



**This Report has been cleared
for submission to the Board by
Frank Clinton, Programme Manager
Signed: Grainne Doyle Date: 6/1/11**

GUIDANCE

INSPECTOR'S REPORT ON A LICENCE APPLICATION

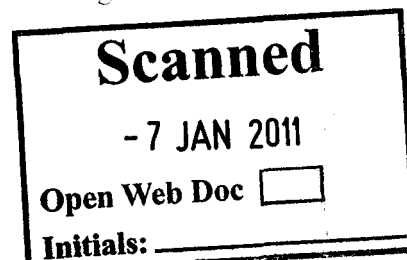
To:	Directors	
From:	Patrick Byrne	Environmental Licensing Programme
Date:	6 th January 2011	
RE:	Application for a review of an IPPC licence from Messrs Jim & Mark Wright (t/a JMW Farms), 52 Cortynan Road, Tynan, Co. Armagh, BT60 4QZ, Northern Ireland, Licence Register No. P0696-02.	

Application Details	
Class of activity:	6.2 "The rearing of pigs in an installation, whether within the same complex or within 100 metres of the same complex, where the capacity exceeds 750 places for sows in a breeding unit", where a breeding unit means a piggery in which pigs are bred and reared up to 30kg in weight.
Category of Activity under IPPC Directive (2008/1/EC):	6.6 (c)
Licence review application received:	21 June 2010
Notices under Section 90 issued:	29 July 2010 & 5 November 2010
Information under Section 90 received:	15 September 2010 & 10 November 2010
Submissions received:	6 July 2010 Mr. Peter Sweetman & Associates 27 July 2010 Monaghan County Council
Site Visit and Notice Inspection:	13 July 2010

Introduction

This licence review application relates to an installation located at Crosses, Monaghan, Co Monaghan, which was granted a licence, P0696-01, on the 20 January 2005. Licence Register No. P0696-01 was issued to Mr John Erskine. Messrs. Jim and Mark Wright purchased the existing installation from Mr John Erskine. The Agency granted a licence transfer from Mr John Erskine to Messrs. Jim & Mark Wright (t/a JMW Farms) on the 10th June 2010.

Mr John Erskine had applied to Monaghan County Council for planning permission to completely redevelop the installation, planning reference no. 07/993, received by the Council on the 18th May 2007. The planning application related to the following:



decommission 8 no. existing pig houses, 4 no. existing pre-fabricated pig houses and ancillary structures and to construct 2 no. replacement pig houses (House 1 with a double apex roof, House 2 with A roof design) and 1 no. meal store together with all ancillary structures and associated site works arising from the above development.

The planning application was supported by an Environmental Impact Statement, which was also submitted in support of this licence review application. Planning permission was granted for the proposed redevelopment on the 16th August 2007 subject to 5 no. conditions.

The activity licensed by the Agency under P0696-01 was a pig rearing activity with the capacity to accommodate 700 sows, rearing approximately 60% of pigs born to factory weight and 40% to 35kgs. The redevelopment of the installation involved the decommissioning of all but one pig house and one overground circular slurry storage tank.

This licence review is for an activity with the capacity to accommodate 1200 sows and their progeny to approximately 35kgs, i.e. a breeding unit¹ with a capacity of 1200 sows.

I undertook a site notice inspection and site visit on the 13th July 2010. On the day of the site visit the site had been substantially redeveloped and animals had been housed in the new buildings. Some ancillary structures and associated site works were still under construction. However, the animal housing and associated under house slurry storage tanks (2 new buildings) and meal store had been constructed.

The pig unit when fully operational will employ 5 full-time workers. The production on the site is continuous. However, operative staff are present, and deliveries and collections are normally undertaken, between 06.00 and 20.00 hours.

Process Description

The operation of the installation as a breeding site involves the breeding of sows on site and the rearing of the progeny to a weight of approximately 35kgs. When the progeny reach a weight of about 35kgs they are sold as production pigs² to be reared to finished (slaughter) weights at other installations. Sows at the end of their breeding life will be fattened and sold off site for processing. Replacement breeding sows will be selected from the progeny born on-site or replacements will be imported to the installation.

Slurry storage is provided in under house storage tanks. These tanks have been constructed over a leak detection system. The overground slurry storage tank, which was retained on-site following decommissioning of the buildings associated with the previous pig rearing activity, is currently being used as a rainwater storage tank. Rainwater collected from the two main building roofs is collected in a sump and then pumped to the overground storage tank. Excess rainwater is diverted to the adjoining surface water drain. The collected rainwater is used for cleaning and washing within the animal houses.

The applicant has identified 1 farmer (customer farm), on which there is a nutrient demand, and where slurry generated on-site will be recovered by landspreading. The farm identified is in County Louth (in the area south of Dundalk). The farm identified is approximately 50km from the installation. The applicant has indicated that they may in the future add additional farms located closer to the installation.

The applicant submitted a nutrient management plan, in a confidential format, in respect of the farm on which pig slurry may be recovered as fertiliser. Where pig slurry is used as a fertiliser on agricultural land, in accordance with European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2010 and the conditions of the Recommended Determination (RD) it is not expected that such application will cause pollution.

¹ 'Breeding unit' means a piggery in which pigs are bred and reared up to 30kg in weight.

'Integrated unit' means a piggery in which pigs are bred and reared to slaughter.

'Sow' means a female pig after its first farrowing.

² 'Production pig' means any pig over 30kg in weight which is being fattened for slaughter.

Emissions

Emission to Air

The main atmospheric emission from the installation is ventilation air from pig houses and gas volatilisation from the organic manure. Odour emissions are also associated with activities on-site such as the loading and movement of pig manure.

The new buildings represent a significant improvement in design, layout and air handling than the buildings which were previously on-site. The change in activity (700 sow unit rearing c.60% of progeny to finished weights on site compared to a 1200 breeding unit) results in similar odour emissions, based on data in the EPA 2001 publication '*Odour Impacts and Odour Emission Control Measures for Intensive Agriculture*'. A pig rearing activity has been operated at the installation for approximately 30 years.

The new buildings (2 no.) have been fitted with a centralised exhaust system which aims to optimise ventilation capacity. The system facilitates different ventilation rates to the individual rooms within the main building. The applicant identifies that the ventilation system compares favourably with Best Available Techniques (BAT) and reference documents on BAT (BREF). In particular it provides mechanical ventilation, optimises the design of the ventilation system in each house to provide good temperature control and provides for the achievement of minimum ventilation rates in winter. In addition, there is minimal movement of animals outside of the two new buildings. Where movement takes place outside of the buildings, the area will be regularly cleaned and wash water directed to slurry storage tanks.

There is a dwelling house located on the western boundary of the site. The house is owned by the applicant and is to be used for the provision of staff facilities. However it has not been included within the site boundary. Other dwelling houses in the area are located approximately 175-200 metres to the west, north and south-east of the installation boundary.

It is considered that the activity has the potential to cause odour nuisance beyond the boundary of the site, given the scale of the activity and the proximity of dwelling houses. Therefore, Condition 5.4 of the RD requires the submission of an odour management programme within one year of the date of grant of licence, outlining odour reduction measures appropriate to the site, which shall be agreed by the Agency. The odour management programme shall be updated and reviewed annually.

Emissions to Sewer

There are no emissions to sewer from this installation

Emissions to Water

There are no process emissions to waters from this installation.

Surface Water

Rainwater harvesting has been installed as part of the site redevelopment. The surface water collected from the roofs of the two new buildings is directed to a sump at the rear (northern boundary of the site). The collected water is then pumped to an overground storage tank retained from the previous pig rearing activity. Collected rainwater in excess of requirements is directed to an adjoining surface water drain. The rainwater collected is used for washing on the farm. The applicant states that other viable options for use on the farm will be explored.

Rainwater in excess of what is harvested and reused on site is discharged to surface water via discharge point SW-1 at the northern boundary of the site. SW-1 discharges to a small field drain which in turn drains in a north-easterly direction to a river which forms a tributary of the Clontibret Stream. Surface water collected in the southern area of the site, including clean yards, is directed off site to field drains via SW-2. The exact location of this monitoring point shall be provided by the licensee following completion of construction or within 3 months of the date of grant of licence whichever occurs sooner.

The field drain flows in a north-western direction to a tributary of the Clontibret Stream. The Clontibret Stream is approximately 7km north of the installation.

There are no EPA water quality monitoring stations on the drains, which form a tributary of the Clontibret Stream, into which surface water from the installation discharge.

In accordance with the Water Framework Directive, the Clontibret Stream (XB_03_9) status in 2009 was 'Poor' and the risk-score is 1a 'at risk of not achieving good status'. Agriculture and sewerage are suspected pollutants according to the Blackwater Water Management Unit Action Plan. There is an extended deadline of 2021 proposed for the Clontibret Stream under the Action Plan.

Surface water from the installation should be uncontaminated and therefore should have no impact on surface water quality off-site. Condition 6.8.5 of the RD requires that there shall be no unauthorised discharge of polluting matter to water. In accordance with Condition 6.8.6 and *Schedule C.2.3 Monitoring of Storm Water Emissions* of the RD the applicant is required to monitor BOD/COD quarterly and to carry out a weekly visual inspection of the emissions from SW-1 and SW-2.

Emissions to Ground

There are no emissions to ground from the activity.

The applicant installed a groundwater well within 20 metres of the site boundary. The well installed was sunk to a depth of approximately 400 feet. However, due to inadequate water supply the well has not been developed further or commissioned. Water supply to the site is from a group water scheme, supplemented by rainwater harvesting which supplies water for washing purposes.

While the well installed outside the site boundary, but within 20 metres of the site boundary, was not commissioned as a supply well it provides an opportunity for monitoring of groundwater. *Schedule C.6.1* of the RD requires annual monitoring of the well installed south of the installation boundary for nitrate, total ammonia and faecal and total coliforms.

The groundwater body at the installation is classified, under the Water Framework Directive, as 'good' overall status and 2(a) 'probably not at risk'.

Prior to construction of the two new buildings on-site the applicant installed a leak detection system under the slurry storage tanks. The leak detection system comprises of drainage pipes under the slurry storage tanks which drain to two leak detection inspection manholes. The applicant proposes to visually inspect drainage to these inspection manholes monthly and to sample and analyse for nitrates, ammonia and total phosphorus annually. The RD includes, under *Schedule C.6.2*, monitoring requirements at the leak detection manholes.

Condition 6.5 requires an assessment of underground and overground effluent storage tanks including integrity testing of pipelines and liquid feed storage tanks. Proposals for repair of any defects identified are to be included in a tank and pipeline assessment report to be submitted as part of the Annual Environmental Report. Such assessment will highlight any potential sources of groundwater contamination on-site, if present.

Manure Management and Recovery

The operation of the pig unit as a 1200 sow breeding unit will result in the production of approximately 10,857 m³ of slurry per annum (including washwater). The storage capacity available for slurry, is c.10,481 m³ (including deductions for freeboard) and equates to approximately 50 weeks, which is in excess of the 26 weeks required under the European Communities (Good Agricultural Practice for Protection of Waters) Regulations, S.I. No. 610 of 2010. All the slurry storage capacity on-site is provided under the animal houses; there are no overground slurry storage facilities.

The applicant has identified one farmer who is available/seeking to accept slurry/manure from the installation as fertiliser for his farm. The applicant has calculated that this farm has a need for up to 12,825m³ of pig slurry/manure per annum based on the nitrogen

balance for the farm (nutrient plan). The identified farm is a tillage farm located in the vicinity of Dundalk, County Louth, approximately 50km from the installation. The applicant has stated that they may identify additional lands in the vicinity of the installation when the installation has been fully established. Any additional lands may be included for the recovery of slurry/manure from the installation subject to the applicant demonstrating a nutrient need by means of a nutrient management plan. Condition 8 of the RD requires that pig slurry/manure is recovered in accordance with the requirements set out in the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2010 and the conditions of the RD.

Waste

Waste arising on-site includes animal carcasses, domestic waste, packaging, veterinary waste and fluorescent tubes. Waste generated on-site is sent off site for disposal or recovery. Animal carcasses and animal tissue waste is stored on-site temporarily prior to collection and transportation to College Proteins, which is a licensed rendering plant (Reg. No. P0037-03).

Veterinary waste arising at the site (including sharps) shall be taken off site for appropriate disposal. The applicant identifies SRCL Ltd. or Transafe Ltd. as the possible companies to undertake the collection and appropriate disposal of such waste.

Used fluorescent tubes are stored on-site and regularly taken to a local civic amenity centre or returned to the supplier. Domestic waste is temporarily stored on-site prior to regular removal for disposal at Monaghan County Council Landfill (Scotch Corner Landfill, Waste licence Reg. No. W0020-02). The RD, Condition 11, requires maintenance of records on matters relating to the waste management operations and practices at this site.

Noise

The site is located in a rural location of Co. Monaghan. While there are residential dwelling houses within close proximity to the installation, it is not anticipated that noise emissions from the unit will cause disturbance. Therefore, standard noise conditions and emission limit values have been included in the RD.

Use of Resources

The activity involves the consumption of animal feed, water, electricity, medications and detergents. Water used at the pig unit is supplied from a group water scheme and is supplemented by rainwater harvesting, currently used to supply washing water requirements.

Electricity is the main source of energy used on-site for lighting, feed distribution systems, ventilation, localised heating for piglets and equipment used in the maintenance and running of the activity.

The two new buildings are insulated to ensure minimal heat loss through roofs and walls and to conserve heat within houses. In addition, the ventilation system is mechanically controlled which avoids excessive ventilation rates. The applicant notes in the application form that all equipment will be serviced regularly. Condition 7 of the RD includes conditions on resource use and energy efficiency.

Compliance with EU Directives

IPPC Directive (2008/1/EC)

The installation falls within the scope of Category 6.6 (c), *installations for the intensive rearing of poultry or pigs with more than 750 places for sows*, of Annex 1 of Council Directive 2008/1/EC concerning integrated pollution prevention and control.

The RD as drafted takes account of the requirements of this Directive. In particular, Condition 7 *Resource Use and Energy Efficiency* provides conditions dealing with water, energy and raw materials use, reduction and efficiency on site. BAT is taken to be

represented by guidance given in the IPPC reference document on BAT for Intensive Rearing of Poultry and Pigs, July 2003.

Water Framework Directive (2000/60/EC)

The only emission to surface water from this installation is uncontaminated storm water from roofs and unpaved areas. The applicant has installed a rainwater harvesting system to collect surface water from the two new buildings constructed on-site. The collected rainwater is stored in an overground tank, retained during the redevelopment of the site, and used on-site for washing of houses. The applicant has identified that they will explore additional uses for rainwater collected.

Storm water is discharged to surface water drains to the north and south of the installation. Discharge to these drains is via monitoring points labelled as SW-1 and SW-2. Condition 6.8.5 of the RD states that there shall be no unauthorised discharge of polluting matter to water.

Water supply to the installation is provided from a group water scheme, Condition 7.3 specifies that the licensee shall identify opportunities for the reduction in the quantity of water used on-site including recycling and reuse initiatives. Condition 6.7 of the RD specifies that all slurry/manure generated on site shall be stored in a manner which does not pollute ground or surface water.

Slurry/manure generated on the installation shall be recovered to land as fertiliser in accordance with the European Communities (Good Agricultural Practice for the Protection of Waters) Regulations, 2010 and the conditions of the RD.

These measures will assist towards achieving the target of good water quality by 2015 under the Water Framework Directive (Directive 2000/60/EC) or the extended deadline of 2021 proposed in the Blackwater Water Management Unit Action Plan for the Clontibret Stream.

EU Nitrates Directive (91/676/EEC)

The Nitrates Directive (91/676/EEC) has the objective of reducing water pollution caused or induced by nitrates from agricultural sources and to further prevent such pollution with the primary emphasis being on the management of livestock manures and other fertilisers. This Directive is currently transposed into Irish legislation by the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2010 (S.I. No. 610 of 2010). S.I. 610 of 2010 revoked S.I. 101 of 2009 with effect from the 20th December 2010.

There is approximately 50 weeks slurry storage capacity at the installation. The RD specifies the minimum slurry storage requirements for this installation in accordance with the Nitrates Regulations. The RD requires that where pig manure is landspread, such practice shall be undertaken in accordance with the Regulations and the conditions of the RD.

Habitats Directive (92/43/EC) & Birds Directive (79/409/EEC)

There are no identified designated areas in the vicinity of the installation. Uncontaminated surface water run-off from the roofs and clean yards on site is discharged to surface water drains. Pig slurry shall be recovered on land as fertiliser in accordance with the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2010 and the conditions of the RD.

Submissions

Two submissions have been received in relation to this review application.

6th July 2010 Mr. Peter Sweetman & Associates

Mr. Sweetman identifies that Article 3 of European Directive 85/337/EEC as amended by Directives 97/11/EC and 2003/35/EC states:

The environmental impact assessment shall identify, describe and assess in an appropriate manner, in light of each individual case and in accordance with Articles 4 to 11, the direct and indirect effects of a project on the following factors:

Human beings, fauna and flora;

Soil, water, air, climate and the landscape;

Material assets and the cultural heritage;

The interaction between the factors mentioned in the first, second and third indents.

Mr. Sweetman asks that the Agency fulfils its obligations under the Directive.

Response:

Article 94 and Schedule 6, of the Planning and Development Regulations 2001 (S.I. 600 of 2001) outlines the information to be contained in an EIS. The EIS submitted in support of the IPPC licence review application and additional information received on the 10th November 2010 addresses the requirements of Article 94 and Schedule 6.

27th July 2010 Monaghan County Council

Monaghan County Council notes that the pig manure production figures for the upgraded facility show a significant increase over figures submitted in 2004 with the original application (Reg. No. 696). The submission states that the Council would have concerns about the cumulative effects of manure disposal if the exemption under Article 34(3) of S.I. 101 of 2009 (Nitrates Regulations) resulted in the application of phosphorus in excess of crop requirements, particularly in sensitive catchments, areas of gley soils, areas of significant landslope, areas of extreme groundwater vulnerability, eutrophic lake catchments and water supply source catchments. Sustainable disposal of Intensive Agricultural Enterprise (IAE) manures on suitable land-banks and disposal in accordance with crop nutrient requirements in particular phosphorus is considered necessary to minimise further eutrophication problems in County Monaghan.

The *Monaghan Agricultural Waste Management Study* (Teagasc 1994) and *The Sludge Management Plan for County Monaghan* (2002) highlight some of the problems faced in Co Monaghan. The Monaghan Groundwater Protection Scheme and the associated *Groundwater Protection Responses for Landspreading - Summary* provide additional recommendations on landspreading IAE manures. The environmental research report "Quantification of Phosphorus Loss from Soil to Water" Synthesis Report (EPA) discusses phosphorus loss from soils and areas of high risk of P loss.

Monaghan County Council requests that a map and plan for the disposal of manure from this licensed facility be provided. For developments with extensive yard areas, the use of Sustainable Drainage Systems is recommended to minimise contamination by silts or occasional contaminants.

Response:

The applicant provides figures for the annual slurry/manure production based on Schedule 2 Table 1 of S.I. 101 of 2009. The operation of the pig unit as a 1200 sow breeding unit will result in the production of approximately 10,857 m³ of slurry per annum (including washwater). The original licence application, received in 2004, related to a 700 sow unit rearing c. 60% of the progeny to slaughter weights. Based on a review of the inspector's report, the quantity of slurry generated was 7,994m³ per annum. The applicant claims that the quantity of slurry presented in the original licence application was based on information available at that time. The quantity of slurry produced from a 700 sow unit rearing c.60% of the progeny to slaughter weights, based on the figures in S.I. 101 of 2009 is 9,347m³ (based on a water to meal ratio of 2:1) increasing to 10,286m³ (water to meal ratio of 2.5:1) and 11,225m³ (based on a water to meal ratio of 3:1).

The concerns expressed by the Council in relation to cumulative effects are acknowledged by the Agency and have been considered in my consideration of this licence review application. Article 34(3) of S.I. 610 of 2010 is a 'transitional provision' which provides for the application to land of phosphorus in excess of the quantities otherwise prescribed in the regulation in a case where the excess arises from the application of spent mushroom compost or manure produced by pigs or poultry. The regulation limits the excess phosphorus application from 1st January 2013 to 5kg/hectare, reducing to 3 kg/hectare from 1st January 2015 and 0kg/hectare from 1st January 2017.

The reports referred to in the submission identify the significant quantities of manures and sludges arising in County Monaghan. The EPA's research report identifies the following tentative priorities: reduce farmyard losses, correct rates of spreading of animal manure and fertiliser, correct time of spreading, riparian or sensitive areas, soil P should not be excessive, nutrient management planning and other measures.

The applicant has identified one tillage farmer in County Louth who has lands in the vicinity of Dundalk. A location map on which the farm is identified was provided in support of the licence review. The nutrient plan for the farm was provided in a confidential format and is therefore not available on the public file. The farm has a fertiliser requirement for the quantity of slurry/manure generated at the pig rearing activity. The applicant has calculated that this farm has a need for up to 12,825m³ of pig slurry/manure per annum based on the nitrogen balance for the farm (nutrient plan). The identified farm is c.50km from the installation and therefore transport costs will be significant. The applicant has identified that they may identify additional lands in the vicinity of the installation when the installation has been fully established. Any additional lands may be included for the recovery of slurry/manure from the installation subject to the applicant demonstrating a nutrient need by means of a nutrient management plan. Condition 8 of the RD requires that pig slurry/manure is recovered in accordance with the requirements set out in the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2010 and the conditions of the RD.

Article 30(2) of the *Nitrates Regulations (S.I. No. 610 of 2010)* specifies that a local Authority shall carry out or cause to be carried out such inspections of farm holdings as is necessary for the purpose of the regulations.

Surface water drainage from the installation discharges via two monitoring locations, SW-1 and SW-2. The applicant has installed rainwater harvesting at the installation which will reduce the quantity of surface water discharged.

Site Visit

I visited the site on the 13th July 2010, and conducted a site inspection accompanied by Mr. Peter Kenny, Group Production Manager, and Mr. Padraic Fay, consultant for the applicant. I also confirmed that the site notice was present at the entrance to the installation. The two new buildings, ancillary structures and associated site works were substantially completed. The applicant had moved a substantial number of sows onto the installation. In correspondence received after the site visit the applicant confirmed that sow numbers were approaching 1200.

Cross Office Liaison

Extensive communication has taken place between the environmental licensing programme and the Office of Environmental Enforcement (OEE) in relation to licensing of the intensive agricultural sector. Advice and guidance issued by the OEE co-ordinated Intensive Agriculture Sectoral Working Group was followed in my assessment of this application.

Environmental Impact Statement

I have examined and assessed the EIS submitted in support of the licence application, and having regard to the statutory responsibilities of the EPA, I am satisfied that it complies with

Article 94 and Schedule 6 of the Planning and Development Regulations 2001 (S.I. 600 of 2001) and EPA Licensing Regulations (S.I. 85 of 1994, as amended).

Best Available Techniques (BAT)

I have examined and assessed the application documentation. I am satisfied that the site, technologies and techniques specified in the application and as confirmed, modified or specified in the attached RD comply with the requirements and principles of BAT. I consider the technologies and techniques as described in the application, in this report, and in the RD, to be most effective in achieving a high general level of protection of the environment having regard – as may be relevant – to the way the installation is located, designed, built, managed, maintained, operated and decommissioned.

Fit & Proper Person Assessment

The Fit & Proper Person test requires three elements of examination: technical ability, legal standing and financial standing. It is my view that the applicant can be deemed a Fit and Proper Person for the purpose of this licence.

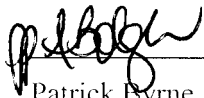
Charges

The RD requires that the licensee pay an annual charge of €4,828 to the Agency to cover the anticipated enforcement effort for the site.

Recommendation

I recommend that the Proposed Determination be issued subject to the conditions and for the reasons as drafted.

Signed,



Patrick Byrne
Senior Inspector,
Office of Climate Change, Licensing and Resource Use

Procedural Note

In the event that no objections are received to the Proposed Determination of the application, a licence will be granted in accordance with Section 85(4) of the Environmental Protection Agency Act 1992 as soon as may be.