Appendix No. 15

Copy of Industrial Emissions Licence
This licence was amended on 12th December 2013 under Section S82A(1) of the Environmental Protection Agency Act 1992 as amended. The details of the Amendment must be read in conjunction with this licence. The amendment document is entitled “IED Amendment”.

This licence was amended on 29 April 2013 under Section 96(1)(c) of the Environmental Protection Agency Acts, as amended. The details of the Amendment A must be read in conjunction with this licence. The Amendment document is entitled Technical Amendment A.

Headquarters
P.O. Box 3000
Johnstown Castle Estate
County Wexford
Ireland

INTEGRATED POLLUTION PREVENTION & CONTROL LICENCE

<table>
<thead>
<tr>
<th>Licence Register Number:</th>
<th>P0879-01</th>
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<tbody>
<tr>
<td>Licensee:</td>
<td>Mr Leo Treanor</td>
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</tbody>
</table>
| Location of Installation: | Corvoy  
Ballybay  
County Monaghan |

Reference number in Register of licences: P0879-01

Further to notice dated 30th March 2009, the Agency in exercise of the powers conferred on it by the Environmental Protection Agency Acts, 1992 to 2007, for the reasons hereinafter set out, hereby grants a licence to

Mr Leo Treanor, Corvoy, Ballybay, County Monaghan

to carry on the following activity:

the rearing in installations, whether within the same complex or within 100 metres of the same complex, where the capacity exceeds 40,000 places

at Corvoy, Ballybay, County Monaghan subject to the conditions as set out.

GIVEN under the Seal of the Agency this 6th day of May 2009

PRESENT when the seal of the Agency was affixed hereto:

Ms Laura Burke Director/Authorised Person
INTRODUCTION

This introduction is not part of the licence and does not purport to be a legal interpretation of the licence.

Mr. Leo Treanor is the owner and operator of this installation located in a rural area of County Monaghan, approximately 4km north of Ballybay. The installation was established at the site approximately 20 years ago. The activity involves the rearing of poultry. The installation has a capacity of 53,000 to 55,000 places within two broiler rearing houses.

The licence sets out in detail the conditions under which Mr. Leo Treanor will operate and manage this installation.
Table of Contents

Glossary of Terms ......................................................................................................................... 1
Decision & Reasons for the Decision ............................................................................................... 5
Part I Schedule of Activities Licensed ............................................................................................ 5
Part II Schedule of Activities Refused ............................................................................................ 5
Part III Conditions .......................................................................................................................... 6
  Condition 1. Scope .......................................................................................................................... 6
  Condition 2. Management of the Installation .................................................................................. 6
  Condition 3. Infrastructure and Operation ...................................................................................... 7
  Condition 4. Interpretation ............................................................................................................. 8
  Condition 5. Emissions .................................................................................................................. 8
  Condition 6. Control and Monitoring ............................................................................................ 9
  Condition 7. Resource Use and Energy Efficiency ........................................................................ 10
  Condition 8. Materials Handling .................................................................................................. 11
  Condition 9. Accident Prevention and Emergency Response ....................................................... 13
  Condition 10. Decommissioning & Residuals Management ......................................................... 13
  Condition 11. Notification, Records and Reports ......................................................................... 14
  Condition 12. Financial Charges and Provisions ........................................................................ 16
SCHEDULE A: Limitations .............................................................................................................. 17
SCHEDULE B: Emission Limits ...................................................................................................... 17
SCHEDULE C: Control & Monitoring ............................................................................................ 18
SCHEDULE D: Annual Environmental Report ............................................................................... 20
Glossary of Terms

All terms in this licence should be interpreted in accordance with the definitions in the Environmental Protection Agency Acts 1992 to 2007 / Waste Management Acts 1996 to 2008, unless otherwise defined in the section.

Adequate lighting  20 lux measured at ground level.
AER  Annual Environmental Report.
Agreement  Agreement in writing.
Annually  All or part of a period of twelve consecutive months.
Application  The application by the licensee for this licence.
Appropriate Facility  A waste management facility, duly authorised under relevant law and technically suitable.
Attachment  Any reference to Attachments in this licence refers to attachments submitted as part of this licence application.
BAT  Best Available Techniques.
Biannually  At approximately six-monthly intervals.
Biennially  Once every two years.
BOD  5 day Biochemical Oxygen Demand (without nitrification suppression).
Buffer Zone  Area excluded from landspreading of manure.
CBOD  5 day Carbonaceous Biochemical Oxygen Demand (with nitrification suppression).
CEN  Comité Européen De Normalisation – European Committee for Standardisation.
Client List  A list of farmers and associated farmlands used for the landspreading of manure from the installation.
COD  Chemical Oxygen Demand.
Containment boom  A boom that can contain spillages and prevent them from entering drains or watercourses or from further contaminating watercourses.
Daily  During all days of plant operation and, in the case of emissions, when emissions are taking place; with at least one measurement on any one day.
Day Any 24 hour period.

Daytime 0800 hrs to 2200 hrs.

dB(A) Decibels (A weighted).

DO Dissolved oxygen.

Documentation Any report, record, results, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.

Drawing Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.

EIS Environmental Impact Statement

Emission limits Those limits, including concentration limits and deposition rates, established in Schedule B: Emission Limits of this licence.

Environmental damage As defined in Directive 2004/35/EC.

EPA Environmental Protection Agency.


Facility Any site or premises used for the purpose of the recovery or disposal of waste.

Fortnightly A minimum of 24 times per year, at approximately two week intervals.

Freeboard The difference in elevation between the maximum elevation of the washwater and the minimum elevation of the storage tank (i.e. the minimum spare vertical height between tank contents and point of over-topping).

ha Hectare.

Hours of operation The hours during which the installation is authorised to be operational.
Incident

The following shall constitute as incident for the purposes of this licence:

(i) an emergency;
(ii) any emission which does not comply with the requirements of this licence;
(iii) any trigger level specified in this licence which is attained or exceeded; and,
(iv) any indication that environmental pollution has, or may have, taken place.

Installation

A stationary technical unit or plant where the activity concerned referred to in the First Schedule of EPA Acts 1992 to 2007 is or will be carried on, and shall be deemed to include any directly associated activity, which has a technical connection with the activity and is carried out on the site of the activity.

IPPC

Integrated Pollution Prevention & Control.

Landspreading

The application of manure to farmland.

$L_{eq}$

Equivalent continuous sound level.

Licensee

Mr. Leo Treanor, Corvoy, Ballybay, County Monaghan.

Local Authority

Monaghan County Council.

Maintain

Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to perform its function adequately.

Manure

Animal Faeces, urine, washwater and any associated feed or bedding.

Monthly

A minimum of 12 times per year, at intervals of approximately one month.

Night-time

2200 hrs to 0800 hrs.

Noise-sensitive location (NSL)

Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.

NMP

Nutrient Management Plan.

Odour-sensitive location

Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of odour at nuisance levels.

PRTR

Pollutant Release and Transfer Register.
Quarterly
At approximately three-monthly intervals.
All or part of a period of three consecutive months beginning on the first day
of January, April, July or October.

Regional Fisheries Board
Northern Regional Fisheries Board.

Sample(s)
Unless the context of this licence indicates to the contrary, the term samples
shall include measurements taken by electronic instruments.

Sanitary effluent
Wastewater from installation toilet, washroom and canteen facilities.

SOP
Standard operating procedure.

Standard method
A National, European or internationally recognised procedure (e.g. I.S. EN,
ISO, CEN, BS or equivalent); or an in-house documented procedure based on
the above references; a procedure as detailed in the current edition of
“Standard Methods for the Examination of Water and Wastewater” (prepared
and published jointly by A.P.H.A., A.W.W.A. & W.E.F.), American Public
Health Association, 1015 Fifteenth Street, N.W., Washington DC 20005,
USA; or an alternative method as may be agreed by the Agency.

Storm water
Rain water run-off from roof and non-process areas.

The Agency
Environmental Protection Agency

Washwater
Water contaminated by use in the washing of yards and animal housing.

Water Services Authority
Monaghan County Council.

Weekly
During all weeks of plant operation and, in the case of emissions, when
emissions are taking place; with at least one measurement in any one week.
Decision & Reasons for the Decision

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of this licence, any emissions from the activity will comply with and will not contravene any of the requirements of Section 83(5) of the Environmental Protection Agency Acts 1992 to 2007.

In reaching this decision the Environmental Protection Agency has considered the application and supporting documentation received from the applicant, one submission received from a third party and the report of its inspector.

No objection having been received to the proposed determination, the licence is granted in accordance with the terms of the proposed determination.

Part I Schedule of Activities Licensed

In pursuance of the powers conferred on it by the Environmental Protection Agency Acts 1992 to 2007, the Agency hereby grants this Integrated Pollution Prevention & Control licence to:

Mr. Leo Treanor, Corvoy, Ballybay, County Monaghan

under Section 83(1) of the said Acts to carry on the following activity:

- the rearing of poultry in installations, whether within the same complex or within 100 metres of the same complex, where the capacity exceeds 40,000 places,

at Corvoy, Ballybay, County Monaghan, subject to the following twelve Conditions, with the reasons therefor and associated schedules attached thereto.

Part II Schedule of Activities Refused

None of the proposed activities as set out in the licence application have been refused.
Part III Conditions

Condition 1. Scope

1.1 IPPC activities at this installation shall be restricted to those listed and described in Part I Schedule of Activities Licensed, and shall be as set out in the licence application or as modified under Condition 1.4 of this licence and subject to the conditions of this licence.

1.2 Activities at this installation shall be limited as set out in Schedule A: Limitations of this licence.

1.3 For the purposes of this licence, the installation is the area of land outlined in red, Attachment No. B.2 'Site Plan Identifying the Site Boundary' of the application. Any reference in this licence to "installation" shall mean the area thus outlined in red. The licensed activity shall be carried on only within the area outlined.

1.4 No alteration to, or reconstruction in respect of, the activity, or any part thereof, that would, or is likely to, result in
   (i) a material change or increase in:
      • the nature or quantity of any emission;
      • the abatement/treatment or recovery systems;
      • the range of processes to be carried out;
      • the fuels, raw materials, intermediates, products or wastes generated, or
   (ii) any changes in:
      • site management, infrastructure or control with adverse environmental significance;
   shall be carried out or commenced without prior notice to, and without the agreement of, the Agency.

1.5 The installation shall be controlled, operated and maintained and emissions shall take place as set out in the licence. All programmes required to be carried out under the terms of this licence become part of this licence.

1.6 This licence is for the purpose of IPPC licensing under the EPA Acts 1992 to 2007 only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.

Reason: To clarify the scope of this licence.

Condition 2. Management of the Installation

2.1 Installation Management

2.1.1 The licensee shall ensure that a person in charge, as defined under the terms of the Environmental Protection Agency Acts 1992 to 2007 shall be available onsite to meet with authorised persons of the Agency at all reasonable times.

2.2 Documentation

2.2.1 The licensee shall establish and maintain an environmental management documentation system which shall be to the satisfaction of the Agency.

2.2.2 The licensee shall issue a copy of this licence to all relevant personnel whose duties relate to any condition of this licence.
2.3 Corrective Action
The licensee shall establish procedures to ensure that corrective action is taken should the specified requirements of this licence not be fulfilled. The responsibility and authority for initiating further investigation and corrective action in the event of a reported non-conformity with this licence shall be defined.

2.4 Awareness and Training
2.4.1 The licensee shall establish and maintain procedures for identifying training needs, and for providing appropriate training, for all personnel whose work can have a significant effect on the environment. Appropriate records of training shall be maintained.

2.4.2 Personnel/contractors performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and/or experience, as required. This includes contractors/agents involved in the transport of waste and manure.

2.5 Communications Programme
The licensee shall maintain a Communications Programme to ensure that members of the public can obtain information at the installation, or as otherwise agreed by the Agency, at all reasonable times, concerning the environmental performance of the installation.

Reason: To make provision for management of the activity on a planned basis having regard to the desirability of ongoing assessment, recording and reporting of matters affecting the environment.

Condition 3. Infrastructure and Operation

3.1 The licensee shall establish and maintain, for each component of the installation, all infrastructure referred to in this licence in advance of the commencement of the licensed activities in that component, or as required by the conditions of this licence. Infrastructure specified in the application that relates to the environmental performance of the installation and is not specified in the licence, shall be installed in accordance with the schedule submitted in the application.

3.2 The licensee shall clearly label and provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency. The requirement with regard to off-site points is subject to the prior agreement of the landowner(s) concerned.

3.3 Tank, Container and Drum Storage Areas
3.3.1 All tank, container and drum storage areas shall be rendered impervious to the materials stored therein. Bunds shall be designed having regard to Agency guidelines ‘Storage and Transfer of Materials for Scheduled Activities’ (2004).

3.3.2 All tank and drum storage areas shall, as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:
(i) 110% of the capacity of the largest tank or drum within the bunded area; or
(ii) 25% of the total volume of substance that could be stored within the bunded area.

3.3.3 All drainage from bunded areas shall be treated as hazardous waste unless it can be demonstrated to be otherwise. All drainage from bunded areas shall be diverted for collection and safe disposal.

3.3.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.

3.3.5 All tanks, containers and drums shall be labelled to clearly indicate their contents.
The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the installation. Once used, the absorbent material shall be disposed of/recovered at an appropriate facility.

The washwater storage tanks shall be fitted with high-level indicators within twelve months of the date of grant of this licence.

The licensee shall provide a minimum of 26 weeks storage of manure onsite or at an agreed storage location unless the licensee has a contract for the transfer of manure to a person authorised or exempted under and in accordance with the Waste Management Acts 1996 to 2008 or the Environmental Protection Agency Acts 1992 and 2007 to undertake their collection and recovery of the manure.

The licensee shall install and maintain a water meter on all water supplies serving the installation within six months from the date of grant of this licence. Records of water usage shall be maintained onsite and a summary records report shall be submitted annually as part of the AFR.

The licensee shall undertake annual maintenance of the broiler house heating systems and the back up generator.

**Condition 4. Interpretation**

**Noise**

Noise from the installation shall not give rise to sound pressure levels (Leq, T) measured at noise sensitive locations which exceed the limit value(s).

**Condition 5. Emissions**

No emissions, including odours, from the activities carried on at the site shall result in an impairment of, or an interference with amenities or the environment beyond the installation boundary or any other legitimate uses of the environment beyond the installation boundary.

The licensee shall ensure that all or any of the following: vermin, flies, and/or dust, associated with the activity do not result in an impairment of, or an interference with, amenities or the environment at the installation or beyond the installation boundary or any other legitimate uses of the environment beyond the installation boundary. Any method used by the licensee to control or prevent any such impairment/interference shall not cause environmental pollution.
Condition 6. Control and Monitoring

6.1 The licensee shall carry out such sampling, analyses, measurements, examinations, maintenance and calibrations as set out below and as in accordance with Schedule C: Control & Monitoring of this licence.

6.1.1 Analyses shall be undertaken by competent staff in accordance with documented operating procedures.

6.1.2 Such procedures shall be assessed for their suitability for the test matrix and performance characteristics shall be determined.

6.1.3 Such procedures shall be subject to a programme of Analytical Quality Control using control standards with evaluation of test responses.

6.1.4 Where any analysis is sub-contracted it shall be to a competent laboratory.

6.2 The licensee shall ensure that:

(i) sampling and analysis for all parameters listed in the Schedules to this licence; and

(ii) any reference measurements for the calibration of automated measurement systems;

shall be carried out in accordance with CEN-standards. If CEN standards are not available, ISO, national or international standards that will ensure the provision of data of an equivalent scientific quality shall apply.

6.3 All emission control equipment shall be calibrated and maintained in accordance with the instructions issued by the manufacturer/supplier or installer.

6.4 The licensee shall complete an assessment of underground and overground effluent storage tanks, including integrity and water tightness testing, pipelines and liquid feed storage tanks within twelve months of date of issue of this licence, and at least once every five years thereafter. In the case of new storage facilities installed onsite, the assessment shall be undertaken in advance of utilisation. A report on such assessment shall be included in the AER, together with proposals for repair of any significant defects found.

6.5 The licensee shall inspect the integrity of the floors of all deep litter houses after each wash down and shall undertake remedial actions to repair any damaged or cracked floors as necessary. The licensee shall maintain a record of all inspections and remedial actions taken.

6.6 The frequency, methods and scope of monitoring, sampling and analyses, as set out in this licence, may be amended with the agreement of the Agency following evaluation of test results.

6.7 The licensee shall ensure that all manure generated onsite is stored in a manner which does not pollute ground or surface waters.

6.8 Storm Water

6.8.1 A visual examination of the storm water discharges shall be carried out weekly. A log of such inspections shall be maintained.

6.8.2 The drainage system (i.e., gullies, manholes, any visible conduits and such other aspects as may be agreed) and bunds shall be inspected weekly, desludged as necessary and properly maintained at all times. All sludge and drainage from these operations shall be collected for safe disposal. The drainage system and bunds shall be properly maintained at all times.

6.8.3 The licensee shall provide and subsequently maintain a rainwater collection and drainage system for all poultry housing onsite.
6.8.4 The licensee shall divert all uncontaminated surface water run-off from roofs and non-contaminated impervious areas of the site, to the surface water drainage system. The licensee shall, within three months of the date of grant of the licence, provide and maintain inspection chamber(s) at the outlet(s) of the surface water drainage system.

6.8.5 There shall be no unauthorised discharge of polluting matter to water.

6.8.6 The licensee shall monitor storm water discharges in accordance with Schedule C.23 Monitoring of Storm Water Emissions of this licence. The results of monitoring shall be reported annually as part of the AER.

6.9 Monitoring of available storage capacity for waste and manure shall be undertaken as outlined in Schedule C.4 Waste and Manure Monitoring, of this licence. Results shall be retained on-site and record of the results shall be available for inspection by authorised personnel, including Agency personnel, at all reasonable times. The results shall be submitted to the Agency in a summary report included as part of the AER.

6.10 The licensee shall ensure that a freeboard of at least 200 mm from the top of each covered washwater storage tank and 300 mm from the top of uncovered washwater storage tanks is maintained, as a minimum, at all times. The required freeboard shall be clearly indicated in the tank.

6.11 Underground, partly underground or overground storage facilities shall conform to the Department of Agriculture, Food and Forestry specifications (S108, S123) or equivalent standard.

6.12 Noise
The licensee shall carry out a noise survey of the site operations as required by the Agency. The survey programme shall be undertaken in accordance with the methodology specified in the ‘Environmental Noise Survey Guidance Document’ as published by the Agency.

6.13 Pollutant Release and Transfer Register (PRTR)
The licensee shall prepare and report a PRTR for the site. The substance and/or wastes to be included in the PRTR shall be as agreed by the Agency each year by reference to EC Regulations No. 166/2008 concerning the establishment of the European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC. The PRTR shall be prepared in accordance with any relevant guidelines issued by the Agency and shall be submitted electronically in specified format and as part of the AER.

Reason: To provide for the protection of the environment by way of treatment and monitoring of emissions.

Condition 7. Resource Use and Energy Efficiency

7.1 The licensee shall carry out an audit of the energy efficiency of the site within twelve months of the date of grant of this licence. The audit shall be carried out in accordance with the guidance published by the Agency, “Guidance Note on Energy Efficiency Auditing”. The energy efficiency audit shall be repeated at intervals as required by the Agency.

7.2 The audit shall identify all opportunities for energy use reduction and efficiency and the recommendations of the audit shall be incorporated into a Resource Use and Energy Programme.

7.3 The licensee shall identify opportunities for reduction in the quantity of water used on site including recycling and reuse initiatives, wherever possible. Reductions in water usage shall be incorporated into a Resource Use and Energy Programme.
7.4 The licensee shall undertake an assessment of the efficiency of use of raw materials in all processes, having particular regard to the reduction in waste generated. The assessment should take account of best international practice for this type of activity. Where improvements are identified, these shall be incorporated into a Resource Use and Energy Programme.

Reason: To provide for the efficient use of resources and energy in all site operations.

Condition 8. Materials Handling

8.1 Waste sent off site for recovery or disposal shall be transported only by an authorised waste contractor or an exempted person (Waste Management (Collection Permit) Regulations, 2007 – 2008). The waste shall be transported from the site of the activity to the site of recovery/disposal only in a manner which will not adversely affect the environment. Such transportation shall be in accordance with the appropriate National and European legislation and protocols.

8.1.1 Animal tissue or carcasses sent off site for disposal/recovery shall be transported in covered, leak-proof containers.

8.1.2 The transport of washwater via the public road shall be carried out in sealed containers such that no spillage can occur.

8.1.3 The transport of manure via the public road shall be carried out in covered trailers such that no spillage can occur.

8.2 The loading and unloading of materials shall be carried out in designated areas protected against spillage and leachate run-off.

8.3 Waste shall be stored in designated areas, protected as may be appropriate against spillage and leachate run-off. The waste shall be clearly labelled and appropriately segregated.

8.4 No waste classified as green list waste in accordance with the EU Shipment of Waste Regulations (Council Regulation EEC No. 1013/2006, as may be amended) shall be consigned for recovery without the agreement of the Agency.

8.5 Waste for disposal/recovery off-site shall be analysed in accordance with Schedule C: Control & Monitoring of this licence.

8.6 Unless approved in writing, in advance, by the Agency the licensee is prohibited from mixing a hazardous waste of one category with a hazardous waste of another category or with any other non-hazardous waste.

8.7 Animal tissue or carcasses stored onsite pending disposal shall be placed in covered, leak-proof containers and shall at a minimum be removed fortnightly.

8.8 Animal faeces, urine, washwater and any residual associated feed or bedding shall be considered to be a manure or fertiliser when recovered as defined in the Waste Management Acts 1996 to 2008 and as agreed by the Agency.

8.9 Recovery of manure

8.9.1 The licensee shall by the first of January each year submit details of all proposed recipients of manure for recovery/disposal other than by landspreading. Details required shall include method of recovery/disposal, location of recovery/disposal facility, permit/authorisation for recovery/disposal facility, agreements between recipient and licensee and quantities to be accepted by the recipient.
8.9.2 Recovery/disposal of manure shall take place only by methods agreed in advance by the Agency and at agreed recovery/disposal facilities which have appropriate authorisation.

8.9.3 Agreements between the licensee and recipients of manure for recovery/disposal, other than landspreading, shall not conflict with any conditions of this licence.

8.9.4 The licensee shall ensure that in cases where there is a transfer of manure from the installation to storage provided by the recipient that it is contained in a purpose built holding structure, adequate for the protection of groundwater and surface water.

8.10 Manure shall only be recovered by landspreading subject to the prior agreement of the Agency and the following conditions:

8.10.1 The licensee shall submit by the first of January annually and maintain on-site the following:

(i) Annual production of manure and the nitrogen and phosphorus content of the manure;

(ii) Summary table of customer farmers receiving manure. The table shall include as a minimum 'Customer Code' (Name to be maintained onsite), 'Townlands' and 'Quantity of Manure (m3)'. The table shall be updated based on a nutrient management plan, as required, to include additional lands acquired during the year;

(iii) Map (scale of 1:50,000) showing the location of farms where manure may be recovered;

(iv) Declaration by suitable qualified person that lands, for recovery of manure, have been inspected and are suitable for landspreading, and

(v) A nutrient management plan for all lands demonstrating adequate capacity for recovery of manure generated at the installation. Nutrient management plans shall be to the satisfaction of the Agency and shall be agreed prior to the movement of manure offsite. Nutrient management plans may, until 1 January 2011, be based on the 'Nitrogen and Phosphorous' Statements issued by the Department of Agriculture, Fisheries and Food. Nutrient management plans shall be maintained onsite for inspection by authorised persons.

8.10.2 The licensee shall maintain onsite for inspection by authorised persons maps (scale 1:10,560) showing land that may be used for recovery of manure.

8.10.3 The licensee shall ensure, in all cases where there is a transfer of manure from the installation to storage provided on farms in the client list, that the recipient farmer is advised of the need to store the manure in a purpose-built holding structure adequate for the protection of groundwater and surface water.

8.10.4 Soil monitoring shall be undertaken as outlined in Schedule C.6 Ambient Monitoring, Land Used for Landspreading of this licence and a summary report included as part of the Nutrient Management Plan.

8.10.5 Landspreading shall, as a minimum, be carried out in accordance with S.I. No. 378 of 2006 European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2006. All landspreading activities shall be carried out in such a manner as to avoid contamination of surface waters and groundwater's, and so as to minimise odour nuisance.

8.10.6 Landspreading shall be undertaken only in accordance with appropriate national standards and protocols as agreed by the Agency.

8.10.7 Landspreading from this activity shall take place only on lands agreed in advance in writing by the Agency. Alterations to this landbank are subject to prior written agreement with the Agency.
8.10.8 Landspreading shall be undertaken to ensure an even spread of manure over land. Manure (excluding washwater) shall be spread by rotary spreader or similar machine. Washwater shall be spread using soil injection, bandspreading or low trajectory splashplate methods. Any other method must be agreed in advance by the Agency.

Reason: To provide for the appropriate handling of material and the protection of the environment.

Condition 9. Accident Prevention and Emergency Response

9.1 The licensee shall, within six months of date of grant of this licence, ensure that a documented Accident Prevention Procedure is in place that addresses the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment. This procedure shall be reviewed annually and updated as necessary.

9.2 The licensee shall, within six months of date of grant of this licence, ensure that a documented Emergency Response Procedure is in place, that addresses any emergency situation which may originate on-site. This procedure shall include provision for minimising the effects of any emergency on the environment. This procedure shall be reviewed annually and updated as necessary.

9.3 Incidents

9.3.1 In the event of an incident the licensee shall immediately:

(i) carry out an investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
(ii) isolate the source of any such emission;
(iii) evaluate the environmental pollution, if any, caused by the incident;
(iv) identify and execute measures to minimise the emissions/malfunction and the effects thereof;
(v) identify the date, time and place of the incident;
(vi) notify the Agency and other relevant authorities.

9.3.2 The licensee shall provide a proposal to the Agency for its agreement within one month of the incident occurring or as otherwise agreed by the Agency, to:

(i) identify and put in place measures to avoid recurrence of the incident; and
(ii) identify and put in place any other appropriate remedial actions.

Reason: To provide for the protection of the environment.

Condition 10. Decommissioning & Residuals Management

10.1 Following termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the site in the licensed activity, the licensee shall, to the satisfaction of the Agency, decommission, render safe or remove for disposal/recovery any soil, subsoil, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.

Reason: To make provision for the proper closure of the activity ensuring protection of the environment.
Environmental Protection Agency Licence Reg. No. P0879-01

Condition 11. Notification, Records and Reports

11.1 The licence shall notify the Agency by both telephone and facsimile, if available, to the Agency’s headquarters in Wexford, or to such other Agency office as may be specified by the Agency, as soon as practicable after the occurrence of any of the following:

(i) any release of environmental significance to atmosphere from any potential emissions point including bypasses;
(ii) any emission that does not comply with the requirements of this licence;
(iii) any malfunction or breakdown of key control equipment or monitoring equipment set out in Schedule C: Control & Monitoring of this licence which is likely to lead to loss of control of the abatement system; and
(iv) any incident with the potential for environmental contamination of surface water or groundwater, or posing an environment threat to air or land, or requiring an emergency response by the Local Authority.

The licensee shall include as part of the notification, date and time of the incident, summary details of the occurrence, and where available, the steps taken to minimise any emissions.

11.2 In the case of any incident relating to discharges to water, the licensee shall notify the Local and Water Services Authority and the Northern Regional Fisheries Board as soon as practicable after such an incident.

11.3 The licensee shall make a record of any incident. This record shall include details of the nature, extent, and impact of, and circumstances giving rise to, the incident. The record shall include all corrective actions taken to manage the incident, minimise wastes generated and the effect on the environment, and avoid recurrence. The licensee shall, as soon as practicable following incident notification, submit to the Agency the incident record.

11.4 The licensee shall record all complaints of an environmental nature related to the operation of the activity. Each such record shall give details of the date and time of the complaint, the name of the complainant (if provided), and give details of the nature of the complaint. A record shall also be kept of the response made in the case of each complaint.

11.5 The licensee shall record all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the installation.

11.6 The licensee shall as a minimum keep the following documents at the site:

(i) the licences relating to the installation;
(ii) the previous year’s AER for the installation;
(iii) records of all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the installation;
(iv) relevant correspondence with the Agency;
(v) up to date site drawings/plans showing the location of key process and environmental infrastructure, including monitoring locations and emission points;
(vi) up to date Standard Operational Procedures for all processes, plant and equipment necessary to give effect to this licence or otherwise to ensure that standard operation of such processes, plant or equipment does not result in unauthorised emissions to the environment; and
(vii) any elements of the licence application or documentation referenced in this licence.

This documentation shall be available to the Agency for inspection at all reasonable times.
11.7 The licensee shall submit to the Agency, by the 31st March of each year, an AER covering the previous calendar year. This report, which shall be to the satisfaction of the Agency, shall include as a minimum the information specified in Schedule D: Annual Environmental Report of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency.

11.8 A full record, which shall be open to inspection by authorised persons of the Agency at all times, shall be kept by the licensee on matters relating to the waste management operations and practices at this site. This record shall as a minimum contain details of the following:

- the tonnages and EWC Code for the waste materials imported and/or sent off-site for disposal/recovery;
- the names of the agent and carrier of the waste, and their waste collection permit details, if required (to include issuing authority and vehicle registration number);
- details of the ultimate disposal/recovery destination facility for the waste and its appropriateness to accept the consigned waste stream, to include its permit/licence details and issuing authority, if required;
- written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site;
- details of all waste consigned abroad for Recovery and classified as ‘Green’ in accordance with the EU Shipment of Waste Regulations (Council Regulation EEC No. 1013/2006, as may be amended). The rationale for the classification must form part of the record;
- details of any rejected consignments;
- details of any approved waste mixing; and
- the results of any waste analyses required under Schedule C: Control & Monitoring, of this licence.

11.9 The licensee shall maintain the following records:

- Broiler stock levels;
- Floor Plan;
- Floor integrity inspection/remedial action records;
- Weekly house humidity & temperature records;
- Weekly water consumption;
- Feed delivery records;
- Mortality and dead bird disposal;
- Rodent control programme including Bait Point Plan and Bait Replenishment;
- Storm water inspection records and test reports;
- Heating systems and back up generator maintenance certificates;
- Hours of operation and reason for operation of back up generator;
- Safety Statement;
- Emergency Action Plan, and
- Chemical inventory and usage.

These records shall be available for inspection by authorised persons of the Agency at all reasonable times.

11.10 The licensee shall maintain a ‘manure register’, to the satisfaction of the Agency, showing as a minimum, details in accordance with Article 23 of S.I. No. 378 of 2006 European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2006.
11.11 The licensee shall submit report(s) as required by the conditions of this licence to the Agency’s Headquarters in Wexford, or to such other Agency office as may be specified by the Agency.

11.12 All reports shall be certified accurate and representative by the installation manager or a nominated, suitably qualified and experienced deputy.

Reason: To provide for the collection and reporting of adequate information on the activity.


12.1 Agency Charges

12.1.1 The licensee shall pay to the Agency an annual contribution of €2,690 or such sum as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the activity as the Agency considers necessary for the performance of its functions under the Environmental Protection Agency Acts 1992 to 2007. The first payment shall be a pro-rata amount for the period from the date of grant of this licence to the 31st day of December, and shall be paid to the Agency within one month from the date of grant of the licence. In subsequent years the licensee shall pay to the Agency such revised annual contribution as the Agency shall from time to time consider necessary to enable performance by the Agency of its relevant functions under the Environmental Protection Agency Acts 1992 to 2007 and all such payments shall be made within one month of the date upon which demanded by the Agency.

12.1.2 In the event that the frequency or extent of monitoring or other functions carried out by the Agency needs to be increased, the licensee shall contribute such sums as determined by the Agency to defray its costs in regard to items not covered by the said annual contribution.

12.2 Environmental Liabilities

12.2.1 The licensee shall as part of the AER, provide an annual statement as to the measures taken or adopted at the site in relation to the prevention of environmental damage, and the financial provisions in place in relation to the underwriting of costs for remedial actions following anticipated events (including closure) or accidents/incidents, as may be associated with the carrying on of the activity.

12.2.2 The licensee shall have regard to the Environmental Protection Agency Guidance on Environmental Liability Risk Assessment, Decommissioning Management Plans and Financial Provision when implementing Condition 12.2.1 above.

Reason: To provide for adequate financing for monitoring and financial provisions for measures to protect the environment.
SCHEDULE A: Limitations

There are no limitations on the installation specified in the Schedule.

SCHEDULE B: Emission Limits

B.1 Emissions to Air

There shall be no emissions to air of environmental significance.

B.2 Emissions to Water

There shall be no emissions to water of environmental significance.

B.3 Emissions to Sewer

There shall be no process effluent emissions to sewer.

B.4 Noise Emissions

<table>
<thead>
<tr>
<th>Daytime dB(A) L_{Aeq} (30 minutes)</th>
<th>Night-time dB(A) L_{Aeq} (30 minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>55 Note 1</td>
<td>45 Note 1</td>
</tr>
</tbody>
</table>

Note 1: There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity of any noise-sensitive location.
SCHEDULE C:  Control & Monitoring

C.1.1. Control of Emissions to Air
There shall be no emissions to air of environmental significance.

C.1.2. Monitoring of Emissions to Air
There shall be no emissions to air of environmental significance.

C.2.1. Control of Emissions to Water
There shall be no emissions to water of environmental significance.

C.2.2. Monitoring of Emissions to Water
There shall be no emissions to water of environmental significance.

C.2.3. Monitoring of Storm Water Emissions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Monitoring Frequency</th>
<th>Analysis Method/Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>COD/CBOD</td>
<td>As required by the Agency</td>
<td>Standard method</td>
</tr>
<tr>
<td>Visual Inspection</td>
<td>Weekly</td>
<td>Sample and examine for colour and odour</td>
</tr>
</tbody>
</table>

Note 1: The licensee shall, within three months of the date of grant of the licence, provide and maintain inspection chambers at the outlets of the surface water drainage system.

C.3.1. Control of Emissions to Sewer
There shall be no process effluent emissions to sewer.

C.3.2. Monitoring of Emissions to Sewer
There shall be no process effluent emissions to Sewer.
### C.4 Waste and Manure Monitoring

<table>
<thead>
<tr>
<th>Class</th>
<th>Frequency</th>
<th>Parameter</th>
<th>Monitoring Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manure</td>
<td>Monthly</td>
<td>Available storage capacity</td>
<td>On-site and off-site storage</td>
</tr>
<tr>
<td>Washwater</td>
<td>Annually</td>
<td>Nutrients (N, P &amp; K) (^1)</td>
<td>On-site and off-site storage</td>
</tr>
<tr>
<td>Other (^2)</td>
<td>Monthly</td>
<td>Available storage capacity</td>
<td>On-site and off-site Wash water storage tanks</td>
</tr>
</tbody>
</table>

- **Note 1:** Nutrient analysis only required if manure is sent off site for recovery as fertiliser; nutrient concentrations in the Nitrates Regulations (S.I. No. 378 of 2006) may be used as an alternative.
- **Note 2:** Analytical requirements to be determined on a case by case basis.

### C.5 Noise Monitoring

No additional noise monitoring is required in this schedule.

### C.6 Ambient Monitoring

#### Land used for Landspreading

**Monitoring Location:** All lands included in the landbank

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Monitoring Frequency (^2, 5)</th>
<th>Analysis Method/Technique (^2, 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil Sampling (^3)</td>
<td>Prior to the preparation of an NMP or Every six years</td>
<td>Morgan’s P test</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Morgan’s P test</td>
</tr>
</tbody>
</table>

- **Note 1:** Each sample should be representative of a maximum area of 4 ha except where uniform cropping and land use has been in place for the previous five years or more. In the latter situation a sample of 12 ha is acceptable.
- **Note 2:** The licensee may assume 'Index 3' for preparation of nutrient management plans where no soil samples are available.
- **Note 3:** Peach, M. and English, L. (1944) 'Rapid micro chemical test'. Soil Science 57:167.
- **Note 4:** Soil analysis shall only be conducted by Department of Agriculture, Fisheries and Food approved laboratories.
- **Note 5:** The above requirements may be substituted by the requirements specified in Article 16(2) of the Nitrates Regulations, S.I. 378 of 2006 until 2011.
### SCHEDULE D: Annual Environmental Report

<table>
<thead>
<tr>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste management record.</td>
</tr>
<tr>
<td>Manure Register.</td>
</tr>
<tr>
<td>Resource consumption summary.</td>
</tr>
<tr>
<td>Complaints summary.</td>
</tr>
<tr>
<td>Ambient monitoring summary.</td>
</tr>
<tr>
<td>Tank and pipeline testing and inspection report.</td>
</tr>
<tr>
<td>Bund integrity test.</td>
</tr>
<tr>
<td>Reported incidents summary.</td>
</tr>
<tr>
<td>Energy efficiency audit report summary.</td>
</tr>
<tr>
<td>Report on progress made and proposals being developed to minimise water demand.</td>
</tr>
<tr>
<td>Resource use and energy programme.</td>
</tr>
<tr>
<td>Development/Infrastructural works summary (completed in previous year and/or prepared for current year).</td>
</tr>
<tr>
<td>Statement of measures in relation to prevention of environmental damage and remedial actions (Environmental Liabilities).</td>
</tr>
<tr>
<td>Any other items specified by the Agency.</td>
</tr>
</tbody>
</table>

**Note 1:** Content may be revised subject to the agreement of the Agency.

Sealed by the seal of the Agency on this the 6th day of May 2009.

PRESENT when the seal of the Agency was affixed hereto:

Ms Laura Burke Director/Authorised Person
AMENDMENT A
TO
INTEGRATED POLLUTION PREVENTION & CONTROL LICENCE

<table>
<thead>
<tr>
<th>Licence Register Number:</th>
<th>P0879-01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensee:</td>
<td>Mr Leo Treanor</td>
</tr>
</tbody>
</table>
| Location of Installation:| Corvoy   
                          | Ballybay  
                          | County Monaghan |
Reasons for the Decision

The Environmental Protection Agency has examined the terms of the Integrated Pollution Prevention and Control Licence (IPPC) Reg. No. P0879-01 granted on 06/05/2009. This amendment facilitates the operation of the licence and the management of manure/slurry (organic fertiliser) in accordance with good agricultural practices and compliance with statutory obligations.

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of Integrated Pollution Prevention and Control (IPPC) licence Reg. No. P0879-01 granted on the 06/05/2009, as well as any amendments noted herein, any emissions from the activity will comply with and not contravene any of the requirements of Section 83(5) of the Environmental Protection Agency Acts, 1992 to 2012.

Technical Amendment

In pursuance of the powers conferred on it by Section 96(1)(c) of the Environmental Protection Agency Acts, 1992 to 2012, the Agency amends the licence, granted to Mr Leo Treanor, Corvoy, Ballybay, County Monaghan, for an installation located at Corvoy, Ballybay, County Monaghan.

This technical amendment is limited to the following Glossary of Terms, Schedules and Conditions:
Amendments

Glossary of Terms:

Amend Glossary of Terms to include the following:

**Customer Farmers**
Farmers who may use/recover organic fertiliser generated at the installation as fertiliser on their lands.

**Organic fertiliser**
Any fertiliser other than that manufactured by industrial process and includes livestock manure, dungstead manure, farmyard manure, slurry, soiled water, silage effluent, non-farm organic substances such as sewage sludge, industrial by-products and sludges and residues from fish farms.

Amend Glossary of Terms to delete the following:

**Buffer zone**
Area excluded from landspreading of manure.

**Clients list**
A list of farmers and associated farmlands used for the landspreading of manure from the installation.

**Landspreading**
The application of manure to farmland.

**NMP**
Nutrient Management Plan.

Conditions:

Amend Condition 2.4.2 of the licence, to read as follows:

2.4.2 Personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and/or experience, as required.

Delete the following Conditions:

8.1.2 The transport of washwater via the public road shall be carried out in sealed containers such that no spillage can occur.

8.1.3 The transport of manure via the public road shall be carried out in sealed containers such that no spillage can occur.
Amend Condition 8.10 and sub-conditions of the licence, to read as follows:

8.10 Organic Fertiliser Movements

8.10.1 The licensee shall calculate and record the quantity of organic fertiliser stored on-site on the 1st January annually. The licensee shall maintain the record on-site and the record shall be available for inspection by authorised persons, including Agency personnel.

8.10.2 The licensee shall record all organic fertiliser movements off-site in an 'organic fertiliser register' which shall be available for inspection on-site by authorised persons.

8.10.3 The licensee shall maintain an 'organic fertiliser register' to the satisfaction of the Agency, showing, as a minimum, the name, herd number of the customer farmer receiving organic fertiliser, quantity of organic fertiliser, date of movement off-site, and details in accordance with Article 23 of S.I. No. 610 of 2010 European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2010 and as otherwise specified by the Agency or Department of Agriculture, Food and the Marine.

8.10.4 The licensee shall, on or before the 31st December annually, submit to the Department of Agriculture, Food and the Marine the completed records of movement of organic fertiliser from the installation (referred to as 'Record 3' by the Department of Agriculture, Food and the Marine). The record shall be in accordance with Article 23 of S.I. No. 610 of 2010 European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2010 and as otherwise specified by the Agency or Department of Agriculture, Food and the Marine. A copy of the record submitted shall be maintained on site for inspection.

8.10.5 The licensee shall calculate and record by the 31st of January annually:

(i) the quantity of organic fertiliser generated by the animals housed on-site in the previous calendar year;

(ii) the total quantity of organic fertiliser moved off-site and recorded in the organic fertiliser register and 'Record 3' as submitted to the Department of Agriculture, Food and the Marine in the previous calendar year;

(iii) the opening quantity of organic fertiliser (1st January of the previous year); and closing quantity of organic fertiliser (1st January of the current year).

These details shall be submitted to the Agency as part of the AER.

8.10.6 The licensee shall maintain a record, at least every six months, of the number of animals housed at the installation. These records shall be available for inspection by authorised persons at all reasonable times.
Delete the following Condition:

11.10. The licensee shall maintain a ‘manure register’, to the satisfaction of the Agency, showing, as a minimum, details in accordance with Article 23 of S.I. No. 378 of 2006, European Communities (Good Agricultural Practice for the Protection of Waters) Regulations 2006.

Schedules:

Delete the following Schedule:

- Schedule C.6 Ambient Monitoring: Land used for Landspraying

Amend the following Schedule:

- Schedule D: Annual Environmental Report

In Annual Environmental Report Content, replace 'Manure Register' and 'Ambient Monitoring Summary' with the following:

  Quantity of organic fertiliser generated during the AER reporting year.
  Quantity of organic fertiliser moved off-site and recorded during the AER reporting year.
  Opening and closing quantity of organic fertiliser at the installation.

This technical amendment shall be cited as Amendment A to the licence.

Sealed by the seal of the Agency on this the 29 day of April, 2013

PRESENT when the seal of the Agency was affixed hereto:

Patrick Byrne, Authorised Person
Headquarters
P.O. Box 3000
Johnstown Castle Estate
County Wexford
Ireland

Section 82A(11) Amendment to Industrial Emissions Licence

<table>
<thead>
<tr>
<th>Licence Register Number:</th>
<th>P0879-01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensee:</td>
<td>Mr Leo Treanor</td>
</tr>
<tr>
<td>Location of Installation:</td>
<td>Corvoy Ballybay Monaghan</td>
</tr>
</tbody>
</table>
Reason for the Decision

The Environmental Protection Agency has examined the terms of Licence Reg. No. P0879-01 as required by the provisions of Section 82A(8)(a) of the Environmental Protection Agency Act 1992 as amended, and determined that the licence can be brought into conformity with the provisions and requirements of Council Directive 2010/75/EU by the exercise of the powers conferred by Section 82A(11) of the Environmental Protection Agency Act 1992 as amended.

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of Licence Reg. No. P0879-01, granted on 06/05/2009, any amendments made to date, as well as any amendments noted herein, the carrying on of the activity will comply with and not contravene any of the requirements of Section 83(5) of the Environmental Protection Agency Act 1992 as amended.

Amendment

In pursuance of the powers conferred on it by Section 82A(11) of the Environmental Protection Agency Act 1992 as amended, the Agency hereby amends Licence Reg. No. P0879-01, granted to Mr Leo Treanor, Corvoy, Ballybay, Monaghan.

Henceforth, the licence shall be read in conjunction with any other amendment made to the licence and the amendments set out below.

From the date of this amendment, Licence Reg. No. P0879-01 shall be deemed to be an Industrial Emissions Licence, granted under Part IV of the Environmental Protection Agency Act 1992 as amended.

This amendment is limited to the following Glossary of Terms or Interpretation, Conditions and Schedules of Licence Reg. No. P0879-01:
**Amendments**

Amend Glossary of Terms or the Interpretation as follows

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BAT conclusions</strong></td>
<td>A document containing the parts of a BAT reference document laying down the conclusions on best available techniques, their description, information to assess their applicability, the emission levels associated with the best available techniques, associated monitoring, associated consumption levels and, where appropriate, relevant site remediation measures.</td>
</tr>
<tr>
<td><strong>BAT reference document</strong></td>
<td>A document drawn up by the Commission of the European Union in accordance with Article 13 of the Industrial Emissions Directive, resulting from the exchange of information in accordance with that Article of that Directive and describing, in particular, applied techniques, present emissions and consumption levels, techniques considered for the determination of best available techniques as well as BAT conclusions and any emerging techniques.</td>
</tr>
<tr>
<td><strong>Groundwater</strong></td>
<td>Has the meaning assigned to it by Regulation 3 of the European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9 of 2010).</td>
</tr>
<tr>
<td><strong>Waste</strong></td>
<td>Any substance or object which the holder discards or intends or is required to discard.</td>
</tr>
</tbody>
</table>
Amend the 'Schedule of Activities Licensed' as follows:

The licensed activities are amended to be as follows:

6.1 (a) The rearing of poultry in installations where the capacity exceeds 40,000 places. ('Poultry' shall be construed in accordance with Regulation 2(2) of the European Communities (Poultry and Hatching Eggs) Regulations 2010 (S.I. No. 564 of 2010).)

New Conditions

Amend the licence to insert the following additional conditions at the end of Condition 2 of the licence:

2A The licensee shall notify the Agency, in a format as may be specified by the Agency, without delay after:

(i) an incident or accident that significantly affects the environment, and/or
(ii) the occurrence of any breach of one or more of the conditions attached to this licence.

2B The licensee shall, where an incident or accident that significantly affects the environment occurs, without delay take measures to limit the environmental consequences of the incident or accident and to prevent further possible incident or accident.

2C The licensee shall, where a breach of one or more of the conditions of this licence occurs, without delay take measures to restore compliance with the conditions of this licence within the shortest possible time.

2D The licensee shall ensure that waste generated in the carrying on of the activity shall be prepared for re-use, recycling or recovery or, where that is not technically or economically possible, disposed of in a manner which will prevent or minimise any impact on the environment.

Reason: To bring the licence into conformity with the requirements of the Industrial Emissions Directive.

This amendment shall be cited as a Section 82A(11) Amendment and should be read in conjunction with Licence Reg. No. P0879-01, granted on 06/05/2009 and any other amendments made to the licence.

Sealed by the seal of the Agency on this the 12th day of December, 2013
PRESENT when the seal of the Agency was affixed hereto:

Frank Clinton, Authorized Person
Appendix No. 16

Water Protection Plan Checklist
# MONAGHAN LOCAL AUTHORITIES

## Water Protection Plan Checklist

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

<table>
<thead>
<tr>
<th>General Site and Water Body Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning Ref. No.</td>
</tr>
<tr>
<td>Townland</td>
</tr>
<tr>
<td>X Co-ordinate</td>
</tr>
<tr>
<td>WMU</td>
</tr>
<tr>
<td>Y Co-ordinate</td>
</tr>
<tr>
<td>WB Status</td>
</tr>
<tr>
<td>Groundwater Vulnerability</td>
</tr>
<tr>
<td>Proximity to nearest watercourse (culverted or open), wetland or lake (meters)</td>
</tr>
</tbody>
</table>

## Is the development entirely or part of one of the following? (tick)

<table>
<thead>
<tr>
<th>Domestic dwelling</th>
<th>Agricultural (cattle/dairy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Works</td>
<td>Agricultural (mushrooms)</td>
</tr>
<tr>
<td>Housing</td>
<td>Agricultural (poultry)</td>
</tr>
<tr>
<td>Institutional</td>
<td>Agricultural (poultry)</td>
</tr>
<tr>
<td>Commercial/Retail</td>
<td>Other agricultural (specify below)</td>
</tr>
<tr>
<td>Mixed Use Development</td>
<td>Other</td>
</tr>
</tbody>
</table>

## Waste Water Production and Treatment Method

| Domestic type waste waters | N/A |
| Waste waters produced from any trade, food, preparation or business | N/A |
| Wheel wash, vehicle wash, cooling waters | N/A |
| Waste waters produced from quarrying etc | N/A |
| Other waste waters | Soiled water applied to applicant’s landholding as per SI 31 of 2014. |

## Fuel or Outdoor Material Storage for Non Domestic Developments

| Number of fuel storage tanks existing or proposed on site? | Gas Storage Tanks |
| Are fuel storage tanks bunded | N/A |
| Detail liquid / feedstuffs / organic / chemical / waste oil storage on outdoor sites | Under Ground mass concrete soiled water tank(s) |

## Hard Surface and Open Yard Areas for Non Domestic Developments

| Footprint of proposed development including yard areas in m² | c. 2,300 |
| Is there potential for soiled yard areas from material, product waste or manure handling, fuel dispensing, silt and soil, yard washing etc. | Yes |
| If yes, are silt trap(s), interceptor(s), soiled water tanks or other control measures shown on drainage plan? | Yes |
| Has the use of SUDS (Sustainable Urban Drainage Systems – | Yes |

Contact: Copyright owner, https://www.monaghan.ie/en/services/environment/water/waterawareness/faqsforseptic tanks/
http://www.susdrain.org) been considered in the design of this
development?

<table>
<thead>
<tr>
<th>Development History – All Developments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have previous pollution prevention planning conditions been complied with?</td>
</tr>
<tr>
<td>Does existing development have an up to date (as constructed) site drainage plan?</td>
</tr>
<tr>
<td>Is the existing/proposed development sewered or unsewered?</td>
</tr>
<tr>
<td>If unsewered, is the existing wastewater treatment system fit for purpose?</td>
</tr>
<tr>
<td>Has the storm water drainage system been examined and/or surveyed for misconnections? (Information leaflet available from Environment Section)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Checklist of items to be included on Site Drainage Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location of lakes, watercourse, wells used for water supply, or karst features on or within 25m of domestic or 100m of non domestic development site</td>
</tr>
<tr>
<td>Location of all drainage outfall points</td>
</tr>
<tr>
<td>Foul water drainage system (in Red)</td>
</tr>
<tr>
<td>Storm water drainage system (in Blue)</td>
</tr>
<tr>
<td>Soiled yard area, soiled water drainage and management system, including silt traps, oil interceptor(s) and any SUDS facilities</td>
</tr>
<tr>
<td>Location of waste water treatment facilities</td>
</tr>
<tr>
<td>Location of fuel storage tank(s)</td>
</tr>
<tr>
<td>Stream/Lake/Wetland/Riparian Corridors</td>
</tr>
</tbody>
</table>

Footnotes and Useful Information

1 Projection in the Irish Grid
2 WMU, RWB, WB status. Objectives available on water maps at www.wfdireland.ie
3 Available in the public outfall section at www.eep.ie
5 Guidance: www.envirocentre.ie Best practice for Oil Storage (BPGCS05)
6 Has certification of installation for previously granted wastewater treatment system been required and if so has it been submitted.
8 Refer to Water Body, Sensitive Waters and Sensitive Land Maps in Chapter 4 of the Monaghan County Development Plan 2013-2019

Abbreviations

WMU Water Management Unit
RWB River Water Body
WB Status Water Body Status
IPPC Integrated Pollution Prevention Control Licence
EIA Environmental Impact Assessment

For Office Use: Sensitivity of Location

<table>
<thead>
<tr>
<th>Is the development located upstream of a high river quality site?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the development located within a good status waterbody?</td>
</tr>
<tr>
<td>Is the development located in the catchment of a water supply source?</td>
</tr>
<tr>
<td>Is the development located within the Source Protection Zone (SPZ) of a groundwater supply source?</td>
</tr>
<tr>
<td>Does the development require a discharge licence to surface or ground waters under the Water Pollution Acts?</td>
</tr>
<tr>
<td>Risk to waters in relation to scale of development, previous planning/environmental history, IPPC or EIA aspects, site management and location in a sensitive area</td>
</tr>
</tbody>
</table>
Appendix No. 17

Details relating to a number of noise surveys carried out on intensive farms in the Cavan region.
### RESULTS OF MEASUREMENTS - FARM 1 (Day-time)

<table>
<thead>
<tr>
<th>Location No.</th>
<th>L_{eq}(A)</th>
<th>Max.P.dB(A)</th>
<th>L_{eq}(A)</th>
<th>L_{eq}(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>65.6</td>
<td>105.4</td>
<td>48.8</td>
<td>59.4</td>
</tr>
<tr>
<td>N2</td>
<td>67.1</td>
<td>66.2</td>
<td>43.8</td>
<td>56.9</td>
</tr>
<tr>
<td>N3</td>
<td>58.4</td>
<td>57.8</td>
<td>40.0</td>
<td>53.2</td>
</tr>
<tr>
<td>N4</td>
<td>46.7</td>
<td>73.3</td>
<td>48.6</td>
<td>63.6</td>
</tr>
<tr>
<td>N5</td>
<td>54.6</td>
<td>78.5</td>
<td>42.4</td>
<td>54.0</td>
</tr>
</tbody>
</table>

### RESULTS OF MEASUREMENTS - FARM 1 (Night-time)

<table>
<thead>
<tr>
<th>Location No.</th>
<th>L_{eq}(A)</th>
<th>Max.P.dB(A)</th>
<th>L_{eq}(A)</th>
<th>L_{eq}(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>38.2</td>
<td>45.9</td>
<td>94.2</td>
<td>50.6</td>
</tr>
<tr>
<td>N2</td>
<td>47.0</td>
<td>47.2</td>
<td>97.0</td>
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<td>N3</td>
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<tr>
<td>N5</td>
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<td>58.6</td>
</tr>
</tbody>
</table>

### RESULTS OF MEASUREMENTS - FARM 2 (Day-time)

<table>
<thead>
<tr>
<th>Location No.</th>
<th>L_{eq}(A)</th>
<th>Max.P.dB(A)</th>
<th>L_{eq}(A)</th>
<th>L_{eq}(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>44.2</td>
<td>45.4</td>
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</tr>
<tr>
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<td>43.7</td>
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<tr>
<td>N3</td>
<td>52.1</td>
<td>64.8</td>
<td>56.0</td>
<td>62.6</td>
</tr>
<tr>
<td>N4</td>
<td>47.5</td>
<td>62.8</td>
<td>45.2</td>
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<tr>
<td>N5</td>
<td>72.8</td>
<td>85.0</td>
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</tr>
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</table>

### RESULTS OF MEASUREMENTS - FARM 2 (Night-time)

<table>
<thead>
<tr>
<th>Location No.</th>
<th>L_{eq}(A)</th>
<th>Max.P.dB(A)</th>
<th>L_{eq}(A)</th>
<th>L_{eq}(A)</th>
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<tbody>
<tr>
<td>N1</td>
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<td>N2</td>
<td>41.7</td>
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<td>67.6</td>
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<td>45.4</td>
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</tr>
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<td>N4</td>
<td>40.6</td>
<td>69.5</td>
<td>43.8</td>
<td>83.3</td>
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<td>N5</td>
<td>47.7</td>
<td>61.9</td>
<td>67.2</td>
<td>88.4</td>
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</tbody>
</table>

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### RESULTS OF MEASUREMENTS - FARM 3 (Day-time)

<table>
<thead>
<tr>
<th>Location No.</th>
<th>L_{eq}dB(A)</th>
<th>Max. P.dB(A)</th>
<th>L_{ref}dB(A)</th>
<th>L_{eq}dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>50.4</td>
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</tr>
<tr>
<td>N4</td>
<td>64.9</td>
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<td>56.6</td>
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</tr>
<tr>
<td>N5</td>
<td>56.1</td>
<td>72.5</td>
<td>58.1</td>
<td>50.7</td>
</tr>
</tbody>
</table>

### RESULTS OF MEASUREMENTS - FARM 3 (Night-time)

<table>
<thead>
<tr>
<th>Location No.</th>
<th>L_{eq}dB(A)</th>
<th>Max. P.dB(A)</th>
<th>L_{ref}dB(A)</th>
<th>L_{eq}dB(A)</th>
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</thead>
<tbody>
<tr>
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<tr>
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<tr>
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<tr>
<td>N5</td>
<td>24.2</td>
<td>54.0</td>
<td>28.0</td>
<td>34.2</td>
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</table>

### RESULTS OF MEASUREMENTS - FARM 4 (Day-time)

<table>
<thead>
<tr>
<th>Location No.</th>
<th>L_{eq}dB(A)</th>
<th>Max. P.dB(A)</th>
<th>L_{ref}dB(A)</th>
<th>L_{eq}dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>72.6</td>
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</tr>
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<td>N3</td>
<td>22.2</td>
<td>63.0</td>
<td>27.9</td>
<td>31.2</td>
</tr>
<tr>
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<td>67.2</td>
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<td>21.6</td>
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</table>

Bord na Móna, Environmental Consultancy Services
### RESULTS OF MEASUREMENTS - FARM 5 (Day-time)

<table>
<thead>
<tr>
<th>Location No.</th>
<th>$L_{eq} dB(A)$</th>
<th>$Max. P dB(A)$</th>
<th>$L_{Aeq} dB(A)$</th>
<th>$L_{Aeq} dB(A)$</th>
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<tr>
<td>N1</td>
<td>63.8</td>
<td>54.8</td>
<td>56.0</td>
<td>40.8</td>
</tr>
<tr>
<td>N2</td>
<td>55.7</td>
<td>57.8</td>
<td>58.6</td>
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<td>N4</td>
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<td>73.4</td>
<td>57.4</td>
<td>56.9</td>
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<td>69.7</td>
<td>48.0</td>
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### RESULTS OF MEASUREMENTS - FARM 5 (Night-time)

<table>
<thead>
<tr>
<th>Location No.</th>
<th>$L_{eq} dB(A)$</th>
<th>$Max. P dB(A)$</th>
<th>$L_{Aeq} dB(A)$</th>
<th>$L_{Aeq} dB(A)$</th>
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<tbody>
<tr>
<td>N1</td>
<td>55.7</td>
<td>54.8</td>
<td>56.0</td>
<td>51.8</td>
</tr>
<tr>
<td>N2</td>
<td>42.9</td>
<td>49.5</td>
<td>52.0</td>
<td>20.6</td>
</tr>
<tr>
<td>N3</td>
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<td>24.7</td>
<td>25.6</td>
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<tr>
<td>N4</td>
<td>24.5</td>
<td>29.3</td>
<td>26.4</td>
<td>51.4</td>
</tr>
<tr>
<td>N5</td>
<td>54.3</td>
<td>43.6</td>
<td>37.9</td>
<td>54.4</td>
</tr>
</tbody>
</table>
All measurements made during night-time were below the 45dBA limit.

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

Location N1 at Location 3 is also situated along a road and traffic from it was a source of noise.

At Location 3 of Location 1 - depots, were located, the noise from the adjacent road was significant. However, due to the nature of the adjacent road, the noise levels were not considered to be significant.

Location N2 (Farm 1 - day-time) was above the upper noise limit. The noise levels were extremely associated with activities on the adjacent road.

The noise levels at Location N2 (Farm 2 - day-time) were above the upper noise limit. However, the position is located adjacent to the highway entrance and exit. Therefore, it is expected that the noise levels will be significantly lower.

All measurements made during day-time were below the 55dBA limit.

Discussion

As part of the application process, environmental noise resulting from activities at the site should not exceed 55dBA during the day-time (08:00 to 22:00) and 45dBA during night-time (22:00 to 08:00). The background noise at Location N2 (Farm 1 - day-time) was above the upper noise level.
Appendix No. 18

Landscaping Details
MINIMUM SPECIFICATION FOR SCREENING BELTS AND SHELTER BELTS
FOR FARMYARDS AND FARM BUILDINGS

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

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

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

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

1. Safety

APPLICANT'S RESPONSIBILITY FOR SAFETY

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

SAFETY DURING CONSTRUCTION

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

Dangers: If any or all of the work is undertaken by the applicant/farmer he/she should seek competent advice and undertake all temporary work required to ensure the stability of excavations, superstructure, stanchion foundations and wall foundations,
also to divert any drains, springs or surface water away from the works, and to guard against possible wind damage, or any other foreseeable risk.

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

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

### 2. Design and Layout of Screening Belts

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

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

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

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

### 3. Design and Layout of Shelter Belts

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

- The direction of prevailing winds, and of winds, which are particularly strong because of “funnelling” along valleys or around hills.
- The position of buildings or structures, which particularly need shelter (calf or sheep houses, animal yards, etc.)
- Future development of the farm, and distance from existing buildings or neighbouring buildings, as above.
Shelter belts work best when they allow about 50% of the wind to pass through. The wind should be slowed rather than blocked as for instance, by Lawson Cypresses which simply cause turbulence. A mixture of species including spruces, pines, firs, and broad leaves will provide a naturally porous belt, providing good shelter.

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

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

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

5. What to Plant
The choice of species will be based on the following considerations:-

1. The suitability of different species for physical conditions on the site, i.e. -soil type, drainage, exposure etc.

2. The suitability of different species for the landscape. In general deciduous trees are more appropriate than most evergreens. Very narrow tall evergreens (Leyland and Lawson Cypresses) should not be used. They draw attention to buildings and look alien in the Irish landscape. The best indicator of the most suitable species for an area are the trees already grown there successfully and look well (see appendix attached).

3. For both screening and shelter a mixture of species is recommended. Generally one species should predominate at about, 60-70% of planting, with one or two other species, grouped irregularly, providing the remainder. A mixture of too many species should be avoided, as should the use of different species placed in a regular alternating pattern in a long row.

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

7. Handling and Planting
Ensure that all preparatory work is completed before the trees are delivered. Tree roots must never be allowed dry out. Weather permitting; planting should commence immediately the trees arrive.
8. Pit Planting
This method is used on dry mineral soils. The young tree is inserted in a hole 150mm x 150mm x 150mm to the depth it was in the nursery soil. The roots should be teased prior to careful back-filling.

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

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

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

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

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

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

14. Minimum and Maximum Planting Areas
This specification refers only to the screening or shelter of farm buildings and farmyards.

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

Shelter belts to protect herds or crops, or other forestry plantings on the farm, come under the responsibility of the Forest Service of this Department.
General Guide to Tree Species for Irish Farm Conditions:  

**NATIVE BROADLEAVES**

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

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>OPTIMUM SITE</th>
<th>CHARACTERISTICS</th>
<th>TIMBER QUALITY</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beech</td>
<td>Well drained, loamy, fertile soils with a preference for soils derived mainly from limestone</td>
<td>Tolerant of shade when young. Creates dense shade and suppresses ground vegetation as it reaches maturity</td>
<td>Excellent timber. Wide range of uses including veneer, furniture, flooring and panelling</td>
<td>Major forest species. Non-native tree. Benefits from a nurse on exposed sites. Useful for under-planting. Grey squirrels can be very destructive particularly to young beech</td>
</tr>
<tr>
<td>Poplars Populus Hybrid clones</td>
<td>Very exacting species requiring deep, well drained moderately fertile sites</td>
<td>Very fast growing, light demanding tree. Some species susceptible to bacterial canker, select disease resistant clones only</td>
<td>Light hardwood timber with many uses. Suitable for veneer, furniture, joinery, plywood, paneling and fruit boxes</td>
<td>Potentially major forest species. Non-native tree. Offers great prospects as Short Rotation Forestry species for pulpwood, paper and particle board</td>
</tr>
<tr>
<td>Red Oak Quercus Rubra</td>
<td>Grows well on poor sandy soils</td>
<td>A fast growing tree, less suited to heavy soils</td>
<td>Yields good pale reddish brown timber, straight grained and easy to work but not quite so strong as Q. robur</td>
<td>Minor forest species. Non-native tree. High amenity because of its red and russet colours in the autumn</td>
</tr>
<tr>
<td>Horse Chestnut Aesculus Hippocastanum</td>
<td>Thrives on all except waterlogged sites but has a preference for fertile soils</td>
<td>An excellent amenity tree used mainly for avenues or as a specimen tree</td>
<td>Timber is soft, weak and of limited use</td>
<td>Minor forest species. Non-native tree</td>
</tr>
<tr>
<td>Walnut Juglans spp</td>
<td>Deep, well drained, loam textured, moderately fertile soil. Suitable for well sheltered sites with a southerly aspect</td>
<td>Larger grows somewhat faster than J. nigra but timber may not be as highly figured. Worth pruning to give a clean stem</td>
<td>Strong, tough elastic, high value timber. Valuable decorative timber much used for furniture and veneer</td>
<td>Potentially major forest species. Non-native tree. Abnormal growths called &quot;burr walnut&quot; are much sought after for veneer, an example of diseased or malformed wood being more valuable than healthy timber</td>
</tr>
<tr>
<td>Lime Tilia spp</td>
<td>Grows on a wide range of sites, but prefers moist fertile limestone soils</td>
<td>Relatively fast growing. Suitable for planting as an amenity tree. Attracts swarms of aphids in summertime causing sticky &quot;honeydew&quot; to cover foliage that drips off to ground vegetation</td>
<td>A very soft, light, white or yellow timber of limited use, although can be used for turnery and wood carving</td>
<td>Minor forest species. Non-native tree. Tree flowers are strongly scented and a great attraction for many insects and a rich source of nectar for bees</td>
</tr>
<tr>
<td>Norway Maple Acer Platanoides</td>
<td>Prefers a deep, moist, alkaline soil. Tolerates less fertile and drier sites than sycamore. Avoid exposed sites and frost hollows</td>
<td>Fast growing tree when young. An attractive amenity tree. Greenish-yellow flower makes a beautiful sight in early spring. Brilliant red, green and gold coloured leaves in the autumn</td>
<td>Same as sycamore and used for similar purposes, but slightly inferior and not as attractively grained</td>
<td>Minor forest species. Non-native tree. Grey squirrels can be very damaging</td>
</tr>
<tr>
<td>SPECIES</td>
<td>OPTIMUM SITE</td>
<td>CHARACTERISTICS</td>
<td>TIMBER QUALITY</td>
<td>REMARKS</td>
</tr>
<tr>
<td>-------------------</td>
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<td>-----------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Silka Spruce  
Picea Sitchensis | Prefers wet mineral soils and peats with previous agricultural use. Well suited to high rainfall areas, quite tolerant of exposed sites | Very fast growing tree. Avoid low rainfall areas, very dry and frost prone sites. Do not plant in single rows for shelter | Reasonably valuable whitewood. General-purpose timber known as “white deal”. Used widely in the general building and construction industry | Major forest species. Non-native tree. An excellent pulpwood tree for paper, fibre and particle-board industries |
| Norway Spruce  
Picea Abies                     | Prefers less acid mineral soils and peats                                      | Not as fast growing or as tolerant of poor sites and exposure as sikta. More suitable for planting in hollows than sikta, being more resistant to frost damage | Somewhat superior to sikta making it also suitable for joinery            | Major forest species. Non-native tree. Good drainage is important to avoid windthrow. Poor wildlife tree because of its very dense shade. Suitable for shelter |
| Douglas Fir  
Pseudotsuga Menziesii          | Prefers a moist deep well drained soil of moderate fertility                   | A fast grower on suitable sites. Ideally suited to sheltered valley slopes. Dislikes waterlogged and shallow soils | An excellent timber of good strength and quality, sometimes referred to as “Oregon pine” it is used for building, flooring, joinery and other uses. Much in demand for transmission poles | Major forest species. Non-native tree. Delayed thinning of crop may lead to windthrow. Poor wildlife value |
| Lodgepole Pine  
Pinus Contorta                            | Grows on the poorest of mineral and peat soils                                 | A fast growing pioneering species. Withstands exposure better than most other species. Up to recent times was widely planted even on the most difficult of sites. | A general-purpose timber, suitable for building, joinery and other uses. | Minor forest species now. Non-native tree. Suffers greatly from “basal sweep” reducing the quality of the log. One of the best shelter tree species |
| Larch  
Larix spp.                                   | European larch prefers moist, well drained, moderately fertile loams while both Japanese and hybrid larch will tolerate a wider range of sites with a preference for high rainfall areas | Larches are strong, light demanding, deciduous conifers. First generation hybrid is normally faster growing than Japanese and both are faster than European | All larches produce dense valuable commercial timber which is both heavier and stronger than most other softwoods | Major forest species. Non-native tree. Larches have a high amenity and wildlife value. Produces light shade allowing ground vegetation |
| Scots Pine  
Pinus Sylvestris                          | Thrives on light textured or sandy soils. Tolerant of acid conditions. Avoid poorly drained or alkaline soils and exposure to coastal winds | A strong, light demanding slow growing tree. Can be used as a nurse species. Unavailable for high elevations or shelter-belted | Good general-purpose softwood timber referred to as “red deal” in the trade. Suitable for construction, flooring, joinery and other uses | Major forest species. Once native but died out, now comes from imported sources. Regarded as the best conifer for both amenity and wildlife. Attracts insects, birds and red squirrels |
<table>
<thead>
<tr>
<th>SPECIES</th>
<th>OPTIMUM SITE</th>
<th>CHARACTERISTICS</th>
<th>TIMBER QUALITY</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monterey Pine</td>
<td>Light to medium textured free draining loam soils. Can be used on infertile sandy soils. Not frost hardy</td>
<td>Very fast growing tree but often of poor coarse branched form. Requires careful attention to seed selection preferably from New Zealand. Early and heavy pruning helps to produce a worthwhile crop.</td>
<td>Not much known about quality of Irish grown timber. Widely used general-purpose timber in southern hemisphere, New Zealand, Australia and Chile.</td>
<td>Minor forest species. Non-native tree. A species with potential if quality seed stock can be produced. Suitable for shelterbelts in coastal areas.</td>
</tr>
<tr>
<td>Pinus Radiata</td>
<td>Requires deep free draining fertile soil. Good on alkaline soils, Avoid poor or very acid soils and exposed sites</td>
<td>Shade tolerant moderately fast growing tree. Useful for under-planting.</td>
<td>Produces a lightweight timber of moderate strength. Very durable in outdoor situations, suitable for greenhouses, decking and cladding.</td>
<td>Minor forest species. Non-native tree. Regarded as good estate tree suitable for screens, mixtures and game cover.</td>
</tr>
<tr>
<td>Western Red Cedar</td>
<td>Can tolerate acid mineral soils and the better peats. Suitable for low rainfall areas. Avoid planting on sites where previous conifer crop suffered from butt rots</td>
<td>Moderate growth rates. A strong shade bearer and excellent for under-planting. Probably best established under some shade.</td>
<td>Good durable timber suitable for quality building purposes.</td>
<td>Minor forest species. Non-native tree which has potential for greater use.</td>
</tr>
<tr>
<td>Thuja Plicata</td>
<td>Prefers well-drained mineral soils. Tolerates moderately acid soils and is less frost tender than other firs. Has a wide pH tolerance</td>
<td>A fast growing tree unsuitable for very poor or very dry sites. Not very good timber quality as the tree tends to be soft.</td>
<td>Timber may be (unfairly) regarded a being of inferior quality. Non-native tree. When grown for Christmas tree production need to be well managed to produce a compact well furnished tree.</td>
<td>Minor forest species now developing multiple uses. Non-native tree. When grown for Christmas tree produced need to be well managed to produce a compact well furnished tree.</td>
</tr>
<tr>
<td>Western Hemlock</td>
<td>Wide range of soils from sands to heavy clays. Suitable for coastal areas</td>
<td>Tolerate a wide range of soils except very acid soils and raw peats</td>
<td>Similar to scots pine but not quite as good</td>
<td>Minor forest species. Non-native tree. More resistant to smoke pollution than most conifers. Suitable shelter tree.</td>
</tr>
<tr>
<td>Conif. Picea</td>
<td>Tolerate a wide range of soils except very acid soils and raw peats</td>
<td>Moderate to fast growth rates but very poor stem form or coarse branching in most cases</td>
<td>General purpose softwood uses</td>
<td>Minor forest species. Non-native tree. Macrocarpa suitable for shelter in coastal areas. Leyland and Lawson although widely used for shelter-belting and screening are in most cases in-appropriate and an intrusion in the landscape.</td>
</tr>
</tbody>
</table>
Appendix No. 19

Construction and Demolition Waste Management Plan
Construction
Waste Management Plan

For

Proposed Development
On Existing Poultry Farm

At

Corvoy,
Ballybay,
Co. Monaghan.

Date: 18th April 2017
**Construction Waste Management Plan for Proposed development on Poultry Farm at Corvoy, Ballybay, Co. Monaghan**

**Applicant:**
Mr. Mark Treanor  
Corvoy,  
Ballybay,  
Co. Monaghan.

**Proposed Development:**
Construction of 1 no. poultry house, together with all ancillary structures and site works associated with the above development on the site of existing poultry farm

At,

**Location:**
Corvoy, Ballybay, Co. Monaghan.
Background:

The following Construction 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 construction waste on this site should reflect the waste management hierarchy, with waste prevention and minimisation being the first priority succeeded by reuse and recycling. The subsequent use of recycled materials in reconstruction works also reduces the quantities of waste which ultimately needs to be consigned to landfill sites.

In this phase of the development, the proposed development has been subdivided into 2 areas of work for the purposes of this plan;

1. Site Development
2. Construction of 1 no. poultry house and ancillary works.

Prevention of Waste:

The primary effort therefore should be to engage in waste prevention and reduce the amount of waste generated in the first place i.e. minimise the resources needed to do the job. Prevention is financially advantageous as it reduces the purchase of construction materials and reduces the need to remove wastes from the site.

The prevention of waste can be minimized by;

- Renovating existing buildings where appropriate.
- Re-using materials where appropriate.
- Re-cycling wastes where appropriate.
- Waste disposal as a last resort.
Renovation: which retains and repairs existing structural and decorative elements, with the introduction only where necessary of new items, contributes greatly to a reduction in C&D waste arising. As this is an application for a proposed new build, renovation of existing building is not applicable to this site.

Reuse of Waste:

Material that is generated should be reused on site or salvaged for subsequent reuse to the greatest extent possible and disposal should only be considered as a last resort. Initiatives should be put in place to maximise the efficient use/reuse of materials. Innovative initiatives to avoid the need for disposal should be investigated.

Recycling of Waste:

In relation to the small volume of waste which cannot be used on site there are a number of established markets available for the beneficial use of this construction waste:

- waste timber can be recycled as shuttering or hoarding, or sent for reprocessing as medium density fibreboard;
- waste concrete can be utilised as fill material for roads or in the manufacture of new concrete when arising at source; and
- in addition, the technology for the segregation and recovery of stone, for example, is well established, readily accessible and there is a large reuse market for aggregates as fill for roads and other construction projects. Bitmac and Asphalt can also be recycled in roads projects.

Overall Management of C&D Waste on the Farm:

As this is a typical agricultural development, there are no waste streams with the potential for significant adverse environmental impact. The site owner, is experienced at carrying out similar development projects on this, or other farms, and will be responsible for the management of C & D waste from this farm. All external contractors to be used will be experienced with regard to poultry farm developments.
Site - Development Plan:

The proposed development is to be completed on a brownfield area and/or a greenfield area, in close proximity to the existing poultry farm structures. This will involve excavating the site of the proposed developments to facilitate site leveling requirements and the construction of soiled water storage tanks. This will involve the excavation of a certain amount of spoil. This material will be used to level low-lying parts of the site with any remaining soil banked around the boundary of the site. In the interim, all excavated soil will be stored on the site well removed from drainage ditches.

Construction Plan:

It is important to emphasise the potential for certain purchasing procedures to contribute to a reduction in excessive material wastage on site. Examples include:

- ordering materials on an "as needed" basis to prevent oversupply;
- purchasing coverings, panelling or other materials in shape, dimensions and form that minimises the creation of excessive scrap waste on site;
- ensuring correct storage and handling of construction materials to minimise generation of damaged materials/waste
- ensuring correct sequencing of operations.

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

- where possible all concrete and aggregates will be ordered and supplied to exactly meet requirements.
- The proposed steel superstructure for the buildings will be made to order off site, and will only require erection on site, thus eliminating any waste.
- The roofing timbers can be ordered to size thus eliminating the need for cutting and wastage.
- All internal fixtures and fittings will be made to order off site and delivered to the site for installation.
- Any wastes that may arise on site will be appropriately stored, recycled where possible with any remaining wastes disposed of as previously outlined.
### Construction waste Types and projected disposal/recovery routes:

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

Due to the nature of the proposed development, i.e. agricultural, there are no areas of significant concern with regard to the proposed development. The volume of waste emanating from the proposed works will be minimized by optimizing the construction process and pre-fabricating a significant proportion of the house off-site. The operator/contractor is/will be greatly experienced at overseeing similar developments on this, and other poultry farms and will be in charge of the management of the construction waste management plan.

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

Signed: Parac Fay
B.Agr.Sc.

Date: 18/04/2017
Appendix No. 20

G.S.I. Info.
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Appendix No. 21

European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2014 – S.I. 31 of 2014
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
EUROPEAN UNION (GOOD AGRICULTURAL PRACTICE FOR PROTECTION OF WATERS) REGULATIONS 2014


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—

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;


“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).
For the purposes of these Regulations, soiled water which is stored together with slurry is deemed to be slurry.

(3) In these Regulations a reference to:

(a) an Article, Part or Schedule which is not otherwise identified is a reference to an Article, Part or Schedule of these Regulations,

(b) a sub-article or paragraph which is not otherwise identified is a reference to a sub-article or paragraph of the provision in which the reference occurs, and

(c) a period between a specified day in a month and a specified day in another month means the period commencing on the first-mentioned day in any year and ending on the second-mentioned day which first occurs after the first-mentioned day.

(4) In these Regulations a footnote to a table in Schedule 2 shall be deemed to form part of the table.

PART 2
FARMYARD MANAGEMENT

Minimisation of soiled water

5. (1) An occupier of a holding shall take all such reasonable steps as are necessary for the purposes of minimising the amount of soiled water produced on the holding.

(2) Without prejudice to the generality of sub-article (1), an occupier of a holding shall ensure, as far as is practicable, that—

(a) clean water from roofs and unsoiled paved areas and that flowing from higher ground on to the farmyard is diverted away from soiled yard areas and prevented from entering storage facilities for livestock manure and other organic fertilisers, soiled water, and effluents from dungsteads, farmyard manure pits or silage pits and

(b) rainwater gutters and downpipes where required for the purposes of paragraph (a) are maintained in good working condition.

Collection and holding of certain substances

6. (1) Livestock manure and other organic fertilisers, soiled water and effluents from dungsteads, farmyard manure pits or silage pits arising or produced in a building or yard on a holding shall, prior to its application to land or other treatment, be collected and held in a manner that prevents the run-off or seepage, directly or indirectly, into groundwaters or surface waters of such substances.

(2) The occupier of a holding shall not cause or permit the entry to waters of any of the substances specified in sub-article (1).
Provision and management of storage facilities

7. (1) Storage facilities for livestock manure and other organic fertilisers, soiled water and effluents from dungsteads, farmyard manure pits or silage pits shall be maintained free of structural defect and be maintained and managed in such manner as is necessary to prevent run-off or seepage, directly or indirectly, into groundwater or surface water, of such substances.

(2) Storage facilities being provided on a holding on or after 31 March 2009 shall—

(a) be designed, sited, constructed, maintained and managed so as to prevent run-off or seepage, directly or indirectly, into groundwater or surface water of a substance specified in sub-article (1), and

(b) comply with such construction specifications for those facilities as may be approved from time to time by the Minister for Agriculture, Food and the Marine.

(3) Storage facilities other than those referred to in sub-article (2) shall be of such construction and design and shall be maintained and managed in such a manner so as to comply with the requirements of sub-article (1) and article 6(2).

(4) In this article "storage facilities" includes out-wintering pads, earthen-lined stores, integrated constructed wetlands and any other system used for the holding or treatment of livestock manure or other organic fertilisers.

General obligations as to capacity of storage facilities

8. (1) The capacity of storage facilities for livestock manure and other organic fertilisers, soiled water and effluents from dungsteads, farmyard manure pits or silage pits on a holding shall be adequate to provide for the storage of all such substances as are likely to require storage on the holding for such period as may be necessary as to ensure compliance with these Regulations and the avoidance of water pollution.

(2) For the purposes of sub-article (1) an occupier shall have due regard to the storage capacity likely to be required during periods of adverse weather conditions when, due to extended periods of wet weather, frozen ground or otherwise, the application to land of livestock manure or soiled water is precluded.

(3) For the purposes of Articles 8 to 14, the capacity of storage facilities on a holding shall be disregarded insofar as the occupier does not have exclusive use of those facilities.

(4) For the purposes of Articles 10 to 14 the capacity of facilities required in accordance with these Regulations for the storage of manure from livestock of the type specified in Tables 1, 2 or 3 of Schedule 2 shall be determined by reference to the criteria set out in the relevant table and the rainfall criteria set out in Table 4 of that schedule and shall include capacity for the storage for
such period as may be necessary for compliance with these Regulations of rainwater, 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,

(c) the occupier has a contract for the transfer of the manure to a person registered under and in accordance with the European Communities (Transmissible Spongiform Encephalopathies and Animal By-products) Regulations 2008 S.I. 252 of 2008 to undertake the transport of manure.

(2) Subject to sub-article (3), the capacity of facilities for the storage of livestock manure may be less than the capacity specified in Article 12 or 13, as appropriate, in relation to—

(a) deer, goats or sheep which are out-wintered at a grassland stocking rate which does not exceed 130 kg nitrogen at any time during the period specified in Schedule 4 in relation to the application of organic fertiliser other than farmyard manure, or

(b) livestock (other than dairy cows, deer, goats or sheep) which are out-wintered at a grassland stocking rate which does not exceed 85 kg nitrogen at any time during the period specified in Schedule 4 in relation to the application of organic fertiliser other than farmyard manure.
(3) Sub-article (2) shall apply only in relation to a holding where all the following conditions are met—

(a) all the lands used for out-wintering of the livestock are comprised in the holding;

(b) the out-wintered livestock have free access at all times to the required lands;

(c) the amount of manure produced on the holding does not exceed an amount containing 140kg of nitrogen per hectare per annum,

(d) severe damage to the surface of the land by poaching does not occur, and

(e) the reduction in storage capacity is proportionate to the extent of out-wintered livestock on the holding.

(4) In this Article, a grassland stocking rate of 130 kg or 85 kg of nitrogen, as the case may be, means the stocking of grassland on a holding at any time by such numbers and types of livestock as would in the course of a year excrete waste products containing 130 kg or 85 kg of nitrogen, as the case may be, per hectare of the grassland when calculated in accordance with the nutrient excretion rates for livestock specified in Table 6 of Schedule 2.

PART 3

NUTRIENT MANAGEMENT

Interpretation, commencement etc

15. (1) In this Part, "crop requirement", in relation to the application of fertilisers to promote the growth of a crop, means the amounts and types of fertilisers which are reasonable to apply to soil for the purposes of promoting the growth of the crop having regard to the foreseeable nutrient supply available to the crop from the fertilisers, the soil and from other sources.

(2) The amount of nitrogen or phosphorus specified in Table 7 or 8 of Schedule 2, as the case may be, in relation to a type of livestock manure or other substance specified in the relevant table shall for the purposes of this Part be deemed to be the amount of nitrogen or phosphorus, as the case may be, contained in that type of manure or substance except as may be otherwise specified in a certificate issued in accordance with Article 32.

(3) The amount of nitrogen or phosphorus available to a crop from a fertiliser of a type which is specified in Table 9 of Schedule 2 in the year of application of that fertiliser shall, for the purposes of this Part, be deemed to be the percentage specified in that table of the amount of nitrogen or phosphorus, as the case may be, in the fertiliser.

(4) The amount of nitrogen or phosphorus available to a crop from an organic fertiliser of a type which is not specified in Table 9 of Schedule 2 shall be deemed
to be the amount specified in the table in relation to cattle manure or, where supported by the necessary analysis, the amount of nitrogen estimated on the basis of the C:N ratio of the compost in accordance with Table 9A unless a different amount has been determined in relation to that fertiliser by, or with the agreement of, the relevant local authority or the Agency, as the case may be.

(5) A reference in this Part to the "nitrogen index" or the "phosphorus index" in relation to soil is a reference to the index number assigned to the soil in accordance with Table 10 or 11 of Schedule 2, as the case may be, to indicate the level of nitrogen or phosphorus available from the soil.

Duty of occupier in relation to nutrient management

16. (1) An occupier of a holding shall take all such reasonable steps as are necessary for the purposes of preventing or minimising the application to land of fertilisers in excess of crop requirement on the holding.

(2) (a) For the purposes of this Article the phosphorus index for soil shall be deemed to be phosphorus index 3 unless a soil test indicates that a different phosphorus index is appropriate in relation to that soil.

(b) The soil test to be taken into account for the purposes of paragraph (a) in relation to soil shall, subject to paragraph (c), be the soil test most recently taken in relation to that soil.

(c) Where a period of five years or more has elapsed after the taking of a soil test in relation to soil the results of that test shall be disregarded for the purposes of paragraph (a) except in a case where that soil test indicates the soil to be at phosphorus index 4.

(3) Without prejudice to the generality of sub-article (1) and subject to sub-article (4), the amount of available nitrogen or available phosphorus applied to promote the growth of a crop specified in Table 12, 13, 14, 15, 16, 17, 18, 19, 20 or 21 of Schedule 2 shall not exceed the amount specified in the table in relation to that crop having regard to the relevant nitrogen index or phosphorus index, as the case may be, for the soil on which the crops are to be grown. In the case of crops not identified in the tables listed above fertilisers shall be applied in accordance with the national agriculture and food development authority's guidance as approved by the Minister for Agriculture, Food and the Marine.

(4) In the case of a holding on which grazing livestock are held, the amount of available phosphorus supplied to the holding by concentrated feedstuff, shall be the amount fed to such livestock in excess of 300kg per 85kg livestock manure nitrogen in the previous calendar year and the phosphorus content of such concentrated feedstuff shall in the absence of a known phosphorus content or phosphorus content provided by the supplier be deemed to be 0.5 kg phosphorus in respect of each 100 kg of such concentrated feedstuff.

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

(b) In paragraph (a), the “relevant proportion” means the proportion of a year as is represented by the storage period specified in Schedule 3 in relation to the holding.

PART 4

PREVENTION OF WATER POLLUTION FROM FERTILISERS AND CERTAIN ACTIVITIES

Distances from a water body and other issues

17. (1) Chemical fertiliser shall not be applied to land within 2m of any surface waters.

(2) Organic fertiliser or soiled water shall not be applied to land within—

(a) 200m of the abstraction point of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 100m$^3$ or more of water per day or serving 500 or more persons,

(b) 100m of the abstraction point (other than an abstraction point specified in paragraph (a)) of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m$^3$ or more of water per day or serving 50 or more persons,

(c) 25m of any borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified in paragraph (a) or (b),

(d) 20m of a lake shoreline,

(e) 15m of exposed cavernous or karstified limestone features (such as swallow-holes and collapse features),

(f) subject to sub-article (13), 5m of any surface waters (other than a lake or surface waters specified at paragraph (a) or (b)), or

(g) the distance specified in sub-article 2(f) shall be increased to 10m for a period of two weeks preceding and two weeks following the periods specified in Schedule 4.

(3) Notwithstanding the requirements of sub-articles (2)(a), (2)(b) and (2)(c), the following distances shall apply—

(a) 30m from the abstraction point in the case of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m$^3$ or more of water per day or serving 50 or more persons,
(b) 15m from the abstraction point in the case of any borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified in paragraph (a).

(4) Sub-article (3) shall only apply in situations where a local authority has completed a technical assessment of conditions in the vicinity of the abstraction point, including taking into account variation in soil and subsoil conditions, the landspreading pressures in the area, the type of abstraction, available water quality evidence and the likely risk to the water supply source and the local authority has determined that the distance does not give rise to a risk to the water supply and a potential danger to human health.

(5) A local authority may decide to apply the landspreading restriction to the upstream catchment area and to the close proximity downstream of the abstraction point in the case of any surface waters.

(6) A local authority may, in the case of any particular abstraction point and following consultation with the Agency, specify a greater distance to that specified in sub-articles (2) or (3) where, following prior investigations, the authority is satisfied that such distance is appropriate for the protection of waters being abstracted at that point. The distance so specified shall be determined by the local authority using an evidence-based approach which takes into account the natural vulnerability of the waters to contamination from land spreading, the potential risk to human health arising from the landspreading activity as well as the water quality evidence, including information on water quality trends.

(7) Notwithstanding the provisions of sub-articles (2), (3) and (6) a local authority shall as soon as may be practicable, following prior investigations and following consultation with the Agency, specify an alternative distance, including a landspreading exclusion area where necessary, in the case of a water abstraction for human consumption in a scheme supplying 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 Eireann.

(4) Organic fertilisers or soiled water shall not be applied to land—

   (a) by use of an umbilical system with an upward-facing splashplate,

   (b) by use of a tanker with an upward-facing splashplate,

   (c) by use of a sludge irrigator mounted on a tanker, or

   (d) from a road or passageway adjacent to the land irrespective of whether or not the road or passageway is within or outside the curtilage of the holding.

(5) Subject to sub-article (6), soiled water shall not be applied to land—

   (a) in quantities which exceed in any period of 42 days a total quantity of 50,000 litres per hectare, or

   (b) by irrigation at a rate exceeding 5 mm per hour.

(6) In an area which is identified on maps compiled by the Geological Survey of Ireland as “Extreme Vulnerability Areas on Karst Limestone Aquifers”, soiled water shall not be applied to land—

   (a) in quantities which exceed in any period of 42 days a total quantity of 25,000 litres per hectare, or

   (b) by irrigation at a rate exceeding 3 mm per hour unless the land has a consistent minimum thickness of 1m of soil and subsoil combined.

(7) For the purposes of sub-article (6), it shall be assumed until the contrary is shown that areas so identified as “Extreme Vulnerability Areas on Karst Limestone Aquifers” do not have a consistent minimum thickness of 1m of soil and subsoil combined.

Periods when application of fertilisers is prohibited

19. (1) Subject to this Article, the application of fertiliser to land is prohibited during the periods specified in Schedule 4.

(2) Sub-article (1) shall not apply in relation to the application to land of—

   (a) soiled water, or
(b) chemical fertilisers to meet the crop requirements of Autumn-planted cabbage or of crops grown under permanent cover, or

(c) fertilisers whose application rate or usage rate is less than 1kg per hectare of available nitrogen or phosphorus.

**Limits on the amount of livestock manure to be applied**

20. (1) The amount of livestock manure applied in any year to land on a holding, together with that deposited to land by livestock, shall not exceed an amount containing 170 kg of nitrogen per hectare.

(2) For the purposes of sub-article (1), the amount of nitrogen produced by livestock and the nitrogen content of livestock manure shall be calculated in accordance with Tables 6, 7 and 8 of Schedule 2 except in the case of pig manure or poultry manure where a different amount is specified in a certificate issued in accordance with Article 32 in relation to that manure.

(3) For the purposes of sub-article (1), the area of a holding shall be deemed to be the eligible area of the holding.

**Ploughing and the use of non-selective herbicides**

21. (1) Where arable land is ploughed between 1 July and 30 November the necessary measures shall be taken to provide for emergence, within 6 weeks of ploughing, of green cover from a sown crop. A rough surface shall be maintained prior to a crop being sown in the case of lands ploughed between 1 December and 15 January.

(2) Where grassland is ploughed between 1 July and 15 October the necessary measures shall be taken to provide for emergence by 1 November of green cover from a sown crop.

(3) Grassland shall not be ploughed between 16 October and 30 November.

(4) (a) When a non-selective herbicide is applied to arable land or to grassland in the period between 1 July and 30 November the necessary measures shall be taken to provide for the emergence within 6 weeks of the application, of green cover from a sown crop or from natural regeneration.

(b) The requirement in sub-article 4 (a) shall be reduced to 75% of the relevant cereal area where a contract is in place for seed crops or crops producing grain destined for human consumption which prohibits the application of a non-selective herbicide preharvest.

(5) Where green cover is provided for in compliance with this Article, the cover shall not be removed by ploughing or by the use of a non-selective herbicide before 1 December unless a crop is sown within two weeks of its removal.

(6) In the case of land which is ploughed in the course of a ploughing competition under the auspices of the National Ploughing Association, a temporary
exemption applies in the form of an extension to the time period specified in sub-article (1) or (2) for establishment of green cover after the land is ploughed.

PART 5

GENERAL

General duty of occupier

22. (1) An occupier of a holding shall ensure compliance with the provisions of these Regulations in relation to that holding.

(2) An occupier of a holding shall comply with any advice or guidelines which may be issued from time to time for the purposes of these Regulations by the Minister, the Minister for Agriculture, Food and the Marine or the Agency.

Keeping of records by occupier

23. (1) Records shall be maintained for each holding which shall indicate—

(a) total area of the holding,

(b) eligible area of the holding,

(c) cropping regimes and their individual areas,

(d) livestock numbers and type,

(e) an estimation of the annual fertiliser requirement for the holding and a copy of any Nutrient Management Plan prepared in relation to the holding,

(f) quantities and types of chemical fertilisers moved on to or off the holding, including opening stock, records of purchase and closing stock,

(g) livestock manure and other organic fertilisers moved on to or off the holding including quantities, type, dates and details of exporters and importers, as the case may be, in a format specified by the Minister for Agriculture Food and the Marine,

(h) the results of any soil tests carried out in relation to the holding,

(i) the nature and capacity of facilities on the holding for the storage of livestock manure and other organic fertilisers, soiled water and effluents from dungsteads, farmyard manure pits or silage pits including an assessment of compliance with Articles 9 to 14,

(j) the quantities and types of concentrated feedstuff fed to grazing livestock on the holding, and

(k) the location of any abstraction point of water used for human consumption from any surface waters, borehole, spring or well.
(2) Where fertiliser is used on a holding and a certificate of the type mentioned in Article 15 or 20 was issued in relation to that fertiliser in accordance with Article 32, a copy of the certificate shall be retained and be available for inspection on the holding for a period of not less than five years from the expiry of validity of the certificate.

(3) Records shall be prepared for each calendar year by 31 March of the following year and shall be retained for a period of not less than five years.

(4) Notwithstanding sub-paragraphs (1), (2) and (3), an occupier shall, where requested by the Minister, the Minister for Agriculture, Food and the Marine, a local authority or the Agency, provide such information as is requested relating to the movement of organic fertilisers on or off the holding.

False or misleading information

24. A person shall not compile information which is false or misleading to a material extent or furnish any such information in any notice or other document for the purposes of these Regulations.

Authorised person

25. (1) In this article, “authorised person” means—

(a) a person who is an authorised person for the purposes of section 28 of the Local Government (Water Pollution) Act, 1977 (No. 1 of 1977), or

(b) a person appointed under sub-article (11) to be an authorised person for the purposes of these Regulations.

(2) An authorised person may for any purpose connected with these Regulations—

(a) enter and inspect any premises for the purposes of performing a function under these Regulations or of obtaining any information which he or she may require for such purposes,

(b) at all reasonable times, or at any time if he or she has reasonable grounds for believing that there is or may be a risk to the environment, or that an offence under these Regulations is being or is about to be committed, arising from the carrying on of an activity at a premises, enter any premises and bring onto those premises such other persons (including a member of the Garda Síochána) or equipment as he or she may consider necessary, or

(c) at any time if he or she has reasonable grounds for suspecting there may be a risk to the environment, or that an offence under these Regulations is being or is about to be committed, involving the use of any vehicle halt and board the vehicle and require the driver of the vehicle to take it to a place designated by the authorised person, and such a vehicle may be detained at that place by the authorised person for such period as he or she may consider necessary.
(3) An authorised person shall not enter into a private dwelling under this Article unless one of the following conditions applies—

(a) the entry is effected with the consent of the occupier or

(b) the entry is authorised by a warrant issued under sub-article (7).

(4) Whenever an authorised person enters any premises or boards any vehicle, under this article, he or she may—

(a) take photographs and carry out inspections, record information on data loggers, make tape, electrical, video or other recordings,

(b) carry out tests and make copies of documents (including records kept in electronic form) found therein and take samples,

(c) monitor any effluent, including trade effluent or other matter, which is contained in or discharged from a premises,

(d) carry out surveys, take levels, make excavations and carry out examinations of depth and nature of subsoil,

(e) require that the premises or vehicle or any part of the premises or anything in the premises or vehicle shall be left undisturbed for a specified period,

(f) require information from an occupier of the premises of any occupant of the vehicle or any person employed on the premises or any other person on the premises,

(g) require the production of or inspect, records (including records held in electronic form) or documents, or take copies of or extracts from any records or documents, and

(h) remove and retain documents and records (including documents held in electronic form) for such period as may be reasonable for further examination,

which the authorised person, having regard to all the circumstances, considers necessary for the purposes of exercising any function under these Regulations.

(5) (a) An authorised person who, having entered any premises or boarded any vehicle pursuant to these Regulations, considers that a risk, to the environment arises from the carrying on of an activity at the premises or involving the use of the vehicle, may direct the owner or occupier of the premises or the driver of the vehicle to take such measures as are considered by that authorised person to be necessary to remove that risk.
(b) If the owner, occupier or driver referred to in paragraph (a) fails to comply with a direction of an authorised person under this subsection, the authorised person may do all things as are necessary to ensure that the measures required under the direction are carried out and the costs incurred by him or her in doing any such thing shall be recoverable from the owner or occupier by him or her, or the person by whom he or she was appointed.

(6) A person shall not—

(a) refuse to allow an authorised person to enter any premises or board any vehicle or to bring any person or equipment with him or her in the exercise of his or her powers,

(b) obstruct or impede an authorised person in the exercise of any of his or her powers,

(c) give to an authorised person information which is to his or her knowledge false or misleading in a material respect, or

(d) fail or refuse to comply with any direction or requirement of an authorised person.

(7) (a) Where an authorised person in the exercise of his or her powers under this article is prevented from entering any premises, or if the authorised person has reason to believe that evidence related to a suspected offence under these Regulations may be present in any premises and that the evidence may be removed therefrom or destroyed, or if the authorised person has reason to believe that there is a significant immediate risk to the environment, the authorised person or the person by whom he or she was appointed may apply to the District Court for a warrant under this article authorising the entry by the authorised person onto or into the premises.

(b) If, on application being made to the District Court under this article, the District Court is satisfied, on the sworn information of the authorised person that he or she has been prevented from entering a premises, the Court may issue a warrant authorising that person, accompanied, if the Court deems it appropriate by another authorised person or a member of the Garda Síochána, as may be specified in the warrant, at any time or times within one month from the date of the issue of the warrant, on production if so requested of the warrant, to enter, if need be by force, the premises concerned and exercise the powers referred to in sub-article (4) or (5).

(8) An authorised person may, in the exercise of any power conferred on him or her by these Regulations involving the bringing of any vehicle to any place, or where he or she anticipates any obstruction in the exercise of any other power conferred on him or her by these Regulations, request a member of the Garda Síochána to assist him or her in the exercise of such a power and any member
of the Garda Síochána to whom he or she makes such a request shall comply with this request.

(9) Any certificate or other evidence given, or to be given, in respect of any test, examination or analysis of any sample shall, in relation to that sample, be evidence, without further proof, of the result of the test, examination or analysis unless the contrary is shown.

(10) When exercising any power conferred on him or her by these Regulations an authorised person shall, if requested by any person affected, produce a certificate or other evidence of his or her appointment as an authorised person.

(11) A person may be appointed as an authorised person for the purposes of these Regulations by the Minister, the Minister for Agriculture, Food and the Marine or the Agency.

(12) In this article “premises” includes land whether or not there are any structures on the land.

Offences and related matters

26. (1) A person who contravenes a provision of Parts 2 to 5 of these Regulations is guilty of an offence and shall be liable—

(a) on summary conviction to a Class A fine or to imprisonment for a term not exceeding 3 months or both or,

(b) on conviction on indictment to a fine not exceeding €500,000 or to imprisonment for a term not exceeding one year or to both such fine and such imprisonment.

(2) Where an offence under these Regulations has been committed by a body corporate and it is proved to have been so committed with the consent or connivance of or to be attributable to any neglect on the part of any person who, when the offence was committed, was a director, manager, secretary or other officer of the body corporate, or a person purporting to act in any such capacity, that person, as well as the body corporate, is guilty of an offence and liable to be proceeded against and punished as if guilty of the first-mentioned offence.

(3) Where the affairs of a body corporate or unincorporated body are managed by its members, sub-article (2) shall apply to the acts and defaults of a member in connection with the functions of management as if such a member were a director or manager of the body.

(4) A prosecution for a summary offence under these Regulations may be taken by a local authority or the Agency.

(5) A prosecution for a summary offence may be taken by a local authority whether or not the offence is committed in the functional area of the authority.

(6) Where a court imposes a fine or affirms or varies a fine imposed by another court for an offence under these Regulations, prosecuted by the Agency
or a local authority, it shall, on the application of the Agency or local authority concerned (made before the time of such imposition, affirmation or variation), provide by order for the payment of the amount of the fine to the Agency or local authority, as the case may be, and such payment may be enforced by the Agency or local authority, as the case may be, as if it were due to it on foot of a decree or order made by the court in civil proceedings.

(7) Where a person is convicted of an offence under these Regulations the court shall, unless it is satisfied that there are special and substantial reasons for not so doing, order that person to pay to the Agency or local authority concerned the costs and expenses, measured by the court, reasonably incurred by the Agency or local authority in relation to the investigation, detection and prosecution of the offence, including costs incurred in the taking of samples, the carrying out of tests, examinations and analyses and in respect of the remuneration and other expenses of employees, consultants and advisers.

(8) (a) Where a local authority has reason to believe that an offence has been or is being committed in relation to a holding the authority may by notice require the person who appears to the authority to be the occupier to provide such information as is specified in the notice in relation to the alleged offence and it shall be the duty of that person to provide such information within the time frame specified in the notice insofar as is known to him or her.

(b) A notice issued in accordance with paragraph (a) shall set out the provisions of Articles 22(1) and 24 and of sub-article (1).

(9) Where a local authority considers that an offence under these Regulations has been or is being committed in relation to a holding the authority shall take such enforcement measures as are warranted by the circumstances and as are necessary to ensure satisfactory compliance with these Regulations and which, save in the case of a trivial or insignificant offence or specific mitigating circumstances, shall include prosecution for the alleged offence.

(10) (a) Where on application by motion by the Agency or a local authority to the District Court, Circuit Court or the High Court, the court hearing the application is satisfied that a person has failed or is failing to comply with a provision of Parts 2 to 5 of these Regulations, the court may by order—

(i) direct the person to comply with the provisions,

(ii) make such other provision, including provision in relation to the payment of costs, as the court considers appropriate, and

(iii) make such interim or interlocutory order as it considers appropriate.

(b) An application for an order under this Article may be made whether or not there has been a prosecution for an offence under these Regulations in relation to the relevant failure of compliance and shall not
prejudice the initiation of a prosecution for an offence under these Regulations in relation to the failure of compliance.

(11) The powers, duties and functions assigned to a local authority or the Agency by this Article are additional to, and not in substitution for, the powers, duties and functions assigned by the Local Government (Water Pollution) Acts 1977 and 1990 or any other statute.

(12) A local authority shall maintain a register of inspections undertaken of farm holdings and information received for the purposes of Article 26(8) and shall keep updated a record of all enforcement measures undertaken in accordance with the requirements of Article 26(9).

PART 6

FUNCTIONS OF PUBLIC AUTHORITIES

Minister for Agriculture, Food and the Marine

27. (1) The Minister for Agriculture, Food and the Marine shall carry out, or cause to be carried out, such monitoring and evaluation programmes in relation to farm practices as may be necessary to determine the effectiveness of measures being taken in accordance with these Regulations.

(2) The Minister for Agriculture, Food and the Marine shall, in relation to each year, make the overall results of monitoring and evaluations carried out in accordance with sub-article (1) available to the Agency, to the Minister and, on request, to a local authority.

(3) The Minister for Agriculture, Food and the Marine shall prepare and keep updated a register of all holdings and shall, on request, make a copy of the register available to the Agency or a local authority.

(4) The Minister for Agriculture, Food and the Marine shall make available to a local authority and/or the Agency a report of an inspection or inspections carried out for the purposes of these Regulations and/or upon written request other information in relation to any holding or holdings as the case may be where such transfer of data is necessary for the purposes of ensuring compliance with these Regulations.

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

Making and review of action programme by the Minister

28. (1) The Minister shall, following consultation with the Minister for Agriculture, Food and the Marine and other interested parties in accordance with this Article, prepare and publish not later than 31 December 2017 and every four years thereafter, a programme of measures (hereafter in this Article referred to as "an action programme") for the protection of waters against pollution from agriculture.
(2) An action programme required by sub-article (1) shall include all such measures as are necessary for the purposes of Article 5 of the Nitrates Directive and shall contain a review of the action programme most recently made for those purposes and of such additional measures and reinforced actions as may have been taken.

(3) The Minister shall ensure that all interested parties are given early and effective opportunities to participate in the preparation, review and revision of an action programme required by this Article and for this purpose shall—

(a) inform interested parties by public notices or other appropriate means including electronic media, in relation to any proposals for the preparation, review or revision of an action programme,

(b) make available to interested parties information in relation to the proposals referred to in paragraph (a) including information about the right to participate in decision-making in relation to those proposals,

(c) provide an opportunity for comment by interested parties before any decision is made on the establishment, review or revision of an action programme,

(d) in making any such decision, take due account of the comments made by interested parties and the results of the public participation, and

(e) having examined any comments made by interested parties, make reasonable efforts to inform those parties of the decisions taken and the reasons and considerations on which those decisions are based, including information on the public participation process.

(4) The Minister shall ensure that such reasonable time is allowed as is sufficient to enable interested parties to participate effectively.

(5) Where the Minister publishes any information in accordance with this Article, the Minister shall—

(a) do so in such manner as the Minister considers appropriate for the purpose of bringing that information to the attention of the public, and

(b) make copies of that information accessible to interested parties free of charge through a website or otherwise.

(6) The Minister shall specify by way of public notice on a website or otherwise the detailed arrangements made to enable public participation in the preparation, review or revision of an action programme, including—

(a) the address to which comments in relation to those proposals may be submitted, and

(b) the date by which such comments should be received.
(7) In this Article “interested parties” includes persons who—

(a) are carrying on any business which relies upon the water environment or which is affected, or likely to be affected, by the action programme, or

(b) are carrying on any activities which have or are likely to have an impact on water status, or

(c) have an interest in the protection of the water environment whether as users of the water environment or otherwise.

Agency

29. (1) The Agency shall prepare at four-yearly intervals a report in accordance with Article 10 of the Nitrates Directive and shall submit such report to the Minister.

(2) The Agency shall undertake a review of progress made in implementing these Regulations and shall submit a report to the Minister by 30 June 2017 and every four years thereafter with the results of that review and with recommendations as to such additional measures, if any, as appear to be necessary to prevent and reduce water pollution from agricultural sources.

(3) In preparing the reports required under 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).
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 ml 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
SCHEDE 2

CRITERIA AS TO STORAGE CAPACITY AND NUTRIENT
MANAGEMENT

Table 1 Slurry storage capacity required for sows and pigs

<table>
<thead>
<tr>
<th>Unit type</th>
<th>m³/week¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water:meal ratio changing for</td>
<td></td>
</tr>
<tr>
<td>finishers only</td>
<td>2.0:1</td>
</tr>
<tr>
<td></td>
<td>2.5:1</td>
</tr>
<tr>
<td></td>
<td>3.0:1</td>
</tr>
<tr>
<td></td>
<td>3.5:1</td>
</tr>
<tr>
<td>Breeding unit (per sow place)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.174</td>
</tr>
<tr>
<td>Integrated unit (per sow place)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.312</td>
</tr>
<tr>
<td></td>
<td>0.355</td>
</tr>
<tr>
<td></td>
<td>0.398</td>
</tr>
<tr>
<td></td>
<td>0.441</td>
</tr>
<tr>
<td></td>
<td>0.483</td>
</tr>
<tr>
<td>Finishing unit (per pig)</td>
<td>0.024</td>
</tr>
<tr>
<td></td>
<td>0.031</td>
</tr>
<tr>
<td></td>
<td>0.039</td>
</tr>
<tr>
<td></td>
<td>0.046</td>
</tr>
<tr>
<td></td>
<td>0.053</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Livestock type</th>
<th>m³/week¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy cow</td>
<td>0.33</td>
</tr>
<tr>
<td>Suckler cow</td>
<td>0.29</td>
</tr>
<tr>
<td>Cattle &gt; 2 years</td>
<td>0.26</td>
</tr>
<tr>
<td>Cattle (18-24 months old)</td>
<td>0.26</td>
</tr>
<tr>
<td>Cattle (12-18 months old)</td>
<td>0.15</td>
</tr>
<tr>
<td>Cattle (6-12 months old)</td>
<td>0.15</td>
</tr>
<tr>
<td>Cattle (0-6 months old)</td>
<td>0.08</td>
</tr>
<tr>
<td>Lowland ewe</td>
<td>0.03</td>
</tr>
<tr>
<td>Mountain ewe</td>
<td>0.02</td>
</tr>
<tr>
<td>Lamb-finishing</td>
<td>0.01</td>
</tr>
<tr>
<td>Poultry — layers per 1000 birds (30% DM)</td>
<td>0.81</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Livestock type</th>
<th>Solid fraction (m³/week)</th>
<th>Seepage fraction (m³/week)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy cow</td>
<td>0.28</td>
<td>0.04</td>
</tr>
<tr>
<td>Suckler cow</td>
<td>0.25</td>
<td>0.03</td>
</tr>
<tr>
<td>Cattle &gt; 2 years</td>
<td>0.23</td>
<td>0.02</td>
</tr>
<tr>
<td>Cattle (18-24 months old)</td>
<td>0.23</td>
<td>0.02</td>
</tr>
<tr>
<td>Cattle (12-18 months old)</td>
<td>0.13</td>
<td>0.01</td>
</tr>
<tr>
<td>Cattle (6-12 months old)</td>
<td>0.13</td>
<td>0.01</td>
</tr>
<tr>
<td>Cattle (0-6 months old)</td>
<td>0.07</td>
<td>0.01</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>County</th>
<th>Millimetres per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlow</td>
<td>24</td>
</tr>
<tr>
<td>Cavan</td>
<td>27</td>
</tr>
<tr>
<td>Clare</td>
<td>32</td>
</tr>
<tr>
<td>Cork</td>
<td>37</td>
</tr>
<tr>
<td>Donegal</td>
<td>38</td>
</tr>
<tr>
<td>Dublin</td>
<td>17</td>
</tr>
<tr>
<td>Galway</td>
<td>34</td>
</tr>
<tr>
<td>Kerry</td>
<td>45</td>
</tr>
<tr>
<td>Kildare</td>
<td>18</td>
</tr>
<tr>
<td>Kilkenny</td>
<td>23</td>
</tr>
<tr>
<td>Laois</td>
<td>22</td>
</tr>
<tr>
<td>Leitrim</td>
<td>33</td>
</tr>
<tr>
<td>Limerick</td>
<td>26</td>
</tr>
<tr>
<td>Longford</td>
<td>23</td>
</tr>
<tr>
<td>Louth</td>
<td>20</td>
</tr>
<tr>
<td>Mayo</td>
<td>40</td>
</tr>
<tr>
<td>Meath</td>
<td>19</td>
</tr>
<tr>
<td>Monaghan</td>
<td>23</td>
</tr>
<tr>
<td>Offaly</td>
<td>20</td>
</tr>
<tr>
<td>Roscommon</td>
<td>26</td>
</tr>
<tr>
<td>Sligo</td>
<td>32</td>
</tr>
<tr>
<td>Tipperary</td>
<td>27</td>
</tr>
<tr>
<td>Waterford</td>
<td>31</td>
</tr>
<tr>
<td>Westmeath</td>
<td>21</td>
</tr>
<tr>
<td>Wexford</td>
<td>25</td>
</tr>
<tr>
<td>Wicklow</td>
<td>33</td>
</tr>
</tbody>
</table>

### Table 5 Storage capacity required for effluent produced by ensiled forage

**Article 9**

<table>
<thead>
<tr>
<th>Crop</th>
<th>Minimum storage requirement (m³/100 tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Short Term Storage</td>
</tr>
<tr>
<td>Grass</td>
<td>7</td>
</tr>
<tr>
<td>Arable silage</td>
<td>7</td>
</tr>
<tr>
<td>Maize</td>
<td>4</td>
</tr>
<tr>
<td>Sugar beet tops</td>
<td>15</td>
</tr>
</tbody>
</table>

1Only permitted where a vacuum tanker or an irrigation system is available on the holding.
### Table 6 Annual nutrient excretion rates for livestock

<table>
<thead>
<tr>
<th>Livestock type</th>
<th>Total Nitrogen (kg/year)</th>
<th>Total Phosphorus (kg/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy cow</td>
<td>85</td>
<td>13</td>
</tr>
<tr>
<td>Suckler cow</td>
<td>65</td>
<td>10</td>
</tr>
<tr>
<td>Cattle (0-1 year old)</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>Cattle (1-2 years old)</td>
<td>57</td>
<td>8</td>
</tr>
<tr>
<td>Cattle &gt; 2 years</td>
<td>65</td>
<td>10</td>
</tr>
<tr>
<td>Mountain ewe &amp; lambs</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Lowland ewe &amp; lambs</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Mountain hogget</td>
<td>4</td>
<td>0.6</td>
</tr>
<tr>
<td>Lowland hogget</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Goat</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Horse (&gt;3 years old)</td>
<td>50</td>
<td>9</td>
</tr>
<tr>
<td>Horse (2-3 years old)</td>
<td>44</td>
<td>8</td>
</tr>
<tr>
<td>Horse (1-2 years old)</td>
<td>36</td>
<td>6</td>
</tr>
<tr>
<td>Horse foal (&lt; 1 year old)</td>
<td>25</td>
<td>3</td>
</tr>
<tr>
<td>Donkey/small pony</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td>Deer (red) 6 months — 2 years</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Deer (red) &gt; 2 years</td>
<td>33</td>
<td>4</td>
</tr>
<tr>
<td>Deer (fallow) 6 months — 2 years</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Deer (fallow) &gt; 2 years</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Deer (sika) 6 months — 2 years</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Deer (sika) &gt; 2 years</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Breeding unit (per sow place)</td>
<td>35</td>
<td>8</td>
</tr>
<tr>
<td>Integrated unit (per sow place)</td>
<td>87</td>
<td>17</td>
</tr>
<tr>
<td>Finishing unit (per pig place)</td>
<td>9.2</td>
<td>1.7</td>
</tr>
<tr>
<td>Laying hen per bird place</td>
<td>0.56</td>
<td>0.12</td>
</tr>
<tr>
<td>Broiler per bird place</td>
<td>0.24</td>
<td>0.09</td>
</tr>
<tr>
<td>Turkey per bird place</td>
<td>1</td>
<td>0.4</td>
</tr>
</tbody>
</table>

### Table 7 Amount of nutrient contained in 1 m³ of slurry

<table>
<thead>
<tr>
<th>Livestock type</th>
<th>Total Nitrogen (kg)</th>
<th>Total Phosphorus (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>5.0</td>
<td>0.8</td>
</tr>
<tr>
<td>Pig</td>
<td>4.2</td>
<td>0.8</td>
</tr>
<tr>
<td>Sheep</td>
<td>10.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Poultry — layers 30% DM</td>
<td>13.7</td>
<td>2.9</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Livestock type</th>
<th>Total Nitrogen (kg)</th>
<th>Total Phosphorus (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poultry manure</td>
<td>broilers/deep litter</td>
<td>11.0</td>
</tr>
<tr>
<td></td>
<td>layers 55% dry matter</td>
<td>23.0</td>
</tr>
<tr>
<td></td>
<td>turkeys</td>
<td>28.0</td>
</tr>
<tr>
<td>Dungstead manure (cattle)</td>
<td></td>
<td>3.5</td>
</tr>
<tr>
<td>Farmyard manure</td>
<td></td>
<td>4.5</td>
</tr>
<tr>
<td>Spent mushroom compost</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Sewage sludge</td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Dairy processing residues and other products not listed above</td>
<td>Total nitrogen and total phosphorus content per tonne based on certified analysis shall be provided by the supplier.</td>
<td></td>
</tr>
</tbody>
</table>

Table 9 Nutrient availability in fertilisers

<table>
<thead>
<tr>
<th>Fertiliser</th>
<th>Availability (%)</th>
<th>Nitrogen</th>
<th>Phosphorus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Soil Index 1 &amp; 2</td>
<td>Soil Index 3 &amp; 4</td>
</tr>
<tr>
<td>Chemical</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Pig and poultry manure</td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Farmyard manure</td>
<td>30</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Spent mushroom compost</td>
<td>20</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Cattle and other livestock manure</td>
<td>40</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>(including that produced on the holding)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9A Nutrient availability in compost

<table>
<thead>
<tr>
<th>Compost C:N ratio¹</th>
<th>N availability (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10</td>
<td>25</td>
</tr>
<tr>
<td>12.5</td>
<td>17.5</td>
</tr>
<tr>
<td>15.0</td>
<td>10</td>
</tr>
<tr>
<td>17.5</td>
<td>5.5</td>
</tr>
<tr>
<td>&gt;20</td>
<td>0.0</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Nitrogen Index</th>
<th>Index 1</th>
<th>Index 2</th>
<th>Index 3</th>
<th>Index 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>The 5th tillage crop following permanent pasture. For subsequent tillage crops use the continuous tillage table.</td>
<td>The 3rd or 4th tillage crop following permanent pasture. If original permanent pasture was cut only, use index 1.</td>
<td>The 1st or 2nd tillage crop following permanent pasture (see also Index 4). If original permanent pasture was cut only, use index 2.</td>
<td>The 1st or 2nd tillage crop following very good permanent pasture which was grazed only.</td>
<td></td>
</tr>
</tbody>
</table>

Continuous tillage: — crops that follow short leys (1-4 years) or tillage crops

<table>
<thead>
<tr>
<th>Previous crop</th>
<th>Index 1</th>
<th>Index 2</th>
<th>Index 3</th>
<th>Index 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals</td>
<td>Sugar beet&lt;br&gt;Fodder beet&lt;br&gt;Potatoes&lt;br&gt;Mungels&lt;br&gt;Kale&lt;br&gt;Oil seed rape, Peas, Beans</td>
<td>Leys (1-4 years) grazed or cut and grazed.</td>
<td>Swedes removed</td>
<td>Swedes grazed in situ.</td>
</tr>
<tr>
<td>Maize</td>
<td>Vegetables receiving less than 200 kg/ha nitrogen</td>
<td>Vegetables receiving more than 200 kg/ha nitrogen</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 11 Phosphorus index system

<table>
<thead>
<tr>
<th>Soil phosphorus index</th>
<th>Soil phosphorus ranges (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grassland</td>
</tr>
<tr>
<td>1</td>
<td>0.0-3.0</td>
</tr>
<tr>
<td>2</td>
<td>3.1-5.0</td>
</tr>
<tr>
<td>3</td>
<td>5.1-8.0</td>
</tr>
<tr>
<td>4</td>
<td>&gt; 8.0</td>
</tr>
</tbody>
</table>
Table 12 Annual maximum fertilisation rates of available nitrogen on grassland

<table>
<thead>
<tr>
<th>Grassland stocking rate 1 (kg/ha/year)</th>
<th>Available nitrogen 2 (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 170</td>
<td>226</td>
</tr>
<tr>
<td>Grassland stocking rate greater than 170 kg/ha/year 1</td>
<td></td>
</tr>
<tr>
<td>171-210</td>
<td>306</td>
</tr>
<tr>
<td>211-250</td>
<td>279</td>
</tr>
<tr>
<td>&gt;250</td>
<td>279</td>
</tr>
</tbody>
</table>

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 170 kg Nitrogen per hectare per year, including that deposited by the animals themselves (or 250 kg 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

<table>
<thead>
<tr>
<th>Grassland stocking rate 1 (kg/ha/year)</th>
<th>Phosphorus Index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Available Phosphorus (kg/ha)</td>
</tr>
<tr>
<td></td>
<td>&lt; 85</td>
</tr>
<tr>
<td></td>
<td>86 - 130</td>
</tr>
<tr>
<td></td>
<td>131-170</td>
</tr>
<tr>
<td>Grassland stocking rate greater than 170 kg/ha/year 1</td>
<td></td>
</tr>
<tr>
<td>171-210</td>
<td>46</td>
</tr>
<tr>
<td>211-250</td>
<td>51</td>
</tr>
<tr>
<td>&gt;250</td>
<td>51</td>
</tr>
</tbody>
</table>

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 170 kg Nitrogen per hectare per year, including that deposited by the animals themselves (or 250 kg 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)

<table>
<thead>
<tr>
<th>Available nitrogen (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st cut</td>
</tr>
<tr>
<td>Subsequent cuts</td>
</tr>
<tr>
<td>Hay</td>
</tr>
</tbody>
</table>

Table 15 Annual maximum fertilisation rates of phosphorus on grassland cut only

<table>
<thead>
<tr>
<th>Phosphorus Index</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>First cut</td>
<td>40</td>
<td>30</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Subsequent cuts</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

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

*The fertilisation rates apply to grassland where there is no grazing livestock on the holding.

*The fertilisation rates in this table apply to those areas of farms where hay or silage is produced for sale off the holding on farms stocked <85kg grassland stocking rate.

Table 16 Maximum fertilisation rates of nitrogen on tillage crops

<table>
<thead>
<tr>
<th>Crop</th>
<th>Nitrogen Index</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter Wheat</td>
<td>210</td>
<td>180</td>
<td>120</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Spring Wheat</td>
<td>150</td>
<td>130</td>
<td>95</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Winter Barley</td>
<td>135</td>
<td>105</td>
<td>75</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Spring Barley</td>
<td>145</td>
<td>120</td>
<td>85</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Winter Oats</td>
<td>110</td>
<td>90</td>
<td>60</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Spring Oats</td>
<td>195</td>
<td>155</td>
<td>120</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Sugar Beet</td>
<td>180</td>
<td>155</td>
<td>120</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Fodder Beet</td>
<td>200</td>
<td>155</td>
<td>120</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Potatoes: Main crop</td>
<td>170</td>
<td>145</td>
<td>120</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>Potatoes: Early</td>
<td>155</td>
<td>130</td>
<td>105</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Potatoes: Seed</td>
<td>155</td>
<td>130</td>
<td>105</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Maize</td>
<td>180</td>
<td>140</td>
<td>110</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Field Peas/Beans</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Oilseed Rape</td>
<td>225</td>
<td>180</td>
<td>160</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>Linseed</td>
<td>75</td>
<td>50</td>
<td>35</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Swedes/Turnips</td>
<td>90</td>
<td>70</td>
<td>40</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Kale</td>
<td>150</td>
<td>130</td>
<td>100</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Forage Rape</td>
<td>130</td>
<td>120</td>
<td>110</td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>

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Where proof of higher yields is available, an additional 20 kg 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.

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

Where malting barley is grown under a contract to a purchaser of malting barley, an extra 20 kg N/ha may be applied where it is shown on the basis of agronomic advice that additional nitrogen is needed to address a proven low protein content in the grain.

Table 17 Maximum fertilisation rates of phosphorus on tillage crops

<table>
<thead>
<tr>
<th>Crop</th>
<th>Phosphorus Index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Winter Wheat</td>
<td>45</td>
</tr>
<tr>
<td>Spring Wheat</td>
<td>45</td>
</tr>
<tr>
<td>Winter Barley</td>
<td>45</td>
</tr>
<tr>
<td>Spring Barley</td>
<td>45</td>
</tr>
<tr>
<td>Winter Oats</td>
<td>45</td>
</tr>
<tr>
<td>Spring Oats</td>
<td>45</td>
</tr>
<tr>
<td>Sugar Beet</td>
<td>70</td>
</tr>
<tr>
<td>Fodder Beet</td>
<td>70</td>
</tr>
<tr>
<td>Potatoes: Main crop</td>
<td>125</td>
</tr>
<tr>
<td>Potatoes: Early</td>
<td>125</td>
</tr>
<tr>
<td>Potatoes: Seed</td>
<td>125</td>
</tr>
<tr>
<td>Maize</td>
<td>70</td>
</tr>
<tr>
<td>Field Peas</td>
<td>40</td>
</tr>
<tr>
<td>Field Beans</td>
<td>50</td>
</tr>
<tr>
<td>Oil Seed Rape</td>
<td>35</td>
</tr>
<tr>
<td>Linseed</td>
<td>35</td>
</tr>
<tr>
<td>Swedes/Turnips</td>
<td>70</td>
</tr>
<tr>
<td>Kale</td>
<td>60</td>
</tr>
<tr>
<td>Forage Rape</td>
<td>40</td>
</tr>
</tbody>
</table>

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

Where proof of higher yields is available, an additional 3.8 kg 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.

Where pH is greater than or equal to 7, 20 kg P/ha may be applied on soils at phosphorus index 4.

*Must be incorporated prior to or during sowing.
### Table 18 Maximum fertilisation rates of nitrogen on vegetable crops

<table>
<thead>
<tr>
<th>Crop</th>
<th>Nitrogen Index</th>
<th>Maximum additional supplementation (Top dressing)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Available Nitrogen (kg/ha)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asparagus (Establishment)</td>
<td>140</td>
<td>115</td>
</tr>
<tr>
<td>Asparagus (After harvest)</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Broad Beans</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>French Beans</td>
<td>90</td>
<td>85</td>
</tr>
<tr>
<td>Beetroot</td>
<td>140</td>
<td>125</td>
</tr>
<tr>
<td>Brussels Sprouts</td>
<td>120</td>
<td>115</td>
</tr>
<tr>
<td>Spring Cabbage</td>
<td>50</td>
<td>35</td>
</tr>
<tr>
<td>Other Cabbage</td>
<td>150</td>
<td>135</td>
</tr>
<tr>
<td>Broccoli</td>
<td>120</td>
<td>110</td>
</tr>
<tr>
<td>Cauliflower (Winter and Spring)</td>
<td>75</td>
<td>50</td>
</tr>
<tr>
<td>Cauliflower (Summer and Autumn)</td>
<td>120</td>
<td>80</td>
</tr>
<tr>
<td>Carrots</td>
<td>90</td>
<td>75</td>
</tr>
<tr>
<td>Celery</td>
<td>120</td>
<td>85</td>
</tr>
<tr>
<td>Courgettes</td>
<td>140</td>
<td>125</td>
</tr>
<tr>
<td>Leeks</td>
<td>100</td>
<td>90</td>
</tr>
<tr>
<td>Lettuce</td>
<td>100</td>
<td>90</td>
</tr>
<tr>
<td>Onions</td>
<td>70</td>
<td>60</td>
</tr>
<tr>
<td>Scallions</td>
<td>90</td>
<td>85</td>
</tr>
<tr>
<td>Parsley</td>
<td>100</td>
<td>80</td>
</tr>
<tr>
<td>Parsnip</td>
<td>100</td>
<td>85</td>
</tr>
<tr>
<td>Peas (Market)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rhubarb</td>
<td>100</td>
<td>90</td>
</tr>
<tr>
<td>Spinach</td>
<td>140</td>
<td>125</td>
</tr>
<tr>
<td>Swede (Horticultural)</td>
<td>70</td>
<td>45</td>
</tr>
<tr>
<td>Swede (Transplanted crops)</td>
<td>80</td>
<td>52</td>
</tr>
</tbody>
</table>
Table 19 Maximum fertilisation rates of phosphorus on vegetable crops

<table>
<thead>
<tr>
<th>Crop</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asparagus (Establishment)</td>
<td>40</td>
<td>25</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Asparagus (Maintenance)</td>
<td>27</td>
<td>17</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Broad Beans</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>French Beans</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Beetroot</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Brussels Sprouts</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Spring Cabbage</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Other Cabbage</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Broccoli</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Cauliflower (Winter and Spring)</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Cauliflower (Autumn)</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Carrots</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Celery</td>
<td>88</td>
<td>65</td>
<td>55</td>
<td>28</td>
</tr>
<tr>
<td>Courgettes</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Leeks</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Lettuce</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Onions</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Scallions</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Parsley</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Parsnip</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Peas (Market)</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Rhubarb</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Spinach</td>
<td>60</td>
<td>45</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Swede</td>
<td>70</td>
<td>60</td>
<td>45</td>
<td>35</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Fruit/Soft Fruit Crops</th>
<th>Available Nitrogen (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples (Dessert)</td>
<td>125</td>
</tr>
<tr>
<td>Apples (Culinary)</td>
<td>125</td>
</tr>
<tr>
<td>Pears</td>
<td>50</td>
</tr>
<tr>
<td>Cherries</td>
<td>70</td>
</tr>
<tr>
<td>Plums</td>
<td>70</td>
</tr>
<tr>
<td>Blackcurrants</td>
<td>80</td>
</tr>
<tr>
<td>Gooseberries</td>
<td>40</td>
</tr>
</tbody>
</table>
Table 21 Annual maximum fertilisation rates of phosphorus on fruit/soft fruit crops

<table>
<thead>
<tr>
<th>Phosphorus Index</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available Phosphorus (kg/ha)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apples (Desert)</td>
<td>25</td>
<td>16</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Apples (Culinary)</td>
<td>20</td>
<td>12</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Pears</td>
<td>16</td>
<td>8</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Cherries</td>
<td>16</td>
<td>8</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Plums</td>
<td>16</td>
<td>8</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Blackcurrants</td>
<td>20</td>
<td>16</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Gooseberries</td>
<td>20</td>
<td>16</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Raspberries</td>
<td>20</td>
<td>16</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Strawberries</td>
<td>16</td>
<td>8</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Redcurrants</td>
<td>20</td>
<td>16</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Loganberries</td>
<td>20</td>
<td>16</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Blackberries</td>
<td>20</td>
<td>16</td>
<td>12</td>
<td>8</td>
</tr>
</tbody>
</table>

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

Table 22 Phosphorus excess limits Article 34(3)

<table>
<thead>
<tr>
<th>Date</th>
<th>Total available phosphorus (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 January 2013</td>
<td>5</td>
</tr>
<tr>
<td>1 January 2015</td>
<td>3</td>
</tr>
<tr>
<td>1 January 2017</td>
<td>0</td>
</tr>
</tbody>
</table>
SCHEDULE 3

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.
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.
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).