

# INSPECTORS REPORT

**WASTE LICENCE REGISTER NUMBER: 29-2**

**APPLICANT:** Offaly County Council

**FACILITY:** Derryclure Landfill, Derryclure, Tullamore, Co. Offaly.

**INSPECTOR:** Caoimhín Nolan

**INSPECTOR'S RECOMMENDATION:** That a revised waste licence be granted subject to a number of conditions.

## (1) Introduction

Derryclure Landfill is located approximately 5 km south of Tullamore town adjacent to the N80 National Secondary Road. The facility is located on cutover peatland and is bounded to the north, east and south by raised bog (used by Bord na Móna), with rough pasture to the west. The nearest private dwelling is located about 500m from the north-west boundary of the facility, and the proposed activities dealt with under this review application will not take place any closer to this receptor. The current waste licence (WL 29-1) allows the facility to accept 40,000 tonnes of non-hazardous waste per annum. Over its lifetime (i.e. since 1976), the facility has accepted in the order of 450,000 tonnes of waste, all of which has been deposited in unlined areas occupying about six hectares. The principal reason for the review is to provide for the acceptance of waste (at a rate of 40,000 tpa) into lined cells which will be constructed adjacent to the present waste body. The applicant estimates that the lined cells will have a total capacity of 800,000 tonnes, which will provide a lifetime of 15-20 years. The layout of the new cells is generally to the east of the existing waste body, and will therefore be further away from the main road and private dwellings. The recommended PD allows the facility to be restored up to a final height of 94m OD, as proposed by the applicant.

The current waste licence (WL 29-1) allows for the following classes of waste activity: Third Schedule Class 1, 2, 7 and 13; Fourth Schedule Class 2, 10, 11 and 13. The applicant has applied for additional classes of waste activity to allow for landfilling into lined cells, the storage of leachate and the collection/storage of recyclable wastes. The licensing of these additional classes of activity will improve the environmental performance of the facility. The recommended Proposed Decision (PD) allows for the waste disposal and recovery activities applied for by the applicant as follows: Third Schedule Class 1, 4, 5, 7, 11 and 13; Fourth Schedule Class 2, 3, 4 and 13. **A plan showing the location and layout of the facility to which the application relates is provided in Appendix 1.**

### Summary of facility details:

<b>Quantity of waste (tpa) to be accepted</b>	40,000 tpa
<b>Environmental Impact Statement Required</b>	Yes. The EIS has been assessed and it complies with the requirements of the EIA Regulations.
<b>Number of Submissions Received</b>	2

### Site Visits:

<b>DATE</b>	<b>PURPOSE</b>	<b>PERSONNEL</b>
04/12/01	Check Site Notice	Caoimhín Nolan

1/02/02	Check Updated Site Notice and undertake site inspection	Caoimhín Nolan
17/12/02	Most recent site visit as part of enforcement of WL 29-1	John Gibbons

## (2) Facility Development Status

**Lined Cells:** The applicant has proposed to construct lined cells on top of cutover peat along the perimeter of the existing unlined waste body. The total area to be developed is approximately 4 hectares. The applicant argues that the removal of peat to construct lined cells would not be feasible due to the following reasons: the considerable quantities involved (i.e. 45,000 m<sup>3</sup>), the low commercial value of the peat, the technical difficulties posed by groundwater intrusion following the removal of the peat, and differential settlement between lined/unlined areas.

The provision of lined cells on top of peat at this locality would prove difficult for a number of reasons. As well as the expected settlement in the peat itself, differential settlement across the proposed liner would be likely due to the varied depths of peat, the presence of numerous tree stumps in the peat, and the intention to construct the liner on top of both peat and the side of the existing waste body. To overcome these problems, the applicant had proposed to construct a composite liner (i.e. 2mm HDPE overlying a 500mm BES layer) on top of a regulation layer of fill material (about 0.5m in depth), which would incorporate a number of geogrids and a groundwater control drainage layer. The in-situ peat ranges in depth from 1.5m up to a maximum of 7m, and following the installation and filling of the new cells, the applicant expects the profile of the peat surface to drop by as much as 3m from its present level (i.e. where the peat is deepest). Based on the quantity of waste to be accepted and the size of the area to be developed, I calculate that the filled cells would exert a pressure of about 20 tonnes/m<sup>2</sup> on the underlying peat. The applicant has not proposed to pre-load the peat with this type of loading during the construction phase, and has not provided any specific calculations to demonstrate that the construction of the proposed liner and regulation layer would cause the peat to settle sufficiently. In view of the risk to the integrity of the liner, the recommended PD requires that peat deposits be removed prior to the construction of lined cells. Condition 3.12 of the recommended PD sets out the lining requirements for new cells to be constructed at the facility. Lining works to be carried out on the side of the existing waste body present particular problems in relation to settlement and landfill gas management, so Condition 3.12.1(e) specifies particular lining requirements for these areas.

**Other Infrastructure:** The facility has a weighbridge, wheelwash, site office, met station, Civic Waste Facility, waste quarantine area, oil interceptor and a septic tank already in place at the facility. Waste disposal to-date has taken place in unlined areas and with the exception of six leachate abstraction boreholes, there is no leachate or landfill gas control infrastructure in place. The applicant proposes to pump leachate from the six leachate abstraction wells to a holding lagoon (or other suitably constructed holding tanks), and to carry out methane stripping prior to the leachate being tankered off-site to Tullamore WWTP. The applicant has proposed to construct more than one leachate storage structure to allow for methane stripping to be carried out on a batch basis, and the recommended PD provides for this. Pending the completion of these structures, the licensee will be required to install a temporary storage structure to collect leachate and other contaminated run-off generated at the facility. Condition 3.13.1 also requires the licensee to install a leachate interceptor drain around the existing waste body. The installation of an active landfill gas collection and flaring system is required under Condition 4.14.

The applicant intends to re-locate the existing Civic Waste Facility and to undertake composting of biodegradable waste, both of which are allowed for under the recommended PD. The applicant is considering installing an in-vessel composting system however the exact waste types, quantities and composting system to be employed have not been finalised, and the recommended PD provides for these to be agreed with the Agency.

**Extension of Site Boundary:** An additional 0.8 ha of land (which was purchased by Offaly County Council) is included in the site boundary and this area is intended to be developed as a Civic Waste Facility. This will replace the Civic Waste Facility already in place at the facility.

### **(3) Management and Control of Emissions to the Environment**

**Air:** The installation of an active landfill gas collection and flaring system is required under Condition 4.14. The recommended PD sets out emission limits and monitoring for dust deposition and noise.

**Groundwater:** Leachate arising from unlined waste deposits is currently impacting on shallow groundwater in the area. Ammonia levels of up to 49 mg/l have been recorded in one groundwater borehole located in the overburden near the waste body. Condition 3.13 provides for leachate management at unlined parts of the facility and includes the provision of an interceptor drain. Condition 3.20.2 of the recommended PD requires the installation of additional groundwater monitoring points to ensure compliance with the monitoring requirements of the Landfill Directive. There are no private wells situated within 500m of the facility boundary.

**Surfacewater:** Wastewater (i.e. from the wheelwash) and some of the leachate generated on-site is currently discharging to surfacewater through a drainage pipe located near the weighbridge office. Condition 6.5 of the recommended PD prohibits such discharges, and pending the installation of a leachate storage lagoon (or similar structure) at the facility, Condition 3.13.3 requires that a temporary storage structure be provided to allow for the storage of any wastewater (i.e. from impervious areas) and any leachate collected at the facility. Condition 3.15 requires appropriate surfacewater control measures to be implemented.

### **(4) Waste Management, Air Quality and Water Quality Management Plans**

The Waste Management Plan for the Midlands Region and the Water Quality Management Plan for the Upper Shannon Catchment (1990) were considered in the evaluation of this licence application. The Derryclure Landfill facility is identified in the Midlands Waste Management Plan as being one of the landfills which is currently operating in the region. In the short-medium term (up to 2006), and pending the provision of new waste collection and recycling systems, the plan envisaged that only one landfill would be necessary in the central region, and that this facility would either be Derryclure Landfill or Kyletalesha Landfill (Co. Laois). It should be noted that Kyletalesha Landfill also intends to continue operating into the short-medium term, and the Agency currently has a licence review application on-hand for this facility. No relevant air quality plan exists.

### **(5) Enforcement Summary re. Waste Licence 29-1**

The Agency has issued five Notifications of Non-compliance to-date for breaches of the conditions of waste licence Reg. no. 29-1 which was issued on 16<sup>th</sup> November 1999. The non-compliances noted relate to a number of issues including discharges to surfacewater, the lack of infrastructure (e.g. waste inspection/quarantine area, hardstanding and bunding), landfilling in unauthorised areas, uncovered waste, nuisances (e.g. litter and birds) and the operation of more than one tipping area. The facility was last audited by the Agency in June 2002 and a total of six non-compliances were noted. The Agency has not received any complaints relating to this facility under the existing licence.

#### **(6) Submissions**

Two valid submissions were received in relation to this waste licence application and I have had regard to them in making this recommendation to the Board.

1. Catherine Buchanan, NPW Site Protection, Dúchas (Submission received 14<sup>th</sup> August, 2002)

*Dúchas have no recommendations or objections to this application.*

**Response:**

The contents of this submission have been noted.

2. Treasa Langford, Development Applications Section, Dúchas (Submission received 2<sup>nd</sup> April, 2003)

*Dúchas have no objection to the proposed licence from a nature conservation perspective.*

**Response:**

The contents of this submission have been noted.

#### **(7) Recommendation**

It is recommended that a revised waste licence be granted for Classes 1, 4, 5, 7, 11 and 13 of the Third Schedule and Classes 2, 3, 4 and 13 of the Fourth Schedule as applied for in the application. In coming to this recommendation, I consider that these activities if licensed, would (subject to the conditions of the recommended Proposed Decision) comply with the requirements of Section 40(4) of the Waste Management Act 1996.

Signed \_\_\_\_\_  
Caoimhín Nolan, Inspector,  
Environmental Management & Planning.

Dated:

## **APPENDIX 1**

### **Site Boundary & Proposed Site Layout**

(Drawing entitled “Landfill Site at Derryclure, Tullamore, Co. Offaly” which was received by the Agency on 6<sup>th</sup> December 2002, and Drawing no. BEN45098A/004 of the application entitled “Extension Design Showing Leachate Drainage System”)