

INSPECTORS REPORT
WASTE LICENCE REGISTER NUMBER 89-1
DERRYCONNELL LANDFILL, CORK COUNTY COUNCIL

(1) INTRODUCTION

This application relates to an existing unlined landfill facility accepting an estimated 14,000 tpa of non-hazardous waste. The landfill has been operational since 1985. The existing facility has a capacity of approximately 14,000 tonnes which would provide void space until early 2001. It is proposed to construct three new lined cells which would give a further capacity of 45,000 tonnes. The proposed extension to the site will provide void space until 2004/5. The proposed decision requires surface water, leachate and gas management systems to be put in place for both the existing and proposed cells.

The facility is situated 3km west of Ballydehob and 4.5km east of Schull on the Mizen Peninsula. There is only one residence within the 500m boundary. Appendix 1 contains a Site Location Map.

The liner to be installed in the three proposed cells will be 2.5mm thick HDPE on top of in situ clay which has been reworked to achieve a permeability of $1 \leq 10^{-9}$ m/s and a minimum thickness of 1m. There will be a 500mm layer of pea-gravel for leachate collection and the waste will be deposited on top of this.

Leachate at the site is currently not controlled. The proposed decision requires that five collection sumps be installed in the existing landfill for the collection of leachate. Leachate is to be removed from the collection sumps via a 500mm diameter HDPE rising main to the proposed leachate lagoon (of storage capacity 2,000m³). Schedule F4 of the proposed decision allows 4kg BOD/day of leachate and a volume of 21m³/day to be tankered to Ballydehob Treatment works. This represents 10% of the overall capacity of Ballydehob treatment works. An approximate spare capacity of 470pe exists at this facility. In the event that excess leachate is generated the proposed decision requires that it shall be disposed of at another treatment plant subject to the Agency's agreement.

In the proposed cells, the leachate collection system will consist of 100-200mm diameter perforated HDPE pipes laid in the 500mm peagravel layer. In each of the three proposed cells, the leachate collection network will drain into a leachate collection manhole or sump which in turn is piped to the leachate lagoon via a 50mm diameter rising main.

An active gas control system is to be installed on site. The gas will be extracted from the waste and pumped via pipework and condensate traps to a gas flare. A proposal

for the utilisation of landfill gas is required by the proposed decision within six months of the date of grant of the licence.

The installation of a weighbridge, wheelwash and septic tank are required under condition 4 of the proposed decision.

The capping system for the landfill is specified in the proposed decision. The Agency's landfill restoration and aftercare manual must be considered during the development of the restoration plan. Condition 4.17.1 of the proposed decision requires the licensee to submit a report on the areas of the landfill already restored.

The facility incorporates a civic waste facility which will consist of a skip for public tipping. At present the public tip their waste onto the ground. There are no recycling banks for bottles, cans etc present on-site. The licensee has provided recycling facilities in the local towns.

Potential nuisances are controlled by condition 6.

Hours of Operation are 9.00 am to 5.00pm Monday to Friday inclusive and from 9.00am to 1.00pm Saturday. Opening outside of these hours can be permitted with the written agreement of the Agency.

The proposed final levels of the site are given in the application with the maximum height of the site being 96 –99m (relative to site datum) pre-settlement. This will not cause a visual intrusion on the surrounding landscape.

Temporary capping is to be achieved by using a combination of degradable film, soil cover and construction waste. Soil will be available on-site from the excavation of the proposed cells.

Name of Applicant	Cork County Council
Facility Name(s)	Derryconnell Landfill Site
Facility Address	Derryconnell, Schull, Co. Cork
Description of Principal Activity	The disposal of waste at landfill
Quantity of waste (tpa)	14,000 tpa
Environmental Impact Statement (EIS) Required	No
Number of Submissions Received	Two

INSPECTOR'S RECOMMENDATION	The proposed decision as submitted to the Board be approved.
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Facility Visits

DATE	PURPOSE	PERSONNEL	OBSERVATIONS
26/03/99	Inspection site notice and of site.	S. Kennelly	Notice in compliance with Regulations.
03/05/00	Site Inspection	S.Kennelly S.McMahon	Poor covering of waste
10/08/00	Site Inspection	S.McMahon	Leachate discharging from site

(2) Waste Types and Quantities

Condition 5 and Schedule G control the types and quantities of waste to be accepted at the facility. The total quantity of waste will not exceed 14,000 tpa. The types of wastes to be accepted are as follows: 10,800 tpa household, 1,200 commercial, 2,000 construction and demolition.

(3) Emissions to Air

Dust monitoring carried out at the site has shown dust deposition to be low (30mg/m²/day – 64mg/m²/day.) Dust monitoring is to be carried out annually at four locations.

It is stated in the application that odours have been detected at the site and that this is largely due to the lack of cover being applied to recently deposited waste. Local residents to east of the site have expressed concerns relating to odours during south westerly winds and flies during summertime. The application of daily cover and installation of a gas flare shall minimise odours in the future.

There are three gas wells in the current landfill area and one in the proposed extension area. Three perimeter boreholes are to be installed within six months of the date of grant of the licence. Landfill gas emissions at the site are to be reduced by the application of daily cover in the short term and the installation of the gas extraction system in the medium term. A proposal for the installation of a permanent gas monitoring system in the site office and any other enclosed structure is required within three months of the date of grant of the licence.

Noise monitoring was carried out on 23rd January and 20th February 1999. No significant levels of noise were measured at the boundary with the exception of one level of 60dBA which occurred as a result of the excavator being located close by at the time. Noise emission limit values have been set in Schedule F of the proposed decision.

(4) Emissions to Groundwater

Three groundwater monitoring boreholes (GW1, GW2 and GW3) were drilled in March 1999 and monitored upon completion. GW1 and GW2 are located down-gradient of the site and GW3 within the waste. The monitoring results show that GW1 & GW2 are not contaminated. The proposed decision stipulates that two more groundwater monitoring boreholes be drilled within six months of the date of grant of the licence to cater for monitoring requirements for the proposed new cells.

(5) Emissions to Surface Water

The Ahboy River is located approximately 160m from the existing landfill. Two tributaries of the Ahboy River run adjacent to the site, one runs north to south and the other runs south to east. There is a constructed open surface water drain running outside the north eastern boundary of the site and a network surface drain within the current landfilling area. Surface water sampling was carried out at seven locations (SW1 to SW7) around the site.

SW6 is a point where leachate from the current public tipping area is discharging to adjacent land. Analysis carried out on the 23/03/99 resulted in a COD of 1100mg/l and a BOD of 110mg/l. This shows the same characteristics as leachate that was monitored at the site and it is clear that leachate is discharging into the stream at this point. The proposed decision requires leachate sumps to be installed at this location and leachate pumped to the storage lagoon.

At the two downstream monitoring locations, SW1 and SW3, the ammonia and alkalinity levels were slightly elevated at 3.47mg/l and 1.15mg/l ammonia as N and 50mg/l and 32mg/l alkalinity. Otherwise the locations SW1, to SW5 & SW7 were of relatively good quality. Further, five leachate collection sumps are to be installed in the existing unlined landfill in order to prevent leachate migrating into surface water.

(6) Other Significant Environmental Impacts of the Development

None

(7) Waste Management, Air Quality and Water Quality Plans

Waste Management Plan for Cork County was adopted in May 1999. It states that Derryconnell has applied for a waste licence to accept 14,000 tpa. and has a further capacity for 71,000 tonnes.

(8) Submissions/Complaints

Two valid submissions were made in relation to this application. Appendix 2 contains a list of the submitters.

1. Submission from Audrey Hallinan, (Received on 22nd March 1999)

The main issue in this submission is the poor visual impact of the site. A request was made that adequate screening be put in place. Mrs Hallinan stressed the point that she and her husband are in their seventies and have moved back to Cork after 50 years in England. They had been informed she says in the submission that the landfill would be closing and are dismayed at the prospect of keeping it open for some years more.

Response

Condition 4.22 requires the licensee to install boundary planting within six months of the date of grant of the licence. In addition security fencing and litter control measures are specified in the proposed decision.

2. Submission from Patricia O'Connor, Senior Environmental Officer, South Western Regional Fisheries Board (Received on 27th September 1999)

Leachate management is the main issue in this submission. Ms O'Connor requests on behalf of the Fisheries Board that leachate and other forms of liquid contamination are controlled and disposed of effectively and without damage to the aquatic environment. She requests that liquid effluent from the site be treated to an acceptable standard prior to discharge to coastal/inland waters and if Ballydehob does not have the capacity to treat the effluent that another option be made available.

Response

Leachate will be managed through the restoration of the existing landfill and lining of the proposed cells. (See Condition 4.15 of the proposed decision). Leachate from both the existing and proposed areas will be pumped into the storage lagoon and tankered off site for treatment in Ballydehob wastewater treatment works and not the Ballydehob local authority foul sewer as stated in the submission. Schedule F.4 of the proposed decision limits the amount of leachate to be tankered to Ballydehob treatment works. Leachate in excess of this amount will be tankered to another treatment works with available capacity, to be agreed in advance with the Agency.

Signed:_____

Sinead McMahon
Inspector,
Environmental Management & Planning

Dated:_____

Appendix 1

Location Map and Layout Plan

Appendix 2

List of persons making submissions

1. Audrey Hallinan
Cnoc cior,
Kilbronogue,
Schull,
Co. Cork

2. Patricia O'Connor
Senior Environmental Officer,
South Western Regional Fisheries Board,
Nevilles Terrace,
Masseytown,
Co. Cork