

## **INSPECTORS REPORT**

### **WASTE LICENCE REGISTER NUMBER 77-1**

#### **Cavan County Council application to operate Corranure landfill.**

#### **Inspector's Recommendation: To grant a Waste licence subject to conditions.**

##### **(1) Introduction:**

Corranure landfill is an existing facility located in the townlands of Corranure and Lismagratty on the northern side of the Cavan to Cootehill road (R188), approximately 3.5 Km from Cavan town. The facility is located in a rural setting, and there are several residences located within 250 metres of its boundary. Plans showing the location and layout of the facility are provided in Appendix 1.

This existing 3.0 hectare landfill (hereafter known as the Existing Landfill) receives mostly municipal waste. A small river, Corranure stream, currently runs alongside the Existing Landfill. It operates on a dilute and disperse basis, and as a result leachate is escaping through the side walls/base into surface waters and groundwater. There have been complaints about its operation concerning nuisances, surfacewater and groundwater contamination. It is proposed to close, remediate and restore this area and move waste disposal activities to a lined area (hereafter known as the Landfill Extension) which would be situated immediately adjacent to the existing facility. A civic waste facility will also be provided.

The unlined Existing Landfill is causing contamination of the adjacent Corranure stream. An analysis of leachate taken from the Existing Landfill demonstrated the presence of List I and II substances. As the base of the unlined Existing Landfill is below the water table, this indicates a direct discharge of these substances to groundwater. However, these substances are present in the groundwater in so small a quantity as to obviate present or future danger of deterioration of the quality of the water in the aquifer (Local Government (Water Pollution) (Amendment) Regulations 1999: S.I. No. 42 of 1999). However, contamination of groundwater is occurring as is evidenced by the presence of cadmium, cyanide, phenols, lead and chromium in downgradient boreholes. Therefore Condition 1.4 restricts waste disposal into the Existing Landfill to nine months following the issuing of the licence in order to ensure early completion and capping of this area. This will minimise leachate production and reduce contamination of groundwater. Condition 5 also prohibits the disposal of sludges in the Existing Landfill. Once this area is filled, Condition 4.17 requires it to be capped within 12 months.

The Landfill Extension will be constructed immediately upon grant of licence in order to receive waste as soon as possible thereafter. A geophysical survey has indicated the possible presence of a fracture zone in the bedrock in the area of the Landfill Extension. However, the depth of overburden in this area would be some 15 metres post construction, and therefore no risk to groundwater is envisaged. The applicant envisages that the Landfill Extension will accept waste until approximately 2008, though the exact date will be defined by when the final restoration height is achieved. Once each cell has been filled, it will be capped prior to restoration to tree and wildflower areas.

Classes 2 and 6 of the Third Schedule and Class 8 of the Fourth Schedule of the Waste Management Act 1996 are refused in the proposed decision as it is considered that the disposal of sludges, composting of green waste and the collection of waste oils in the civic waste facility (to which these classes refer) are adequately covered in other classes specified in the proposed decision.

The applicant failed to answer all the queries raised by the Agency in an Article 16(1) notice. Consequently an Article 16(4) notice was issued, but again the applicant failed to supply the all information requested in the Article 16(1) notice. However, once Article 16(4) is used the Agency may proceed to make a decision on the application.

<b>Quantity of waste (tpa)</b>	32,050
<b>Environmental Impact Statement Required</b>	Yes
<b>Number of Submissions Received</b>	25

#### **SITE VISITS:**

<b>DATE</b>	<b>PURPOSE</b>	<b>PERSONNEL</b>	<b>OBSERVATIONS</b>
18/1/99	Site notice inspection	E. Merriman	Notice compliant
22/6/00	Site familiarisation	E. Merriman, K. Reynolds	Existing Landfill almost full and expanding northwards.

#### **(2) Facility Development**

The Existing Landfill is unlined. It is causing contamination of groundwater and the adjacent Corranure stream. Condition 1.4 restricts waste deposition into the Existing Landfill to nine months only and this will allow for the achievement of restoration levels (Condition 8.3) and the development of the Landfill Extension. Remediation of the Existing Landfill will consist of the following: diversion of Corranure stream into a culvert in order to preclude leachate infiltration from the Existing Landfill, the installation of a leachate interceptor drain around the Existing Landfill and additional active leachate extraction, permanent capping and restoration of the existing landfill.

The Landfill Extension, which consists of two cells, will be lined (Condition 4). Condition 4 also requires the installation of perimeter fencing, a buffer strip incorporating a berm, a weighbridge, a wheelwash, a leachate storage lagoon and landfill gas management infrastructure (for both the Existing Landfill and the proposed Landfill Extension), surface water control, a waste inspection and quarantine area, an office, improvements to the junction with the R188 road, improved monitoring infrastructure and bunded fuel storage. Condition 8.1 requires restoration of the Landfill Extension upon completion.

A civic waste facility is to be provided within nine months of date of grant of the licence (Condition 4). The applicant proposes recovery of a limited number of waste types in the civic waste facility, and Condition 5 requires a report on the recovery of other waste types.

The Proposed Decision also provides for development of a 2,000 tonne per annum composting facility. Condition 5 requires a proposal from the applicant for the agreement of the Agency.

**(3) Waste Types and Quantities**

**Projections of quantities & types of wastes to be accepted at the facility for disposal:**

YEAR	NON-HAZARDOUS WASTE (tpa)
2000	25373
2001	26134
2002	26917
2003	27725
2004	28557
2005	28414
2006	30050

Additionally 2,000 tonnes per annum of biodegradable waste may be accepted for composting and other wastes (Condition 5) may be accepted for recovery at the Civic Waste Facility. Some hazardous waste such as waste oil will be accepted at the civic waste facility. However, these will be removed to authorised facilities for recovery.

**(4) Emissions to Air**

**Landfill Gas:** The Existing Landfill has no gas control system. There is little evidence of gas migration. Nonetheless, with the advent of the Landfill Extension and the projected growth in waste intake, an active gas management system is required. The applicant is required to undertake an assessment of the feasibility of energy generation by landfill gas combustion (Condition 4). Condition 9 of the proposed decision requires landfill gas monitoring while Condition 7 sets trigger levels for landfill gas and emission limit values for the flarestack.

**Odours:** Odours associated with the landfill will be minimised by the covering of waste, the installation of an active landfill gas extraction system for both the Existing Landfill and the Landfill Extension, and the requirement to dispose of treated sludge into trenches which are then immediately covered. Potential nuisances are also controlled by Condition 6 of the proposed decision.

**Noise:** A noise survey of the Existing Landfill activities and nearby noise sensitive locations (private residences) indicated that the existing noise environment is principally influenced by traffic on the adjacent R188 road, although background noise levels at one noise sensitive location, NSL2, are influenced by landfill plant. Condition 4 requires the construction of a screening berm in the buffer zone and perimeter planting in order to mitigate, inter alia, noise emissions. Condition 7 sets noise emission limit values for noise sensitive locations. Condition 9.1 requires that, in light of the relocation of waste activities northwards, additional perimeter and noise sensitive monitoring locations be provided.

**Dust:** Dust emissions will be controlled by the proper handling and compaction of the waste (Condition 5), together with the surfacing of the access and most internal roads, the installation of a wheelwash (Condition 4), and spraying roads with water as required (Condition 6). Schedule E sets forth monitoring requirements while Schedule F sets an emission limit value for dust deposition.

**Aerosols:** Leachate recirculation can only occur into lined cells with the prior agreement of the Agency (Condition 4). No leachate treatment is proposed on-site, and therefore aerosol generation should be minimal.

#### **(5) Emissions to Groundwater**

The facility is located on green to grey, medium to coarse grained greywackes with subordinate shales. Overburden consists of stiff to hard, brown, clayey, sandy, gravely silt. Groundwater flow is generally from the southeast towards the northwest.

**Existing Landfill:** List I and II substances these have been detected in downgradient groundwater monitoring boreholes. The Existing Landfill is located within the groundwater zone of contribution to PW5, a council owned well used as the potable supply to an adjacent residence and the levels of bacteria, phenols and iron have exceeded the Maximum Allowable Concentrations of the European Communities (Quality of water intended for human consumption) Regulations, 1988 (SI No. 81 of 1998). Therefore the proposed decision requires the provision of an alternative potable supply to this residence. Phenols and/or bacteria have also been detected in three other private wells (PW2, PW3 and PW4) but these are apparently located upgradient of the Existing Landfill. Further monitoring of these wells will allow the source of this contamination to be established (Condition 9).

**Proposed Landfill Extension:** Overburden depths across the proposed Landfill Extension area are greater than 10 metres and have a low/moderate permeability. The bedrock is classified as a poor generally unproductive aquifer. Therefore the Groundwater Protection Response matrix (DoELG, EPA and GSI, 1999) for the proposed Landfill Extension is R2<sup>1</sup> and this implies that the site is generally acceptable.

#### **(6) Emissions to Surface Waters**

The facility straddles the watershed between two small streams, a tributary of Analee River and a tributary of Cavan River known as Corranure stream (also known as the Kinneypottle). The Cavan and Analee rivers both discharge into Lough Oughter. This is an important coarse fishing lake, which is designated as a sensitive area under the Environmental Protection Agency Act, 1992 (Urban Waste Water Treatment) Regulations, 1994 (S.I. No. 419 of 1994), a proposed National Heritage Area and a Special Protection Area.

A fisheries survey of Corranure Stream found no game or coarse fish at five downstream sites. The absence of coarse fish species such as eels and sticklebacks is attributed to pollution from the Existing Landfill. The Q-rating for the stream, which is a measure of biological water quality, varies from 1 (grossly polluted) 0.2 kilometres downstream of the landfill to 2-3 (moderately polluted) 2 to 3 kilometres downstream

of the landfill. The proposed decision requires the implementation of a number of leachate management measures which should result in an improvement in the water quality of Corranure stream. A surface water control and management programme is required under the proposed decision, while baseline surveys (followed by ongoing routine monitoring) of the Analee stream prior to waste activities commencing in the proposed Landfill Extension are also required (Cell 2 of the Landfill Extension lies within the catchment of this stream).

Collected leachate from the Existing Landfill and the Landfill Extension will be pumped to Cavan Wastewater Treatment Plant as proposed by the applicant or agreed alternative (Condition 7.7.). In response to a Section 52 notice regarding this discharge, no conditions were proposed by the applicant/sanitary authority.

#### **(7) Other Significant Environmental Impacts of the Development**

Traffic: Because of the predicted increase in traffic resulting from the proposed Landfill Extension, the applicant proposes road improvements in the vicinity of the landfill entrance. These are provided for in Condition 4 of the proposed decision.

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

1. Draft Waste Management Plan for North East Region 1999–2004 (November 1999): This draft plan envisages the continued disposal of waste at Corranure in the medium to long term pending new waste infrastructure for the North East Region (Counties Cavan, Monaghan, Meath and Louth).
2. Draft County Cavan Water Quality Management Plan (January 1984): This draft plan specifies salmonid fishery water quality for the Analee stream and coarse fishery water quality for the Corranure stream.
3. There is no air quality management plan for Co. Cavan.

#### **(9) Submissions/Complaints**

**An overview of the submissions received in relation to the waste licence application is provided. This includes a summary of all issues raised in the submissions.**

Twenty five submissions were received in relation to this application. The grounds stated and my response to each ground are set out under the relevant headings.

##### **1. Surface Waters.**

*This ground*

- *opposes the applicants proposal for the discharge of wastewater from the wheelwash via an oil separator to surface waters.*

Condition 4.9 requires this discharge to be directed to the leachate storage lagoon for ultimate disposal at Cavan town wastewater treatment plant (unless an alternative treatment works is agreed by the Agency).

- *refers to the lack of information regarding the storage of waste oils, filters, etc.*
- Condition 4.12 requires bunding of all tank and drum storage areas.
- *refers to the limited assessment (two sampling occasions and limited analysis) of water quality in Corranure stream.*

It is considered that the data submitted adequately demonstrates the impact of the Existing Landfill on the water quality of Corranure stream.

- *refers to concern that the leachate from the proposed leachate interceptor drain for the Existing Landfill will contaminate the proposed Corranure stream culvert. It is contended that the actual method of culverting proposed represents an even more serious risk than previously existed as the culvert will provide a preferential pathway for leachate escaping to Corranure stream.*

Both these operations are Specified Engineering Works (Condition 4). The proposed design of these works will be examined in tandem so that leachate contamination is properly addressed.

- *a revised site infrastructure drawing was submitted as part of the application process. However, this drawing did not show that partial culverting of Corranure Stream had been undertaken in the intervening period.*

The licensee will have to submit detailed drawings of the area along with the proposed route and design details of the stream diversion for the prior approval of the Agency as the stream diversion is a Specified Engineering Works (Condition 4).

- *claims that pollution of Corranure stream is rendering the water unfit for animal consumption. It is contended that flooding of pasture lands downstream with polluted water and litter has forced a farmer to graze her livestock elsewhere.*

Compliance with the conditions of the proposed decision will ensure adequate protection of the surrounding environment.

- *refers to a lack of specified targets for the mitigation of Corranure stream.*

See previous response.

- *Lough Oughter, in whose catchment the facility and Cavan town's wastewater treatment plant lie, is designated as a sensitive area under the Urban Wastewater Treatment Directive. Therefore this catchment requires a high degree of environmental protection. Inadequate attention has been paid to the phosphorous content of the leachate.*

As stated above, compliance with the conditions of the proposed decision will ensure adequate protection of receiving waters. Table E.4.3 of the proposed decision requires phosphate monitoring of Corranure and Analee streams and any discharges from the facility. The discharge from Cavan Wastewater Treatment Plant, which will treat leachate from the landfill, is subject to the requirements of the Environmental Protection Agency Act, 1992 (Urban Waste Water Treatment) Regulations, 1994 (S.I. No. 419 of 1994).

- *no assessment was made of sediment contamination in Corranure stream in the application. There is a potential for ongoing adverse affects on the aquatic environment arising from the persistence of heavy metal and/or organic complexes in that sediment.*

Condition 9 provides for routine physico-chemical and biological monitoring of Corranure stream and physico-chemical monitoring of all discharges to surface waters. Condition 9.6 enables the Agency to specify additional monitoring if so required. These conditions are considered adequate for the ongoing assessment of Corranure stream.

- *the lack of a surface water quality scheme in the application.*

Table E.4.1 of the Proposed Decision specifies surface water monitoring locations, and Table E.4.3 specifies surface water monitoring parameters.

## 2. **Groundwater.**

*This ground contends that:*

- *the overburden permeability values presented by the applicant are incorrect and the quality of the clays underlying the Landfill Extension have thus been over estimated.*

Overburden permeabilities can be calculated from the raw data submitted as part of the application. Condition 4.14 specifies that the Landfill Extension will be lined according to the Landfill Directive (1999) requirements for non-hazardous landfills.

- *that a private potable well located approximately 250 metres northeast of the facility has been polluted to such an extent by the Existing Landfill that water has now to be “imported” to this farmstead.*

Groundwater flow is generally southeast to northwest. Therefore neither the Existing Landfill nor the Landfill Extension are likely to impact on this well’s water quality. However, this well has been sampled on two occasions during the application process, and on each occasion it has shown evidence of pollution (bacteria, iron, selenium and phenols have on one or both sampling occasions exceeded MAC limits). The owner of this well is aware that it is polluted and has installed a filtration system. Further monitoring will enable determination of the source of its contamination. Condition 9 requires a proposal to monitor all private wells within 500 metres of the facility, including this particular well subject to the owner’s agreement.

- *groundwater levels have not been related to the proposed basal levels of the Landfill Extension. Groundwater levels presented in one of the A16(1) replies by the applicant are inaccurate.*

Water levels were measured on three occasions (August 1998, December 1999 and January 2000) at two boreholes in the Landfill Extension area and the results recorded were similar. The figures quoted by the submitter relate to water strikes observed during the drilling of the boreholes and not the water table level. The applicant failed to relate the water table to the proposed basal levels of the landfill extension. However, this relationship can be extrapolated from the application. The basal levels in drawing number CORR/REPL/04 are based on a different datum than all other elevations presented in the application. The water table, based on the data provided, will be approximately one metre below the lowest basal level of the Landfill Extension.

- *the well of a residence (PWI), which is located within the facility boundary, was not sampled as required.*

This well no longer provides a potable water supply. This residence has been purchased by the applicant and is now vacant. It is proposed to demolish it as part of the development of the Landfill Extension.

- *This ground states that the application does not comply with Article 20 of the Waste Management (Licensing) Regulations (1997) in that no quantitative assessment of the risk to groundwater has been presented. Article 20 requires an investigation of groundwater, as the Agency considers necessary, in order to comply with Articles 4, 5 and 7 of the Groundwater Directive (80/68/EEC). This ground applies to both the Existing Landfill and the proposed Landfill Extension. In the latter case, it is claimed that a possible fracture zone close to or beneath the proposed Landfill Extension was not properly investigated.*

Various hydrological investigations were undertaken as part of this application. It was established from these investigations that while there are direct discharges of List I and II substances from the Existing Landfill into groundwater, these substances are present

in the groundwater in so small a quantity as to obviate present or future danger of deterioration of the quality of the water in the aquifer (Local Government (Water Pollution) (Amendment) Regulations 1999: S.I. No. 42 of 1999). A geophysical survey indentified a possible fracture zone in the Landfill Extension area. The Agency requested a more thorough assessment of hydrological conditions in that area but the applicant simply reinterpreted the data to state that “it is possible that the change in resistivity noted is a reflection of undulating bedrock topography”. However, as the depth of overburden in the Landfill Extension area will be approximately 15 metres post construction, the risk of leachate movement to this zone, if it exists, is insignificant.

- *conflicting information in the application concerning the direction of groundwater flow at the facility.*

The results of monitoring presented in the application concluded that the hydraulic gradient is generally southeast to northwest.

- *confusion over the location of groundwater monitoring locations.*

Table E.4.2 of Schedule E lists groundwater monitoring locations.

### **3. Leachate Management**

*This ground refers to:*

- *No leachate composition data was included in the application. Leachate is likely to continue to pose a risk to the environment beyond the 30 years specified in the Environmental Impact Statement.*

Both the Environmental Impact Statement and further information submitted to the Agency on 3/5/2000 contain leachate analyses. Condition 8 provides for the aftercare of the facility and this will entail ongoing monitoring as required.

- *confusion as to whether leachate pre-treatment is proposed for the leachate storage lagoon.*

The applicant initially proposed leachate pre-treatment, but based on A16(1) replies, is no longer making this proposal.

- *the quality control/quality assurance scheme for the installation of the landfill liner was not provided in response to an A16(1) request.*

The installation of the landfill liner for the Landfill Extension is a Specified Engineering Works (Condition 4) and the prior agreement of the Agency will be required. This will include agreement for Quality Assurance/Quality Control on the liner.

- *the lack of information in the application regarding the capacity of Cavan town wastewater treatment plant to treat leachate from the facility. Also questioned is the lack of detail concerning the pipeline which transports leachate from the facility to Cavan town wastewater treatment plant and the ability to move leachate by tanker to the wastewater treatment plant.*

The sanitary authority (Cavan County Council) which operates this treatment plant agreed to accept (in its Section 52 response) the leachate without any conditions. Leachate will be pumped to Cavan town’s wastewater treatment plant through a dedicated pipeline, the integrity of which has to be established prior to waste activities commencing in the Landfill Extension (Condition 4.15).

- *no assessment was made of the potential effects of the likely toxic components of leachate on the output, whether direct discharge or treatment process sludge, from Cavan Wastewater Treatment Plant.*



Table E.7 of Schedule E specifies the monitoring requirements, including toxicity testing, for leachate piped/tankered to wastewater treatment plants.

- *Table 3.3 (Leachate generation in different development stages of the landfill) of the Environmental Impact Statement, Volume 2, does not include the contribution from the Existing Landfill.*

Table 3.3 includes a contribution for collected leachate from the Existing Landfill. The applicant estimates this amount to be 10% of its leachate production once the leachate interceptor drain has been installed. It is envisaged that, as a minimum, leachate will additionally be pumped from the four leachate abstraction/monitoring boreholes required in the Existing Landfill (Condition 4). The conditions of the Proposed Decision will ensure effective control of leachate.

- *a submission queries the data used to model ammonium and BOD discharge over a 30-year period from the Existing Landfill.*

The data presented demonstrates that degradation of deposited waste will proceed more slowly in a capped landfill as opposed to an uncapped landfill.

- *the lack of exact leachate monitoring locations in the application and future monitoring arrangements.*

Proposed leachate monitoring locations for the Existing Landfill were supplied in additional information to the Agency on 23/7/1999 but these boreholes were subsequently destroyed when waste was placed over them. Condition 4 requires new leachate monitoring locations for both phases of the facility while monitoring of the leachate is provided for in Schedule E of the proposed decision.

#### 4. Air

- *This ground refers to the lack of baseline surveys for boundary dust deposition and PM<sub>10</sub>s. Also queried is the lack of exact dust monitoring locations in the application.*

5. The applicant failed to provide a quantitative assessment of dust emissions from the facility despite a request to do so. However, Schedule F.3 sets a dust deposition limit for the facility boundary while Schedule E.2 specifies dust deposition monitoring. **Lack of design details for various infrastructure and proposals in the application.**

*This ground refers to the lack of specific design details for various proposed infrastructure and mitigation measures in the application. Without design details, a decision cannot be made on the effectiveness of a particular proposal. Examples are the landfill gas passive venting system for the Existing Landfill, and the construction of cells in the landfill extension.*

This submission was made before the Agency requested additional or further information from the applicant. However, the applicant failed to supply design details when requested by the Agency for much of the proposed facility remediation measures and infrastructure. The Agency consequently proceeded on the basis of Article 16(4) of the Waste Management (Licensing) Regulations, 1997. Accordingly, where no design details were submitted by the applicant, the Proposed Decision specifies infrastructure (Condition 4) and requires the prior agreement of the Agency for all the specified engineering works listed in Schedule D.

6. **Reference to standards (for example, the liner for the Landfill Extension) contained in the Agency's unpublished Landfill Site Design Manual.**

The consultants for the applicant refer to the Agency's draft Landfill Site Design Manual when specifying the design of certain aspects of the facility. The conditions of the licence will determine the specific standards applied at this facility.

#### **7. Historically Poor Management of This Facility.**

*This ground refers to the poor operational practices that have been occurring at this facility and the indifference of Cavan County Council to residents concerns. Somebody other than the council should monitor activities at the facility. It is pointed out that improved operational practices, as referred to in the application, have not been implemented to-date, and thus there can be little confidence in the applicant. Photographic evidence has been submitted demonstrating the inadequate use of daily cover.*

Condition 2 of the Proposed Decision provides for the proper management of the facility, including a communications programme. Condition 5 provides for the management of waste at the facility. The Agency will ensure that conditions of the waste licence are enforced, and this includes conducting site inspections, audits and monitoring in order to ascertain compliance with the conditions of the Proposed Decision.

#### **8. Landfill Gas.**

*This ground refers to the lack of design detail for gas management infrastructure and lack of assessment of emissions from the proposed flarestack. There is no emergency landfill gas migration plan or proposals for monitoring of same. The retrofitting of boreholes into a capped landfill as opposed to construction at pace with landfilling is a very poor idea. Inadequate monitoring was undertaken for the application process.*

An assessment of flarestack emissions and a contingency plan was contained in additional information supplied to the Agency on 23/7/1999. Gas management infrastructure is a specified engineering works (Schedule D) and thus requires the prior agreement of the Agency. Condition 7.4 specifies trigger levels for representative landfill gas components. Condition 9 specifies monitoring, including the provision of additional monitoring locations to detect landfill gas migration and a permanent gas monitor inside the office and other enclosed buildings on the facility. Condition 10.1 requires the submission of Emergency Response Procedures, one of which will be expected to deal with the issue of landfill gas migration. The Agency considers retrofitting of landfill gas extraction boreholes good practice. Two landfill gas surveys were undertaken at the request of the Agency (September 1998 and January 2000).

#### **9. Waste Acceptance**

*This ground contends that all categories of waste, including human sewage, are accepted at the landfill. The source of sludges to be accepted at the facility has not been stated.*

Condition 1 restricts the types of waste that can be accepted at the facility. Condition 5 only permits the disposal of treated sludge within the lined cells of the Landfill Extension. Condition 5 requires eluate and toxicity testing for all industrial sludges being accepted at the facility.

#### **10. Waste Handling.**

*This ground refers to insufficient detail concerning waste handling in Attachment E.4 of the application.*

Condition 5 specifies that waste acceptance and handling procedures are developed for the facility.

**11. Environmental Management Plan.**

*This ground refers to confusion as to the final content of the Environmental Management Plan (EMP) proposed in the application.*

Condition 2.4 requires the submission of an EMP. Schedule A of the Proposed Decision sets out the required EMP content.

**12. Litter.**

*This ground refers to wind-blown litter on adjacent lands and roads.*

Potential nuisances are controlled by Condition 6 of the Proposed Decision.

**13. Birds.**

*This ground refers to an indefinite discussion of the issue of avian nuisance by the applicant. Birds are causing nuisance (noise, defecation) to nearby residences. Trees have been damaged by nesting birds.*

Potential nuisances are controlled by Condition 6 of the Proposed Decision.

**14. Vermin.**

*This ground refers to the ever increasing rodent problem.*

Potential nuisances are controlled by Condition 6 of the Proposed Decision.

**15. Flies.**

*This ground refers to a nearby residence being infested with flies during hot weather.*

Potential nuisances are controlled by Condition 6 of the Proposed Decision.

**16. Odours.**

*This ground refers to the lack of baseline odour and aerosol surveys, shortcomings in the possible odour sources identified in the application in that passive venting and odours associated with leachate treatment were not addressed. Also that, with respect to additional information supplied to the Agency on 23/7/99, the claim by the applicant that venting of landfill gas will reduce any impact from uncontrolled odour emissions is disputed. A distinct odour is detectable at a nearby farmstead when certain climatic conditions occur. There is no commitment in the application to odour monitoring in the event of relevant complaints.*

Odours were qualitatively assessed in the application as being evident only near the active tipping area. Condition 4 prohibits leachate recirculation unless agreed by the Agency. Any leachate treatment on the facility, with associated aerosol risks, would require the prior agreement of the Agency (Specified Engineering Works: Condition 4). Therefore aerosol production is expected to be minimal. Condition 5 provides for a restricted tipping area, daily covering and special disposal of treated sludges, all factors which should reduce odour emissions. Passive venting will be employed until an active collection system for landfill gas flaring has been installed (Condition 4.16). It is acknowledged that venting of landfill gas will not by itself address odorous emissions. However, Conditions 6.1 and 6.7 provide for the control of odour emissions from the facility, and the flaring of gas, once installed, will further control odour generation.

**17. Restoration**

*This ground refers to insufficient information regarding the species and numbers of plants to be used in the restoration of the facility, and their subsequent maintenance. The proposed restoration does not seriously address the existing level of contamination and pollution emanating from the facility.*

Condition 8.1 provides for the restoration of the facility to be based on information contained in the application. Restoration and Aftercare works are Specified Engineering Works (Condition 4), and as such, the licensee must supply detailed plans, including maintenance proposals, for prior approval of the Agency. Compliance with the conditions of the proposed decision will significantly reduce the impact of the Existing Landfill.

#### **18. Monitoring**

*This ground refers to:*

- *the lack of a proposal for ecological monitoring in the application.*

A proposal for ecological monitoring was submitted by the applicant on 23/7/1999 in response to an Agency request. However, it is considered that further ecological monitoring at this stage is not necessary. Condition 9.6 allows the Agency to specify ecological monitoring if/when it is considered necessary.

- *the lack of a commitment for meteorological monitoring on the facility.*

The Landfill Directive does not specify that meteorological monitoring has to occur on-site. Table E.5 of Schedule E specifies the monitoring requirements for this facility. It is acceptable to gather some of this data at nearby synoptic weather stations.

- *the lack of a commitment for noise monitoring on the facility, and the impact of noise on a nearby farm house (NSLI).*

Refer to Section 4, Noise of this report.

- *the Environmental Impact Statement does not contain data for all the monitoring points listed.*

Not all the monitoring points listed were sampled during each sampling run if at all. Condition 9 and Schedule E of the Proposed Decision sets forth monitoring requirements for the facility.

#### **19. The Existing Landfill is expanding into an unauthorised area.**

*This ground refers to expansion of the waste tipping area of the Existing Landfill even though the Agency has not made a decision on the waste licence application.*

The Existing Landfill was in operation before an application for a waste licence was submitted to the Agency. The expansion of the Existing Landfill referred to is contained within the facility boundary (red line) as proposed in the application. The Existing Landfill may continue to operate pending a decision on the application by the Agency.

#### **20. Encroachment onto adjacent road by boundary fence erected by the applicant.**

*This issue refers to the road which joins the R188 road adjacent to the facility entrance. It is submitted that the applicant has erected a pallisade fence which has restricted the width of this road, thereby restricting access by large vehicles to residences and farms.*

Condition 4 requires boundary fencing which, as a Specified Engineering Works (Condition 4), requires the prior agreement of the Agency. A dispute over the exact delineation of this road is a matter between the parties involved.

#### **21. Public File of application unavailable for viewing at the main office of Cavan County Council.**

Following contact between the Agency and the council, this matter was resolved and the file was made available for public viewing.

#### **22. Traffic and Safety.**

*This ground refers to the fact that the new entrance to the facility is adjacent and parallel to the exit point onto the R188 regional road of a road which leads to a farmstead with obvious safety implications.*

Refer to traffic in section 7 of this report. It should be noted that the side road leads to other properties besides the submitter. Condition 4 requires the implementation of road improvements to the R188 road and the side road in the vicinity of the facility entrance.

#### **23. Incomplete Application**

*This ground queries the ability of the Agency to make this Proposed Decision when the applicant has not provided all the information requested by the Agency.*

The applicant failed to supply answers to all the queries raised in an Article 16(1) notice. Consequently an Article 16(4) notice was issued, but again the applicant failed to answer all the questions raised by the Agency. However, Article 16(4) allows the Agency to proceed to make a decision on the application. The submitter was informed of this reason by letter on 26/9/2000.

#### **24. Devaluation of Property.**

*This ground refers to devaluation of adjacent property on account of the facility. The submitter notes that the applicant bought out three adjacent houses.*

The conditions of this licence provide for the closure and restoration of the Existing Landfill. They also provide for an engineered Landfill Extension. This will have all necessary infrastructure associated with a modern landfill installed prior to waste activities commencing in the Landfill Extension. The Proposed Decision provides for the control of nuisances and emissions. The applicant bought three adjacent properties, one of which is due for demolition if the Landfill Extension proceeds.

#### **25. Visual Impact.**

*This ground refers to the visual impact of the facility on a nearby farmstead. Also, the small road, which provides access to this property, has been lined with a high, industrial type fence. This has changed part of the road leading to this property from rural to industrial. The assessment of current and proposed landscape impacts is impossible from the information provided.*

The Existing Landfill has a current elevation of 100 metres above Ordnance Datum, and Condition 8 restricts both the Existing Landfill and the Landfill Extension to this elevation. Restoration of both the landfill phases will blend the facility with the surrounding drumlin landscape. Condition 4 requires the construction and subsequent planting of berms around the Landfill Extension prior to waste activities commencing in those areas. Condition 4.3 requires a perimeter pallisade fence. Condition 4.22 requires perimeter plantings within 12 months.

#### **26. The facility is an environmental timebomb on the edge of a rapidly developing area of population.**

*This ground states that the landfill should be located in an area that is remote from heavily populated areas. No basis for the description “environmental timebomb” was presented.*

The facility is located in a rural area approximately 3 Kilometres from Cavan town and there are only a few residences located within 250 metres of its boundary.

#### **27. Health Hazard.**

*This ground claims the facility is a health hazard to people who live close to the landfill. There was no assessment of the health impact of the serious contamination of surface waters, or of the impact of vermin/pests and scavenging birds.*

The conditions of this Proposed Decision provide for the control of vectors which might transmit disease and protection of surface waters.

**28. Environmental Impact Statement.**

*This ground refers to*

- *no proper explanation was provided for a statement that “the other landfills.....would not be able to sustain an extension similar to that proposed at Corranure”.*

The missing bit of the sentence quoted in this submission is “in the county are smaller in size with little or no remaining void space and”.

- *The Environmental Impact Statement does not adequately deal with the concerns of local residents. There was no scoping or consultation with local residents other than in Appendix D (Land Use).*

At the time of preparation of this Environmental Impact Statement, scoping was not a mandatory requirement.

**Signed** \_\_\_\_\_

**Name:** Eamonn Merriman

**Dated:**

## **APPENDIX 1**

### **FACILITY LOCATION AND LAYOUT PLANS**

1. Figure 3.1 from the Environmental Impact Statement, Volume 2.
2. Drawing CORR/REPL/04 from the application.