this existing farm which might, in combination with the subject farm, increase the potential risk to the surface water in the area.

There is potential for diffuse pollution occurring from the surrounding agricultural land which should be considered in combination with the subject development.

The proposed development seeks to replace a significant amount of structures on site with modern purpose built pig houses completed in line with Cavan Co. Co., Department of Agriculture Food and The Marine and EPA standards and requirements. The development will however see a reduction in the overall activity on site and consequently will result in overall improvements in manure management.

As per normal practices this fertiliser will all be stored and distributed in accordance with S.I. 31 of 2014 European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2014. It is concluded that any existing developments in combination with the subject facility will not result in any additional direct or indirect impacts on the afore mentioned Natura 2000 sites.

5.0 SCREENING STATEMENT WITH CONCLUSIONS

The conclusion on the completion of this Appropriate Assessment Screening Report is that it is considered that full Stage 3 Appropriate Assessment is not required for the granting of a planning permission for the redevelopment of this pig farm at Drumsgraddan and Finaway, Ballyjamesduff, Co. Cavan.

It is felt that,

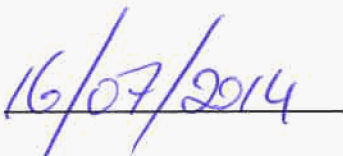
- given the considerable distance of the proposed project from the identified Natura 2000 sites,
- the proposed development relates to the replacement of existing structures on the farm,
- the proposed development will see an overall reduction in intensity from 1,510 sows integrated to 1,250 sows integrated
- all organic fertiliser, existing and proposed, will be allocated for use in accordance with S.I. 31 of 2014, and,

it is concluded that the proposal will not have a significant effect on the conservation objectives or integrity of these sites and as such appropriate assessment is not required.

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Paraic Fay B.Agr.Sc.
CLW Environmental Planners



Date

ADDENDUMS 1-4

National Parks and Wildlife Service Site Synopsis' for sites identified within this Appropriate Assessment Screening.

- The Lough Sheelin SPA (NPWS Site Code 004065)
- Lough Kinnale and Derragh Lough SPA (NPWS Site Code 004061)
- The River Boyne and Blackwater SAC (NPWS Site Code 002299)

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SITE SYNOPSIS

SITE NAME: LOUGH SHEELIN SPA

SITE CODE: 004065

Lough Sheelin is a medium- to large-sized lake, with a maximum length of 7 km. The lake lies near the top of the catchment of the Inny River, a main tributary of the River Shannon. It is a typical limestone lake and is fairly shallow (maximum depth 14 m). The trophic status of the lake has varied greatly since the 1970s due to pollution from mainly agricultural sources. It was recently (1998-2000) classified as a highly eutrophic system.

The shoreline is varied and no one plant species predominates over large areas. Species present include Jointed Rush (*Juncus articulatus*) and Common Spike-rush (*Eleocharis palustris*) growing on stony beaches, with Yellow Sedges (*Carex cf. demissa*), Lesser Spearwort (*Ranunculus flammula*), Water Mint (*Mentha aquatica*) and Black Bog-rush (*Schoenus nigricans*) also represented. The shore of the lake is also wooded in places and there are some very small offshore islands that are wooded with willows (*Salix aurita* and *S. cinerea*). The islands are fringed by swamp communities of Common Reed (*Phragmites australis*), Common Clubrush (*Scirpus lacustris*) and Bottle Sedge (*Carex rostrata*). A good range of Charophytes has been recorded from the lake, including *Chara denudata*, a Red Data Book species.

Despite very variable water quality in recent decades, Lough Sheelin remains a very important site for wintering waterfowl, especially diving duck. It supports nationally important populations of four species, i.e. Great Crested Grebe (140), Pochard (546), Tufted Duck (762) and Goldeneye (224) all figures are average peaks for the 5 seasons 1995/96-1999/00. A number of other species occur in relatively low numbers, including Mute Swan (28), Mallard (76), Coot (24), Little Grebe (19), Cormorant (42) and Black-headed Gull (202).

The variable water quality over the years, with periods of highly eutrophic conditions, undoubtedly has had some adverse impacts on the wintering waterfowl, especially the diving duck. This would appear to be borne out by the very variable numbers of birds recorded over the years. It is considered that there is urgent need to reduce the phosphorus inputs to the feeder streams entering the lake.

Lough Sheelin is a nationally important site for four species of wintering wildfowl and is one of the main Midlands lakes sites for wintering birds. An improvement in water quality would probably result in higher numbers of birds frequenting the site.

6.10.2004

SITE SYNOPSIS

SITE NAME: LOUGH KINALE AND DERRAGH LOUGH SPA

SITE CODE: 0004061

Lough Kinale is a relatively small lake that is situated immediately downstream of Lough Sheelin, both lakes being near the top of the catchment of the Inny River, a main tributary of the River Shannon. Derragh Lough, a much smaller system, is connected to Lough Kinale and the Inny River. This is a typical limestone system and is very shallow (maximum depth of Lough Kinale is c. 4 m). As with Lough Sheelin, the trophic status of the lake has varied greatly since the 1970s due to pollution. It was recently (1998-2000) classified as a highly eutrophic system. The lake was formerly an important Trout fishery.

Lough Kinale has two main basins, almost separated by swamp formations. Reed swamp is frequent around the lakes, with Common Reed (*Phragmites australis*) and Tufted-sedge (*Carex elata*) occurring commonly. A calcium-rich small sedge marsh occurs along parts of the shoreline. This is characterised by species such as Long-stalked Yellow-sedge (*Carex lepidocarpa*), Marsh Pimpernel (*Anagallis tenella*), Knotted Pearlwort (*Sagina nodosa*), Marsh Pennywort (*Hydrocotyle vulgaris*) and Water Mint (*Mentha aquatica*). Areas of bog occur around the margins of the lakes in places but some of these have been planted with conifers.

Despite the very variable water quality in recent decades, Lough Kinale and Derragh Lough remain an important site for wintering waterfowl, especially diving duck. The site supports nationally important populations of two species, i.e. Pochard (951) and Tufted Duck (449) - figures are average peaks for the 5 seasons 1995/96-1999/00. A large population of Mute Swan (120), close to the threshold for national importance, also uses the site. Coot (199), whilst still occurring in substantial numbers, formerly had a population of national importance. A number of other species are found, in relatively low numbers, including Great Crested Grebe (25), Mallard (130) and Goldeneye (22). Marginal grassland areas outside of the site attract feeding wildfowl and waders such as Lapwing and Golden Plover.

The variable water quality over the years, with periods of highly eutrophic conditions, undoubtedly has had adverse impacts on the wintering waterfowl, and especially the diving duck. This would appear to be borne out by very variable numbers of birds recorded over the years. The lake is still vulnerable to pollution and it is considered that there is urgent need to reduce the phosphorus inputs to the system. Afforestation has taken place close to parts of the shoreline and further planting would be undesirable. Angling and wildfowling activities currently cause some disturbance to the birds and any increase in such activities would be of concern.

Whilst relatively small in area and subject to a number of damaging activities, this site retains national importance for two duck species. With an improvement in the

environmental conditions pertaining at the site, higher numbers of some species would undoubtedly occur.

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19.8.2004

SITE SYNOPSIS

SITE NAME: RIVER BOYNE AND RIVER BLACKWATER

SITE CODE: 002299

This site comprises the freshwater element of the River Boyne as far as the Boyne Aqueduct, the Blackwater as far as Lough Ramor and the Boyne tributaries including the Deel, Stoneyford and Tremblestown Rivers. These riverine stretches drain a considerable area of Meath and Westmeath and smaller areas of Cavan and Louth. The underlying geology is Carboniferous Limestone for the most part with areas of Upper, Lower and Middle well represented. In the vicinity of Kells Silurian Quartzite is present while close to Trim are Carboniferous Shales and Sandstones. There are many large towns adjacent to but not within the site. Towns both small and large, include Slane, Navan, Kells, Trim, Athboy and Ballivor.

The site is a candidate SAC selected for alkaline fen and alluvial woodlands, both habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive – Atlantic Salmon, Otter and River Lamprey.

The main areas of alkaline fen are concentrated in the vicinity of Lough Shesk, Freehan Lough and Newtown Lough. The hummocky nature of the local terrain produces frequent springs and seepages which are rich in lime. A series of base-rich marshes have developed in the poorly drained hollows, generally linked with these three lakes. Open water is usually fringed by Bulrush (*Typha latifolia*), Common Club-rush (*Scirpus lacustris*) or Common Reed (*Phragmites australis*) and this last species also extends shorewards where a dense stand of Great Fen Sedge or Saw Sedge (*Cladium mariscus*) frequently occurs. This in turn grades into a sedge and grass community (*Carex* spp., *Molinia caerulea*) or one dominated by the Black Bog-rush (*Schoenus nigricans*). An alternative direction for the aquatic/terrestrial transition to take is through a floating layer of vegetation. This is normally based on Bogbean (*Menyanthes trifoliata*) and Marsh cinquefoil (*Potentilla palustris*). Other species gradually become established on this cover, especially plants tolerant of low nutrient status e.g. bog mosses (*Sphagnum* spp.). Diversity of plant and animal life is high in the fen and the flora, includes many rarities. The plants of interest include Narrow-leaved Marsh Orchid (*Dactylorhiza traunsteineri*), Fen Bedstraw (*Galium uliginosum*), Cowbane (*Cicuta virosa*), Frogbit (*Hydrocharis morsus-ranae*) and Least Bur-reed (*Sparganium minimum*). These species tend to be restricted in their distribution in Ireland. Also notable is the abundance of aquatic Stoneworts (*Chara* spp.) which are characteristic of calcareous wetlands.

The rare plant, Round-leaved Wintergreen (*Pyrola rotundifolia*) occurs around Newtown Lough. This species is listed in the Red Data Book and is protected under the Flora Protection Order, 1999, and this site is its only occurrence in Co. Meath.

Wet woodland fringes many stretches of the Boyne. The Boyne River Islands are a small chain of three islands situated 2.5 km west of Drogheda. The islands were formed by the build up of alluvial sediment in this part of the river where water movement is sluggish. All of the islands are covered by dense thickets of wet, Willow (*Salix* spp.) woodland, with the following species occurring: Osier (*S. viminalis*), Crack Willow (*S. fragilis*), White Willow (*S. alba*), Purple Willow (*Salix purpurea*) and Grey Willow (*S. cinerea*). A small area of Alder (*Alnus glutinosa*) woodland is found on soft ground at the edge of the canal in the north-western section of the islands. Along other stretches of the rivers of the site Grey Willow scrub and pockets of wet woodland dominated by Alder have become established, particularly at the river edge of mature deciduous woodland. Ash (*Fraxinus excelsior*) and Birch (*Betula pubescens*) are common in the latter and the ground flora is typical of wet woodland with Meadowsweet (*Filipendula ulmaria*), Angelica (*Angelica sylvestris*), Yellow Iris, Horsetail (*Equisetum* spp.) and occasional tussocks of Greater Tussock-sedge (*Carex paniculata*).

The dominant habitat along the edges of the river is freshwater marsh - the following plant species occur commonly here: Yellow Flag (*Iris pseudacorus*), Creeping Bent (*Agrostis stolonifera*), Canary Reed-grass (*Phalaris arundinacea*), Marsh Bedstraw (*Galium palustre*), Water Mint (*Mentha aquatica*) and Water Forget-me-not (*Myosotis scorpioides*). In the wetter areas of the marsh Common Meadow-rue (*Thalictrum flavum*) is found. In the vicinity of Dowth, Fen Bedstraw (*Galium uliginosum*), a scarce species mainly confined to marshy areas in the midlands, is common in this vegetation. Swamp Meadow-grass (*Poa palustris*) is an introduced plant which has spread into the wild (naturalised) along the Boyne approximately 5 km south-west of Slane. It is a rare species which is listed in the Red Data Book and has been recorded among freshwater marsh vegetation on the banks of the Boyne in this site. The only other record for this species in the Republic is from a site in Co. Monaghan.

The secondary habitat associated with the marsh is wet grassland and species such as Tall Fescue (*Festuca arundinacea*), Silverweed (*Potentilla anserina*), Creeping Buttercup (*Ranunculus repens*), Meadowsweet (*Filipendula ulmaria*) and Meadow Vetchling (*Lathyrus pratensis*) are well represented. Strawberry Clover (*Trifolium fragiferum*), a plant generally restricted to coastal locations in Ireland, has been recorded from wet grassland vegetation at Trim. At Rossnaree river bank on the River Boyne, is Round-Fruited Rush (*Juncus compressus*) found in alluvial pasture, which is generally periodically flooded during the winter months. This rare plant is only found in three counties in Ireland.

Along much of the Boyne and along tributary stretches are areas of mature deciduous woodland on the steeper slopes above the floodplain marsh or wet woodland vegetation. Many of these are planted in origin. However the steeper areas of King Williams Glen and Townley Hall wood have been left unmanaged and now have a more natural character. East of Curley Hole the woodland has a natural appearance with few conifers. Broad-leaved species include Oak (*Quercus* spp.), Ash (*Fraxinus excelsior*), Willows, Hazel (*Corylus avellana*), Sycamore (*Acer pseudoplatanus*), Holly (*Ilex aquifolium*), Horse chestnut (*Aesculus* sp.) and the shrubs Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*) and Elder (*Sambucus nigra*). South-west of Slane and in Dowth, the addition of some more exotic tree species such

as Wych Elm (*Ulmus glabra*), Beech (*Fagus sylvatica*), and occasionally Lime (*Tilia cordata*), are seen. Coniferous trees, Larch (*Larix* sp.) and Scots Pine (*Pinus sylvestris*) also occur. The woodland ground flora includes Barren Strawberry (*Potentilla sterilis*), Enchanter's Nightshade (*Circaea lutetiana*) and Ground-ivy (*Glechoma hederacea*), along with a range of ferns. Variation occurs in the composition of the canopy, for example, in wet patches alongside the river, White Willow and Alder form the canopy.

Other habitats present along the Boyne and Blackwater include lowland dry grassland, improved grassland, reedswamp, weedy wasteground areas, scrub, hedge, drainage ditches and canal. In the vicinity of Lough Shesk, the dry slopes of the morainic hummocks support grassland vegetation which, in some places, is partially colonised by Gorse (*Ulex europaeus*) scrub. Those grasslands which remain unimproved for pasture are species-rich with Common Knapweed (*Centaurea nigra*), Creeping Thistle (*Cirsium arvense*) and Ribwort Plantain (*Plantago lanceolata*) commonly present. Fringing the canal alongside the Boyne south-west of Slane, are Reed Sweet-grass (*Glyceria maxima*), Great Willowherb (*Epilobium hirsutum*) and Meadowsweet.

The Boyne and its tributaries is one of Ireland's premier game fisheries and it offers a wide range of angling from fishing for spring salmon and grilse to seatrout fishing and extensive brown trout fishing. Atlantic Salmon (*Salmo salar*) use the tributaries and headwaters as spawning grounds. Although this species is still fished commercially in Ireland, it is considered to be endangered or locally threatened elsewhere in Europe and is listed on Annex II of the Habitats Directive. Atlantic Salmon run the Boyne almost every month of the year. The Boyne is most important as it represents an eastern river which holds large three-sea-winter fish from 20–30 lb. These fish generally arrive in February with smaller spring fish (10 lb) arriving in April/May. The grilse come in July, water permitting. The river gets a further run of fish in late August and this run would appear to last well after the fishing season. The salmon fishing season lasts from 1st March to 30th September.

The Blackwater is a medium sized limestone river which is still recovering from the effects of the arterial drainage scheme of the 70's. Salmon stocks have not recovered to the numbers pre drainage. The Deel, Riverstown, Stoneyford and Tremblestown Rivers are all spring fed with a continuous high volume of water. They are difficult to fish in that some are overgrown while others have been affected by drainage with the resulting high banks.

The site is also important for the populations of two other species listed on Annex II of the E.U. Habitats Directive, namely River Lamprey (*Lampetra fluviatilis*) which is present in the lower reaches of the Boyne River while the Otter (*Lutra lutra*) can be found throughout the site. In addition, the site also supports many more of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Pine Marten, Badger and Irish Hare. Common Frog, another Red Data Book species, also occurs within the site. All of these animals with the addition of the Stoat and Red Squirrel, which also occur within the site, are protected under the Wildlife Act.

Whooper Swans winter regularly at several locations along the Boyne and Blackwater Rivers. Parts of these areas are within the cSAC site. Known sites are at Newgrange (c. 20 in recent winters), near Slane (20+ in recent winters), Wilkinstown (several records of 100+) and River Blackwater from Kells to Navan (104 at Kells in winter 1996/97, 182 at Headfort in winter 1997/98, 200-300 in winter 1999/00). The available information indicates that there is a regular wintering population of Whooper Swans based along the Boyne and Blackwater River valleys. The birds use a range of feeding sites but roosting sites are not well known. The population is substantial, certainly of national, and at times international, importance. Numbers are probably in the low hundreds.

Intensive agriculture is the main landuse along the site. Much of the grassland is in very large fields and is improved. Silage harvesting is carried out. The spreading of slurry and fertiliser poses a threat to the water quality of this salmonid river and to the lakes. In the more extensive agricultural areas sheep grazing is carried out.

Fishing is a main tourist attraction on the Boyne and Blackwater and there are a number of Angler Associations, some with a number of beats. Fishing stands and styles have been erected in places. The Eastern Regional Fishery Board have erected fencing along selected stretches of the river as part of their salmonid enhancement programme. Parts of the river system have been arterially dredged. In 1969 an arterial dredging scheme commenced and disrupted angling for 18 years. The dredging altered the character of the river completely and resulted in many cases in leaving very high banks. The main channel from Drogheda upstream to Navan was left untouched, as were a few stretches on the Blackwater. Ongoing maintenance dredging is carried out along stretches of the river system where the gradient is low. This is extremely destructive to salmonid habitat in the area. Drainage of the adjacent river systems also impacts on the many small wetland areas throughout the site. The River Boyne is a designated Salmonid Water under the EU Freshwater Fish Directive.

The site supports populations of several species listed on Annex II of the EU Habitats Directive, and habitats listed on Annex I of this directive, as well as examples of other important habitats. Although the wet woodland areas appear small there are few similar examples of this type of alluvial wet woodland remaining in the country, particularly in the north-east. The semi-natural habitats, particularly the strips of woodland which extend along the river banks and the marsh and wet grasslands, increase the overall habitat diversity and add to the ecological value of the site as does the presence of a range of Red Data Book plant and animal species and the presence of nationally rare plant species.

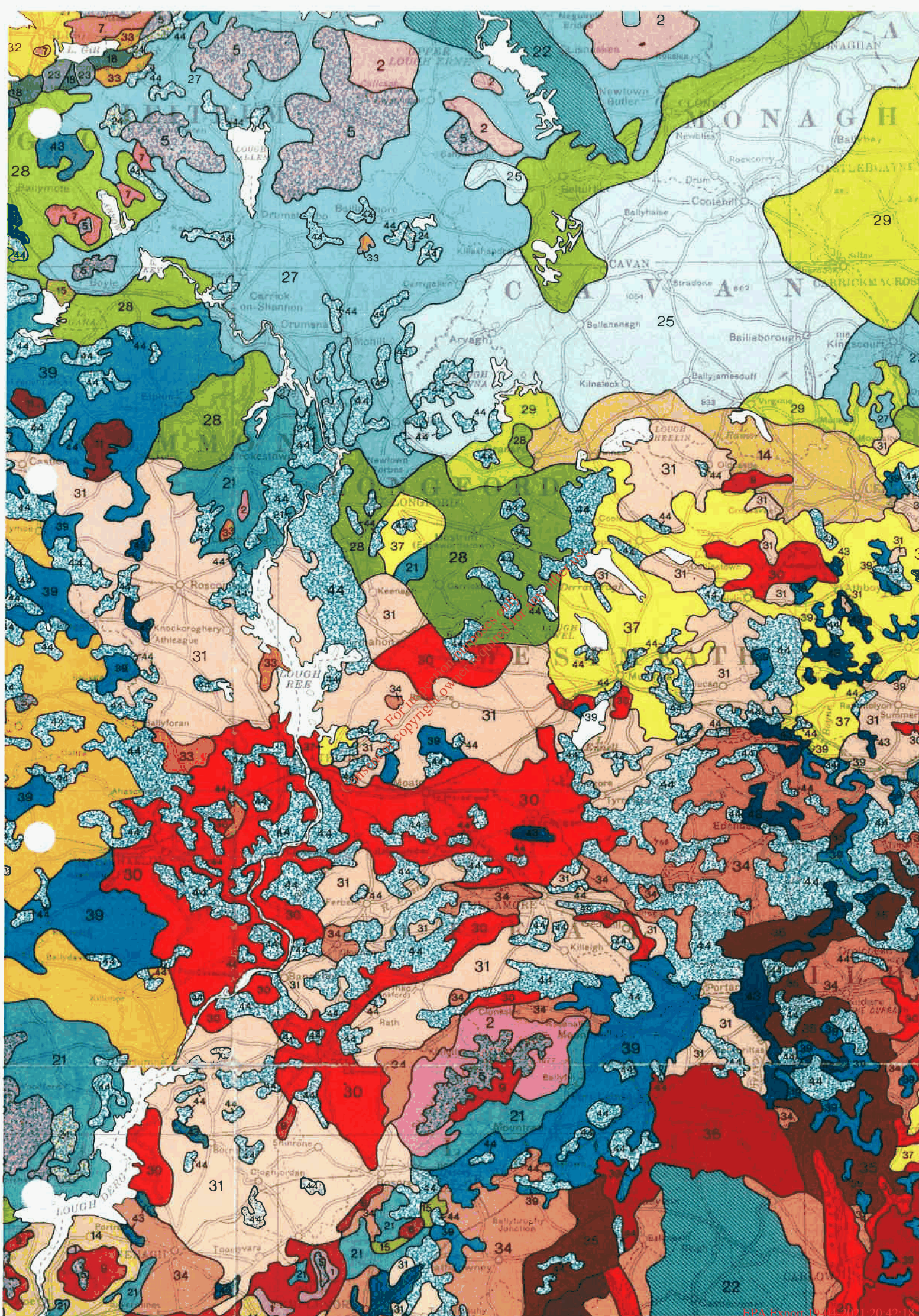
6.10.2006

Appendix No. 14

***Extract from General Soil Map of
Ireland.***

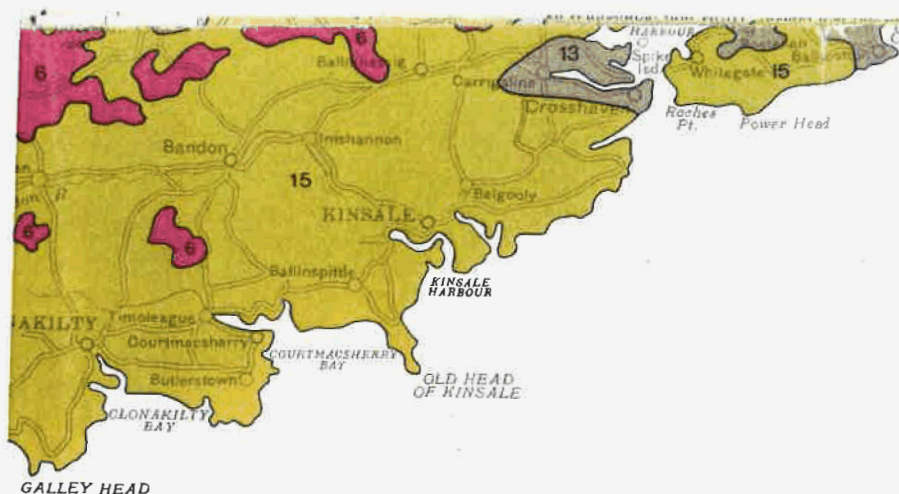
***Profile of Soil Association No. 14 &
25***

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Geographical Divisions	Soil Association			Parent Material	Per cent of total area
	Nos.	Principal Soil	Associated Soils		
Drumlin (at 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 (at 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
	39	Gleys** (90)	Grey Brown Podzolics (10)	Limestone glacial till	3.27 2.86
Flat to Undulating Lowland (mainly wet Mineral and Organic Soils)	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.



Broad Physiographic Divisions	Soil Association			Parent Material	Per cent of total area
	Nos.	Principal Soil	Associated Soils		
Rolling Lowland	12	Acid Brown Earths (70%) (Coarse texture)	Gleys (25%) Podzols (5%)	Mostly granite or rhyolite glacial till	1.13 2.50
	13	Acid Brown Earths (70)	Grey Brown Podzolics (15) Gleys (15)	Mixed sandstone, limestone glacial till	1.69 1.40
	14	Acid Brown Earths (75)	Gleys (15) Brown Podzolics (10)	Ordovician - Silurian - Cambrian shale glacial till	4.22 4.32
	15	Brown Podzolics (60)	Acid Brown Earths (20) Gleys (20)	Sandstone, Lower Avonian shale glacial till	6.31 5.23
	16	Acid Brown Earths (90)	Gleys (5), Regosols (3), Podzols (2)	Morainic sands and gravels and blown sands	.42 .35
	17	Acid Brown Earths (90)	Gleys (5) Peaty Gleys (5)	Basalt glacial till	.02 1.35
	18	Podzols (70)	Gleys (20), Peat (10)	Sandstone, granite, mica schist glacial till	.74 .61
	19	Acid Brown Earths (70)	Gleys (15), Peaty Gleys (15)	Upper Carboniferous shale and sandstone glacial till	.77 .64
	20	Brown Podzolics (60)	Acid Brown Earths (20), Gleys (20)	Mica schist glacial till	1.41 2.46
	21	Gleys (75)	Peaty Gleys (25)	Sandstone glacial till	2.95 2.78
	22	Gleys (75)*	Acid Brown Earths (15) Peat (10)	Upper Carboniferous shale glacial till	4.86 4.27
	23	Lithosols (80)	Rock Outcrop and Peat (20)	Granite and sandstone and shallow glacial till (quartzite in places)	1.31 1.08
	24	Blanket Peat (Low level)			5.14 4.40

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

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

Based on the Ordnance Survey by permission of the Government.

Appendix No. 15

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

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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.

L₉₀ and L₁₀ Values

The L₉₀ and L₁₀ values represent the sound levels exceeded for a percentage of the instrument measuring time. L₁₀ indicates that for 10% of the monitoring period, the sound levels were greater than the quoted value. L₁₀ 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 703A Type One Sound Level Meter
Calibration Certificate Number
Microphone Type:MK224
Tripod

Serial No. 024818
103602
Serial No. 970065

Calibrator CR 513A
Calibration Certificate Number

Serial No. 024602
101432

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	38.4	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 ₁₀ dB(A)	L ₉₀ dB(A)
N1	33.2	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	31.3	45.2	31.3	30.6

RESULTS OF MEASUREMENTS - FARM 2 (Day-time)				
Location No.	L _{eq} dB(A)	Max.P.dB(A)	L ₁₀ dB(A)	L ₉₀ dB(A)
N1	44.2	53.6	45.1	41.7
N2	44.6	60.8	45.4	41.7
N3	52.1	64.3	56.0	42.3
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 ₁₀ dB(A)	L ₉₀ dB(A)
N1	37.3	58.9	38.2	32.6
N2	41.7	53.8	43.3	37.8
N3	43.0	66.2	45.4	39.2
N4	40.6	69.5	43.8	35.5
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	39.8	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	43.7	63.8	42.8	34.7
N2	49.5	66.0	52.8	37.4
N3	59.8	88.7	62.8	47.8
N4	50.5	63.3	53.2	43.7
N5	54.3	94.4	53.0	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	32.3	72.6	35.2	30.8
N2	33.7	52.2	35.5	30.6
N3	36.2	53.0	37.9	31.2
N4	30.5	67.5	34.0	30.7
N5	33.5	50.7	35.5	31.0

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 L_{eq} 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_{90} 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 N5 (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 N5 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.

Appendix No. 16

European Communities (Welfare of Farmed Animals) Regulations 2008 – S.I. 14 of 2008

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STATUTORY INSTRUMENTS

S.I. No. 14 of 2008

EUROPEAN COMMUNITIES (WELFARE OF FARMED ANIMALS)
REGULATIONS 2008

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(Prn. A8/0148)

S.I. No. 14 of 2008

EUROPEAN COMMUNITIES (WELFARE OF FARMED ANIMALS)
REGULATIONS 2008

ARRANGEMENT OF REGULATIONS

Part 1

PRELIMINARY AND GENERAL

1. Citation
2. Interpretation

Part 2

ANIMAL WELFARE GENERALLY

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

Part 3

WELFARE OF LAYING HENS

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

Part 4

WELFARE OF CALVES AND PIGS

11. Application of Part 4
12. Accommodation for calves and pigs
13. Accommodation for calves
14. Accommodation for pigs
15. Accommodation for sows and for gilts after service
16. Use of concrete slatted floors
17. Restrictions on certain procedures
18. Import of calves or pigs

Part 5

SLAUGHTER OF ANIMALS

- 19. Slaughter of an animal
- 20. General requirements for slaughterhouses
- 21. Other requirements for slaughterhouses
- 22. Requirements for slaughter or killing outwith slaughterhouses
- 23. Disease control, fur animals, surplus chicks
- 24. Emergency and humane killing and slaughtering
- 25. Import of meat

Part 6

AUTHORISED OFFICERS

- 26. Appointment of authorised officer
- 27. Functions of authorised officer
- 28. Search warrant

Part 7

WELFARE NOTICE AND EMERGENCY MEASURES

- 29. Welfare notice
- 30. Service of welfare notice
- 31. Appeal against welfare notice
- 32. Power to seize and dispose of an animal
- 33. Emergency measures

Part 8

FINAL PROVISIONS

- 34. Obstruction, etc.
- 35. Forgery
- 36. Evidence on certificate
- 37. Offences
- 38. Revocation and savers

Schedule 1

CONDITIONS UNDER WHICH AN ANIMAL SHOULD BE KEPT

Schedule 2

CONDITIONS UNDER WHICH LAYING HENS SHOULD BE KEPT

Schedule 3

CONDITIONS UNDER WHICH CALVES AND PIGS SHOULD BE KEPT

Schedule 4

CONDITIONS RELATING TO ANIMALS TO BE SLAUGHTERED OR KILLED

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S.I. No. 14 of 2008

EUROPEAN COMMUNITIES (WELFARE OF FARMED ANIMALS)
REGULATIONS 2008

I, MARY COUGHLAN, Minister for Agriculture, Fisheries and Food, in exercise of the powers conferred on me by section 3 of the European Communities Act 1972 (No. 27 of 1972) and for the purpose of giving effect to Council Directive No. 91/629/EEC of 19 November 1991¹, Council Directive 91/630/EEC of 19 November 1991², Council Directive No. 93/119/EEC of 22 December 1993³, Council Directive No. 97/2/EC of 20 January 1997⁴, Commission Decision No. 97/182/EC of 24 February 1997⁵, Council Directive 98/58/EC of 20 July 1998⁶, Council Directive 2001/88/EC of 23 October 2001⁷, Commission Directive 2001/93/EC of 9 November 2001⁸, Council Directive No. 1999/74/EC of 19 July 1999⁹ and Commission Directive 2002/4/EC of 30 January 2002¹⁰, hereby make the following regulations—

Part 1

PRELIMINARY AND GENERAL

Citation

1. These Regulations may be cited as the European Communities (Welfare of Farmed Animals) Regulations 2008 and come into operation on 1 February 2008.

Interpretation

2. (1) In these Regulations—

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

“authorised officer” means—

- (a) an authorised officer within the meaning of section 17A (inserted by the Diseases of Animals (Amendment) Act 2001 (No. 3 of 2001)) of the Diseases of Animals Act 1966 (No. 6 of 1966),
- (b) an authorised person or inspector within the meaning of the Protection of Animals Kept for Farming Purposes Act 1984 (No. 13 of 1984),

¹O.J. No. L 340 of 11.12.1991, p. 28.

²O.J. No. L 340 of 11.12.1991, p. 33.

³O.J. No. L 340 of 31.12.1993, p. 21.

⁴O.J. No. L 25 of 28.1.1997, p. 24.

⁵O.J. No. L 76 of 18.3.1997, p. 30.

⁶O.J. No. L 221 of 8.8.1998, p. 23.

⁷O.J. No. L 316 of 1.12.2001, p. 1.

⁸O.J. No. L 316 of 1.12.1993, p. 36.

⁹O.J. No. L 203 of 3.8.1999, p. 53.

¹⁰O.J. No. L 30 of 31.1.2002, p.44.

*Notice of the making of this Statutory Instrument was published in
“Iris Oifigiúil” of 8th February, 2008.*

6 [14]

- (c) an authorised officer within the meaning of the European Communities (Food and Feed Hygiene) Regulations 2005 (S.I. No. 910 of 2005),
- (d) a member of the Garda Síochána,
- (e) an officer of Customs and Excise, or
- (f) a person appointed under Regulation 26;

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

“Calves Directive” means Council Directive No. 91/629/EEC of 19 November 1991, Council Directive No. 97/2/EC of 20 January 1997 and Commission Decision No. 97/182/EC of 24 February 1997;

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

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

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

“Pigs Directive” means Council Directive No. 91/630/EEC of 19 November 1991, Council Directive 2001/88/EC of 23 October 2001 and Commission Directive 2001/93/EC of 9 November 2001;

“premises” includes land, with or without buildings;

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

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

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

Part 2

ANIMAL WELFARE GENERALLY

Scope

3. (1) This Part does not apply to—

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

(d) an invertebrate animal.

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

Obligation to ensure welfare of an animal

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

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

Part 3

WELFARE OF LAYING HENS

Application of Part 3

5. (1) This Part applies to premises where there are 50 or more laying hens.

(2) This Part is without prejudice to the generality of Regulation 4.

General conditions for keeping laying hens

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

Free-range or barn systems

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

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

8 [14]

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

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

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

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

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

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

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

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

Un-enriched cage systems

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

- (a) the cage has at least 550 unrestricted square centimetres of area (measured in a horizontal plane and not including non-waste deflection plates that may restrict the available area) available for each laying hen in the cage,
- (b) a feed trough, to which each laying hen has unrestricted access, the length of which measures at least 10 centimetres multiplied by the number of laying hens in the cage, is present in the cage,
- (c) subject to subparagraph (d), a drinking channel, to which each laying hen has unrestricted access, the length of which measures at least 10 centimetres multiplied by the number of laying hens in the cage, is present in the cage,
- (d) where drinking points are plumbed in, at least two nipple drinkers or cups are within reach of the cage,

- (e) the cage is at least 40 centimetres high over at least 65 per cent of its floor area and not less than 35 centimetres at any point,
- (f) the floor of the cage is constructed in a manner that adequately supports each forward facing claw of each hen,
- (g) the slope of the floor of the cage does not exceed 14 per cent or 8 degrees, and
- (h) the cage is fitted with suitable claw-shortening devices.

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

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

Enriched cage systems

9. The owner or person in charge of an enriched cage system shall not keep a laying hen in an enriched cage system unless—

- (a) the cage has a total area of at least 2000 square centimetres,
- (b) an area of at least 750 square centimetres, of which a minimum of 600 square centimetres is usable, is available for each laying hen in the cage,
- (c) the height of the cage other than above the usable part is at least 20 centimetres at every point,
- (d) there is a nest in the cage,
- (e) adequate litter is available in the cage to permit pecking and scratching by each laying hen,
- (f) appropriate perches, that measure, in length, at least 15 centimetres multiplied by the number of laying hens in the cage, are present in the cage,
- (g) a feed trough, to which each laying hen has unrestricted access, that measures at least 12 centimetres multiplied by the number of laying hens in the cage, is present in the cage,
- (h) subject to subparagraph (i), a drinking system, to which each laying hen has unrestricted access, appropriate to the number of laying hens is provided in each cage,
- (i) if drinking points are plumbed in, at least two nipple drinkers or cups are within reach of each laying hen, and
- (j) the cage is fitted with suitable claw-shortening devices.

Register

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

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

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

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

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

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

- (a) the application does not comply with this Regulation,
- (b) in the opinion of the Minister, the application contains a statement that is false or misleading in a material respect,
- (c) the premises to which the application or registration relates does not comply, in the opinion of the Minister, with these Regulations,
- (d) the person is, in the opinion of the Minister, not a fit person to keep laying hens,
- (e) he or she is satisfied that these Regulations have not been or will not be complied with,
- (f) the applicant or registered person has been convicted of or committed an offence, whether he or she has been convicted or not, under any enactment relating to animals, animal health, animal welfare or public health,
- (g) the applicant or registered person has failed to comply with a condition of registration,
- (h) a registered person has ceased to keep or rear laying hens at the premises to which registration relates,
- (i) a person is disqualified by a Court of competent jurisdiction under any enactment from keeping, dealing in or having charge or control of, directly or indirectly, laying hens, or
- (j) it is necessary, in the opinion of the Minister—
 - (i) to prevent the risk or spread of disease,

(ii) to eradicate disease, or

(iii) is necessary, incidental, supplementary or consequential for the purposes of giving effect to an act of the institutions of the European Communities.

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

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

(a) notify applicant or registered person in writing of the proposal and of the reasons for the proposal, and that he or she may make representations to the Minister in relation to the proposal within 14 days of the notification,

(b) consider a representation made before deciding whether to proceed with, modify or annul the proposal, and

(c) notify the applicant or registered person of the decision and the reasons for the decision.

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

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

(a) notify the applicant or registered person in writing of the decision and the reasons for the decision, and that he or she may make representations to the Minister in relation to the decision within 14 days of the date of the notification,

(b) consider a representation made, and

(c) confirm, modify or annul the decision and notify the applicant or registered person of the decision and the reasons for the decision.

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

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

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

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

(15) A person who, on the coming into operation of this Regulation, is registered under Regulation 7 of the Regulations revoked by Regulation 38 (1)(b) is considered to be registered under this Regulation and may be dealt with as if registered under this Regulation.

(16) On the coming into operation of these Regulations, an application for registration under Regulation 7 of the Regulations revoked by Regulation 38 (1)(b) is considered to be an application for registration under this Regulation and shall be determined in accordance with this Regulation.

Part 4

WELFARE OF CALVES AND PIGS

Application of Part 4

11. (1) This Part applies to—

- (a) calves confined for rearing or fattening, and
- (b) pigs confined for breeding, rearing or fattening.

(2) Regulations 15(1), (2), (3) and (4) and 16 apply to—

- (a) a premises built, rebuilt or used, for the first time for breeding, rearing or fattening pigs from 1 January 2003, and
- (b) all premises used for breeding, rearing or fattening pigs from 1 January 2013.

(3) This Part is without prejudice to the generality of Regulation 4.

Accommodation for calves and pigs

12. (1) A person shall not have in his or her possession or under his or her control or cause or permit another person to have in his or her possession or under his or her control a calf or pig unless the conditions for keeping, rearing and fattening the calf or pig, as the case may be, comply with Part 1 of Schedule 3.

(2) A person shall not have in his or her possession or under his or her control or cause or permit another person to have in his or her possession or under his or her control a calf unless the conditions for keeping, rearing and fattening the calf comply with Part 2 of Schedule 3.

(3) A person shall not have in his or her possession or under his or her control or cause or permit another person to have in his or her possession or under his or her control a pig unless the conditions for keeping, rearing and fattening the pig comply with Part 3 of Schedule 3.

Accommodation for calves

13. (1) Subject to paragraph (3), the owner or person in charge of a premises built, rebuilt or brought into use on or after 1 January 1998 and used for rearing or fattening calves shall not confine, or cause or permit another person to confine a calf—

- (a) over eight weeks of age in an individual pen unless a registered veterinary practitioner certifies that the health or behaviour of the calf requires that it be isolated to receive treatment,
- (b) unless the pen in which the calf is confined is of a width at least equal to the height of the calf at the withers and of a length at least 10% greater than the body length of the calf, measured from the tip of the nose to the caudal end of the pin bone (tuber ischia).

(2) A person shall not keep, or cause or permit another person to keep, a calf in an individual pen with solid walls but a pen shall have perforated walls that ensure that a calf confined therein has direct visual and tactile contact with other calves unless the person is in possession of a certificate from a registered veterinary practitioner that states that the calf, due to health or behaviour, requires to be individually isolated to receive treatment.

(3) A person shall not keep calves in a group, or cause or permit another person to keep calves in a group, unless the unobstructed space available for each calf is at least equal to—

- (a) 1.5 square metres for each calf with a live weight of less than 150 kilogrammes,
- (b) 1.7 square metres for each calf with a live weight of 150 kilogrammes or more but less than 220 kilogrammes, and
- (c) 1.8 square metres for each calf with a live weight of 220 kilogrammes or over.

(4) A person shall not use, or cause or permit another person to use, premises built, rebuilt or brought into operation before 1 January 1998 for rearing or fattening calves unless the premises complies with paragraphs (1), (2) and (3).

(5) This Regulation does not apply to—

- (a) a calf kept with its mother for suckling, or
- (b) a premises with fewer than six calves.

Accommodation for pigs

14. (1) The owner or person in charge of a premises used for breeding, rearing or fattening pigs shall not confine, or cause or permit another person to confine, a pig unless the floor area available to each weaner or rearing pig (other than sows and gilts after service) reared in a group is at least—

- (a) 0.15 square metres for each pig of an average weight of 10 kilogrammes or less,

14 [14]

- (b) 0.20 square metres for each pig of an average weight of between 10 kilogrammes and less than or equal to 20 kilogrammes,
- (c) 0.30 square metres for each pig of an average weight of greater than 20 kilogrammes and less than or equal to 30 kilogrammes,
- (d) 0.40 square metres for each pig of an average weight of greater than 30 kilogrammes and less than or equal to 50 kilogrammes,
- (e) 0.55 square metres for each pig of an average weight of greater than 50 kilogrammes and less than or equal to 85 kilogrammes,
- (f) 0.65 square metres for each pig of an average weight of greater than 85 kilogrammes and less than or equal to 110 kilogrammes,
- (g) 1.00 square metre for each pig of an average weight of greater than 110 kilogrammes.

(2) A person shall not keep a pig or cause or permit another person to keep a pig in a building or part of a building if there are continuous noise levels, equal to or greater than 85dBA in the building or part thereof where pigs are kept.

(3) A person shall not keep a pig, or cause or permit another person to keep a pig unless the pig is kept where there is a light intensity of 40 lux or more for a continuous period of at least 8 hours in any 24 hour period.

Accommodation for sows and for gilts after service

15. (1) Subject to paragraphs (2) and (3), the owner or person in charge of a premises used for breeding, rearing or fattening pigs shall not confine, or cause or permit another person to confine, either a sow or a gilt after service unless the floor area available to each sow or gilt after service reared in a group is at least—

- (a) a minimum of 2.50 square metres for each sow in a group of sows or gilts if there are fewer than 6 pigs in the group,
- (b) a minimum of 2.25 square metres for each sow in a group of sows or gilts if there are more than 5 but fewer than 40 pigs in the group,
- (c) a minimum of 2.025 square metres for each sow in a group of sows or gilts if there are 40 or more pigs in the group,
- (d) a minimum of 1.81 square metres for each gilt after service if there are fewer than 6 pigs in the group,
- (e) a minimum of 1.64 square metres for each gilt after service if there are more than 5 but fewer than 40 pigs in the group, or
- (f) a minimum of 1.48 square metres for each gilt after service if there are 40 pigs or more in the group.

(2) A minimum floor area of at least—

- (a) 1.3 square metres for each pregnant sow, or

(b) 0.95 square metres for each gilt after service,

shall comprise a continuous solid floor and no more than 15% of the floor area referred to in this paragraph shall consist of openings designed for drainage.

(3) Subject to paragraph (4), the owner or person in charge of a premises used for breeding, rearing or fattening pigs shall not confine, or cause or permit another person to confine, either a sow or a gilt in the period commencing 28 days after service and ending 7 days before the expected date of farrowing other than in—

(a) a group in a pen the sides of which are greater than 2.8 metres in length, or

(b) a group in a pen the sides of which are greater than 2.4 metres in length if there are no more than five sows or gilts in the group.

(4) A person may keep a sow or gilt to which paragraph (3) refers in an individual pen during the period mentioned in that paragraph if—

(a) there are no more than 9 sows on the premises, and

(b) the sow or gilt may turn easily in the pen.

(5) A person shall not tether or cause or permit another person to tether a sow or gilt.

(6) A person shall not have in his or her possession or under his or her control a sow or gilt that has been tethered in contravention of paragraph (5).

Use of concrete slatted floors

16. The owner or person in charge of a premises used for breeding, rearing or fattening pigs shall not keep, or cause or permit another person to keep, a pig on a concrete slatted floor unless—

(a) the maximum width of each opening is no more than—

(i) 11 millimetres in any floor where a piglet is kept,

(ii) 14 millimetres in any floor where a weaner is kept,

(iii) 18 millimetres in any floor where a rearing pig is kept, or

(iv) 20 millimetres in any floor where either a sow or a gilt after service is kept,

and

(b) the minimum width of each slat is at least-

(i) 50 millimetres in any floor where a piglet or weaner is kept, or

(ii) 80 millimetres in any floor where a rearing pig, a sow or a gilt after service is kept.

Restriction on certain procedures

17. (1) Subject to paragraph (2), a person shall not carry out or cause or permit another person to carry out a procedure (other than for therapeutic or diagnostic purposes) on a pig that is likely to result in damage to, or loss of a sensitive part of the body or the alteration of the bone structure of, a pig other than—

- (a) non-routine, uniform reduction of corner teeth of piglets, by grinding or clipping, no later than 7 days after birth, leaving an intact smooth surface where injury has occurred to a sow's teats or to the tails or ears of another pig,
- (b) reduction in length of boars tusks where necessary to prevent injury to other animals or for safety reasons,
- (c) non-routine docking of part of the tail where injury has occurred to the tail or ear of a pig,
- (d) castration of male pigs by means that do not involve tearing tissue, or
- (e) nose ringing when the pig is kept in an outdoor husbandry system.

(2) (a) Subject to paragraph (3), a procedure outlined in paragraph (1) may only be carried out under hygienic conditions by a registered veterinary practitioner or a person who has competence relating to, and experience of, the procedure.

(b) A person shall only carry out a procedure specified in paragraph (1) (a) or (c) if the environment, stocking density or the management system in which a pig is reared would not, in the opinion of a registered veterinary practitioner who is familiar with the premises, and has been consulted in a professional capacity regarding the necessity of carrying out the procedure, facilitate injury to the pig.

(3) A person, other than a registered veterinary practitioner, shall not castrate or dock the tail of a pig older than 7 days.

(4) A registered veterinary practitioner shall not castrate or dock the tail of a pig older than 7 days unless the pig is under anaesthetic and additional prolonged analgesia administered by that registered veterinary practitioner.

Import of calves or pigs

18. A person shall not import—

- (a) a calf, or
- (b) a pig,

from a country that is not a member state of the European Union unless the calf or pig is accompanied by a certificate, issued by a competent authority in that country, certifying that the animal has received treatment at least equal to the treatment provided for in these Regulations.

Part 5

SLAUGHTER OF ANIMALS

Slaughter of an animal

19. (1) A person shall take all necessary care during movement, lairaging, restraint, stunning, slaughter or killing of an animal to ensure that the animal is spared avoidable excitement, pain or suffering.

(2) This Part is without prejudice to the generality of Regulation 4.

General requirements for slaughterhouses

20. (1) Subject to paragraph (2), the owner or person in charge of a slaughterhouse shall ensure that—

- (a) the construction, facilities and equipment of the slaughterhouse, and its operation, are such as to spare an animal any avoidable excitement, pain or suffering, and
- (b) a soliped, ruminant, pig, rabbit or poultry brought into the slaughterhouse is-
 - (i) moved and if necessary lairaged in accordance with Part 1 of Schedule 4,
 - (ii) restrained in accordance with Part 2 of Schedule 4,
 - (iii) stunned before slaughter or killed instantaneously in accordance with Part 3 of Schedule 4,
 - (iv) bled in accordance with Part 4 of Schedule 4.

(2) Subparagraph (1)(b)(iii) does not apply in the case of an animal subject to particular methods of slaughter required by certain religious rites, if the religious authority on whose behalf slaughter is carried out is competent to apply and monitor the special provisions which apply to slaughter according to the religious rites of that religion.

(3) A religious authority to which paragraph (2) applies shall operate under the responsibility of a registered veterinary practitioner.

Other requirements for slaughterhouses

21. (1) The owner or person in charge of a slaughterhouse or a person engaged in the slaughter of an animal shall ensure that—

- (a) instruments, restraint and other equipment and installations used for stunning or killing are designed, constructed, maintained and used in such a way as to achieve rapid and effective stunning or killing,
- (b) suitable spare equipment and instruments are kept at the place of slaughter for emergency use and that spare equipment and instruments are properly maintained and are inspected at least once a month,

- (c) subject to paragraph (2), a person shall not move, lairage, restrain, stun, slaughter or kill an animal unless that person has the knowledge and skill necessary to perform the tasks humanely and efficiently, and
- (d) a person carrying out the slaughter of an animal takes all necessary care to ensure that the animal is rendered unconscious, killed or slaughtered in a manner or by a means that does not cause unnecessary, avoidable or excessive pain or suffering to the animal.

(2) If an authorised officer is of the opinion that a person employed for slaughtering or killing an animal does not possess the necessary skill, ability and professional knowledge, the owner or the person in charge of the slaughterhouse or other premises shall, in accordance with the directions of the authorised officer and subject to any time limits that he or she may specify, arrange a staff training programme enabling such person to obtain the required training in order to satisfy the standards appropriate to that type of employment.

(3) A person shall comply with a direction under paragraph (2).

Requirements for slaughter or killing outwith slaughterhouses

22. A person shall not kill or slaughter or cause or permit another person to kill or slaughter a soliped, ruminant, pig, rabbit or poultry, which is to be killed or slaughtered outwith a slaughterhouse unless Regulation 20(1)(b)(ii), (iii) and (iv) are complied with.

Disease control, fur animals, surplus chicks

23. (1) A person shall not slaughter or kill or permit a person to slaughter or kill a soliped, ruminant, pig, rabbit or poultry, if it is to be slaughtered or killed for the purpose of disease control, other than in accordance with Part 5 of Schedule 4.

(2) A person shall not slaughter or kill or permit a person to slaughter or kill an animal farmed for its fur other than in accordance with Part 6 of Schedule 4.

(3) A person shall not slaughter or kill or permit a person to slaughter or kill surplus day-old chicks, as defined in the European Communities (Live Poultry and Hatching Eggs) Regulations, 1992 (S.I. No. 362 of 1992) and embryos in hatchery waste unless they are killed as rapidly as possible in accordance with Part 7 of Schedule 4.

Emergency and humane killing and slaughtering

24. (1) Regulations 21 and 22 do not apply in the case of an animal that has to be killed immediately for emergency reasons.

(2) Subject to paragraph (3), the owner or person in charge of a seriously injured or diseased animal shall ensure that it is slaughtered or killed immediately to avoid unnecessary suffering, unless a registered veterinary practitioner considers, after examining the animal, that it is not necessary to slaughter or kill the animal.

(3) A registered veterinary practitioner may authorise the transport of an injured or diseased animal for the purpose of slaughter or killing provided the practitioner is of the opinion that transport does not entail further unnecessary suffering for the animal.

Import of meat

25. A person shall not import meat obtained from a soliped, ruminant, pig, rabbit or poultry from a third country unless it is accompanied by a veterinary certificate certifying that the animal had been slaughtered or killed under conditions which offer guarantees of humane treatment at least equivalent to that granted to an animal of European Community origin.

Part 6

AUTHORISED OFFICERS

Appointment of authorised officer

26. (1) The Minister may, by instrument in writing, appoint such and so many persons as he or she thinks fit to be authorised officers for the purposes of some or all of these Regulations as may be specified in the instrument.

(2) The manager of a local authority may by instrument in writing, appoint such and so many persons as he or she thinks fit to be authorised officers for the purposes of Part 5 of these Regulations.

(3) The Minister or manager of a local authority may terminate the appointment of an authorised officer appointed by him or her, whether or not the appointment was for a fixed period.

(4) An appointment as an authorised officer ceases—

- (a) if it is terminated pursuant to paragraph (3),
- (b) if it is for a fixed period, on the expiry of that period, or
- (c) if the person appointed is an officer of the Minister or a local authority, upon the person ceasing to be such an officer.

(5) Nothing in paragraph (4) is to be construed so as to prevent the Minister or manager of a local authority from reappointing as an authorised officer a person to whom that paragraph relates.

(6) An officer of the Minister or of a local authority shall furnish an authorised officer appointed under this Regulation with a warrant of his or her appointment as an authorised officer and, when exercising a power conferred on him or her, the officer, an officer of Customs and Excise or a member of the Garda Síochána shall, if requested by a person affected, produce the warrant or evidence that he or she is such an officer or member to the person.

Functions of authorised officer

27. (1) If an authorised officer has reasonable cause to suspect that—

- (a) an animal is present, has been present or may be present on a premises,
- (b) an animal is or has been killed, slaughtered, processed, stored or otherwise dealt with on a premises, or
- (c) a document relating to an animal is present, was present or may be present on a premises,

the authorised officer may enter the premises and he or she may—

- (i) search the premises,
- (ii) stop a person, vehicle, vessel or container,
- (iii) board and search a vehicle, vessel or container,
- (iv) examine an animal, vehicle, vessel, container or other thing that may be used in connection with an animal,
- (v) take, without payment, samples from an animal, feed or other thing or an article, substance or liquid as he or she may reasonably require and carry out or cause to be carried out on a sample such tests, analyses, examinations or inspections as he or she considers necessary or expedient,
- (vi) require the production of a document or thing relating to an animal, feed, vehicle, vessel, container or other thing,
- (vii) retain a document or thing (for so long as is necessary),
- (viii) give a direction to, or request information of, a person regarding an animal, feed, vessel, vehicle, container, premises or other thing as he or she considers necessary,
- (ix) require the name and address of a person and the name and address of any other relevant person including the person to whom an animal or feed, is being delivered or who is causing it to be delivered,
- (x) require of a person the ownership, identity and origin of the animal or feed,
- (xi) make a record whether in writing, by photography or otherwise,
- (xii) mark or otherwise identify an animal, feed, or a sample taken under subparagraph (v).

(2) If an authorised officer has reasonable cause to suspect that—

- (a) an offence is being or has been committed under these Regulations,
- (b) a contravention of an act of the institutions of the European Communities relating to animal welfare is being or has been committed, or
- (c) evidence of an offence or contravention may be, is or has been on a premises—

the authorised officer may, in addition to the powers exercisable by him or her under subsection (1)—

- (i) search a person, where the authorised officer considers it necessary,

- (ii) seize and detain, an animal, carcass, animal product, animal by-product, animal feed, food, vessel, vehicle, container, equipment, machinery or other thing, or
- (iii) dispose of, or require the owner or person in charge of or in possession of an animal, carcass, animal product, animal by-product, animal feed, food or other thing to deal with or dispose of it (or any equipment, machinery, plant or other thing used in connection with, or that may have been in contact with, the animal, carcass, animal product, animal by-product, animal feed or food) in a manner that the authorised officer sees fit.

(3) An authorised officer shall not enter, except with the consent of the occupier, a private dwelling, unless he or she has obtained a search warrant under Regulation 28.

(4) An authorised officer may use reasonable force, if necessary, in exercise of his or her powers under this Regulation.

(5) An authorised officer, when exercising a power under this Regulation may be accompanied by other persons and may take with him or her, or those persons may take with them, any equipment or materials to assist the officer in the exercise of the power.

(6) An authorised officer is not liable in any proceedings for anything done in the purported exercise of his or her powers under these Regulations if the court is satisfied that the act was done in good faith and that there were reasonable grounds for doing it.

(7) Without prejudice to the generality of paragraph (1), a direction or requirement of an authorised officer may include conditions prohibiting, restricting or otherwise controlling the use, processing or movement of an animal as may be specified by the authorised officer.

(8) Nothing in this Regulation operates to prejudice any power to search, or to seize or detain property, which may, apart from these Regulations, be exercised by a member of the Garda Síochána or an officer of Customs and Excise.

(9) If a member of the Garda Síochána has reasonable grounds to suspect that a person has committed an offence under these Regulations, the member may without warrant arrest the person.

Search warrant

28. (1) If a judge of the District Court is satisfied by information on oath of an authorised officer that there are reasonable grounds for suspecting—

- (a) that evidence of, or relating to, the commission or intended commission of an offence under these Regulations is to be found on a premises,
- (b) there is or was an animal, feed, equipment or other thing made, used or adapted for use (including manufacture and transport) in connection with an animal or feed, on a premises,

- (c) a document or other record related to a thing to which subparagraph (a) or (b) refers is or may be on the premises,

the judge may issue a search warrant.

(2) A search warrant under this Regulation shall be expressed and operate to authorise a named authorised officer, accompanied by such authorised officers or other persons as the named authorised officer thinks necessary, at any time, within one month from the date of issue of the warrant, on production if so requested of the warrant, to enter (if necessary by use of reasonable force) the premises, vehicle, vessel or aircraft named in the warrant.

(3) If a premises is entered pursuant to a warrant issued under this Regulation, an authorised officer so entering may exercise all or any of the powers conferred on an authorised officer under these Regulations.

Part 7

WELFARE NOTICE AND EMERGENCY MEASURES

Welfare Notice

29. (1) If an authorised officer is of the opinion that—

- (a) an animal is being caused unnecessary pain, suffering or injury,
- (b) an animal is at risk of being caused unnecessary pain, suffering or injury,
- (c) there is a serious risk to the welfare of an animal, herd or flock or
- (d) the conditions under which an animal, herd or flock is being bred or kept contravene these Regulations,

he or she may serve or cause to be served on the owner or keeper of the animal, herd or flock a notice ("welfare notice") stating that opinion and directing that—

- (i) an ill or injured animal be cared for in an appropriate manner,
- (ii) veterinary or other specialist advice be obtained in respect of an ill or injured animal,
- (iii) an animal be supplied with feed appropriate to its age and species and in such quantity as will maintain it in good health,
- (iv) an animal be given access to such a supply of suitable liquid as will enable it to fulfil its fluid intake needs,
- (v) one or more animals be moved to and kept in such place as the officer specifies in the notice,
- (vi) one or more animals be sold, destroyed or otherwise disposed of in such manner and at such place (if any) as the officer may specify in the notice,

- (vii) such alterations or additions be made to the premises, land or place at which the animal is kept, or to the equipment and facilities found there, as the officer may specify in the notice,
- (viii) such alterations be made to the manner in which the animal is kept as the officer may specify in the notice, or
- (ix) such other measures be taken as are necessary to ensure that the animal is kept in a manner that complies with these Regulations.

(2) A welfare notice may specify one or more requirements or refer to one or more animals or species of animal.

(3) A requirement contained in a welfare notice may specify a time limit within which it is to be complied with.

(4) A welfare notice may require the owner or keeper of the animal to choose between two or more of the requirements specified in the welfare notice.

(5) A requirement specified in a welfare notice (in this Regulation referred to as "the earlier welfare notice") may be modified or withdrawn in a further welfare notice and in that event the earlier welfare notice shall have effect subject to such modification or withdrawal.

(6) A person, including a person upon whom a welfare notice is served, shall not deal with an animal to which the welfare notice relates other than in accordance with the terms of the welfare notice.

(7) In the event of an appeal made pursuant to Regulation 31 a person, including the person appealing, shall not deal with an animal to which a welfare notice relates pending the determination of the appeal other than in accordance with such directions as shall be given in writing to the appellant by an authorised officer.

(8) If the terms of a welfare notice are confirmed with or without modification by the judge of the District Court hearing an appeal under Regulation 31, a person including the person who made the appeal shall not deal with an animal to which the welfare notice relates other than in accordance with the welfare notice as confirmed.

(9) Any costs pertaining to action required to comply with a welfare notice will be borne by the owner of the animal to which the welfare notice relates.

Service of Welfare Notice

30. (1) A welfare notice shall, subject to paragraph (2), be addressed to the person concerned by name and may be served on a person—

- (a) by giving it to the person,
- (b) by leaving it at the address at which the person ordinarily resides or, where an address for service has been furnished, at that address,
- (c) by sending it by post in a prepaid registered letter to the address at which the person ordinarily resides or, where an address for service has been furnished, at that address, or

- (d) if the address at which the person ordinarily resides cannot be ascertained by reasonable enquiry and the compliance notice relates to a premises, by delivering it to the premises or by affixing it in a conspicuous position on or near the premises.

(2) If a welfare notice is to be served on a person who is the owner or keeper of an animal and the name of the person cannot be ascertained by reasonable enquiry, it may be addressed to that person by using the words "the owner" or "the keeper".

(3) A person shall not, at any time within 6 months after a welfare notice is affixed under paragraph (1)(d), remove, damage or deface the notification or compliance notice without lawful authority.

(4) For the purposes of this Regulation, a company within the meaning of the Companies Acts is considered to be ordinarily resident at its registered office and every other body corporate or unincorporated body is considered to be ordinarily resident at its principal office or place of business.

Appeal against welfare notice

31. (1) A person may appeal within 7 days of the service of a welfare notice to the judge of the District Court having jurisdiction in the District Court District where the animal to which the welfare notice relates is situated or to the judge of the District Court where the person bringing the appeal ordinarily resides or carries on business on the grounds that the notice or any terms thereof are not justified having regard to these Regulations and the objectives of the Calves Directive, General Welfare Directive, Laying hens Directive or Pigs Directive (hereafter referred to as "an appeal").

(2) An appeal may be heard at any sitting of the District Court within the appropriate District Court District.

(3) Notice of an appeal shall be served on the Minister at least 2 days prior to the hearing of the appeal by serving it on the Minister or by leaving it at the place and in the manner specified in the welfare notice.

(4) A notice of appeal shall contain a statement of the grounds upon which it is alleged that the notice or any of the terms thereof are not justified.

(5) A copy of the notice of appeal shall be lodged with the District Court Clerk in the manner specified in the welfare notice (if any) at least 2 days prior to the hearing of the appeal.

(6) On the hearing of an appeal under this Regulation a judge of the District Court may confirm, modify or annul a welfare notice.

Power to seize and dispose of an animal

32. (1) Without prejudice to Regulation 27 or 29, if—

- (a) the owner or keeper of an animal fails to comply with the terms of a welfare notice within the time limit specified therein,
- (b) an authorised officer has reasonable grounds for believing that the terms of a welfare notice will not be complied with,

- (c) a welfare notice has been confirmed with or without modification under Regulation 31 and the notice has not been complied with,
- (d) an authorised officer has reasonable grounds for believing that the terms of a welfare notice which has been confirmed with or without modification under Regulation 31 will not be complied with, or
- (e) pending the determination of an appeal made under Regulation 31, an authorised officer has reasonable grounds for believing that—
 - (i) a welfare notice, or
 - (ii) a direction given pursuant to Regulation 27,

has not been or will not be complied with, an authorised officer may at any time seize the animal at such premises as he or she thinks fit.

(2) An authorised officer may sell or dispose of a seized animal or cause it to be sold or be otherwise disposed of or destroyed in such manner and at such place as the authorised officer considers appropriate in the circumstances of the case.

(3) Any profits arising out of the sale or disposal of an animal under this Regulation shall be paid to the owner of the animal less any expenses incurred in connection with seizure, maintenance, sale, disposal or destruction of the animal.

(4) The costs (including ancillary costs) of seizure, maintenance, sale, disposal or destruction of an animal under Regulation 27, this Regulation or Regulation 33 are, subject to paragraph (3), recoverable—

- (a) by deducting the costs from any sum that is or becomes payable by the Minister to the owner of the animal, or
- (b) as a simple contract debt in any court of competent jurisdiction from the person who was the owner of the animal at the time of seizure, sale, disposal or destruction took place.

Emergency measures

33. Notwithstanding Regulation 29(1), if an authorised officer who is a veterinary practitioner is of the opinion that an animal—

- (a) is suffering a degree of pain, suffering or injury, or
- (b) is seriously at risk of being subject to a degree of pain, suffering or injury,

and that measures should be taken immediately to relieve its pain or suffering or risk of pain or suffering, he or she may seize, sell, dispose of or destroy or may arrange for the sale, disposal or destruction of the animal.

Part 8

FINAL PROVISIONS

Obstruction, etc

34. A person shall not-

- (a) obstruct or impede an authorised officer in the exercise of his or her functions under these Regulations,
- (b) fail, without reasonable cause, to comply with a requirement or direction of an authorised officer under Regulation 27,
- (c) in purporting to give information to an authorised officer for the performance of the officer's functions under Regulation 27—
 - (i) make a statement that he or she knows to be false in a material particular or recklessly make a statement which is false in a material particular, or
 - (ii) fail to disclose a material particular,
- (d) tamper or otherwise interfere with a sample taken under Regulation 27, or
- (e) aid or abet a contravention of these Regulations.

Forgery

35. (1) A person shall not forge or utter knowing it to be forged a direction or requirement of an authorised officer under Regulation 27 (if the direction or requirement is in written form) or a welfare notice or a document purporting to be an extract therefrom (hereafter in this Regulation referred to as "a forged document").

(2) A person shall not alter with intent to defraud or deceive, or utter knowing it to be so altered a direction or requirement of an authorised officer under Regulation 27 (if the direction or requirement is in written form) or a welfare notice or an extract therefrom (hereafter in this Regulation referred to as "an altered document").

(3) A person shall not have, without lawful authority, in his or her possession or under his or her control a forged document or an altered document.

Evidence on certificate

36. (1) In proceedings for an offence consisting of a contravention of these Regulations, a certificate purporting to be signed by a person employed at a laboratory named in the certificate stating the capacity in which that person is so employed and stating any one or more of the following, namely—

- (a) that the person received a sample submitted to the laboratory,
- (b) that, for such period as is specified in the certificate, the person had in his or her custody a sample so submitted,

- (c) that the person gave to such other person as is specified in the certificate a sample so submitted, or
- (d) that the person carried out any laboratory examination and the result of that examination,

is, unless the contrary is proved, evidence of the matters stated in the certificate.

(2) A certificate purporting to be signed by an officer of the Minister and to certify that on a specific day or days or during the whole of a specified period—

- (a) a particular person was registered in the register,
- (b) the registration of a particular person had been revoked, or
- (c) that a particular, registration was subject to a particular condition or conditions,

is, without proof of the signature of the person purporting to sign the certificate or that he or she is an officer of the Minister, evidence, unless the contrary is shown, of the matters stated in the certificate.

(3) In proceedings for an offence under these Regulations the court may, if it considers that the interests of justice so require, direct that oral evidence of the matters stated in a certificate under paragraph (1) or (2) be given, and the court may for the purpose of receiving oral evidence adjourn the matter.

(4) In proceedings for an offence, evidence of an act of the institutions of the European Community may be given by production of a copy of the act certified by an officer of the Minister to be a copy of the act, and it is not necessary to prove the signature of the officer or that he or she is an officer of the Minister.

(5) Paragraph (4) is in addition to and not in substitution for the European Communities (Judicial Notice and Documentary Evidence) Regulations 1972 (S.I. No. 341 of 1972).

Offences

37. (1) A person who—

- (a) contravenes Regulation 4, 6, 7, 8, 9, 10(2), (12), 12, 13, 14, 15, 16, 17, 18, 19, 20, 21(1), (3), 22, 23, 24(2), 25, 29(6), (7), 30(3), 34 or 35, or
- (b) fails to comply with a direction or requirement of an authorised officer under Regulation 27 or the requirements of a welfare notice or a welfare notice confirmed with or without modification,

commits an offence and is liable on conviction to a fine not exceeding €5,000 or to a term of imprisonment not exceeding 6 months or both.

(2) A summary offence under these Regulations may be prosecuted by—

- (a) the Minister, or
- (b) in respect of Part 5, the local authority in whose functional area the alleged offence occurs.

(3) If an offence under these Regulations is committed by a body corporate or by a person purporting to act on behalf of a body corporate or on behalf of an unincorporated body of persons and it is proved to have been so committed with the consent or connivance of or to be attributable to any wilful neglect on the part of any other person who, when the offence was committed, was, or purported to act as, a director, manager, secretary or other officer (including a member of any committee of management or other controlling authority) of the body, such other person as well as the body, or the person so purporting to act on behalf of the body, commits an offence and is liable to be proceeded against and punished as if he or she were guilty of the first-mentioned offence.

(4) If the affairs of a body corporate are managed by its members, paragraph (3) applies in relation to the acts and defaults of a member in connection with the functions of management as if the member were a director or manager of the body corporate.

(5) In a prosecution for an offence under these Regulations, it is not a defence for the defendant to show that Regulation 5 applies to that person in respect of the premises to which the alleged offence relates if he or she is entered in the Register maintained under Regulation 10 unless he or she can show to the satisfaction of the Court that he or she has given notice in accordance with Regulation 10(13) and the Minister is put on notice of this defence no later than 10 days prior to the sitting of the Court where the case is heard.

Revocation and Savers

38. (1) The following are revoked—

- (a) European Communities (Protection of animals at time of slaughter) Regulations 1995 (S.I. No. 114 of 1995),
- (b) European Communities (Welfare of laying hens) Regulations 2002 (S.I. No. 98 of 2002),
- (c) European Communities (Welfare of calves and pigs) Regulations 2003 (S.I. No. 48 of 2003),
- (d) European Communities (Protection of animals at time of slaughter) (Amendment) Regulations 2004 (S.I. no. 192 of 2004),
- (e) European Communities (Protection of animals kept for farming purposes) Regulations 2006 (S.I. No. 705 of 2006)
- (f) European Communities (Welfare of laying hens) (Amendment) Regulations 2007 (S.I. No. 105 of 2007), and
- (g) European Communities (Welfare of calves and pigs) (Amendment) Regulations 2007 (S.I. No. 307 of 2007).

(2) A welfare notice within the meaning of the Regulations revoked by paragraph (1) that is in force immediately before the making of these Regulations remains in force and shall be dealt with as if it were a welfare notice.

(3) An appeal under Regulations revoked by paragraph (1) shall be dealt with as if it were an appeal under Regulation 31 of these Regulations.

(4) These Regulations are in addition to and not in substitution for the Protection of animals kept for farming purposes Act 1984 (No. 13 of 1984).

(5) In case of conflict, these Regulations prevail over the Slaughter of Animals Act 1935.

Schedule 1

Regulation 4(2)

CONDITIONS UNDER WHICH AN ANIMAL SHOULD BE KEPT

Staffing.

1. An animal shall be cared for by a sufficient number of staff possessing the appropriate ability, knowledge and professional competence.

Inspection.

2. An animal kept in a husbandry system in which the welfare of the animal depends on frequent human attention shall be inspected at least once a day and an animal in another system shall be inspected at intervals sufficient to detect and allow for action to avoid any suffering.

3. Adequate lighting (fixed or portable) shall be available to enable an animal to be thoroughly inspected at any time.

4. An animal which appears to be ill or injured must be cared for appropriately without delay and, where the animal does not respond to such care, veterinary advice must be obtained as soon as possible. Where necessary, a sick or injured animal shall be isolated in suitable accommodation with, where appropriate, dry comfortable bedding.

Record keeping.

5. The owner or keeper of an animal shall maintain a record of any medicinal treatment given and of the number of mortalities found at each inspection. Equivalent information being kept for other purposes shall suffice.

6. These records shall be retained for a period of at least 3 years and shall be made available to an authorised officer when requested by him or her.

Freedom of movement.

7. The freedom of movement of an animal, having regard to its species and in accordance with established experience and scientific knowledge, must not be restricted in such a way as to cause it unnecessary suffering or injury. Where an animal is continuously or regularly tethered or confined, it must be given the space appropriate to its physiological and ethological needs in accordance with established experience and scientific knowledge.

Buildings and accommodation.

8. Materials to be used for the construction of accommodation, and in particular for the construction of pens and equipment with which an animal may come into contact, must not be harmful to the animal and must be capable of being thoroughly cleaned and disinfected.

9. Accommodation and fittings for securing an animal shall be constructed and maintained so that there are no sharp edges or protrusions likely to cause injury to the animal.

10. Air circulation, dust levels, temperature, relative air humidity and gas concentrations must be kept within limits which are not harmful to an animal.

11. An animal kept in buildings must not be kept either in permanent darkness or without an appropriate period of rest from artificial lighting. Where the natural light available is insufficient to meet the physiological and ethological needs of an animal appropriate artificial lighting must be provided.

Animals not kept in buildings.

12. An animal not kept in buildings shall where necessary and possible be given protection from adverse weather conditions, predators and risks to its health.

Automatic or mechanical equipment.

13. All automated or mechanical equipment essential for the health and well-being of an animal must be inspected at least once daily. If defects are discovered these must be rectified immediately or, if this is impossible, appropriate steps must be taken to safeguard the health and well-being of the animal. Where the health and well-being of an animal is dependent on an artificial ventilation system, provision must be made for an appropriate backup system to guarantee sufficient air renewal to preserve the health and well-being of the animal in the event of failure of the system and an alarm system must be provided to give warning of breakdown. The alarm system must be tested regularly.

Feed, water and other substances.

14. An animal must be fed a wholesome diet which is appropriate to its age and species and which is fed to the animal in sufficient quantity to maintain it in good health and satisfy its nutritional needs. No animal shall be provided with food or liquid in a manner, nor shall such food or liquid contain any substance, which may cause unnecessary suffering or injury.

15. An animal must have access to feed at intervals appropriate to its physiological needs.

16. An animal must have permanent access to a suitable water supply or be able to satisfy its fluid intake needs by other means.

17. Feeding and watering equipment must be designed, constructed and placed so that contamination of food and water and the harmful effects of competition between animals are minimised.

18. No animal remedy may be administered to an animal other than an animal remedy authorised under and administered in accordance with the European Communities (Animal Remedies) (No. 2) Regulations 2007 (S.I. No. 786 of 2007) and the European Communities (Control of Animal Remedies and their Residues) Regulations 2007 (S.I. No. 143 of 2007) and no other substance may be given to an animal unless it has been demonstrated by scientific studies of

animal welfare or established experience that the effect of that substance is not detrimental to the health or welfare of the animal.

Breeding procedures.

19. Natural or artificial breeding or breeding procedures that cause or are likely to cause suffering or injury to an animal must not be practised. This provision does not preclude the use of certain procedures likely to cause minimal or momentary suffering or injury or which might necessitate interventions which would not cause lasting injury.

20. An animal shall not be kept for farming purposes unless it can reasonably be expected, on the basis of its genotype or phenotype, that it can be kept without detrimental effect on its health or welfare.

Schedule 2

Regulation 6.

CONDITIONS UNDER WHICH LAYING HENS SHOULD BE KEPT

1. All laying hens shall be inspected by the owner or person in charge of the premises where they are located at least once each day.

2. The sound level shall be minimised and constant and sudden noises on a premises shall be avoided.

3. Ventilation fans, feeding machinery and other equipment shall be constructed, located, operated and maintained in a manner that causes the least possible noise.

4. Each building used to keep or rear laying hens shall have light levels that are sufficient to allow laying hens to see one another and be seen clearly, to investigate their surroundings visually and show normal levels of activity. Where there is natural light, light apertures shall be placed in a manner that light is distributed evenly within the accommodation.

After the first days of conditioning, lighting shall follow a 24 hour cycle, include an uninterrupted period of darkness of approximately eight hours so that the laying hens may rest and avoid problems such as immuno-depression and ocular anomalies and, otherwise, be such as to prevent health and behavioural problems. An adequate period of twilight, when the light is dimmed and which facilitates the laying hens setting down without disturbance or injury, shall be provided.

5. Without prejudice to paragraph 6, parts of buildings, equipment, machinery or other utensils that may come into contact with laying hens shall be thoroughly cleansed and disinfected at regular intervals.

6. On each occasion when depopulation is carried out, parts of buildings, equipment, machinery or other utensils that may come into contact with laying hens shall be thoroughly cleansed and disinfected prior to the introduction of a new batch of laying hens.

7. While cages are occupied, they shall be kept satisfactorily clean.

8. Droppings must be removed as often as necessary and dead laying hens must be removed when found or, at a minimum, once a day.

9. Each cage shall be constructed in a manner that prevents a laying hen from escaping.

10. Accommodation that comprises two or more tiers of cages must have devices (or other appropriate measures must be taken) to facilitate inspection of each tier and removal of laying hens without difficulty.

11. A cage door must be designed and be of such dimensions that an adult laying hen may be removed without unnecessary suffering or sustaining injury.

12. Mutilation of a laying hen shall, without prejudice to point 19 to the Annex of Directive 98/58/EC, be prohibited.

13. Beak trimming may only be undertaken by trained and competent personnel and the beaks of laying hens over 9 days old shall not be trimmed.

Regulation 12.

Schedule 3

Part 1

CONDITIONS FOR THE REARING OR FATTENING OF CALVES AND PIGS

1. Materials used for the construction of accommodation and in particular boxes, stalls and equipment with which calves or pigs may come into contact shall not be harmful to the calves or pigs. Those parts of the accommodation with which an animal may come into contact shall be capable of being thoroughly cleansed and disinfected and shall be thoroughly cleansed and disinfected, using an approved disinfectant to prevent cross-infection and the build-up of disease-carrying organisms.

2. Electrical circuits and equipment shall be installed in accordance with the terms of the National Rules for Electrical Installations Second Edition 1991 (ET 101/1991) or any amendment, modification or replacement to those Rules.

3. Insulation, heating and ventilation of the building shall ensure that the air circulation, dust level, temperature, relative air humidity and gas concentrations are kept within limits which are not harmful to the calves or pigs.

4. All automated or mechanical equipment essential for the health and well-being of calves or pigs shall be inspected at least once daily. Where defects are discovered, these shall be rectified immediately or as soon as reasonable. In the meantime, all appropriate steps shall be taken to safeguard the health and well-being of the calves or pigs until the defect has been rectified, notably by using alternative methods of feeding and maintaining a satisfactory environment.

Where an artificial ventilation system is used, provision shall be made for an appropriate back-up system to guarantee sufficient air renewal to preserve the health and well-being of the calves or pigs in the event of the failure of the system, and an alarm system, independent of the mains electricity supply, shall be provided to inform the owner or person in charge of the breakdown or fire.

The alarm system shall be tested at least once a month and maintained in proper working order.

5. Calves and pigs shall not be kept permanently in darkness. To meet their behavioural and physiological needs, the accommodation shall be well lit by natural or artificial light, for at least 8 continuous hours each day. Every source of artificial light shall be mounted so as not to cause discomfort to the calves or pigs.

An adequate source of light shall be available to enable the calves or pigs to be properly inspected at any time.

6. All housed calves reared in groups or in individual pens shall be inspected by the owner or the person in charge at least twice daily. Calves kept outside, and pigs shall be inspected at least once daily.

Any calf or pig that appears to be ill or injured shall be treated appropriately without delay and veterinary advice shall be obtained as soon as possible for any calf or pig that is not responding to the care of the owner or person in charge.

Where necessary, sick or injured calves and pigs shall be isolated in adequate accommodation with dry, comfortable bedding.

A calf or pig shall be able to turn around easily unless such movement is contrary to specific advice from a registered veterinary practitioner.

7. Where tethers are used, they shall not cause injury to the calves and shall be inspected regularly and adjusted as necessary to ensure a comfortable fit.

Each tether shall be designed to avoid the risk of strangulation or injury and to allow the calf to move in accordance with paragraph 1 Part 2.

8. Housing, pens, equipment and utensils for calves and pigs shall be properly cleansed and disinfected to prevent cross-infection and the build-up of disease-carrying organisms. Faeces, urine and uneaten or spilt food shall be removed and bedding changed as often as necessary to minimize smell and avoid attracting flies or rodents.

9. Floors shall be smooth but not slippery so as to prevent injury to the calves or pigs and so designed as not to cause injury or suffering to calves or pigs standing or lying on them. Floors shall be suitable for the size and weight of the calves or pigs and form a rigid, even and stable surface. The lying area shall be comfortable, clean, and adequately drained and shall not adversely affect the calves or pigs. Appropriate bedding shall be provided for all calves less than 2 weeks old. If bedding is provided for pigs, it shall be clean, dry and not harmful to the pigs.

10. (a) Feeding and watering equipment for calves and pigs shall be designed, constructed, placed and maintained so that contamination of feed and water is minimized.

(b) Equipment and fittings shall be designed and maintained in such a way as to minimize, as far as is practicable, the exposure of the calves or pigs to spills of feed or water, or to faeces and urine.

11. Calves and pigs shall be cared for by a sufficient number of suitably experienced personnel.

Part 2

SPECIFIC PROVISIONS FOR CALVES.

1. Subject to Regulation 4, the accommodation for calves shall be constructed in such a way as to allow each calf to lie down, rest, stand up and groom itself without difficulty. Each calf shall have a clean place in which to rest and shall, unless isolated for veterinary reasons, be able to see other calves.

2. Calves shall not be tethered, with the exception of group-housed calves which may be tethered for periods of not more than one hour at the time of feeding milk or milk substitute.

3. All calves shall be provided with an appropriate diet adapted to their age, weight and behavioural and physiological needs, to promote good health and welfare and for this purpose the food for calves shall contain sufficient iron to ensure an average blood haemoglobin level of at least 4.5 mmol/litre and a minimum daily ration of fibrous food shall be provided for each calf over 2 weeks old, the quantity being raised from 50g to 250g per day for calves from 8 to 20 weeks old.

4. All calves shall be fed at least twice a day. Where calves are housed in groups and not fed ad libitum or by an automatic feeding system, each calf shall have access to the food at the same time as the others in the group.

5. All calves over 2 weeks of age shall have access to a sufficient quantity of fresh water or be able to satisfy their fluid intake needs by drinking other liquids. However, in hot weather conditions or for calves that are ill, fresh drinking water shall be available at all times.

6. Each calf shall receive bovine colostrum as soon as possible after it is born and, in any case, within the first 6 hours of life.

Part 3

SPECIFIC PROVISIONS FOR VARIOUS CATEGORIES OF PIGS

Chapter I.

ALL PIGS

1. Subject to Regulation 14, accommodation for pigs shall be constructed in such a way as to allow each pig lie down, rest, and stand up without difficulty. Each pig shall have a clean place in which to rest and shall, unless isolated for veterinary reasons, be able to see other pigs.

Each pig shall have access to a clean lying area that is physically and thermally comfortable, adequately drained and that is of sufficient area to allow each pig lie down at the same time.

2. If pigs are kept together, measures shall be taken to prevent fighting that goes beyond normal behaviour and to investigate the causes of fighting. If possible, measures, including provision of plentiful straw or other materials, shall be put in place. Pigs which show persistent aggression towards others or are victims of aggression shall be isolated or kept separate from the group.

3. All pigs shall be provided with an appropriate diet adapted to their age, weight and behavioural and physiological needs, to promote good health and welfare.

4. All pigs shall be fed at least once a day. Where pigs are housed in groups and not fed ad libitum or by an automatic feeding system, each pig shall have access to the food at the same time as the others in the group.

5. All pigs over 2 weeks of age shall have permanent access to a sufficient quantity of fresh water.

6. In addition to measures normally taken to prevent tail-biting and other vices and in order to enable them to satisfy their behavioural needs, all pigs, taking into account environmental conditions, management systems and stocking densities, shall be able to obtain straw or any other suitable material or object.

7. Subject to Regulation 14(2), the owner or person in charge shall take all necessary measures to ensure that pigs are not subject to constant or sudden noise.

8. A pig shall have permanent access to a sufficient quantity of suitable material, such as straw, hay, wood, peat or mushroom compost to enable proper investigation and manipulation activities, that does not compromise the health of the pig.

Chapter II

BOARS

9. Subject to paragraph 10, boar pens shall be sited and constructed so as to allow the boar to turn around and to hear, smell and see other pigs, and to provide for clean resting areas. The lying area shall be dry and comfortable.

The minimum unobstructed floor area of the pen for an adult boar shall be 6 square metres.

10. If pens are used for natural service, the minimum unobstructed floor area of a pen for an adult boar shall be 10 square metres.

Chapter III.

SOWS AND GILTS

11. Pregnant sows and gilts shall, if necessary, be treated against external and internal parasites. If they are placed in farrowing crates, pregnant sows and gilts shall be thoroughly cleaned.

12. Sows and gilts shall be provided with a clean, adequately drained, comfortable lying area and shall, in the week before expected farrowing, be given suitable nesting material unless this is not technically feasible due to the slurry system in use on the premises.

13. An unobstructed area behind the sow or gilt shall be available for the ease of natural or assisted farrowing.

14. Farrowing crates where sows are kept loose shall have some adequate means, such as farrowing rails, to protect the piglets.

15. Sows and gilts shall be provided with a diet that satisfies their nutritional needs and contains sufficient quantity of suitable bulky or high fibre food to satisfy their hunger and the need to chew and to ensure that they do not display signs of hunger.

Chapter IV.

PIGLETS

16. Piglets shall be provided with a source of heat and a solid, dry and comfortable lying area, covered with a mat or littered with suitable material, away from the sow where all of them can rest at the same time.

17. Where a farrowing crate is used, the piglets shall have sufficient space to be able to be suckled without difficulty.

18. Tail docking or tooth clipping shall not be carried out routinely except where injuries to sows' teats or to other pigs' ears or tails have occurred.

Where tooth clipping appears necessary, this shall be carried out within seven days of birth.

19. Subject to paragraph 20, piglets shall not be weaned from the sow at less than 28 days of age unless the welfare or health of the dam or piglets would otherwise be adversely affected.

20. Despite paragraph 19, piglets, if accommodated in specialised housing that has been thoroughly cleaned and disinfected immediately before the introduction of those piglets, may be weaned from the sow at no less than 21 days of age.

21. Housing to which paragraph 20 refers shall be separate, in a manner that adequately prevents the risk or spread of disease, from housing containing sows.

Chapter V.

WEANERS AND REARING PIGS

22. Pigs shall be placed in groups as soon as possible after weaning. They should be kept in stable groups with as little mixing as possible.

If pigs unfamiliar with one another are to be mixed, they shall be mixed at as early an age as possible and, preferably, within seven days of weaning.

Pigs shall be afforded adequate opportunity to escape and hide from other pigs.

23. An animal remedy shall not be administered, to facilitate mixing of pigs, other than in exceptional circumstances, under and in accordance with the written prescription of a registered veterinary practitioner; that prescription shall be retained by the owner or person in charge of the pigs and a copy shall be retained by the registered veterinary practitioner who prescribes the animal remedy.

Schedule 4

Regulation 20.

Part 1

REQUIREMENTS FOR THE MOVEMENT AND LAIRAGING OF ANIMALS IN SLAUGHTERHOUSES.

I. General requirements.

1. A slaughterhouse shall have suitable equipment and facilities available for the purpose of unloading animals from means of transport.
2. Animals shall be unloaded as soon as possible after arrival. If delay is unavoidable they shall be protected from extremes of weather and provided with adequate ventilation.
3. Animals which might injure each other on account of their species, sex, age or origin shall be kept and lairaged apart from each other.
4. Animals shall be protected from adverse weather conditions. If they have been subjected to high temperature in humid weather they shall be cooled by appropriate means.
5. The condition and state of health of the animals shall be inspected at least every morning and evening.
6. Without prejudice to Chapter VI of Annex I to Directive 64/433/EEC, animals which have experienced pain or suffering during transport or upon arrival at the slaughterhouse, and unweaned animals, shall be stunned and slaughtered immediately. If this is not possible, they shall be separated and then stunned and slaughtered as soon as possible and at least within the following two hours. Animals which are unable to walk shall not be dragged to the place of slaughter, but shall be killed where they lie or, where it is possible and does not entail any unnecessary suffering, transported on a trolley or moveable platform to the place of emergency slaughter.

II. Requirements for animals delivered other than in containers.

1. Equipment for unloading animals shall have non-slip flooring and, if necessary, be provided with lateral protection. Bridges, ramps and gangways shall be fitted with sides, railings or some other means of protection to prevent animals falling off them. Exit or entry ramps shall have the minimum possible incline consistent with the animal being able to retain its footing.
2. During unloading, care shall be taken not to frighten, excite or mistreat the animals, and to ensure that they are not overturned. Animals shall not be lifted

by the head, horns, ears, feet, tail or fleece in such a way as to cause them unnecessary pain or suffering. When necessary, they shall be led individually.

3. Animals shall be moved with care. Passageways shall be so constructed as to minimise the risk of injury to animals, and so arranged as to exploit their gregarious tendencies. Instruments intended for guiding animals shall be used solely for that purpose, and only for short periods. Instruments which administer electric shocks may be used only for adult bovine animals and pigs which refuse to move, provided that the shocks last no more than two seconds, are adequately spaced out and that the animals have room ahead of them in which to move. Such shocks may be applied only to the muscles of the hindquarters.

4. Animals shall not be struck on, nor shall pressure be applied to, any particularly sensitive part of the body. In particular, animals' tails shall not be crushed, twisted or broken and their eyes shall not be grasped. Blows and kicks shall not be inflicted.

5. Animals shall not be taken to the place of slaughter unless they can be slaughtered immediately. If they are not slaughtered immediately on arrival they shall be lairaged.

6. A slaughterhouse shall be equipped with a sufficient number of pens for adequate lairaging of the animals with protection from the effects of adverse weather.

7. A lairage shall have:

- (a) floors which minimise the risk of slipping and which do not cause injury to animals in contact with them,
- (b) adequate ventilation, taking into account the extremes of temperature and humidity which may be expected. Where mechanical means of ventilation are required, provision shall be made for emergency back-up facilities in the event of breakdown,
- (c) artificial lighting at a level sufficient to permit inspection of all animals at any time; if necessary, adequate back-up lighting shall be available,
- (d) where necessary, equipment for tethering animals,
- (e) where necessary, adequate supplies of a suitable bedding material for all animals kept in the lairage overnight.

8. Where, in addition to the lairages referred to above, slaughterhouses, have field lairages without natural shelter or shade, appropriate protection from adverse weather shall be provided. Field lairages shall be maintained in such condition as to ensure that animals are not subjected to physical, chemical or other health hazards.

9. Animals which are not taken directly upon arrival to the place of slaughter shall have drinking water available to them from appropriate facilities at all times. Animals which have not been slaughtered within 12 hours of their arrival shall be fed, and shall subsequently be given moderate amounts of food at appropriate intervals.

10. Animals which are kept for 24 hours or more at a slaughterhouse shall be lairaged and, where appropriate, tethered, in such a way that they can lie down and feed without difficulty. Where animals are not tethered, food shall be provided in a way which will permit the animals to feed undisturbed.

III. Requirements for animals delivered in containers.

1. Containers in which animals are transported shall be handled with care, and shall not be thrown, dropped or knocked over. Where possible, they shall be loaded and unloaded horizontally and mechanically.

2. Animals delivered in containers with perforated or flexible bottoms shall be unloaded with particular care in order to avoid injury. Where appropriate, animals shall be unloaded from the containers individually.

3. Animals which have been transported in containers shall be slaughtered as soon as possible; otherwise they shall if necessary be watered and fed in accordance with paragraph 9 of Section II.

Part 2

RESTRAINT OF ANIMALS BEFORE STUNNING, SLAUGHTER OR KILLING.

1. Animals shall be restrained in an appropriate manner in such a way as to spare them any avoidable pain, suffering, agitation, injury or contusions.

However, in the case of ritual slaughter, restraint of bovine animals before slaughter using a mechanical method intended to avoid any pain, suffering or agitation and any injuries or contusions to the animals is obligatory.

2. Animals' legs shall not be tied, and animals shall not be suspended before stunning or killing. However, poultry and rabbits may be suspended for slaughter provided that appropriate measures are taken to ensure that, on the point of being stunned, they are in a sufficiently relaxed state for stunning to be carried out effectively and without undue delay.

Furthermore, holding an animal in a restraint system may in no circumstances be regarded as suspension.

3. Animals which are stunned or killed by mechanical or electrical means applied to the head shall be presented in such a position that the equipment can be applied and operated easily, accurately and for the appropriate time. The Minister may, however, in the case of solipeds and cattle, authorise the use of appropriate means to restrain head movements.

4. Electrical stunning equipment shall not be used as a means of restraint or immobilisation or to make animals move.

Part 3

STUNNING OR KILLING OF ANIMALS OTHER THAN ANIMALS REARED FOR FUR.

I. Permitted methods.

A. Stunning.

1. Captive bolt pistol.
2. Concussion.
3. Electronarcosis.
4. Exposure to carbon dioxide.

B. Killing.

1. Free bullet pistol or rifle.
2. Electrocution.
3. Exposure to carbon dioxide.

C. The Minister may, however, authorise decapitation, dislocation of the neck and the use of a vacuum chamber as a method of killing for certain specific species, provided that Regulation 19 is complied with and that specific requirements laid down in Section III of this Part are met.

II. Specific Requirements for Stunning.

Stunning shall not be carried out unless it is possible to bleed the animals immediately afterwards.

1. Captive bolt pistol.

- (a) Instruments shall be positioned so as to ensure that the projectile enters the cerebral cortex. In particular, it is prohibited to shoot cattle in the poll position.

Sheep and goats may be shot in the poll position if the presence of horns prevents use of the crown position. In such cases the shot shall be placed immediately behind the base of the horns and aimed towards the mouth, and bleeding shall commence within 15 seconds of shooting.

- (b) When using a captive bolt instrument, the operator shall check to ensure that the bolt retracts to its full extent after each shot. If it does not so retract, the instrument shall not be used again until it has been repaired.
- (c) Animals shall not be placed in stunning pens unless the operator who is to stun them is ready to do so as soon as the animal is placed in the pen. Animals shall not be placed in a head restraint until the slaughterman is ready to stun them.

2. Concussion.

- (a) This is only permitted using a mechanically-operated instrument which administers a blow to the skull. The operator shall ensure that the instrument is applied in the proper position and that the correct strength of cartridge is used, in accordance with the manufacturer's instructions, to produce an effective stun without fracture of the skull.

- (b) However, in the case of small batches of rabbits, where a non-mechanical blow to the skull is used, that operation shall be carried out in such a way that the animal is immediately rendered unconscious and remains so until its death and in compliance with Regulation 19.

3. Electronarcosis.

A. Electrodes.

1. Electrodes shall be so placed that they span the brain, enabling the current to pass through it. Appropriate measures shall also be taken to ensure that there is good electrical contact, in particular by removing excess wool or wetting skin.

2. Where animals are stunned individually, the apparatus shall:

- (a) incorporate a device which measures the impedance of the load and prevents operation of the apparatus if the minimum required current cannot be passed;
- (b) incorporate an audible or visible device indicating the length of time of its application to an animal;
- (c) be connected to a device indicating the voltage and the current under load, and be positioned so as to be clearly visible to the operator.

B. Waterbath stunners

1. Where waterbath stunners are used to stun poultry, the level of the water shall be adjustable in order to ensure that there is good contact with the bird's head.

The strength and duration of the current used in this case will be determined by an authorised officer so as to ensure that the animal is immediately rendered unconscious and remains so until death.

2. Where poultry are stunned in groups in a waterbath, a voltage sufficient to produce a current strong enough to ensure that every bird is stunned shall be maintained.

3. Appropriate measures shall be taken to ensure that the current passes properly, in particular, by the use of good electrical contacts and by wetting the shackle-to-leg contact.

4. Waterbaths for poultry shall be adequate in size and depth for the type of bird being slaughtered, and shall not overflow at the entrance. The electrode which is immersed in the water shall extend the length of the waterbath.

5. If necessary, manual back-up shall be available.

C. Exposure to carbon dioxide.

1. The concentration of carbon dioxide for stunning pigs shall be at least 70% by volume.

2. The chamber in which pigs are exposed to the gas, and the equipment used for conveying the pigs through it, shall be so designed, constructed and maintained as to avoid injury to the pigs and compression of the chest and enable them to remain upright until they lose consciousness. Adequate lighting shall be provided in the conveying mechanism and the chamber to allow pigs to see other pigs or their surroundings.

3. The chamber shall be fitted with devices for measuring the gas concentration at the point of maximum exposure and for giving a clearly visible and audible warning if the concentration of carbon dioxide falls below the required level.

4. Pigs shall be placed in pens or containers in which they can see each other and conveyed into the gas chamber within 30 seconds from their entry into the installation. They shall be conveyed as rapidly as possible from the entrance to the point of maximum concentration of the gas and shall be exposed to it for long enough to ensure that they remain unconscious until they have been killed.

5. The Minister may, on application, and subject to such conditions as he or she may specify, authorise the stunning of poultry by exposure to carbon dioxide or a mixture of other gases or refuse an application.

III. Specific Requirements for Killing.

1. Free bullet pistol or rifle.

These methods, which may be used to kill various species, in particular large farmed game and deer, are subject to authorisation by the Minister, who shall be satisfied, in particular, that these methods are used by duly qualified staff and are in compliance with Regulation 19.

2. Decapitation and dislocation of the neck.

These methods, which are to be used only for killing poultry, are subject to authorisation by the Minister, who shall be satisfied, in particular, that these methods are used by duly qualified staff and are in compliance with Regulation 19.

3. Electrocution and carbon dioxide.

The Minister may authorise the killing of various species by these methods provided that, in addition to Regulation 19, the specific provisions laid down in paragraphs 3 and 4 of Section II are complied with. The Minister may, to ensure the effectiveness of these methods, lay down the strength and duration of the current used and the concentration and length of exposure to carbon dioxide.

4. Vacuum chamber.

This method, which is to be used only for the killing without bleeding of certain animals for consumption belonging to farmed game species (quail, partridge and pheasant), is subject to authorisation by the Minister. To obtain authorisation the owner or person in charge of the animals shall ensure, in addition to compliance with Regulation 19, that:

- (a) the animals are placed in an airtight chamber in which a vacuum is swiftly achieved by means of a powerful electric pump,
- (b) the vacuum is maintained until the animals are dead,
- (c) the animals are held in groups in transport containers which can be placed in the vacuum chamber, which is designed for that purpose.

Part 4

BLEEDING OF ANIMALS.

1. For animals which have been stunned, bleeding shall be started as soon as possible after stunning and be carried out in such a way as to bring about rapid, profuse and complete bleeding. In any event, the bleeding shall be carried out before the animal regains consciousness.

2. All animals which have been stunned shall be bled by incising at least one of the carotid arteries or the vessels from which they arise.

After incision of the blood vessels, no further dressing procedures nor any electrical stimulation may be performed on the animals before the bleeding has ended.

3. Where one person is responsible for the stunning, shackling, hoisting and bleeding of animals, that person shall carry out those operations consecutively on one animal before carrying them out on another animal.

4. Manual back-up shall be available where poultry is bled by means of automatic neck-cutters so that, in the event of a breakdown, birds may be slaughtered immediately.

Part 5

KILLING METHODS FOR DISEASE CONTROL.

Permitted methods.

- 1. Any method permitted under Part 3 that causes certain death.
- 2. In addition, the Minister may, in compliance with Regulation 19, permit the use of other methods for killing conscious animals, ensuring in particular that:
 - (a) if methods are used which do not cause immediate death (for example, captive bolt shooting), appropriate measures are taken to kill the animals as soon as possible, and in any event before they regain consciousness,
 - (b) nothing more is done to the animals before it has been ascertained that they are dead.
- 3. Permitted methods of killing for disease control set out in this Schedule shall be carried out by or under the supervision of an authorised officer.

Part 6

METHODS OF KILLING FUR ANIMALS.

I. Permitted methods.

1. Mechanically-operated instruments which penetrate the brain.
2. Injection of an overdose of a drug with anaesthetic properties.
3. Electrocution with cardiac arrest.
4. Exposure to carbon monoxide.
5. Exposure to chloroform.
6. Exposure to carbon dioxide.

The Minister shall decide on the most appropriate method of killing for the different species concerned in compliance with Regulation 19.

II. Specific requirements.

1. Mechanically-operated instruments which penetrate the brain.
 - (a) Instruments shall be positioned so as to ensure that the projectile enters the cerebral cortex.
 - (b) This method is permitted only if it is followed by immediate bleeding.
2. Injection of an overdose of a drug with anaesthetic properties.

Only those anaesthetics, doses and applications which cause immediate loss of consciousness followed by death may be used.

3. Electrocution with cardiac arrest.

Electrodes shall be placed so that they span the brain and the heart and the minimum current level used shall lead to immediate loss of consciousness and cardiac arrest. However, for foxes, where electrodes are applied to the mouth and rectum, a current of an average value of 0.3 amps shall be applied for at least 3 seconds.

4. Exposure to carbon monoxide.
 - (a) The chamber in which the animals are exposed to the gas shall be designed, constructed and maintained in such a way as to avoid injury to the animals and allow them to be supervised.
 - (b) The animals shall be introduced into the chamber only after it has been filled with a concentration of carbon monoxide of at least 1% by volume, supplied by a source of 100% carbon monoxide.

- (c) The gas produced by an engine specially adapted for that purpose may be used to kill mustelids and chinchillas provided that tests have shown that the gas used:

- (i) has been suitably cooled,
- (ii) has been sufficiently filtered, and
- (iii) is free from any irritant matter or gas.

The animals cannot be placed in the chamber until the concentration of carbon monoxide has reached at least 1% by volume.

- (d) When inhaled the gas shall first induce deep general anaesthesia and shall then cause certain death.
- (e) The animals shall remain in the chamber until they are dead.

5. Exposure to chloroform.

Exposure to chloroform may be used to kill chinchillas provided that:

- (a) the chamber in which the animals are exposed to the gas is designed, constructed and maintained in such a way as to avoid injury to the animals and allow them to be supervised,
- (b) the animals are introduced into the chamber only if it contains a saturated chloroform-air compound,
- (c) when inhaled, the gas first induces deep general anaesthesia and then causes certain death;
- (d) the animals remain in the chamber until they are dead.

6. Exposure to carbon dioxide.

Carbon dioxide may be used to kill mustelids and chinchillas provided that-

- (a) the chamber in which the animals are exposed to the gas is designed, constructed and maintained in such a way as to avoid injury to the animals and allow them to be supervised,
- (b) the animals are introduced into the chamber only when the atmosphere contains the highest possible concentration of carbon dioxide supplied by a source of 100% carbon dioxide,
- (c) when inhaled, the gas first induces deep general anaesthesia and then causes certain death, and
- (d) the animals remain in the chamber until they are dead.

Part 7

KILLING OF SURPLUS CHICKS AND EMBRYOS IN HATCHERY WASTE.

I. Permitted methods for the killing of chicks.

1. Use of a mechanical apparatus causing rapid death.
2. Exposure to carbon dioxide.
3. However, the Minister may permit the use of other scientifically recognised killing methods provided that they comply with Regulation 4.

II. Specific requirements.

1. Use of a mechanical apparatus producing rapid death.
 - (a) The animals shall be killed by an apparatus which contains rapidly rotating mechanically operated killing blades or expanded polystyrene projections.
 - (b) The capacity of the apparatus shall be sufficient to ensure that all animals are killed immediately, even if they are handled in large numbers.
2. Exposure to carbon dioxide.
 - (a) The animals shall be placed in an atmosphere with the highest obtainable concentration of carbon dioxide, supplied by a source of 100% carbon dioxide.
 - (b) The animals shall remain in this atmosphere until they are dead.

III. Permitted method of the killing of embryos.

1. To kill any living embryos instantaneously, all hatchery waste shall be treated by the mechanical apparatus mentioned in paragraph 1 of Section II.
2. However, the Minister may permit the use of other scientifically recognised killing methods provided that they comply with Regulation 19.



GIVEN under my Official Seal,
31 January 2008

MARY COUGHLAN
Minister for Agriculture, Fisheries and Food

EXPLANATORY NOTE.

(This note is not part of the Instrument and does not purport to be a legal interpretation.)

These Regulations give effect to a series of European Directives concerning the protection of animals including laying hens, calves and pigs and animals being slaughtered.

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Appendix No. 17

Copy of Nitrates Directive – S.I. 31 of 2014

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STATUTORY INSTRUMENTS.

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

CONTENTS

PART 1

PRELIMINARY

ARTICLE

1. Citation, commencement and application
2. Purpose of Regulations
3. Revocations
4. Interpretation

PART 2

FARMYARD MANAGEMENT

5. Minimisation of soiled water
6. Collection and holding of certain substances
7. Provision and management of storage facilities
8. General obligations as to capacity of storage facilities
9. Capacity of storage facilities for effluents and soiled water
10. Capacity of storage facilities for pig manure
11. Capacity of storage facilities for poultry manure
12. Capacity of storage facilities for manure from deer, goats and sheep
13. Capacity of storage facilities for manure from cattle
14. Reduced storage capacity in certain circumstances

PART 3

NUTRIENT MANAGEMENT

15. Interpretation, commencement etc.
16. Duty of occupier in relation to nutrient management

PART 4

PREVENTION OF WATER POLLUTION FROM FERTILISERS AND
CERTAIN ACTIVITIES

- 17. Distances from a water body and other issues
- 18. Requirements as to manner of application of fertilisers, soiled water etc.
- 19. Periods when application of fertilisers is prohibited
- 20. Limits on the amount of livestock manure to be applied
- 21. Ploughing and the use of non-selective herbicides

PART 5

GENERAL

- 22. General duty of occupier
- 23. Keeping of records by occupier
- 24. False or misleading information
- 25. Authorised person
- 26. Offences and related matters

PART 6

FUNCTIONS OF PUBLIC AUTHORITIES

- 27. Minister for Agriculture, Food and the Marine
- 28. Making and review of action programme by the Minister
- 29. Agency
- 30. Local authorities
- 31. Compliance with Data Protection Acts
- 32. Certificate in relation to nutrient content of fertiliser
- 33. Exemption for exceptional circumstances for research
- 34. Transitional provisions

SCHEDULE 1

SOIL TEST

SCHEDULE 2

CRITERIA AS TO STORAGE CAPACITY AND NUTRIENT MANAGEMENT

SCHEDULE 3

STORAGE PERIODS FOR LIVESTOCK MANURE

SCHEDULE 4

PERIODS WHEN APPLICATION OF FERTILISERS TO LAND IS PROHIBITED

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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 1991¹, Directive 2000/60/EC of 23 October 2000², Directive 2003/35/EC of 26 May 2003³, Directive 2006/11/EC of 15 February 2006⁴, Directive 2006/118/EC of 12 December 2006⁵ and Directive 2008/98/EC of 19 November 2008⁶ hereby make the following regulations:

PART 1

PRELIMINARY

Citation, commencement and application

1. (a) These Regulations may be cited as the European Union (Good Agricultural Practice for Protection of Waters) Regulations 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—

¹O.J. No. L 375/1, 31 December 1991.

²O.J. No. L 327/1, 22 December 2000.

³O.J. No. L 156/17, 25 June 2003.

⁴O.J. No. L 64/52, 4 March 2006.

⁵O.J. No. L 372/19, 27 December 2006.

⁶O.J. No. L 312/3, 22 November 2008.

*Notice of the making of this Statutory Instrument was published in
"Iris Oifigiúil" of 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 dungsteeds, 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 dungsteeds, 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 100m³ or more of water per day or serving 500 or more persons,
- (b) 100m of the abstraction point (other than an abstraction point specified in paragraph (a)) of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m³ or more of water per day or serving 50 or more persons,
- (c) 25m of any borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified in paragraph (a) or (b),
- (d) 20m of a lake shoreline,
- (e) 15m of exposed cavernous or karstified limestone features (such as swallow-holes and collapse features),
- (f) subject to sub-article (13), 5m of any surface waters (other than a lake or surface waters specified at paragraph (a) or (b)), or
- (g) the distance specified in sub-article 2(f) shall be increased to 10m for a period of two weeks preceding and two weeks following the periods specified in Schedule 4.

(3) Notwithstanding the requirements of sub-articles (2)(a), (2)(b) and (2)(c), the following distances shall apply-

- (a) 30m from the abstraction point in the case of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m³ or more of water per day or serving 50 or more persons,

- (h) 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 10m³ 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 10m³ or more of water per day or serving 50 or more persons,
- (b) 50m of any other borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified at paragraph (a),
- (c) 20m of a lake shoreline,
- (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

- (h) 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 dungsteeds, 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 sub-articles (1) and (2) the Agency shall consult with the Department of Agriculture, Food and the Marine and the co-ordinating local authority in each river basin district, and such other persons as it considers appropriate.

(4) The Department of Agriculture, Food and the Marine 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).

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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

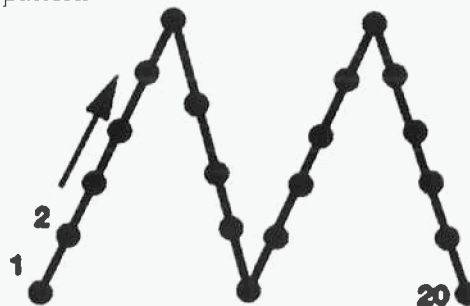
Soil pH shall be determined by measuring pH in a soil:water suspension of 1:2 ratio. Place 10 ml of dried sieved soil and 20 mls of deionised water into a suitable container. Mix thoroughly and allow to stand for at least 10 minutes. Stir for 30 seconds, and allow to settle immediately before recording 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

¹An additional 200mm freeboard must be provided in all covered tanks and 300mm freeboard in all uncovered tanks. Allowance must also be made for net rainfall during the specified storage period for uncovered tanks.

Table 2 Slurry storage capacity required for cattle, sheep and poultry

Livestock type	m ³ /week ¹
Dairy cow	0.33
Suckler cow	0.29
Cattle > 2 years	0.26
Cattle (18-24 months old)	0.26
Cattle (12-18 months old)	0.15
Cattle (6-12 months old)	0.15
Cattle (0-6 months old)	0.08
Lowland ewe	0.03
Mountain ewe	0.02
Lamb-finishing	0.01
Poultry — layers per 1000 birds (30% DM)	0.81

¹An additional 200mm freeboard must be provided in all covered tanks and 300mm freeboard in all uncovered tanks. Allowance must also be made for net rainfall during the specified storage period for uncovered tanks.

Table 3 Storage capacity required for dungstead manure

Livestock type	Solid fraction (m ³ /week)	Seepage fraction (m ³ /week) ¹
Dairy cow	0.28	0.04
Suckler cow	0.25	0.03
Cattle > 2 years	0.23	0.02
Cattle (18-24 months old)	0.23	0.02
Cattle (12-18 months old)	0.13	0.01
Cattle (6-12 months old)	0.13	0.01
Cattle (0-6 months old)	0.07	0.01

¹Allowance must also be made for net rainfall during the specified storage period for uncovered tanks.

Table 4 Average net rainfall during the specified storage period

County	Millimetres per week
Carlow	24
Cavan	27
Clare	32
Cork	37
Donegal	38
Dublin	17
Galway	34
Kerry	45
Kildare	18
Kilkenny	23
Laois	22
Leitrim	33
Limerick	26
Longford	23
Louth	20
Mayo	40
Meath	19
Monaghan	23
Offaly	20
Roscommon	26
Sligo	32
Tipperary	27
Waterford	31
Westmeath	21
Wexford	25
Wicklow	33

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

¹Only 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 kg/year	Total Phosphorus kg/year
Dairy cow	85	13
Suckler cow	65	10
Cattle (0-1 year old)	24	3
Cattle (1-2 years old)	57	8
Cattle > 2 years	65	10
Mountain ewe & lambs	7	1
Lowland ewe & lambs	13	2
Mountain hogget	4	0.6
Lowland hogget	6	1
Goat	9	1
Horse (>3 years old)	50	9
Horse (2-3 years old)	44	8
Horse (1-2 years old)	36	6
Horse foal (< 1 year old)	25	3
Donkey/small pony	30	5
Deer (red) 6 months — 2 years	13	2
Deer (red) > 2 years	25	4
Deer (fallow) 6 months — 2 years	7	1
Deer (fallow) > 2 years	13	2
Deer (sika) 6 months — 2 years	6	1
Deer (sika) > 2 years	10	2
Breeding unit (per sow place)	35	8
Integrated unit (per sow place)	87	17
Finishing unit (per pig place)	9.2	1.7
Laying hen per bird place	0.56	0.12
Broiler per bird place	0.24	0.09
Turkey per bird place	1	0.4

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 m³ = 1,000 litres = 1 tonne.

Table 8 Amount of nutrients contained in 1 tonne of organic fertilisers other than slurry

Livestock type		Total Nitrogen (kg)	Total Phosphorus (kg)
Poultry manure	broilers/deep litter	11.0	6.0
	layers 55% dry matter	23.0	5.5
	turkeys	28.0	13.8
Dungstead manure (cattle)		3.5	0.9
Farmyard manure		4.5	1.2
Spent mushroom compost		8	1.5
Sewage sludge		Total nitrogen and total phosphorus content per tonne shall be 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

¹The determination of the C:N ratio shall be based on a methodology agreed with the Agency or the Minister for Agriculture, Food and the Marine

Table 10 Determining nitrogen index for tillage crops

Tillage crops that follow permanent pasture			
Nitrogen Index			
Index 1	Index 2	Index 3	Index 4
The 5th tillage crop following permanent pasture. For subsequent tillage crops use the continuous tillage table.	The 3rd or 4th tillage crop following permanent pasture. If original permanent pasture was cut only, use index 1.	The 1st or 2nd tillage crop following permanent pasture (see also Index 4). If original permanent pasture was cut only, use index 2.	The 1st or 2nd tillage crop following very good permanent pasture which was grazed only.
Continuous tillage: — crops that follow short leys (1-4 years) or tillage crops			
Previous crop			
Index 1	Index 2	Index 3	Index 4
Cereals Maize	Sugar beet Fodder beet Potatoes Mangels Kale Oil seed rape, Peas, Beans		
	Leys (1-4 years) grazed or cut and grazed.		
	Swedes removed	Swedes grazed in situ	
Vegetables receiving less than 200 kg/ha nitrogen	Vegetables receiving more than 200 kg/ha nitrogen		

Table 11 Phosphorus index system

Soil phosphorus index	Soil phosphorus ranges (mg/l)	
	Grassland	Other crops
1	0.0-3.0	0.0-3.0
2	3.1-5.0	3.1-6.0
3	5.1-8.0	6.1-10.0
4	> 8.0	>10.0

Table 12 Annual maximum fertilisation rates of available nitrogen on grassland

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

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

²The maximum nitrogen fertilisation of grassland shall not exceed that specified for stocking rates less than or equal to 170 kg/ha/year unless a minimum of 5% of the eligible area of the holding is used to grow crops other than grass or a derogation applies in respect of the holding.

³This table does not imply any departure from Article 20(1) which prohibits the application to land on a holding of livestock manure in amounts which exceed 170kg Nitrogen per hectare per year, including that deposited by the animals themselves (or 250kg in the case of a holding to which a derogation has been granted, in accordance with the Nitrates Directive).

⁴The 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			
		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

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

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

³Manure produced by grazing livestock on a holding may be applied to Index 4 soils on that holding in a situation where there is a surplus of such manure remaining after the phosphorus fertilisation needs of all crops on soils at phosphorus indices 1, 2 or 3 on the holding have been met by the use only of such manure produced on the holding.

⁴The maximum phosphorus fertilisation of grassland shall not exceed that specified for stocking rates less than or equal to 170 kg/ha/year unless a minimum of 5% of the eligible area of the holding is used to grow crops other than grass or a derogation applies in respect of the holding.

⁵This table does not imply any departure from Article 20(1) which prohibits the application to land on a holding of livestock manure in amounts which exceed 170kg Nitrogen per hectare per year, including that deposited by the animals themselves (or 250kg in the case of a holding to which a derogation has been granted in accordance with the Nitrates Directive).

⁶An additional 15 kg of phosphorus per hectare may be applied on soils at phosphorus indices 1, 2, or 3 for each hectare of pasture establishment undertaken.

Table 14 Annual maximum fertilisation rates of available nitrogen on grassland (cut only, no grazing livestock on holding)

	Available nitrogen (kg/ha)
1 st cut	125
Subsequent cuts	100
Hay	80

Table 15 Annual maximum fertilisation rates of phosphorus on grassland cut only

Phosphorus Index				
	1	2	3	4
Available Phosphorus (kg/ha) ^{1,2,3}				
First cut	40	30	20	0
Subsequent cuts	10	10	10	0

¹The fertilisation rates for soils which have more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils.

²The fertilisation rates apply to grassland where there is no grazing livestock on the holding.

³The fertilisation rates in this table apply to those areas of farms where hay or silage is produced for sale off the holding on farms stocked <85kg grassland stocking rate.

Table 16 Maximum fertilisation rates of nitrogen on tillage crops

Crop	Nitrogen Index			
	1	2	3	4
Available Nitrogen (kg/ha)				
Winter Wheat ^{1,2}	210	180	120	80
Spring Wheat ^{1,2}	160	130	95	60
Winter Barley ¹	180	155	120	80
Spring Barley ^{1,3}	135	100	75	40
Winter Oats ¹	145	120	85	45
Spring Oats ¹	110	90	60	30
Sugar Beet	195	155	120	80
Fodder Beet	195	155	120	80
Potatoes: Main crop	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

¹Where proof of higher yields is available, an additional 20kg N/ha may be applied for each additional tonne above the following yields:

Winter Wheat — 9.0 tonnes/ha Spring Wheat — 7.5 tonnes/ha

Winter Barley — 8.5 tonnes/ha Spring Barley — 6.5 tonnes/ha

Winter Oats — 7.5 tonnes/ha Spring Oats — 6.5 tonnes/ha

The higher yields shall be based on the best yield achieved in any of the three previous harvests, at 20% moisture content.

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

³Where malting barley is grown under a contract to a purchaser of malting barley, an extra 20 kg N/ha may be applied where it is shown on the basis of agronomic advice that additional nitrogen is needed to address a proven low protein content in the grain.

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

¹The fertilisation rates for soils which have more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils.

²Where proof of higher yields is available, an additional 3.8kg P/ha may be applied on soils at phosphorus 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.

³Where pH is greater than or equal to 7, 20kg P/ha may be applied on soils at phosphorus index 4.

⁴Must be incorporated prior to or during sowing.

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

¹The fertilisation rates for soils which have more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils.

Table 20 Annual maximum fertilisation rates of nitrogen on fruit/soft fruit crops

	Available Nitrogen (kg/ha)
Apples (Dessert)	125
Apples (Culinary)	125
Pears	50
Cherries	70
Plums	70
Blackcurrants	80
Gooseberries	40

	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

¹The fertilisation rates for soils which have more than 20% organic matter shall not exceed the amounts permitted for Index 3 soils.

Table 22 Phosphorus excess limits Article 34(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.

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SCHEDULE 4

Articles 14, 17 and 19

PERIODS WHEN APPLICATION OF FERTILISERS TO LAND IS PROHIBITED

1. In counties Carlow, Cork, Dublin, Kildare, Kilkenny, Laois, Offaly, Tipperary, Waterford, Wexford and Wicklow, the period during which the application of fertilisers to land is prohibited 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.



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.

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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. 18

***Location of Pig Farm site in relation
to Archaeological features as
outlined in the Archaeological
Survey of Ireland.***

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My Map

Finaway Site



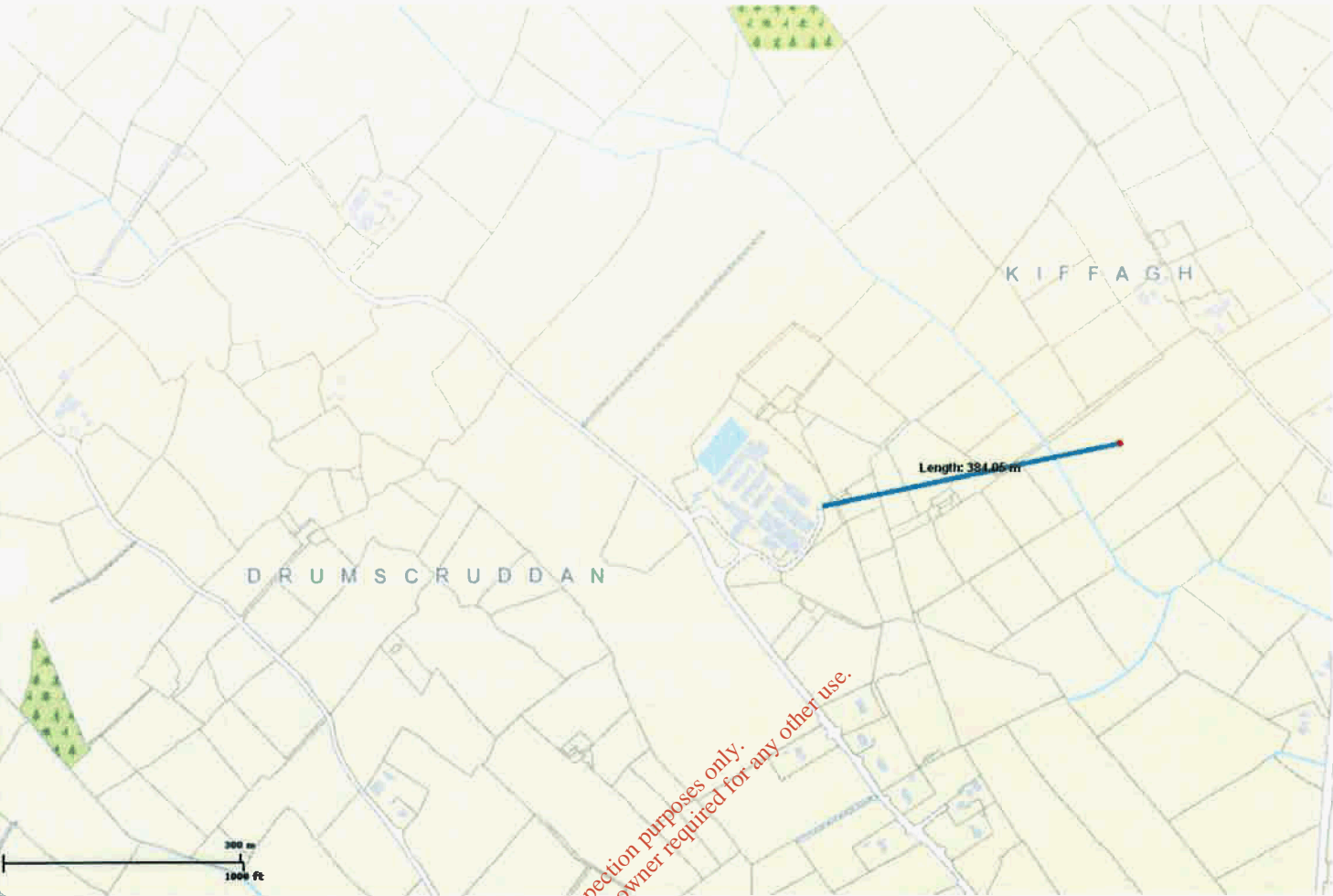
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My Map

Drumscrudan Site



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