



Headquarters,
Johnstown Castle Estate
Wexford, Ireland

INTEGRATED POLLUTION CONTROL PROPOSED DETERMINATION

Licence Register Number: 382

Applicant: **Mr. Antone Kiernan**

Location of Activity: Carrowcushcly Pig Unit
Carrowcushcly
Ballymote
County Sligo

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Glossary of Terms

The Agency	Environmental Protection Agency.
The Licensee	Antone Kiernan, Turin, Mounnugent, County Cavan.
The Location of the Activity	Carrowcushcly Pig Unit, Carrowcushcly, Ballymote, County Sligo.
Local Authority	Sligo County Council.
AER	Annual Environmental Report.
Annually	All or part of a period of twelve consecutive months.
BATNEEC	Best Available Technology Not Entailing Excessive Cost.
BOD	5 day Biochemical Oxygen Demand.
Buffer zone	Area excluded from landspreading of waste.
COD	Chemical Oxygen Demand.
Daily	During all days of plant operation, and in the case of emissions, when emissions are taking place; with no more than 1 measurement on any one day.
Daytime	0800 hrs to 2200 hrs.
Daylight hours	Lighting-up time plus an hour
dB(A)	Decibels (A weighted).
DO	Dissolved Oxygen.
DoELG	Department of the Environment and Local Government.
EIS	Environmental Impact Statement.
EMP	Environmental Management Programme.
EPA	Environmental Protection Agency.
EWC	European Waste Catalogue (94/3/EEC, see also Agency Guidance Note on the EWC).
GSI	Geological Survey of Ireland.
ha	hectare.
IPC	Integrated Pollution Control.
Leq	Equivalent continuous sound level.
Monthly	At least 12 times per year at approximately monthly intervals.
Night-time	2200 hrs to 0800 hrs.

Noise 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 noise at nuisance levels.
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.
ppm	Parts per million.
Quarterly	All or part of any three consecutive months.
Regional Fisheries Board	North Western Regional Fisheries Board.
Slurry/manure	Animal faeces, urine, washwater and any associated feed or bedding.
Standard Methods	"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) 19th Ed. 1995, American Public Health Association, 1015 Fifteenth Street, N.W., Washington DC 20005, USA.
Waste disposal activity	Means any of the activities included in the Third Schedule to the Waste Management Act 1996.
Waste recovery activity	Means any of the activities included in the Fourth Schedule to the Waste Management Act 1996.
Weekly	During all weeks of plant operation, and in the case of emissions, when emissions are taking place; with no more than one measurement in any one week.

Reasons for the Decision

The 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 not contravene any of the requirements of Section 83(3) of the Environmental Protection Agency Act, 1992.

In reaching this decision the Agency has considered the application and supporting documentation received from the applicant, all submissions received from other parties and the report of its inspector.

Activities Licensed

In pursuance of the powers conferred on it by the Environmental Protection Agency Act, 1992, the Agency proposes to grant this Integrated Pollution Control licence to:

Mr Antone Kiernan, Turin, Mountnugent, County Cavan, IPC licence Register No.: 382

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

- the rearing of pigs in installations, whether within the same complex or within 100 metres of that complex, where the capacity exceeds 1,000 units on gley soils or 3,000 units on other soils and where units have the following equivalents; 1 pig = 1 unit, 1 sow = 10 units,

at Carrowcushcly Pig Unit, Carrowcushcly, Ballymote, County Sligo subject to the following conditions (11 No.), with the reasons therefor and associated schedules attached thereto.

Conditions

Condition 1 Scope

- 1.1 The activity shall be controlled, operated, and maintained and emissions shall take place as set out in this Integrated Pollution Control (IPC) licence. All programmes required to be carried out under the terms of this licence, become part of this licence.
- 1.2 No alteration to, or reconstruction in respect of, the activity or any part thereof which would, or is likely to, result in a material change or increase in:
 - 1.2.1 The nature or quantity of any emission,
 - 1.2.2 The abatement/treatment or recovery systems,
 - 1.2.3 The range of processes to be carried out,
 - 1.2.4 The fuels, raw materials, products or wastes generated,or any changes in:
 - 1.2.5 The site management and control with adverse environmental significanceshall be carried out or commenced without prior notice to, and without the prior written agreement of, the Agency.
- 1.3 This licence is for the purposes of IPC licensing under the EPA Act, 1992 only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.
- 1.4 Any reference in this licence to 'site' shall mean the plan area edged in black and labelled 'Site Location Map' Drawing Number E 138.101, in the IPC licence application.
- 1.5 This licence relates to a facility with the capacity to house a maximum number of animals as described in *Schedule 1(i) Animal Numbers Housed at the Facility*.

Reason: To clarify the scope of this licence.

Condition 2 Management of the Activity

2.1 Corrective Action

- 2.1.1 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.

2.2 Awareness and Training

- 2.2.1 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 upon the environment. Appropriate records of training shall be maintained.
- 2.2.2 Personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and/or experience, as required. The licensee must ensure that contractors/agents involved in landspreading of waste are appropriately trained, and receive adequate supervision.

2.3 Responsibilities

- 2.3.1 The licensee shall ensure that a person in charge, as defined under the terms of the Environmental Protection Agency Act, 1992 shall be available on-site to meet with authorised persons of the Agency at all reasonable times.

2.4 Communications

- 2.4.1 The licensee shall put in place a programme to ensure that members of the public can obtain information concerning the environmental performance of the licensee at all reasonable times.
- 2.4.2 The licensee shall submit to the Agency, eighteen months from the date of grant of this licence, and each calendar year by 1 November thereafter, an AER which shall be to the satisfaction of the Agency. This report shall include as a minimum the information specified in *Schedule 5(i) Recording & Reporting to the Agency* and shall be prepared in accordance with any relevant guidelines issued by the Agency.

2.5 Vermin Control

- 2.5.1 The licensee shall maintain sufficient and continuous vermin control at the site.

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 Notification

- 3.1 The licensee 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:

- 3.1.1 Any unauthorised emission.

- 3.1.2 Any incident with the potential for environmental contamination of surface water or groundwater, or posing an environmental threat to air or land, or requiring an emergency response by the Local Authority.
- 3.2 The licensee shall include as part of the notification, date and time of the incident, details of the occurrence, and the steps taken to minimise the emissions and avoid recurrence. The licensee shall make a record of any incident as set out in Condition 3.1 above. The notification given to the Agency shall include details of the circumstances giving rise to the incident and all actions taken to minimise the effect on the environment and minimise wastes generated.
- 3.3 A summary report of reported incidents shall be submitted to the Agency as part of the AER. The information contained in this report shall be prepared in accordance with any relevant guidelines issued by the Agency.
- 3.4 In the case of any incident as set out in Condition 3.1.2 above which relates to contamination of surface or groundwater, the licensee shall notify the North Western Regional Fisheries Board as soon as practicable after such an incident.
- 3.5 In the event of any incident, as set out in Condition 3.1.2 having taken place, the licensee shall notify the Local Authority as soon as practicable, after such an incident.

Reason : To provide for the notification of incidents and update information on the activity.

Condition 4 Emissions to Atmosphere

- 4.1 There shall be no emission to the atmosphere of environmental significance.
- 4.2 The licensee shall ensure that all operations on-site shall be carried out in a manner such that air emissions and/or odours do not result in significant impairment of, or significant interference with amenities or the environment beyond the site boundary and at odour sensitive locations as specified in *Schedule 2 (i) Odour Sensitive Locations*.

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

Condition 5 Waste Management

- 5.1 Disposal or recovery of waste shall take place only as specified in *Schedule 3(i) High Risk/ Hazardous Wastes for Disposal/Recovery* and *Schedule 3(ii) Other Wastes for Disposal/Recovery* of this licence and in accordance with the appropriate National and European legislation and protocols. No other waste shall be recovered on-site or disposed of/recovered off-site without prior notice to, and prior written agreement of, the Agency.
- 5.2 Animal tissue or carcasses stored on-site pending disposal shall be placed in covered, leak proof containers and shall at a minimum be removed weekly for disposal in accordance with *Schedule 3(i) High Risk/ Hazardous Wastes for Disposal/Recovery*.
- 5.3 Waste sent off-site for recovery or disposal shall only be conveyed by a waste contractor, as agreed by the Agency, and only transported from the site of the activity to the site of recovery/disposal in a manner which will not adversely affect the environment.
- 5.3.1 Animal tissue or carcasses sent off site for disposal/recovery shall be transported in covered, leak proof containers.
- 5.3.2 The transport of slurry/manure via the public road shall be carried out in sealed containers such that no spillage can occur.

- 5.4 For wastes other than those destined for landspreading, 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:
- 5.4.1 The names of the agent and transporter of the waste.
 - 5.4.2 The name of the persons responsible for the ultimate disposal/recovery of the waste.
 - 5.4.3 The ultimate destination of the waste.
 - 5.4.4 Written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site.
 - 5.4.5 The tonnages and EWC Code for the waste materials listed in *Schedule 3(i) High Risk/Hazardous Wastes for Disposal/Recovery* and *Schedule 3(ii) Other Wastes for Disposal/Recovery*, sent off-site for disposal/recovery.
 - 5.4.6 Details of any rejected consignments.
- A copy of this Waste Management Record shall be submitted to the Agency as part of the AER for the site.
- 5.5 Where wastes are destined for landspreading the following conditions apply:
- 5.5.1 Monitoring of available storage capacity for slurry/manure should be undertaken as outlined in *Schedule 3(iii) Waste Monitoring and Analysis*. Results should be submitted to the Agency monthly and a summary report included as part of the AER.
 - 5.5.2 Slurry composition shall be analysed as outlined in *Schedule 3(iii) Waste Monitoring and Analysis* and a summary report included as part of the AER.
 - 5.5.3 Slurry/Manure shall not be removed to off-site storage facilities without prior written agreement of the Agency.
 - 5.5.4 Landspreading shall not take place on lands identified in *Schedule 3(iv) Lands where Landspreading of Organic Wastes from this Facility are Excluded*.
 - 5.5.5 All contractors and agents undertaking landspreading must be as outlined in the IPC licence application. Alterations must be agreed in writing in advance with the Agency.
 - 5.5.6 All lands where waste from the activity is to be landspread must be as outlined in the IPC licence application. Alterations to this landbank must be agreed in writing with the Agency.

- 5.5.7 The licensee shall ensure that no slurry/manure from the facility to which this licence relates, is provided to lands in the landbank, which receive waste for landspreading from any other off-farm source which are not included in the Nutrient Management Plan, other than by agreement with the Agency.
- 5.5.8 Agreements between the licensee and recipients of wastes for landspreading should not conflict with any conditions in this licence.
- 5.5.9 An investigation into the vulnerability of each of the landspreading areas shall be carried out to the satisfaction of the Agency, following guidance given in the Groundwater Protection Schemes document (referenced in note 2 of Schedule 3(vi)). A report on this investigation for 50% of the landbank shall be submitted to the Agency within twelve months of the date of grant of this licence and a report on the remainder of the landbank shall be submitted to the Agency within eighteen months of the date of grant of this licence.
- 5.5.10 All landspreading activities shall be undertaken in accordance with a Nutrient Management Plan which must be agreed in advance with the Agency and submitted not later than eighteen months from the date of grant of this licence and each calendar year thereafter as part of the AER.
- 5.5.11 The maximum annual application of pig slurry applied shall be 13.48 m³/hectare unless otherwise agreed in writing with the Agency, following completion of the vulnerability assessment of the landspreading area to the satisfaction of the Agency.
- 5.5.12 Landspreading shall be carried out in accordance with *Schedule 3(v) Buffer Zones for Landspreading of Organic Waste* and *Schedule 3(vi) Code of Practice for Landspreading of Organic Waste*. All landspreading activities shall be carried out in such a manner as to avoid contamination of surface and groundwaters, and so as to minimise odour nuisance from the activity.
- 5.5.13 Landspreading shall be undertaken using soil injection, bandspreading, or low trajectory splashplate methods. Any other method must receive prior written agreement from the Agency.
- 5.5.14 A register of landspread slurry/manure ('Slurry/Manure Register') shall be maintained on site on a daily basis and shall be available for inspection by authorised personnel of the Agency at all times. This register shall include details of the following:
- (i) date of slurry/manure spreading,
 - (ii) contractor/agent spreading slurry/manure,
 - (iii) weather and ground conditions at the time of spreading and weather forecast for subsequent 48 hours,
 - (iv) nutrient requirements for individual fields/plots,
 - (v) volumes of slurry/manure applied to individual fields/plots.
- 5.5.15 The details, as per Condition 5.5.14, from the register should be reported to the Agency monthly, and annually as part of the AER.
- 5.6 The licensee shall submit proposals, for the agreement of the Agency, for the appropriate storage of waste straw, within three months of the date of grant of this licence. Following agreement of the Agency proposals on appropriate storage of straw shall be implemented within three months.
- 5.7 The licensee shall within six months of the date of grant of this licence, cover the R/S slurry tank and any open sump tanks to prevent rain ingress.

- 5.8 Domestic sewage from the facility shall be discharged to the on-site septic tank. This septic tank shall be inspected every six months and de-sludged at least annually and records of these inspections should be maintained by the licensee. No landspreading of domestic sewage/sludge from this septic tank shall take place. The licensee shall obtain prior written agreement from the Agency for the proposed disposal/recovery of this waste.

Reason: To provide for the disposal of waste and the protection of the environment.

Condition 6 Noise

- 6.1 Activities on-site shall not give rise to noise levels off site, at noise sensitive locations, which exceed the following sound pressure limits (Leq, 30 minute):
- 6.1.1 Daytime: 55 dB(A)
- 6.1.2 Night-time: 45 dB(A).
- 6.2 There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise sensitive location.

Reason: To provide for the protection of the environment by control of noise.

Condition 7 Protection of Surface and Groundwaters

- 7.1 Surface water.
- 7.1.1 The licensee shall divert all uncontaminated surface water runoff from roofs and non-contaminated impervious areas of the site, to the surface water drainage system. This drainage system shall discharge to the stream, through 3 outfalls, which ultimately drains to the Owenmore River, as referenced in 'Attachment 12A.3 Site Plan Showing the surface water Drains, Manholes and Discharge Points at the Carrowcushcly Sow Unit' in the IPC licence application. The licensee shall provide an inspection chamber at each outlet of the surface water drain.
- 7.1.2 There shall be no discharge of contaminated water to any surface water discharge system.
- 7.1.3 The licensee shall monitor surface water discharges in accordance with *Schedule 4(i) Surface Water Discharge Monitoring* of this licence. This shall be reported annually as part of the AER.
- 7.1.4 In the event that any analyses or observations made on the quality or appearance of surface water runoff should indicate that contamination has taken place, the licensee shall,
- (i) carry out an immediate investigation to identify and isolate the source of the contamination,
 - (ii) put in place measures to prevent further contamination and to minimise the effects of any contamination on the environment,
 - (iii) and notify the Agency, in accordance with Condition 3.1, as soon as is practicable.
- 7.2 Facilities for the Protection of Groundwater and Surface Water
- 7.2.1 The licensee shall provide a minimum storage capacity of 8000m³ (excluding freeboard) on-site.

- 7.2.2 The licensee shall inform the Agency within five days where the quantity of stored slurry/manure exceeds 80% of the total available storage capacity. The licensee shall include as part of the notification, date of the exceedence, and the proposed measures to be undertaken.
- 7.2.3 Underground, partly underground or over ground concrete storage facilities shall conform to the Department of Agriculture, Food and Forestry specifications (S108, S123) or equivalent standard.
- 7.2.4 The licensee shall prepare a programme for agreement with the Agency on assessment of under and over-ground effluent storage tanks, sumps and pipelines to ensure that all effluent storage tanks, sumps and pipelines are tested within six months of the date of grant of this licence and at least once every five years thereafter. A report on such tests shall be included in the AER.
- 7.2.5 All pump sumps shall be fitted with high liquid level alarms within six months from the date of grant of this licence.
- 7.2.6 All fuel tank storage areas shall be rendered impervious to the materials stored therein. In addition, fuel tank 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
 - (ii) 25% of the total volume of substance which could be stored within the bunded area.
- Drainage from bunded areas shall be diverted for collection and safe disposal. All bunds shall be tested at least once every five years. A report on such tests shall be included in the AER.

Reason: To provide for the protection of surface waters and groundwater.

Condition 8 Monitoring

- 8.1 The licensee shall carry out such sampling, analyses, measurements, examinations, as set out in Schedules:-
- Schedule 3(iii) Waste Monitoring and Analysis*
 - Schedule 4(i) Surface Water Discharge Monitoring*
 - Schedule 4(ii) Ambient Surface Water Monitoring*
 - Schedule 4(iii) Site and Ambient Groundwater Monitoring*
 - Schedule 4 (iv) Ambient Soil Monitoring*
- of this licence.
- 8.2 The frequency, methods and scope of monitoring, sampling and analyses, as set out in this licence, may be amended with the written agreement of the Agency following evaluation of test results. The licensee shall install on all emission points such sampling points or equipment, as may be required by the Agency. All such equipment shall be consistent with the safe operation of all sampling and monitoring systems.
- 8.3 The licensee shall provide safe and permanent access to the following sampling and monitoring points:
- 8.3.1 Waste storage areas on-site.
 - 8.3.2 Surface water discharge points.
- and safe access to any other sampling and monitoring points required by the Agency.

Reason: To ensure compliance with the requirements of other conditions of this licence by provision of a satisfactory system of measurement and monitoring of emissions.

Condition 9 Recording and Reporting to Agency

- 9.1 The licensee shall record all sampling, analyses, measurements, examinations and maintenance carried out in accordance with the requirements of this licence.
- 9.2 The licensee shall record all incidents which affect the normal operation of the activity and which may create an environmental risk.
- 9.3 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 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. The licensee shall submit a report to the Agency, during the month following such complaints, giving details of any complaints which arise. A summary of the number and nature of complaints received shall be included in the AER.
- 9.4 The format of all records required by this licence shall be to the satisfaction of the Agency. Records shall be retained on-site for a period of not less than seven years and shall be available for inspection by the Agency at all reasonable times.
- 9.5 Reports of all recording, sampling, analyses, measurements, examinations, as set out in *Schedule 5(i) Recording and Reporting to the Agency* in this licence, shall be submitted to the Agency Headquarters as specified in this licence. The format of these reports shall be to the satisfaction of the Agency. One original and three copies shall be submitted as and when specified.
- 9.6 All reports shall be certified accurate and representative by the licensee or other senior officer designated by the licensee.
- 9.7 All written procedures controlling operations affecting this licence shall be available on-site for inspection by the Agency at all reasonable times.
- 9.8 The frequency and scope of reporting, as set out in this licence, may be amended with the written agreement of the Agency following evaluation of test results.

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

Condition 10 Emergency Response

- 10.1 The licensee shall, within six months of the date of grant of this licence, ensure that a documented Emergency Response Procedure is in place which shall address any emergency situation which may originate on-site. This Procedure shall include provision for minimising the effects of any emergency on the environment.

Reason: To provide for the protection of the environment.

Condition 11 Financial Provisions

11.1 Agency Charges

- 11.1.1 The licensee shall pay to the Agency a minimum annual contribution of £1,846, or such greater sum as the Agency from time to time determines, towards the cost of monitoring as the Agency considers necessary for the performance of its functions under the Environmental Protection Agency Act, 1992. The licensee shall in 2000 and subsequent years, not later than January 31 of each year, pay to the Agency this amount updated in accordance with changes in the Consumer Price Index from the date of the licence to the renewal date. The updated amount shall be notified to the licensee by the Agency. For 1999, the licensee shall pay a pro rata amount from the date of this licence to December 31 1999. This amount shall be paid to the Agency within one month of the date of grant of this licence.

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

Schedule 1(i) Animal Numbers Housed at the Facility

Animal Class	Numbers ^{Note 1, 2}
Farrowing/Suckling Sows	112
Dry Sows	480
Maiden Gilts	120
Boars	15
Weaners	2520
Finishers	3360

Note 1: This excludes suckling pigs maintained on site.

Note 2: Variation in these numbers is allowed providing the overall number of units remains unchanged.

Schedule 2(i) Odour Sensitive Locations

Location
3 residences approximately 50 m NW of site 1 residence approximately 400 m SW of site

Schedule 3(i) High Risk/ Hazardous Wastes for Disposal/Recovery

Waste Materials	Further Treatment On-Site	On-site Recovery, Reuse or Recycling	Method of Off-Site Disposal ^{Note 1}
Veterinary Waste	None	None	Return to supplier ^{Note 2}
Animal tissue or carcasses	None	None	Agreed contractor
Other ^{Note 3}			

Note 1: Any variation from those contractors named in the IPC Licence application, or subsequent agreements, must have the prior written agreement of the Agency. In such cases where a previously agreed waste contractor is considered not to exercise due care in respect of the transport and disposal of the licensee's waste, the Agency may at any time instruct a licensee to stop using this contractor.

Note 2: If an approved hazardous waste disposal contractor accepts responsibility for ultimate disposal of the veterinary waste, such disposal arrangements should be made following written agreement with the Agency.

Note 3: No other high risk/hazardous waste shall be disposed of or recovered off-site without prior notice to, and prior written agreement of the Agency.

Schedule 3(ii) Other Wastes for Disposal/Recovery

Waste Materials	Further Treatment On-Site	On-Site Recovery, Reuse or Recycling ^{Note 1}	Method of Off-Site Disposal/Recovery ^{Note 2}
Domestic and canteen waste	None	None	Agreed disposal contractor.
Animal slurry/manure	None	None	Landspreading
Other ^{Note 3}			

Note 1: The licensee may further treat, reuse, recycle or recover waste subject to the prior written agreement of the Agency.

Note 2: Any variation from those contractors named in the IPC Licence application, or subsequent agreements, must have the prior written agreement of the Agency. In such cases where a previously agreed waste contractor is considered by the Agency not to exercise due care in respect of the transport and disposal of the licensee's waste, the Agency may at any time instruct a licensee to stop using this contractor.

Note 3: No other waste shall be disposed of or recovered off-site without prior notice to, and prior written agreement of the Agency.

Schedule 3(iii) Waste Monitoring and Analysis

Waste Monitoring Reference(s): As labelled in Site Layout Plan in Attachment 9.2

Waste Materials	Frequency	Parameter	Waste Monitoring Reference
Slurry/Manure	Annually	%Dry matter, total N, total P, total K	Waste straw from the Gilt House G,H (farrowing house) I (dry sow house) R (fattening house) R/S (slurry tank) W (new first stage weaner) Z (new second stage weaner) XYZ (new slurry transfer channel/tank)
Slurry/Manure	Weekly	Available storage capacity	G,H, P New (farrowing House) I,J,V1,K,V2 (dry sow house) R,S,X,Y (fattening house) R/S (slurry tank) T (gilt house) V1-T (slurry channel) W (new first stage weaner house) Z (new second stage weaner house) XYZ (new slurry transfer channel/tank)

Schedule 3(iv) Lands where Landspreading of Organic Wastes from this Facility are Excluded

Location
Land areas identified in Spreadland Location Map attachment 11B.1 of the IPC licence application labelled: 49,55,29E

Schedule 3(v) Buffer Zones for Landspreading of Organic Waste

No organic waste shall be spread within the following buffer zones:

Area	Buffer zone (m)
Sensitive buildings (hospitals, schools and churches)	200
Dwelling houses	100 ^{Note 1}
Karst features	30
Archaeological features	10
Lakes and main river channels	20 ^{Note 4}
Small watercourses ^{Note 2}	10
Public Roads ^{Note 2}	10
Domestic wells ^{Note 2}	50
Public water supplies ^{Note 2 & Note 3}	300 m or 100 days travel time

Note 1: This distance may be decreased with the written consent of the occupier and prior written agreement by the Agency.

Note 2: The above distances to be increased if the gradient is greater than 6% (1:17).

Note 3: The appropriate distance depends on vulnerability and groundwater flow direction.

Note 4: The buffer zone for Bellanascarrow Lough shall be a minimum of 300 meters and the buffer zone for the feeder stream into Bellanascarrow Lough shall be a minimum of 100 meters.

Schedule 3(vi) Code of Practice for Landspreading of Organic Waste^{Note 1}

Spreading shall not take place:
<ul style="list-style-type: none"> On wet or waterlogged ground On frozen or snow covered ground On exposed bedrock Where surface gradients are excessive (preferably < 18% (1:5)) On fields that display cracks over pipe or mole drainage systems During November to February inclusive except with agreement by the Agency Outside daylight hours
Loadings:
<ul style="list-style-type: none"> Regardless of the dilution factor, the maximum hydraulic loading per single application shall not exceed 25 m³ per hectare on shallow limestone soils and in no case shall exceed 50m³ per hectare.^{Note 3} Application of slurry/manure shall not be made on soils with a Morgan's P test in excess of 15 mg P/litre sampled to a depth of 10 cm.
Organic Waste application shall be in accordance with the following guidelines:
<ul style="list-style-type: none"> Landspreading on lands with extreme groundwater vulnerability ratings^{Note 2} would be considered Not Generally Acceptable. Application should be made such that the rate of application of nitrogen from organic wastes does not exceed 250 kg N/ha per annum. No application when the risk of causing odour nuisance to the public is greatest e.g. Sundays or public holidays No application during meteorological conditions which increase the risk of odour nuisance. No application where significant rain is forecast within 48 hours

Note 1: This Code of Practice may be amended by the Agency as further environmental information becomes available.

Note 2: As defined in Groundwater Protection Schemes, DoELG/EPA/GSI joint publication 1999.

Note 3: In accordance with condition 5.5.11 the maximum annual application of pig slurry shall be 13.48 m³/hectare, unless otherwise agreed in writing with the Agency, following completion of the vulnerability assessment.

Schedule 4(i) Surface Water Discharge Monitoring

Emission Point Reference No's.: SWA (Storm water outfall at South-eastern boundary of site)
SWB, SWC (Storm water outfalls at Southern boundary of site)

Parameter	Monitoring Frequency	Analysis Method/Technique
Visual Inspection	Weekly	Not Applicable
COD or BOD	Quarterly	Standard Methods
Molybdate reactive phosphate	Quarterly	Standard Methods
Total ammonia	Quarterly	Standard Methods

Schedule 4(ii) Ambient Surface Water Monitoring

Monitoring Point Reference No's. ^{Note 1}: 5,7,6,9,10,22,27,30,X1,X2,X3,X4 (Figure A additional Information submitted with EIS)

Parameter	Monitoring Frequency	Analysis Method/Technique
COD or BOD	Quarterly	Standard Methods
Total Ammonia	Quarterly	Standard Methods
Total Nitrogen	Quarterly	Standard Methods
Molybdate reactive phosphate	Quarterly	Standard Methods

Note 1: Additional monitoring points may be necessary with amendments in spreadlands.

Schedule 4(iii) Site and Ambient Groundwater Monitoring

Monitoring Point Reference No's ^{Note 1}: 19,20,21,25,26,28,29,32,X7 (Figure A additional Information submitted with EIS)

Parameter	Monitoring Frequency	Analysis Method/Technique
Nitrate	Annually	Standard Methods
Total Ammonia	Annually	Standard Methods
Faecal coliforms	Annually	Standard Methods

Note 1: Additional monitoring points may be necessary with amendments to the spreadlands.

Schedule 4(iv) Ambient Soil Monitoring

Monitoring Point Reference No's ^{Note 1, 2}: For all spreadlands utilised in this IPC licence

Conditions	Monitoring frequency	Analysis Method/Technique
Where no soil test available	Within 12 months of grant of licence	Morgan's P test ^{Note 3}
Where soil test $\leq 10 \text{ mg P l}^{-1}$	Every 2 years	Morgan's P Test
Where soil test $> 10 \text{ mg P l}^{-1}$ but $\leq 15 \text{ mg P l}^{-1}$	Annually	Morgan's P Test

Note 1: Additional sample monitoring locations may be required if the spreadlands are altered

Note 2: Each sample should be representative of a maximum area of 4 ha except where uniform cropping and landuse has been in place for the previous 5 years or more. In the latter situation a sample area of 12 ha is acceptable. Each sample should be taken in accordance with the Teagasc soil sampling guidelines.

Note 3: M Peach & L English (1944) 'Rapid micro-chemical tests'. Soil Science 57: 167.

Schedule 5(i) Recording and Reporting to the Agency

Completed reports shall be submitted to:

The Environmental Protection Agency
P.O. Box 3000
Johnstown Castle Estate
County Wexford

or Any other address as may be specified by the Agency

Reports are required to be forwarded as set out below:

Report	Reporting Frequency	Report Submission Date
Slurry/manure register	Monthly	Ten days after end of the month being reported on.
Available slurry/manure storage capacity	Monthly	Ten days after end of the month being reported on.
Complaints (where they arise)	Monthly	Ten days after end of the month being reported on.
Nutrient Management Plan	Annually	Eighteen months from the date of grant of licence; thereafter as part of the AER.
Annual Environment Report (AER)	Annually	Eighteen months from the date of grant of licence and each calendar year by 1 November thereafter.
Tank and pipeline testing and inspection programme	Every 5 years	Six months from the date of grant of licence; thereafter as part of the AER.
Proposals for appropriate storage for waste straw	Once off	Within three months of the date of grant of this licence.
Groundwater and Aquifer Vulnerability report Part 1	Once off	Within twelve months of the date of grant of this licence.
Groundwater and Aquifer Vulnerability report Part 2	Once off	Within eighteen months of the date of grant of this licence.

Annual Environmental Report Content
Waste Management Report (arising from Condition 5) including details of the Waste Management Record, Waste Monitoring and Analysis, and Slurry/Manure Register
Nutrient Management Plan
Ambient soil monitoring report
Ambient surface water monitoring report
Ambient groundwater monitoring report
Surface water discharge monitoring
Tank and pipeline testing and inspection report
Bund test report
Reported incidents summary
Complaints summary
Investigation of the possibility of alternative treatment technologies such as digestion for the disposal of slurry.
Investigation of measures available to reduce and minimise odours from pig slurry

Signed on behalf of the Agency

Patrick J. Nolan
Authorised person

Dated this day 4th of August 1999