

INSPECTORS REPORT ON A LICENCE APPLICATION

To:	DIRECTOR PADRAIC LARKIN	
From:	PERNILLE HERMANSEN	- LICENSING UNIT
Date:	27/01/05	
RE:	APPLICATION FOR REVIEW OF A WASTE LICENCE FROM CAVAN COUNTY COUNCIL, LICENCE REGISTER 77-2	

Application Details

Type of facility:	Integrated Waste Management Facility (Landfill, Civic Amenity facility (CAF) and Materials Recovery Facility)
Class(es) of Activity (P = principal activity):	3 rd Schedule: Classes 1, 4, 5 (P), 7, 11, 12 and 13 4 th Schedule: Classes 1, 2, 3, 4, 9, 10, 11, 12 and 13
Quantity of waste managed per annum:	90,000 t
Classes of Waste:	Household waste, commercial waste, construction & demolition waste, green waste, meat & bonemeal waste (MBM), street cleaning waste and household hazardous waste (to be collected at CAF)
Location of facility:	Corranure Landfill, Cootehill Road, Cavan.
Licence application received:	1/12/03
Third Party submissions:	Three
EIS Required:	Yes
Article 14 Notices sent:	28/06/04
Article 14 compliance date:	6/10/04
Article 16 Notices sent:	28/06/04
Article 16 Compliance date:	29/11/04
Site Inspection:	Art 8 notice issued on 14/01/04 12/03/04 Site notice inspection by Pernille Hermansen, OLG. Site notice compliant. 18/11/04 Site inspection by Caoimhin Nolan, OEE and PH, OLG

1. Facility

This report relates to an application by Cavan County Council (CCC) for a review of the existing waste licence for Corranure Landfill (WL 77-1, issued on 12/6/01). The existing facility comprises approximately 7 hectares consisting of a capped and unlined landfill phase which the applicant refers to as the remediated landfill as well as Phases 1 and 2. The proposed development will consist of a lined extension (Phase 3) on lands owned by CCC north of the existing landfill. The landfill extension area will cover an area of 4 ha. and will be capable of accepting approximately 5 years filling with each cell having a lifetime of approximately 2.5 years at an input rate of 90,000 tpa.

At present, filling is taking place in Phase 1. The applicant expects to commence filling in Phase 2 in 2005 which has a disposal capacity for 72,000 tonnes. The applicant proposes that filling will commence in Phase 3 in 2006 with a total capacity of 478,000 tonnes and is expected to be completed in 2011.

The area surrounding the landfill facility is used for agricultural purposes, mainly grazing. The southern perimeter of the facility is adjacent to the Regional Road R188 Cavan–Cootehill Road. There are about 12 residences within 500 m of the existing site boundary. The four houses closest to the facility are owned by CCC, with one of the houses being unoccupied. Two of the inhabited houses are adjacent to the facility entrance road and one house is about 180m east of the facility.

The principle amendments proposed in the review application to the existing waste licence (WL 77-1) are to increase the tonnage of waste accepted from 32,050 to 90,000 tpa and to develop Phase 3 extension with future cells in the lands adjacent to the existing landfill.

Classes 1, 4, 5, 7, 11, 12 and 13 of the Third Schedule and Classes 1, 2, 3, 4, 9, 10, 11, 12 and 13 of the Fourth Schedule were applied for in the application. Class 5 of the Third Schedule is the principal activity. The following classes have been refused: Classes 1 and 10 of the Fourth Schedule. These activities as described by the applicant are more appropriate to, and acceptable under some of the other licensed activities as set in the RD. The applicant is not going to carry out solvent reclamation or regeneration, rather solvents will be collected and stored at the civic waste facility prior to recovery off-site. This activity is covered under Class 13 of the Fourth Schedule.

The applicant proposes to maintain the hours as set in the existing licence for Monday to Friday and extend the hours of operation on Saturdays and the hours of waste acceptance as shown below. The RD allows for this (Condition 1).

	Existing Hours (WL 77-1)	Proposed hours for review*
Hours of operation	8:00 – 17:30 Monday to Friday 8:30 – 13:00 Saturday	8:00 – 17:30 Monday to Friday 8:00 – 13:00 Saturday
Hours of waste acceptance	8:30 – 16:30 Monday to Friday 9:00 – 12:00 Saturday	8:00 – 16:30 Monday to Friday 8:00 – 12:30 Saturday

*The proposed operational and waste acceptance hours are the same for both the landfill and the civic waste facility.

Infrastructure Development

The installation of infrastructure at the facility is controlled by Condition 3 of the RD.

An Bord Pleanála granted an approval for the proposed development on 18/6/04 including three conditions. One of these conditions states that there shall be no landfill activities on the site until road works improvements have been carried out on R188. This control is not duplicated herein.

Phases 1, 2 and 3 are/will be engineered cells with composite lining systems and leachate and landfill gas collection systems. The proposed development (Phase 3) involves the construction of two separate lined cells (Cell 3 and 4) on lands to the north of Phase 2.

Since the granting of the existing waste licence (WL 77-1), the original landfill (hereafter referred to as the remediated landfill) has been regraded and capped with an impermeable capping system as per the conditions of the existing waste licence. Four boreholes have been installed in the remediated landfill for monitoring of leachate and another four boreholes have been installed for the collection of landfill gas. The landfill gas is extracted to an enclosed flare. The Corranure Stream near the landfill was realigned to divert surface water and a leachate interceptor drain was placed around the perimeter of the remediated landfill. Furthermore an administration building, civic amenity site, wheelwash, weighbridge and waste inspection/quarantine area have also been provided at the facility. The applicant has also constructed a new building (approximately 195m²) adjacent to the waste inspection/quarantine area where dry recyclables are being baled prior to transfer off-site for recovery. The R188 Road which provides access to the facility has been upgraded with a deceleration lane and a new entrance into the facility.

2. Operational Description

The applicant proposes to accept 90,000 tonnes per annum consisting of household waste (40,000), commercial waste (20,000 tonnes), construction and demolition waste (5,000 tonnes), green waste (2,000 tonnes), meat & bonemeal waste (20,000 tonnes), street cleaning residues (900 tonnes) and household hazardous waste (100 tonnes). The RD allows the facility to accept up to 90,000 tonnes per annum detailed in Schedule A. The annual tonnages of the various waste types can be changed with the agreement of the Agency as long as the total annual tonnage remains the same.

The Animal By-Product Regulation 1774/2002 permits the disposal of MBM, however according to veterinary advisors “relaxation of the current veterinary controls is inappropriate at this time and that landfill is not a viable or realistic option for disposal of MBM”¹. The RD does not allow for the acceptance of MBM waste for disposal at the facility, as it is not considered to be BAT. The applicant has requested in the Article 14 reply received 30/8/04 that if the acceptance of MBM for disposal is not approved the additional intake of 20,000 tpa be divided between household and commercial waste with 10,000 tpa additional waste to each waste category which is acceptable.

The facility also entails a civic waste facility which will allow for acceptance of the following waste types: glass, plastic containers, newspapers, tetra pak containers, paper, aluminium and steel cans, textiles, cardboard and household hazardous waste

¹ Report of the Interdepartmental/Agency Committee on Disposal Options for Meat and Bonemeal (MBM). 4th of December 2003. Department of Agriculture and Food.

such as fluorescent tubes, waste oils, oil filters, waste batteries etc. The applicant estimates that about 500 tonnes of waste will be accepted for recycling at the facility. In addition the applicant proposes to accept 2,000 tpa green waste at the civic waste facility for off-site composting. The RD requires that daily odour inspections shall be carried out at the designated area for green waste storage at the civic waste facility (Condition 9). The applicant states that composting will not be carried out at the facility, so the conditions in the existing licence (WL 77-1) in relation to on-site composting are not retained in this RD.

3. Use of Resources

The applicant details that electricity is used on site for lighting and heating. Fuel will be used for site vehicles and an on-site generator. The applicant has not included any details as to the proposed quantities of fuel and electricity to be used at the facility.

4. Emissions

4.1 Air

To this date four landfill gas boreholes (G-01, G-02, G-03 and G-04) have been installed in the remediated landfill phase with collection system attached to the enclosed flare. The applicant tried to commission the flare in December 2004 but was unsuccessful due to lack of gas (see below). The flare is now scheduled for commission by the end of January 2005.

According to the applicant the landfill gas monitoring results indicate low levels of gas production in the extraction and perimeter boreholes which is attributed to high levels of leachate in the waste body suppressing gas production. During the site inspection on 18/11/04 monitoring results were presented showing leachate levels from 5 to 9 m in the wells in the remediated landfill and 4 to 5 m leachate in the collection chamber for the active cell (Phase 1).

Schedule D sets the monitoring requirements for landfill gas. Condition 3 requires that a monitoring proposal for monitoring of landfill gas in Phases 1, 2 and 3 prior to the installation of the gas collection system be submitted by the applicant for agreement by the Agency within six months. Furthermore the applicant shall submit a proposal for installation of additional perimeter landfill gas monitoring boreholes as there are no perimeter boreholes on the western boundary of the landfill. The trigger levels for landfill gas are set out in Condition 6 of the RD.

4.2 Emissions to Sewer

A Section 52 consent has been obtained from CCC. CCC has no changes to the conditions in relation to sewer discharge as set in the existing licence (WL 77-1). The conditions in the existing licence regarding sewer discharges have been duplicated in this RD (Condition 6). The existing licence does not contain any conditions in relation to emission limit values for discharges to sewer as well as any Sanitary Authority charges.

Collected leachate and sanitary wastewater shall be discharged to the leachate storage lagoon which will discharge to the foul sewer and treated at Cavan Wastewater Treatment Plant (CWWTP) as proposed by the applicant. In addition the RD requires that drainage from the waste inspection/quarantine areas as well as the wheel wash be discharged to the leachate storage lagoon as required under the current licence (WL 77-1) (Condition 3).

The applicant proposes to monitor the discharge to the sewer at the leachate lagoon. The RD allows for this and requires the monitoring to be carried out on a quarterly basis. Monitoring requirements are set under Condition 9 and Schedule D.

Leachate removal:

In Phase 3 the leachate will be collected in the leachate drainage blanket which will be part of the lining system and flow to a collection chamber constructed at the lowest point of each cell. The leachate will be pumped from each of the collection chambers to a leachate storage lagoon. According to the applicant the estimated maximum volume of leachate produced for the existing and future extensions to the landfill equals 68 m³/day. The applicant has proposed to extend the existing lagoon from 270 m³ to 480 m³ in order that the lagoon will provide 7 days storage in accordance with the existing licence (77-1). The RD requires that the proposed extended leachate storage lagoon shall be provided within twelve months of the date of grant of this licence (Condition 3). The RD also requires that the applicant submits a proposal detailing how leachate collection and storage will be managed during the construction of the lagoon extension. The applicant has proposed that the capacity of the rising main is assessed and a full plant audit to be undertaken before any additional leachate is discharged to the CWWTP to ensure on-going proper leachate management when the volume of leachate produced at the facility increases (Condition 3).

The applicant has submitted details of leachate monitoring showing that the concentrations of the parameters monitored for (pH, Temperature, Electrical Conductivity, Ammonia, COD, BOD, Total Oxidised Nitrogen and Chloride) are within the expected ranges for a methanogenic leachate. The RD requires that leachate monitoring locations within the cells (Phases 1, 2 and 3) be agreed with the Agency (Condition 3 and Schedule D). The RD requires that the visual inspection and leachate levels be monitored in all leachate monitoring locations. The leachate quality shall be measured in the leachate storage lagoon and two locations within the waste body (Schedule D). A telemetry system shall be installed for the recording of leachate levels in the lined cells and the leachate storage lagoon (Condition 3).

4.3 Emissions to Surface Waters

The proposed landfill extension lies in the catchment of two streams, the Corranure Stream and Lismagratty Stream, both of which are tributaries of the Annalee River. The Corranure Stream flows for approximately 4 km to Cavan town and is culverted under Cavan town to its confluence with Cavan River, which discharges into Annalee River. The Lismagratty Stream joins the Annalee River about 5 km downstream of the landfill facility. The Annalee River discharges to Lough Oughter, which in turn drains via the Erne River into Upper and Lower Loughs Erne.

The RD requires that surface water run-off perimeter drains be installed at the facility (Condition 3). Surface water run-off from the facility is currently being discharged to Corranure Stream which runs at the southern boundary of the facility. Surface water run-off from Phases 2 and 3 is proposed to be discharged to the Lismagratty stream at the northern boundary of the facility. A silt trap and oil interceptor is installed at the discharge point to the Corranure Stream. The RD requires that silt traps and Class I full retention oil interceptors fitted with manual shut-off valve are installed and maintained at the discharge point to Corranure Stream as the surface water run-off from the impermeable surfaces around the administration building and the civic waste facility discharges to this point (Condition 3). During the site inspection on 18/11/04

it was observed that large amount of suspended solids from the landfill were entering the surrounding surface water catchment. An adequately sized silt trap shall be installed at the northern boundary discharge point to reduce suspended solids being emitted into Lismagratty Stream (Condition 3).

Since the granting of the licence, infrastructure has been installed in 2001/2002 to improve the surface water quality at the facility. The mitigation measures include the realignment and piping of the Corranure Stream to prevent leachate entering the stream, capping of the landfill to reduce leachate generation and construction of leachate interceptor drains to collect the leachate. However the monitoring of the stream still show contamination is occurring from the remediated landfill.

Chemical surface water monitoring results comparing results from 1999 with results from 2002 which show an improvement in the surface water quality for some key parameters (Ammonia, BOD and Conductivity) although the water quality is not below the salmonid standards of the Freshwater Fish Directive (78/659/EEC) for parameters such as Ammonium and BOD.

The biological assessment results for Corranure Streams show that the stream is still seriously polluted. The rating has changed from Q1 to Q2 immediately downstream of the landfill. The applicant has submitted results for Lismagratty stream showing that the stream is currently moderately polluted with a rating of Q3 at all five monitoring points starting immediately downstream of the proposed extension to about 3.3km downstream of the facility.

The applicant has also submitted results showing concentrations of heavy metals in sediments samples from Corranure and Lismagratty streams. However it is not clear whether acceptable international standards have been used in making the assessment. Based on the information submitted it is not possible to make an informed assessment as to whether the sediments are contaminated to the extent as where the fauna in the streams would be affected (see submission by the Northern Regional Fisheries Board below). The toxicity of the sediments cannot simply be determined by measuring the concentrations of the heavy metals: physiochemical quality parameters such as sediment grain size, flow, concentrations of organic carbon, ammonia and sulphides etc., may affect sediment contaminant concentrations. Therefore I feel it is necessary that a detailed assessment of the sediments of both Corranure Stream and Lismagratty Stream be carried out as detailed in the Landfill Manuals, Landfill Monitoring, 2nd Edition. The parameters to be analysed should include as a minimum hydrocarbons, PCBs, phenol as well as heavy metals (Schedule D).

To ensure that the remediated landfill is not causing further pollution of the surface water courses, the applicant is required to carry out remediation as part of the landfill conditioning plan in accordance with the Landfill Directive. The RD requires that an investigation assessment is carried out on the impacts on the Corranure and Lismagratty streams from the remediated landfill to include a full sediment and biological assessment and proposed further remediation including surface water and groundwater control and abatement as is necessary to prevent pollution of the streams (Condition 4). Results will indicate whether stream sediment has to be removed as part of the remediation project

The recommended decision requires that surface water monitoring is carried out at both Corranure Stream and Lismagratty Stream (Schedule D). The RD requires that a biological assessment of both streams is carried out within 6 months of the date of grant of licence in accordance with Condition 4.2 and annually thereafter (Condition 9 and Schedule D).

4.4 Emissions to ground/groundwater:

The Inspector's Report that accompanied the existing waste licence 77-1 outlines the geology and hydrogeology of the site. The applicant has submitted various results for the groundwater flow direction at the site. Recent monitoring results indicate that the groundwater flow direction is approximate northwards.

The formation levels for Phase 3 (poorly defined in the application) are set by Condition 3 to ensure sufficient in-situ clay remains, this can be amended with agreement of the Agency and will likely involve enhanced engineering solutions than prescribed owing to the proximity to bedrock aquifer. High groundwater table will present issues during construction there may be requirement for dewatering to relieve any undue hydrostatic pressures on the in-situ clay following excavation to formation level. The RD allows for groundwater extracted during the construction of Phase 3 to be discharged to the surface water drainage network (Condition 6). Prior to lining works being carried out at the proposed extension, the licensee shall submit a detailed groundwater management programme in the case of a high water table to include monitoring of the extracted groundwater for such parameter as suspended solids, electrical conductivity and ammonia etc. (Condition 3).

In the most recent groundwater monitoring report submitted June 2004, the applicant states that the groundwater sampled from the monitoring points on or in the immediate vicinity of the current landfill cell is considered to be of generally good chemical quality, although there is evidence of the downgradient groundwater monitoring point SA1 being influenced by the landfill activities, as slightly elevated concentrations of Electrical Conductivity (934 $\mu\text{S}/\text{cm}$), Iron (1.1 mg/l) and Sodium (51 mg/l) were detected. Furthermore the groundwater monitoring results shows that the bacteriological quality of the groundwater is poor for all boreholes at the facility (both up and downgradient wells) as well as in all monitored private wells surrounding the facility.

Groundwater monitoring requirements are established under Schedule D of the RD. The RD requires that the water quality is monitored in the existing wells GW01, GW03, R01/RC01, R02/RC02 and SA1. The applicant states that borehole GW02 (located between Phases 1 and 2) is being replaced by borehole R01/RC01 (downgradient of Phase 2). The RD requires the licensee to submit a monitoring proposal for monitoring of groundwater in selected down-gradient private wells within 500 m of the facility (Condition 9).

The RD requires groundwater trigger levels to be monitored in the following wells as proposed by the applicant: GW01 (Upgradient of the facility), R01/RC01 (downgradient of Phases 1 and 2) and GW03 (down gradient of Phase 3) (Schedule D and Condition 6). The recommended decision requires that the applicant submit a proposal for trigger levels for some key parameters not all parameters currently being monitored under the existing licence as proposed by the applicant (Condition 6).

4.5 Noise:

The applicant has submitted results from a noise survey carried out at two noise sensitive locations. NSL1 is a dwelling located 180m east of the facility and NSL2 is a dwelling located 430m to the west of the facility. The measured day time levels were L_{Aeq} 52 and 51 dB(A) at NSL1 and 44 dB(A) at NSL2. The applicant states that the noise levels measured were principally due to landfill operation and a small number of passing vehicles (NSL1) and distant traffic (NSL2).

The RD requires that noise emission is measured at the four boundary locations and specified noise sensitive locations (Schedule D). The RD requires that an updated proposal for monitoring of noise emission be submitted to the Agency prior to waste acceptance at Phase 3 (Condition 9). Schedule C sets the noise emission limit value to be measured at noise sensitive locations.

4.6 Nuisance:

Potential nuisances at the facility are controlled by Condition 7 of the RD.

Dust

The applicant has submitted results from four dust deposition surveys carried out during 2002 and 2003. The measured deposition rates measured at four boundary locations are less than the limit specified in the existing licence (WL 77-1), with the exception of location D1 for the June/July 2003 period where the measured level was 370 mg/m²/day. The applicant states that engineering works were being carried out near the western boundary during this monitoring period so that the dust deposition rate reported at this location was influenced by this short-term activity. Condition 9 of the RD requires the applicant to submit a revised dust monitoring programme to the Agency prior to commencement of waste acceptance at the proposed extension Phase 3. The dust monitoring requirements are set in Schedule D. The dust deposition level is set in Schedule C.

5. Restoration and Aftercare

The applicant states that the existing landfill site will remain at its present height of approximately 128 m O.D. The proposed extension to the north will be raised to a height of approximately 128.5 m O.D so it will be partially obscured by the existing landfill. Condition 4 of the RD requires that the facility shall not exceed 129.5mOD (Malin Head) as required under the existing licence.

Condition 5 of the RD requires that filled cells are permanently capped within twenty-four months of the cells having been filled to the required level. The RD requires that the restoration of Phases 1, 2 and 3 is completed twelve months after the installation of the permanent cap (Condition 4).

6. Cultural Heritage, Habitats & Protected Species

The nearest archaeological sites are two ringforts located in Lismagraty and Drumbo about 170m and 200m from the eastern and southwestern facility boundaries respectively. There is a possibility that the ringfort in Lismagraty could be prehistoric in origin. According to the applicant these facts suggest that further prehistoric deposits or remains will likely be encountered within the proposed landfill extension area. Condition 9 requires that the advice of the Heritage Section of the Department of the Environment, Heritage and Local Government be sought prior to development of any undisturbed area.

The applicant details that the site is not covered by any designations for conservation. The Cavan and Analee rivers both discharge into Lough Oughter which is designated as a pNHA and SPA. Lough Oughter and associated loughs are located within a 10km radius of the facility.

7. Waste Management and Water Quality Management Plans

The Waste Management Plan for North East Region (1999-2004) adopted by CCC in April 2000, identifies Corranure Landfill as providing medium to long term landfill capacity for the Region. The Draft County Cavan Water Quality Management Plan (January 1984) has been considered during the assessment of this application for a waste licence.

8. Environmental Impact Statement

I have examined and assessed the EIS and am satisfied that it complies with the EIA and Waste Licensing Regulations.

9. Compliance with Directives/Regulations

The facility falls under the scope of the IPPC and Landfill directives. In relation to the Groundwater Directive, the facility will not have any direct emission to groundwater.

10. Compliance Record

At the last audit carried out at the facility on 13/08/04 (Audit report attached) seven non-compliances and 18 observations were noted. Three of the non-compliances are in relation to landfill gas management. In particular the landfill gas flare was not operational and was causing odour nuisances. Two of the non-compliances relate to leachate management. The volume of leachate discharged to sewer is not recorded and the leachate levels are not measured in the lined cells. Furthermore leachate is not being abstracted from the remediated landfill.

11. Submissions

There were three submissions made in relation to this application.

11.1 Submission from Mr Brian McKeever, Principal Environmental Health Officer, North Eastern Health Board, Environmental Health Services, The Arcade, Main Street, Cavan, County Cavan.

Mr. McKeever makes three points in his submission.

- (i) Mr. McKeever states that the principal concern with the application is the proposal to dump 20,000 tons of meat and bone meal which will include both specified risk material and non specified risk material with the former being tested negative for BSE. The system of verification of the SRM as being negative for BSE is not outlined in detailed according to Mr. McKeever. Mr. McKeever states that it is imperative that proper controls and verification procedures are introduced and maintained to ensure that all meat and bone meat waste transported and dumped has tested negative for BSE.
- (ii) Mr. McKeever notes that the consultants quote in some detail from the Health Status Report of the North Eastern Health Board in support of their case that no relevant effects of this type of development have been evident on the health of the population of the North-East region. Furthermore he states that the Boards department of Public Health will likely be forwarding to the Agency some comments in relation to this matter.

Comment: The RD does not allow for the disposal of MBM waste at the facility as outlined above.

- (iii) Mr. McKeever states that it is important that the conditions of the licence and the supervision of the facility be such as to ensure protection of public health in

other relevant areas for example: groundwater protection, pest control and nuisance control.

Comment: Condition 3 of the RD requires that effective groundwater management infrastructure shall be provided and maintained at the facility at all times. Furthermore Condition 6 outlines that there shall be no direct emission to groundwater. Condition 7 of the RD ensures that potential nuisances at the facility are controlled.

11.2 Submission from Mr Edmund MacCabe, Drumbo, Cavan, County Cavan.

Mr. MacCabe makes two points in his submission.

- (i) Mr. MacCabe refers to enclosed correspondence concerning his complaints regarding the operation by Cavan County Council of the facility under its existing licence.

Comment: The correspondence that Mr. MacCabe refers to was not enclosed with the submission. This was noted in a letter issued on 29/01/04 by the Agency to Mr MacCabe. No further correspondence has been received from Mr MacCabe.

- (ii) Mr MacCabe states that he wishes to renew his complaints regarding bird soiling, litter and piling up of waste together with contamination of surface water drains.

Comment: See comment above regarding nuisance control. Condition 3 ensures that effective surface water management infrastructure is provided and maintained at the facility.

11.3 Submission from Dr. Áine Ní Shuilleabhain, Senior Fisheries Environmental Officer, Northern Regional Fisheries Board, Station Road, Ballyshannon, Co. Donegal.

Dr. Ní Shuilleabhain makes three points in her submission in relation to concerns of long term potential for leachate to reach surface waters especially having regard to the unknown mix of toxins which can arise from landfill containing domestic waste.

- (i) Dr. Ní Shuilleabhain notes a concern in relation to the described ongoing moderately polluted status of the Corranure Stream which has salmonid habitat.

Comment: This information has been taken into consideration during the drafting of the RD. As detailed above Condition 3 ensures surface water management control at the facility. Furthermore an extensive monitoring programme of the stream is to be carried out to monitor the pollution status of the stream (Conditions 4 and 9).

- (ii) It is noted that the Lismagratty stream is moderately polluted at all sites assessed in 2003. However the statement attributing this solely to non-point agricultural sources is not accepted. Dr. Ní Shuilleabhain submits details regarding the use of lands to the rear of the Corranure landfill for disposal and containment of sewage sludge and associated point source discharge, the subject to of court proceedings under Section 171 of the Fisheries Consolidation Act (1959 as Amended), is a likely significant contribution to this situation.

Comment: This has been taken into consideration when drafting the RD. The new extension (Phase 3) is a lined landfill phase with leachate and landfill gas collection

system. Condition 6 of the RD does not allow for emission of leachate, contaminated stormwater or wastewater into the surface water drains and courses.

- (iii) Dr. Ní Shuilleabhain raises a concern in relation to potential for bioaccumulation of toxins in fish and suggests that the sediments of both streams should be sampled and analysed for potential toxins and heavy metals. Depending on the results of these samples it is suggested that it might be appropriate to monitor fish for bioaccumulation of such chemicals. This could be potentially important in relation to edible fish (e.g. Brown Trout) which anglers remove.

Comment: Condition 4 requires the applicant to carry out a detailed sediment assessment in accordance with current guidance on methods for sampling and chemical analyses of contaminated sediment. Condition 9 enables the Agency to request further monitoring including possible monitoring of bioaccumulation of contaminants in fish, if needed, based on the results obtained from the sediment assessment.

12. Charges

The current charge for the existing licence (WL 77-2) is €14,513.00 set on 12 June 2001. The recommended decision requires that the applicant shall pay an annual contribution of €17,782.00 (Condition 13). The fee increase is due largely to an increase in the inspector daily fee.

13. Recommendation

I recommend that a licence be granted subject to the conditions set out in the attached RD and for the reasons as drafted.

In making the recommendation for a waste licence I have taken into account all information submitted as part of the application including the Environmental Impact Statement and the submissions.

I am satisfied, on the basis of the information available, that the waste activity, or activities, licensed hereunder will comply with the requirements of Section 40(4) of the Waste Management Acts, 1996-2003.

Signed

Pernille Hermansen
Inspector
Office of Licensing & Guidance

Procedural Note

In the event that no objections are received to the Proposed Decision on the application, a licence will be granted in accordance with Section 43(1) of the Waste Management Acts 1996-2003.

Appendix 1

Attached Documentation

- Audit of 13/08/04



LICENCE AUDIT REPORT

Corranure Landfill Facility	Visit No:	3
Mr. Frank Gibbons	Date of Audit:	13 August 2004
Corranure Landfill, Lismagratty & Corranure Townlands, Cootehill Road, Cavan	Register Number:	77-1
Lead Auditor: Ms Derval Devaney	Scheduled:	21/07/04
Inspector: Mr Caoimhin Nolan	Audit Reference Number (ARN):	77-1/04AR03DD
Audit Criteria: Licence Reg. No. 77-1	Issued:	12/06/2001

NOTIFICATION OF NON-COMPLIANCE

You have been found to be in non-compliance with the conditions of the Licence as set out in this Audit Report. You are required to undertake the corrective actions specified to close out the Non-Compliances and Observations raised in this Report or further enforcement action may be taken by the Agency.

In view of the above you are required to submit a schedule to the Agency within 14 working days of receipt of this Report detailing how the non-compliances and observations specified therein are to be rectified. Please quote the above Audit Reference Number in any future correspondence in relation to this Report. If you have any further queries please contact Mr Caoimhin Nolan at 094 904 8400.

The opening meeting commenced at 10.30am and the following were in attendance:

- Representing Cavan County Council:

Ms Sandra Smith, Facility Manager

- Representing the Environmental Protection Agency:

Ms Derval Devaney (Lead Auditor), and Mr Caoimhin Nolan (Auditor)

The lead auditor gave a brief introduction to the objectives and scope of the audit as outlined in the audit plan and to the procedure to be followed for the remainder of the audit. The agenda for the opening meeting as set out in the audit plan was adhered to.

The presentation was given by Ms. Sandra Smith. Ms Smith outlined the history of the site and the developments which have taken place to-date. Seven of the objectives and targets were identified some of which relate to increasing customer satisfaction and reduction of landfill odour, visual impact, provision of training, etc. New software has been installed for the weighbridge system. The landfill gas flare was installed in the last two weeks but not in

operation due to high leachate levels and malfunctioning of the leachate pumps. Staff will be required as part of the EMP to fill out an environmental quality indicator in relation to dust and other nuisances that may arise while on-site. The reduction of tonnages to landfill was one objective which was addressed through kerbside collection for recyclables and the “pay by bag” system. The development of Cell 2 was also an objective and this area is almost ready for lining. It is planned that works will be complete on Cell 2 by the end of 2004.

Progress on EMP implementation was considered satisfactory in many cases by the Audit team. However, many of the objectives and targets are conditions that are required by the licence. It was pointed out that the EMP should be concise and more specific to the environmental issues that are present on-site.

The last audit and site inspection report for the facility was also discussed on-site and there are some outstanding corrective actions due on these reports. These are mentioned in the observations section of the report.

Facility inspection and assessment

A tour of the facility was conducted, special attention was paid to the leachate lagoon, the landfill gas flare, the civic amenity area, the working face and construction of Cell 2, the height and slopes of old cells, surface water monitoring, leachate and landfill gas infrastructure.

Interviews

The following representatives were interviewed during the audit:

Name	Position	Issue
Mr Brendan Smith	Deputy manager	Weighbridge operation

Documentation

The following documentation was requested for review:

Record	Comment
Calibration records	Satisfactory
Procedure for tankering leachate off-site	Satisfactory
Emergency Response Procedure	See audit findings
Incident Records	See audit findings
Waste documents for landfill	See audit findings
Civic amenity material - outgoing	See audit findings
Leachate level monitoring	See audit findings
Landfill gas monitoring for 2004	See audit findings
Groundwater monitoring for 2004	See audit findings
Surface water monitoring for 2004	See audit findings
Complaints log	See audit findings

The closing meeting commenced at 5.00pm and the attendees were as at the opening meeting.

The Lead Auditor gave a summary of the audit result. The licensee was found to be in non-compliance with the Waste Licence in the matters and conditions listed below. Observations made during the audit (listed below), were discussed.

The licensee was briefed on the Agency's reporting procedures and was advised that an audit report would be issued.

Finally, the licensee was thanked for the courteous and co-operative manner of the staff, and the assistance and co-operation extended during the audit.

Non-Compliances observed during the Audit:

The audit process is a random sample on a particular day of a facility's compliance with some of its Waste licence conditions. Where a non-compliance against a particular condition has not been reported, this should not be construed to mean that there is full compliance with that condition of the licence.

The licensee was found to be in non-compliance with the requirements of the Waste licence in respect of the following (Schedule and Condition numbers refer to the Waste Licence):

1. The facility has exceeded the annual waste tonnage limit of 32,050. A total of 34,575 tonnes were accepted at the facility for disposal during the twelve month period from July 2003 to June 2004.

Condition No. 1.4 states:

"The quantity of wastes to be accepted for disposal at the landfill shall not exceed 30,050 tonnes per annum. Additionally 2,000 thousand tonnes per annum of biodegradable waste for composting may be accepted at the facility, unless otherwise agreed by the Agency. Waste, other than inert waste for the purpose of capping/restoration, shall only be accepted for disposal at the Existing Landfill until 31st October, 2001."

Corrective Action Required

The licensee must put in place measures to ensure that only waste quantities are accepted as outlined in Condition 1.4 of the licence.

2. HighTotal Coliforms were found at GW03 and SA1 sampled on 25/05/04 and 10/06/04. The Agency had not been notified of these incidents.

Condition No. 3.3 states:

"Unless otherwise instructed in writing by the Agency, the licensee shall:

- a) *notify the Agency as soon as practicable and in any case not later than 10.00 a.m. the following working day after the occurrence of any incident;*

(b) submit the written record required by this condition to the Agency as soon as practicable and in any case within five working days after the occurrence of any

incident”

Corrective Action Required

You are required to notify the Agency of any incident which occurs in accordance with Condition 3.3. Also, you are reminded to inform other relevant authorities (e.g. Fisheries Board) as required by Condition 3.3

3. Leachate was not being abstracted from the restored landfill. The licensee stated that the leachate pumps broke down on 16/07/04 and these had not been repaired.

Condition No. 4.15.3:

“Within twelve months of the date of grant of this licence, the licensee shall install and maintain a system for the active extraction of leachate from the Existing Landfill.”

Corrective Action Required

Repair pumps for leachate abstraction and provide for extra as back-up to ensure constant extraction of leachate from existing landfill.

4. The landfill gas flare, although installed, is not yet operational. The timeframe specified in the licence for provision of this infrastructure has passed.

Condition 4.16.1 states:

“Within fifteen months of the date of grant of this licence, a system for the active collection and flaring of landfill gas (from the Existing Landfill and Landfill Extension) shall be installed at the facility. The flare shall be of an enclosed type design and shall comply with the emission limits in Schedule F: Emission Limits of this licence.”

Corrective Action Required

Active collection and flaring of landfill gas is essential to meeting environmental compliance at the facility. The landfill flare should be commissioned at once and put in place measures to ensure that the landfill gas flare is operational at all times as required by Condition 4.16 of your licence.

5. The assessment of the utilisation of landfill gas as an energy resource has not been submitted to the Agency.

Condition No. 4.16.6 states:

“Within twenty four months of the date of grant of licence, the licensee shall submit an assessment of whether the utilisation of landfill gas as an energy resource is feasible. If feasible such a system shall be installed within a timeframe agreed with the Agency.”

Corrective Action Required

Submit the utilisation of landfill gas report to the Agency for assessment and approval.

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6. Odours arising from landfill gas were causing a nuisance outside the boundary (e.g. on the public road) on the day of the audit.

Condition No. 7.3

“The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary”.

Put in place measures to ensure that odour nuisance outside the boundary of the landfill does not occur. Ensure the flare is operational.

7. Leachate levels in the lined cells were not being recorded. Leachate flow/volume to sewer is also not recorded daily at P6/V6.

Condition No. 9.1:

“The licensee shall carry out such monitoring and at such locations and frequencies as set out in Schedule E: Monitoring of this licence and as specified in the Conditions of this licence.”

Corrective Action Required

Carry out monitoring of leachate as specified in Condition 9.1 to show compliance with Condition 4.15.6.

Audit Observations:

While these observations do not constitute non-compliances with any condition of the licence, they should be addressed by the licensee in order to improve the environmental performance of the facility and reported back to the Agency in accordance with the request under action required below.

1. Submit to the Agency the bunding proposal report completed by MCOS for the waste inspection and quarantine area.
 2. Submit details on the outcome of consultation with the Sanitary Services Section of Cavan Co.Co. in relation to leachate acceptance at the Waste Water Treatment Plant. Include in your submission an assessment of the need for a methane stripping plant.
 3. Submit surface water and foul waste network drainage maps completed by MCOS for entire facility. Colour code the drainage network system.
 4. In relation to the last site inspection report (see cover letter Ref. NC/10/CN dated 22/07/04), submit the outstanding groundwater report completed by MCOS. Submit complete SEW proposals for flare and landfill gas management system. Complete CCTV survey of the pipework on-site.
 5. Install a CCTV camera on-site. Put in place a procedure, which relates to the holding of confiscated waste/vehicles.
 6. Investigate surface water contamination at K4 and SW1. Only sample when there is a true representation of discharge to surface water. In relation to upstream and downstream sampling submit to the Agency alternative sampling points, if necessary, that may have more flow in periods during dry weather spells.
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7. Submit the stability assessment and topographical report, which are now complete.
 8. Label all landfill gas wells in the restored landfilled section and include these wells in the landfill gas monitoring network. Ensure all monitoring points are labelled at the facility.
 9. Update the complaints log to reflect Agency correspondence dated 29/04/04 (ref: CC04CN). Any complaints sent by the Agency should be recorded on the facility's complaints log.
 10. Follow up any outstanding incidents without delay. The corrective action on the last incident dated 16/07/04 in relation to the malfunction of pumps at the leachate wells was still not complete on the day of the audit. In future, all incident records should have an individual record number assigned to ease the tracking of an incident.
 11. In relation to the incoming waste records there was no record detailing what member of staff checked the load. Ensure that waste checks at the working face are recorded in accordance with condition 3.10.
 12. In relation to wastes sent off-site for disposal/recovery (a) some C1 forms were illegible (e.g. B028275 for florescent tubes), (b) the attachment on some C1 forms, showing weight and details of transporter for that consignment, had no link back to that C1 form (e.g. B0167851 for Johnston Logistics collection on 14/07/04 no date or C1 code on the attachment) (c) there was no weight or vehicle number recorded for the green waste going off-site to NWP recycling on 26/02/04 (Doc. Ref. No: 13136) (d) you are required to have the completed C1 forms on -file.
 13. Update the Emergency Response Procedure to include EPA contact details in the event of an explosion or incident on-site.
 14. The leachate level monitoring data is not being submitted to the Agency. Submit levels and tabulate them in an easily interpretive manner so that one can identify the depth of leachate in each well.
 15. Complete and document the training in relation to the flare's operation and control when up and running.
 16. Hoof marks were evident on Cell 2 (constructional phase) of the landfill. Maintain security and stock-proof fencing along the facilities boundary.
 17. A man-made surface water pond was evident at Cell 2. Submit proposals for the management of surface water for Phase II as an SEW. Your attention is drawn to the requirements specified in the Agency's correspondence of 06/11/03 Ref: AK10EM). Include in the report additional monitoring to be carried out during the construction works. It is fundamental that effective surface water control is in place during the construction works at the facility.
 18. Leachate break-outs were noted during the site tour along the steep western slope (near dust sampling point D1). Provide for its collection and/or diversion back into the waste body.
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General comment:

The Audit team considers that the facility's management needs to prioritise works that need to be carried out to completion in order to meet conditions of their licence which has environmental significance. The Audit team considers that the landfill gas and leachate management are the main issues which require immediate attention. Also the reporting and closing-out of incidents, odour nuisance, compliant logs and waste records must be addressed. A document management system could perhaps be set up at the facility so as to ensure the submission of reports (e.g. SEWs report, Quarantine/inspection area report/landfill gas use as energy resource report) to the Agency on a timely manner in order to comply with your licence.

Many of the non-compliances that were raised in last year's audit have not been adequately addressed to date therefore the Agency considers that Cavan Co. Co. must show commitment to their waste licence and the outstanding issues in relation to landfill gas and leachate management, otherwise the Agency will have no option but to take further action in relation to these outstanding matters.

As outlined during the closing meeting the licensee should achieve compliance with those conditions found to be in non-compliance during the course of the audit. The licensee should inform the Agency of the actions taken to close out the Action Requests raised in this audit report. These actions will be verified during subsequent audits.

**Report prepared
by:**

Derval Devaney

Reviewed by:

Michael Henry

Date:

16/09/04

Date:

16/09/04
