This Report has been cleared for submission to the Board by Tom McLoughlan, Senior Inspector
Signed _____ Date 14/03/2016

**OFFICE OF ENVIRONMENTAL SUSTAINABILITY**

**ENVIRONMENTAL LICENSING PROGRAMME**

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| **TO:** | Directors | |
| **FROM:** | Brian Meaney | Environmental Licensing Programme |
| **DATE:** | 14 March 2016 | |
| **RE:** | Technical Amendment to Industrial Emissions licence register number **W0201-03** held by Bord na Móna plc in relation to the **Drehid landfill**. | |

## 1. Introduction

The Agency received a request on 29 February 2016 from Bord na Móna to amend licence register number W0201-03. The request relates to a proposed temporary increase in waste acceptance at the landfill the need for which has come about because of recent constraints on outlets available to and previously used by the waste industry.

This memo recommends that the change is accommodated by a technical amendment of the licence made in accordance with Section 96(1)(b) of the EPA Act 1992 as amended.

## 2. Licence history

Bord na Móna was first granted a licence in August 2005 for the Drehid landfill. Authorisation was given to dispose of 120,000 tonnes of waste per annum at the landfill. Waste acceptance commenced in February 2008.

A revised licence (W0201-02) was granted in April 2009. The revised licence allowed for an increase in the footprint of the landfill and authorised the acceptance of up to 360,000 tonnes of waste per annum for a period of 7 years up to 31 December 2015, reverting to 120,000 tonnes per annum thereafter.

The licence was reviewed in March 2010 and a new licence (W0201-03) issued. This review was initiated by the Agency. There was no change in the authorised scale of waste acceptance which remained at 360,000 tonnes per annum up to 31 December 2015.

The licence (W0201-03) was amended in January 2013 for the purposes of the European Communities Environmental Objectives (Groundwater) Regulations 2010 and again in December 2013 to give effect to the requirements of the Industrial Emissions Directive. The licence is now an Industrial Emissions licence and is no longer a waste licence.

On 1 January 2016, in accordance with the licence, the authorised waste acceptance at the landfill reverted to 120,000 tonnes per annum.

## 3. Technical Amendment request

The licensee has sought authorisation to increase waste acceptance to 360,000 tonnes per annum (from the now authorised 120,000 tonnes per annum) for a period to end-2017. The licensee states that since the start of 2016 there has been significant demand for void space, representing a rate of waste intake that would exceed the authorised 120,000 tonnes

per annum if continued through the year. The licensee provided the following week-by-week breakdown of waste accepted this year:

| 2016 | Week | Tonnes of waste |
|---|---|---|
| January 4 to March 5 | Week 1 | 4,376 |
| | Week 2 | 3,570 |
| | Week 3 | 3,598 |
| | Week 4 | 6,294 |
| | Week 5 | 5,900 |
| | Week 6 | 3,310 |
| | Week 7 | 2,145 |
| | Week 8 | 2,499 |
| | Week 9 | 1,889 |

The data shows a fall-off in waste acceptance in recent weeks. This represents the licensee's response to the demand experienced in the early part of the year and their intention to protect their (now reduced) licensed annual capacity. Despite this, the licensee has stated in correspondence with the Agency that it expects further pressure as the year progresses.

The licensee also states that the total waste intake authorised over the 7 year period from 2009 to 2015 was not used. Of the total 2,520,000 tonnes authorised in that period, some 2,040,252 tonnes of waste were accepted. The licensee represents the gap as an under-utilisation of 479,748 tonnes, as illustrated by the following data:

| Year | Authorised (tonnes) | Accepted (tonnes) | Difference (calculation, tonnes) |
|---|---|---|---|
| 2009 | 360,000 | 188,095 | 171,905 |
| 2010 | 360,000 | 328,230 | 31,770 |
| 2011 | 360,000 | 315,799 | 44,201 |
| 2012 | 360,000 | 295,111 | 64,889 |
| 2013 | 360,000 | [1]310,900 | 49,100 |
| 2014 | 360,000 | [2]282,117 | 77,883 |
| 2015 | 360,000 | 320,000 | 40,000 |
| **Total** | **2,520,000** | **2,040,252** | **479,748** |

[1] AER 2013: A further 160,000 tonnes of waste were accepted for recovery at the landfill including 90,000 tonnes of soil and fines material and 43,000 tonnes of construction and demolition waste. An additional 19,200 tonnes of brown bin waste was taken into the composting facility.

[2] AER 2014: A further 294,000 tonnes of waste were accepted for recovery at the installation including 151,000 tonnes of inert soil and fines and 93,000 tonnes of clean construction rubble used for engineering. An additional 27,600 tonnes of organic fines was taken into the composting facility.

Regarding the temporary 7-year increase to 360,000 tonnes up to end-2015, the licensee explains that this was proposed in 2008 as a response to delays in the delivery of significant waste management infrastructure, particularly the Dublin waste to energy facility which, it is now known, will be available towards mid-2017.

## 4. Analysis of technical amendment request

In the 7-year period 2009-2015, the difference between authorised and accepted tonnage of waste is 479,748 tonnes. It is conceivable that the licensee should be allowed to work through this authorised tonnage. The licensee has sought authorisation to accept up to 360,000 tonnes of waste per annum for 2016 and 2017. If the difference above (479,748 tonnes) is divided across these two years (239,874 tonnes) and added to the baseline 120,000 tonnes, we get a total of 359,874 tonnes per annum. Thus allowing for waste acceptance up to 360,000 tonnes for a further two years to end-2017 will allow the licensee to work through the unused allowance from the previous 7 years in addition to the baseline waste acceptance. It will also allow for available landfill capacity to be freed up in the State and respond to ongoing shortfalls in that regard.

## 5. Licensing and planning permission

Quantitative limits on waste acceptance at the landfill are enforced by two regulators: Kildare County Council through planning permission and the Agency through the Industrial Emissions licence. The licensee will always be constrained by the tighter limit. As part of their role in capacity planning for waste management, it is adequate and appropriate that the Waste Management Planning Regions and the local authorities exert the necessary ongoing control on waste acceptance caps at the landfill for as long as the national capacity shortfall continues.

## 6. Assessment

The landfill was authorised in the period 2009 to 2015 to accept up to 360,000 tonnes per annum. The landfill operated in the range 188,000 to 328,000 tonnes per annum of waste intake during the same period and there is no evidence of significant environmental pollution having been caused as a result of the high level of waste acceptance and disposal.

Ammonia in emissions to surface water are occasionally high. Ongoing exceedences of the emission limit value are attributed to naturally-occurring ammonia in pumped groundwater. According to the 2014 AER, the number of ammonia exceedences has reduced steadily from 2012 (40 no.) to 2013 (36) to 2014 (10). A second constructed wetland is proposed to bring about further reductions in ammonia emissions. A biological assessment reported in the 2014 and 2013 AERs states that discharges are not having a discernable impact on the Cushaling River that receives the emissions.

*Site inspections*

Three site visits were undertaken by the Agency in 2015, one for groundwater and surface water monitoring, one relating to landfill gas and one for general compliance with the licence. I read the three site visit reports and there are no matters of particular concern for this report.

*Non-compliances*

A number of non-compliances are documented in the Agency's database. A sample of these indicates the ammonia emissions issue (attributed to the high naturally-occurring ammonia in groundwater in the area) remains an issue. Other non-compliances concern the biodegradable content of waste accepted at the installation (which is limited by the licence) and reporting of this matter.

A compliance investigation remains open at this time in relation to ELRA, CRAMP and financial provision. The latest situation is presented in section 8 of this report.

*Complaints*

Three complaints were logged by the Agency in 2016 to date. These all concerned odour and were described by the complainants as a gas smell. Two complaints were attributed by the licensee to a faulty gas well that needed repair.

One complaint was made to the Agency in 2015 and concerned litter falling from a truck as it left the installation.

Four complaints were made to the Agency in 2014. Three concerned odour. One concerned traffic. According to the licensee's AER for 2014 (the most recent available), 10 complaints were received by the licensee in that year, nine in relation to odour and one in relation to litter.

Four complaints were made to the Agency in 2013, all concerned with odour and referring to odour as an ongoing problem.

## 7. Appropriate Assessment

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the proposed activity, individually or in combination with other plans or projects is likely to have a significant effect on any European Site. In this context, particular attention was paid to the European Sites at Ballynafagh Lake SAC [001387], Ballynafagh Bog SAC [000391], Mouds Bog SAC [002331], The Long Derries, Edenderry SAC [000925], River Boyne and River Blackwater SAC [002299], Pollardstown Fen SAC [000396], River Barrow and River Nore SAC [002162]. The proposed activity is not directly connected with or necessary to the management of any European Site and the Agency considered, for the reasons set out below, that it can be excluded, on the basis of objective information, that the proposed activity, individually or in combination with other plans or projects, will have a significant effect on any European Site and accordingly determined that an Appropriate Assessment of the proposed activity was not required. The reasons for this determination are as follows:

- Discharges to surface water from the installation do not exceed the licence limits other than for ammonia which is attributed to the pumping and discharge of groundwater that has naturally elevated levels of ammonia and a small number of exceedences for suspended solids.
- The site is located in the catchment of the River Barrow. Drainage from the landfill flows through a settlement pond, a constructed wetland, a network of manmade drains across the Bord na Móna landholding and further settlement ponds before it reaches the Cushaling River which supports salmonid and cyprinid fish. The Cushaling is a tributary of the River Figile which converges with the Barrow approximately 35km downstream.
- Biological monitoring of the Cushaling River, involving kick sampling and qualitative assessment of benthic macro-invertebrates, shows the Q-value to be 3-4 which is slightly polluted. According to the licensee's annual environmental report for 2014 and 2013, a similar result was found in 2008 which was before the development of the landfill indicating that the landfill is not having an adverse impact on the river.

## 8. Financial provision

The following summarises the factual position vis-à-vis financial provision at Drehid Landfill and is based on information provided by Mr Jim Moriarty, OEE.

CRAMP costings of [redacted] were agreed with the EPA in July 2014 and ELRA costings of [redacted] were agreed in December 2015. The EPA sought financial provision proposals for these liabilities and, in response to this, OEE met with Bord na Móna personnel on 3 March 2016.

The company intend to address the ELRA liabilities by means of an environmental impairment insurance policy. It was noted at the 3 March 2016 meeting that all of the necessary information had been provided to their insurance company and that the company should be in a position to submit fuller details regarding a proposed policy before the end of March 2016.

In relation to the CRAMP liabilities, the company intends to address the financial provision obligations by means of a charge on gas assets at the landfill. The company said that gas revenues from engines at the landfill amount to some [redacted] per annum before tax and other deductions and, while this may fall off in later years, the gas asset, when aggregated over the longer term, exceeds the CRAMP liability. Detailed figures regarding gas revenues and projections remain to be submitted as do proposals for a suitable instrument to secure [redacted] from the gas asset in a manner that complies with EPA guidance. This information is due by the end of March 2016.

## 9. Recommendation

I recommend that licence register number W0201-03 is amended in accordance with Section 96(1)(b) of the EPA Act 1992 as amended and as set out in the recommended licence amendment document. The making of the amendment will not result in the relevant requirements of Section 83(5) of the EPA Act 1992 as amended ceasing to be satisfied.

Signed

Brian Meaney

Environmental Licensing Programme

**Table 1 European sites**

| | European site (site code) | Distance and direction from installation | Qualifying interests (* denotes a priority habitat) | Conservation objectives |
|---|---|---|---|---|
| 1 | Ballynafagh Lake SAC (001387) | Approximately 6.8 km southeast | **Habitats:**<br>Alkaline Fens<br>**Species:**<br>Desmoulin's Whorl Snail (Vertigo moulinsiana)<br>Marsh Fritillary (Euphydryas aurina) | As per NPWS (2015) Conservation objectives for Ballynafagh Lake SAC [0001387]. Generic Version 4.0. Department of Arts, Heritage and the Gaeltacht (dated 13/02/2015). |
| 2 | Ballynafagh Bog SAC (000391) | Approximately 7.5 km southeast | **Habitats:**<br>Active raised bogs*<br>Degraded raised bogs still capable of natural regeneration<br>Depressions on peat substrates of the Rhynchosporion | As per NPWS (2015) Conservation Objectives: Ballynafagh Bog SAC 000391. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht (dated 10/11/2015). |
| 3 | Mouds Bog SAC (002331) | Approximately 12 km south | **Habitats:**<br>Active raised bogs*<br>Degraded raised bogs still capable of natural regeneration<br>Depressions on peat substrates of the Rhynchosporion | As per NPWS (2015) Conservation Objectives: Mouds Bog SAC 002331. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht (dated 20/11/2015). |
| 4 | The Long Derries, Edenderry SAC (000925) | Approximately 7.3 km west | **Habitats:**<br>Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*) (* important orchid sites)* | As per NPWS (2015) Conservation objectives for The Long Derries, Edenderry SAC [000925]. Generic Version 4.0. Department of Arts, Heritage and the Gaeltacht (dated 13/02/2015). |
| 5 | River Boyne and River | Approximately 14 km north | **Habitats:**<br>Alkaline fens | As per NPWS (2015) Conservation objectives for River Boyne and |

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| | Blackwater SAC (002299) | | Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)*<br>**Species:**<br>River Lamprey *(Lampetra fluviatilis)*<br>Salmon *(Salmo salar)*<br>Otter *(Lutra lutra)* | River Blackwater SAC [002299]. Generic Version 4.0. Department of Arts, Heritage and the Gaeltacht (dated 13/02/2015). |
| 6 | Pollardstown Fen SAC (000396) | Approximately 15 km south | **Habitats:**<br>Calcareous fens with Cladium mariscus and species of the Caricion davallianae*<br>Petrifying springs with tufa formation (Cratoneurion)*<br>Alkaline fens<br>**Species:**<br>Geyer's Whorl Snail (*Vertigo geyeri*)<br>Narrow-mouthed Whorl Snail (*Vertigo angustior*)<br>Desmoulin's Whorl Snail (*Vertigo moulinsiana*) | As per NPWS (2015) Conservation objectives for Pollardstown Fen SAC [000396]. Generic Version 4.0. Department of Arts, Heritage and the Gaeltacht (dated 13/02/2015). |
| 7 | River Barrow and River Nore SAC (002162) | Approximately 35 km downstream | **Habitats:**<br>Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation<br>European dry heaths<br>Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels<br>* Petrifying springs with tufa formation (*Cratoneurion*)<br>Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles<br>* Alluvial forests with *Alnus glutinosa* and *Fraxinus* excelsior (*Alno-Padion, Alnion incanae, Salicion albae*)<br>Mudflats and sandflats not covered by seawater at low tide<br>*Salicornia* and other annuals colonizing mud and sand<br>Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)<br>Estuaries<br>Mediterranean salt meadows | As per NPWS (2011) Conservation Objectives: River Barrow and River Nore SAC 002162. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht (dated 19/07/2011). |

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|---|---|---|---|---|
| | | | (*Juncetalia maritimi*)<br>**Species:**<br>Desmoulin's whorl snail (*Vertigo moulinsiana)*<br>Freshwater pearl mussel (*Margaritifera margaritifera*)<br>White-clawed crayfish (*Austropotamobius pallipes)*<br>Sea lamprey (*Petromyzon marinus)*<br>Brook lamprey (*Lampetra planeri*)<br>River lamprey (*Lampetra fluviatilis*)<br>Twaite shad (*Alosa fallax*)<br>Atlantic salmon (*Salmo salar*) (only in fresh water)<br>Otter (*Lutra lutra*)<br>Killarney fern (*Trichomanes speciosum*)<br>Nore freshwater pearl mussel (*Margaritifera durrovensis*) | |