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 Signed: NOELEEN KERRY Date: 03/02/12



**OFF LICENSING & RESOURCE USE**

**INSPECTORS REPORT ON A LICENCE APPLICATION**

To:	Directors	
From:	Orla Harrington	Environmental Licensing Programme
Date:	23RD FEBUARY 2012	
RE:	REVIEW OF AN IPPC LICENCE - MEADOW MEATS LIMITED, LICENCE REGISTER P0183-02	

**Application Details**

Licensee:	Meadow Meats Ltd.
Location of Installation:	Rathdowney, Co. Laois.
Class of activity:	7.4.1 The operation of slaughterhouses with a carcass production capacity greater than 50 tonnes per day.
Category of Activity under IPPC Directive (2008/1/EC):	6.4. (a) Slaughterhouses with a carcase production capacity greater than 50 tonnes per day.
Section 87(1)b notice sent:	30 <sup>th</sup> June 2011
Review form received:	16 <sup>th</sup> September 2011
Notices under Article 90 issued:	30 <sup>th</sup> June 2011, 1 <sup>st</sup> November 2011, 12 <sup>th</sup> January 2012
Information under Article 90 received:	23 <sup>rd</sup> November 2011, 6 <sup>th</sup> February 2012
Submissions received:	None

## **1. Reason for Licence Review**

On the 30th June 2011, the Environmental Protection Agency initiated a review of the IPPC licence held by Meadow Meats Limited for the installation located at Rathdowney, Co. Laois, IPPC licence register number P0183-01. The review was initiated by writing to the licensee and placing a newspaper notice in the Irish Independent.

The reasons for initiating the review are in light of the requirements under the following regulations:

- (1) The European Communities Environmental Objectives (Surface Waters) Regulations 2009;
- (2) The European Communities Environmental Objectives (Groundwater) Regulations 2010; and
- (3) The European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009.

Meadow Meats Limited (Ltd) was granted a licence by the Agency on the 25<sup>th</sup> March 1998 and it was technically amended on the 1<sup>st</sup> November 2005 to bring operations into compliance with the Environmental Protection Agency Acts, 1992 and 2003.

## **2. Emissions to Surface Waters**

Meadow Meats Ltd operates a cattle slaughtering unit and associated processing facility. It is located on a site of approximately 18 acres close to Rathdowney town, Co. Laois.

All process wastewater from the activity is treated at the wastewater treatment plant (WWTP) which discharges via pipeline approximately 280m long to the River Erkina. All wastewater on site is generated through washdown activities in the various process and handling areas throughout the plant, as well as canteen waste, liquid waste from cooling water systems, boiler condensate and blowdown, together with water softener discharges are all treated in the WWTP before being discharged to the River Erkina via EW2.

Treatment consists of an activated sludge system comprising of screenings, dissolved air floatation (DAF) unit, balancing tanks, aeration tanks, clarifiers, sludge holding tank, belt press and pump sump for final pumping to the Erkina River (EW2). The process effluent (EW2) emission is in compliance with the existing licence limits. The annual environmental report (AER) 2010 for Meadow Meats Ltd showed 100% compliance for all licensed parameters discharging to water. The WWTP operates to meet the following requirements; BOD (20mg/l), COD (80mg/l), and SS (30mg/l). Nitrification/denitrification occurs within the WWTP. Phosphorus removal is to less than the emission limit value of 2mg/l Total Phosphorus by chemical means.

There are six storm water emission points (EW3, EW4, EW5, EW6, EW7 and EW8) that discharge from the installation to an adjacent stream called the Rathdowney Stream, which flows for 0.5km before it converges with the River Erkina.

Priority substances are not limited in the existing licence.

### **2.1. Receiving waters and impact**

The following table summarises the main considerations in relation to the River Erkina. The River Erkina rises in the Black Hill, Co. Tipperary and flows easterly into Rathdowney Co. Laois. The River Erkina is a tributary of the River Nore.

**Table 1.0 Receiving waters**

<b>Characteristic</b>	<b>Information</b>	<b>Comment</b>
Receiving water name and code	River Erkina	Site Code: IE_SE_15_1033. The River Erkina flows for 15km before it meets the River Nore (IE_SE_15_1836).
EPA monitoring stations	15E010100  15E030500  15E010200	1.7km upstream of the confluence of the Erkina River and the Rathdowney Stream (IE_SE_15_1318). This monitoring station did not have Q value readings.  4km upstream of the confluence of the Erkina River and the Rathdowney Stream.  1.2Km downstream of the confluence of the Erkina River and the Rathdowney Stream.
Biological quality rating (Q value)	Q3-4 2010 (15E030500)  Q3-4 2010 (15E010200)	Upstream  Downstream
WFD Status	Moderate (2011)	Objective is to Restore by 2021 <sup>Note 1</sup>
WFD Risk	1a, at risk	
WFD Protected Areas	River Barrow & River Nore SAC (Site Code: 002162)  River Nore SPA (Site Code: 004233)  Nore Pearl Mussel Designated Catchment <sup>Note 2</sup>	12Km downstream of emissions to water (EW2)  7km downstream of EW2  The installation is within the Nore Catchment but the Freshwater Pearl Mussel populations are located 15km downstream of EW2
WMU Action plan	Erkina Water Management Unit Action Plan	Discharge identified as a point pressure and a risk in the plan.
Sub-basin management plan for the freshwater pearl mussel	Freshwater Pearl Mussel Nore Sub Basin Management Plan	Reviewing and issuing of discharge licences shall be prioritised for pearl mussel catchments.

Note 1: South Eastern River Basin Management Plan [www.wfdireland.ie/maps.html](http://www.wfdireland.ie/maps.html)

Note 2: The European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009, S.I. No. 296 of 2009.

The installation is identified as a pressure and a risk in the water management unit action plan. The pressures on the waterbody from excessive nutrients have been identified as coming predominantly from agriculture (87%). It should be noted that, in addition to discharge from this installation; Rathdowney WWTP and storm water overflows (D0288-01), which are currently under assessment, discharge into the River Erkina. The Rathdowney WWTP has been deemed by the Agency to have treatment 'not appropriate' based on effluent results and is identified as both a pressure and a risk in the water management unit action plan.

Monitoring undertaken by the Agency indicates that the River Erkina has Q3-4 status upstream and Q3-4 downstream of the emission to water (EW2). The River Erkina has a water quality status rating of moderate.

It has been advised by a sectorial expert in the Office of Climate, Licensing and Resource Use (OCLR), that the Fourth Schedule of the *Freshwater Pearl Mussel Regulations 2009* do not apply to an entire catchment only those areas outlined in the First Schedule of the *Freshwater Pearl Mussel Regulations 2009*. Therefore, when setting ELVs for existing discharges to waters draining to those areas outlined in the First Schedule it is appropriate to aim to achieve good status. In *Schedule B and C*, the RD sets ELVs and monitoring requirements for the emission to waters (EW2).

The calculations in Table 2 are based on the maximum flow rates from EW2 at 700m<sup>3</sup>/day (0.0081m<sup>3</sup>/sec) and 95%ile flow<sup>1</sup> (0.19m<sup>3</sup>/sec) in the River Erkina. The dilution factor is 23 for the River Erkina under 95%ile flow conditions. Background concentrations are based on the results of the upstream monitoring taken from the EPA report *Water Quality in Ireland 2007-2009*, using the mean concentration of all parameters 1.7km upstream of Meadow Meats Ltd (Appendix 3-3 River Chemistry Summary – 15E010100 Clarneyball Bridge).

**Table 2: Mass Balance**

Parameter	Background Conc. (mg/l) <sup>Note 1</sup>	Current ELVs (mg/l)	Proposed ELVs (mg/l)	Contribution from the discharge <sup>Note 2</sup> (mg/l)	Predicted downstream conc. <sup>Note 2</sup> (mg/l)	95%ile standard (mg/l) (Good) <sup>Note 3</sup>
BOD	1.2	20	20	0.77	1.98	≤2.6mg/l
PO <sub>4</sub> -P	0.02	2(TP)	1.4	0.054	0.074	≤0.075mg/l
Total Ammonia - N	0.03	2	2	0.080	0.110	≤0.140mg/l

Note 1: Monitoring results (mean values) 1.7km upstream of emission to water (Clarneyball Bridge (15E010100))

Note 2: Based on proposed ELVs.

Note 3: European Communities Environmental Objectives (Surface Waters) Regulations 2009.

Table 2 demonstrates that the discharge based on existing emission limit values (ELVs) from the installation is not significant and that a reduction in the current ELVs is not required.

<sup>1</sup> 95%ile flow determined using the EPA's Hydrometric Data System; confirmed by the Office of Environmental Assessment (OEA).

The Ortho P limit will replace the total phosphorus limit currently specified in the existing licence. The licensee states in the review that the 'ELV value set out in the licence for total P is 2mg/l. This yields a corresponding limit for Ortho P of 1.1mg/l to 1.4mg/l'. The recommended decision (RD) specifies an ELV of 1.4mg/l for Ortho P effective from date of grant of the licence. The current licence has a requirement to monitor emissions to water (EW2) for nitrates (25mg/l). It is proposed to replace this with an ELV of 15mg/l for total nitrogen in line with BAT guidance for the slaughtering sector.

The licensee has established; which was a requirement from the existing licence, an action limit of 100mg/l for COD for the storm water emissions. However monitoring of COD is not continuous and the action level agreed under the existing licence appears to be high for uncontaminated surface water. There were no exceedances in any of the existing surface water parameters during 2010 according to the AER. It is proposed that the setting of a warning and action limit for COD is removed. The requirement for monitoring Total Ammonia in the storm waters is brought forward in the RD as this is a good indicator of pollution.

The existing ELVs are based on good status standards as laid down in the European Communities Environmental Objectives (Surface Waters) Regulations 2009, S.I. No. 272 of 2009 (*Surface Waters Regulations 2009*). The assimilative capacity calculations and ELVs as set in the RD suggest that the receiving waterbody is capable of accommodating the current discharge.

The RD requires the licensee to review the finalised version of the Freshwater Pearl Mussel Nore Sub Basin Management Plan for the Nore Catchment on an annual basis, implement applicable measures and submit a measures report as part of the AER.

This installation carries out a slaughtering activity and therefore priority substances are not a characteristic of emissions to water and are not dealt with in any further detail.

## **2.2 Specific Standards or objectives for Protected Areas**

In considering the application regard was had to the requirements of standards or objectives laid down for protected areas specifically the following:

### The European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009

The Nore pearl mussel '*Margaritifera durrovensis*' are very rare and populations were only ever known from the Barrow, Nore and Suir main channels. It is now thought to be restricted to a short section of approximately 10km of the main Nore channel.

The most recent estimate of the total number of *Margaritifera durrovensis* adults in Ireland, based on surveys from 1991 to 2005 is 500 individuals. This represents a decline of 75% from the total of 2,000 individuals found in 1991. Recruitment of juvenile mussels is being prevented by the poor quality of the river substrate resulting from excessive siltation and nutrient enrichment.

The timescale of recovery even if measures were implemented immediately is much longer than the survival time of the current population in the wild. The conclusion from these studies referred to in the Nore SBMP is that the *Margaritifera durrovensis* population in the River Nore is un-viable and on the verge of extinction. Assisted breeding has been identified as the only method by which the current population of 300 adult mussels can be increased in the medium to long term and the population is in an unfavourable condition based on the European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations S.I No. 296 of 2009 (*Freshwater Pearl Mussel Regulations 2009*).

The River Erkina is not listed in the First Schedule of the *Freshwater Pearl Mussel Regulations 2009* to contain freshwater pearl mussels, but the *Freshwater Pearl Mussel Regulations 2009* and their associated Sub-basin Management Plans apply to the River Erkina as it is part of the Nore catchment which is specified in the regulations. The Freshwater Pearl Mussel populations are located 15km downstream of EW2 within the Nore catchment.

The ELVs specified in the RD aim to achieve the environmental objectives and standards established in the European Communities Environmental Objectives (Surface Waters) Regulations 2009 / The European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009.

#### Habitats and Species of European Sites directly dependant on water

The River Erkina is part of the River Barrow and River Nore Special Area of Conservation (cSAC 002162) and the River Nore Special Protected Areas (SPA 004233). The installation discharges 12km upstream of the cSAC and 7km upstream of the SPA. Whilst there are conservation objectives for the SAC and SPA there is only one environmental objective or standard for a water dependant species; the freshwater pearl mussel which is discussed further above. The objectives for the SAC, SPA are to maintain or restore the favourable conservation condition of the Annex I habitats and Annex II species for which the SAC has been selected.

As previously highlighted, this review is for the purposes of assessing existing discharges in the context of new environmental quality standards and objectives and does not consider any further increase in the ELVs for emissions to waters. The Agency has examined the scope of the European Communities (Birds and Natural Habitats) Regulations 2011 and within the limited scope of this review, the Agency is satisfied that the discharge will not likely have a significant effect on the River Barrow and River Nore SAC, River Nore SPA and therefore the requirements regarding Appropriate Assessment set out in Part 5 of the European Communities (Birds and Natural Habitats) Regulations 2011 do not apply.

With respect to water quality, the ELVs in the RD aim to achieve good status in the River Erkina, and hence, will contribute to the favourable conservation objectives for the area.

### **2.3 Emission controls and environmental quality standards**

The ELV's specified in the RD have been established according to the combined approach whereby the stricter of the requirements which would result from the application of limits which aim to achieve the quality standards and the application of limits based on BAT.

The ELVs specified in the RD aim to achieve the environmental objectives and standards established in the European Communities Environmental Objectives (Surface Waters) Regulations 2009 / The European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009.

### **3.0 Emissions to Groundwater**

Water demand on site is met by two groundwater abstraction wells. One is located within the site boundary and the other outside. There is an additional borehole within the site boundary used for monitoring purposes. The licensee monitors all wells on site annually for nitrate and ammonia under condition 9.2 in the existing licence. This condition has been removed and brought forward in the RD under ambient monitoring for groundwater.

There is one aspect to the activity that represents a diffuse source of pollutant input to groundwater; landspreading of organic waste/organic fertiliser. Dewatered sludge is transported offsite for landspreading in accordance with an EPA approved nutrient management plan (NMP).

The requirements specified in the RD aim to achieve the environmental objectives and standards set out in the European Communities Environmental Objectives (Groundwater) Regulations 2010 and updates the existing landspreading conditions to include specific reference to the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2010.

#### 4.0 Updating the existing licence

The RD has transposed all relevant existing licence conditions from P0183-01 into the Agency's current licence format. Consequently the RD specifies amendments and additional requirements.

Table 3 summarises the amendments made to the existing licence as a result of changes to the following;

- Adjustments approved by the OEE;
- Once off assessments and reports being closed out;
- Statutory and format updates of conditions;
- The European Communities Environmental Objectives (Surface Waters) Regulations 2009;
- The European Communities Environmental Objectives (Groundwater) Regulations 2010 and
- The European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009.

The licensee has clarified that their class of activity is 7.4.1. This installation was licenced in 1998 under class 7.4 of the EPA Act 1992. The technical amendment in 2005 to achieve conformity with the IPPC Directive did not change the class of activity. The Protection of the Environment Act 2003 amended the First Schedule and introduced Class 7.4.1 to reflect the IPPC Directive and class 7.4 became 7.4.2 with additional wording so that 7.4.1 takes precedence. The licensee is operating above the thresholds specified in class 7.4.1 and the RD incorporates this amendment to ensure compliance with Annex I of Council Directive 2008/1/EC (IPPC Directive).

**Table 3: List of new or amended conditions proposed in the RD**

Condition or Schedule No.	Reason for change	Description
Condition 1.7, 1.3	Environmental Objectives Regulations Review	Scope of the licence
Condition 2.1, 2.2.2.8, 2.2.2.9	Better management and control of site	Management of the installation
Condition 3.1, 3.2, 3.4,3.5,3.6,3.7, 3.11,	Better management and control of site	Infrastructure and Operation
Condition 3.8, 3.12	Environmental Objectives Regulations Review	Silt Traps and Oil Separators/ storage for landspreading
Condition 4.1.3	Interpretation	Discrete sampling
Condition 6.1, 6.2, 6.7,6.9,6.16	Better management and control of site	Control and Monitoring
Condition 6.10	Environmental	Freshwater Pearl Mussel Review

	Objectives Regulations Review	
Condition 8.9, 8.11, 8.12	Better management and control of site	Materials Handling
Condition 8.13, 8.2, 8.3, 8.4, 8.5, 8.6,	Environmental Objectives Regulations Review	Landspreading/ Waste Handling
Condition 10.2, 10.3, 10.4,	Better management and control of site	Decommissioning and Residuals Management
Condition 11.2	Environmental Objectives Regulations Review	To notify the National Parks and Wildlife of any incident relating to discharges to water in Pearl Mussel designated site.
Condition 11.7, 11.9, 11.10,	Better management and control of site	Notification and Reports
Condition 12.2	Better management and control of site	Environmental Liabilities
Schedule B.2	Environmental Objectives Regulations Review	Emissions to Waters
Schedule C.6	Environmental Objectives Regulations Review	Groundwater Monitoring

### 5.0 Cross Office Liaison

The OEE inspector for Meadow Meats Limited, Irene Doyle, offered advice and guidance in terms of current compliance and historical issues relating to the plant. This advice was followed in my assessment of this review.

OEE is satisfied that the following conditions from the current licence (register number P0183-01) can be amended or removed to update the RD; Condition 6.2 (emissions to water), Condition 9.1.2, 9.1.3 (non- process water). OEE is satisfied that Condition 9.1.6 can be removed.

### 6.0 Submissions

No submissions received.

### 7.0 Charges

The charge specified in the RD is €10,861.72, the same as the invoice for 2012.

### Recommendation

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

Signed



Orla Harrington

**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 87(4) of the Environmental Protection Agency Acts 1992 and 2011 as soon as may be after the expiration of the appropriate period.