

MEMO

TO: Board of Directors **FROM:** Peter Carey
CC: **DATE:** 21 October 2003

SUBJECT : Technical Committee Report on Objections to Proposed Decision -
Kyletalesha Landfill, Clonsoughy, Kyleclonhobert, Co. Laois Waste Licence Review
Application Reg. No. 26-2

Application details

Application Details	
Applicant:	Laois County Council
Location of Activity:	Clonsoughy, Kyleclonhobert, Co. Laois
Reg. No.:	26-2
Proposed Licensed Activities under Waste Management Act 1996:	Third Schedule: Classes 2, 4, 5, 6, 7, 11, 13 Fourth Schedule: Classes 2, 3, 4, 9, 11, 13
Proposed Activities Refused under Waste Management Act 1996:	Third Schedule: Classes 1, 12 Fourth Schedule: Classes 10, 12
Proposed Decision issued on:	26/06/03
Objections received:	21/07/03 (Applicant)
Inspector that drafted PD:	Caoimhin Nolan

Consideration of the objection

A Technical Committee (TC) was established to consider the objections.

The Technical Committee comprised;

Peter Carey, Chairperson
Donal Howley, Inspector
Breege Rooney, Inspector

This is the Technical Committee's report on the objections.

1. Objection From Laois County Council

The Objector provides reasons for objecting to certain Conditions and these are dealt with by the TC under the Grounds below.

Ground 1: Condition 3.4.1: *The Objector objects to the timeframe of 3 months to install new fencing where there are breaches in the existing hedgerow network along the N80 National Secondary Road and request a timeframe of 6 months. They state that*

planting is not recommended during the months of April to September inclusive, as the fatality rate would be excessive. They state that the recommended planting season for saplings is October to March. They state that they propose to plant mature saplings in all breaches in the existing hedgerows network along the N80 National Secondary Road during the period October/November 2003.

Technical Committee's Evaluation

The TC notes that Condition 3.4.1 requires new fencing to be installed where there are breaches in the existing hedgerow. The TC considers that it is unlikely that planting mature saplings will satisfy this requirement. In any event, the final decision on this application is likely to issue in October/November and the period during which the applicant proposes to plant the saplings will be within three months of issue of the licence. The Technical Committee therefore recommends no change to the condition.

Recommendation

No change to Condition 3.4.1

Ground 2: Condition 3.13.3 (Leachate storage structure): *The Objector objects to the timeframe of 6 months to replace the existing unlined leachate storage lagoon with an appropriate leachate storage structure and request a timeframe of 18 months. The applicant states that within 6 months, investigations will be conducted to identify the most suitable location of the replacement structure, and that within 12 months of receipt of Agency approval on the design, that the tendering, construction and commissioning process will be completed. The applicant includes a report on the integrity of the unlined leachate storage lagoon, which indicates that there is no loss of leachate from the lagoon.*

Technical Committee's Evaluation

The TC considers that the applicant should be able to provide an appropriate leachate storage structure within six months of the date of grant of licence. However, based on the results of the integrity report, i.e. no loss of leachate from the lagoon, the TC recommends that time period be extended to 12 months to facilitate the applicant with the tendering process and construction of the structure.

Recommendation

Change Condition 3.13.3 as follows:

Within **twelve** months of the date of grant of this licence, the licensee shall replace the existing unlined leachate storage lagoon with an appropriate leachate storage structure. The structure shall be fully enclosed except for inlet and outlet piping.

Ground 3: Condition 3.14.1 (Landfill Gas Management): *The Objector objects to the timeframe of 6 months to install infrastructure for the active collection and flaring of landfill gas and request a timeframe of 18 months to carry out field trials and flaring tests on waste which has been deposited at shallow depths; undertake detailed design; prepare contract documents; for the tendering process; and for installation and commissioning of an effective landfill gas collection and flaring system.*

Technical Committee's Evaluation

The TC notes that there is no active landfill gas control infrastructure in place at the facility. The TC also notes that the landfill conditioning plan submitted by the applicant, to satisfy the requirements of the Directive on the landfill of waste, states that the applicant has landfill gas infrastructure in place. The TC notes that under condition 4.17 'landfill gas management' of the current waste licence (Reg. No. 26-1) issued on 11/05/00, the licensee was required to submit proposals for the Agency's agreement on the active collection and flaring / utilisation of landfill gas. Hence a lot of the work referred to in the objection above should already be completed. Given the potential difficulties in procuring an enclosed flare the TC recommends that the time period be extended to 12 months.

Recommendation

Change Condition 3.14.1 as follows:

Within **twelve** months of the date of grant of this licence, infrastructure for the active collection and flaring of landfill gas shall be installed at the facility. This shall include infrastructure for the collection and flaring of landfill gas arising from waste deposits in unlined parts of the facility (e.g. Cells 1 to 5). The flare shall be of an enclosed type design.

Ground 4: Condition 3.20.1(b) (Monitoring infrastructure – landfill gas): *The Objector objects to the requirement to provide and maintain an effective permanent gas monitoring system in the site office and other enclosed structures at the facility. The objector states that the use of a portable gas analyser for weekly monitoring was agreed under Waste Licence Reg. 26-1 and gas levels have not exceeded the licences emission limit values.*

Technical Committee's Evaluation

The TC considers a permanent gas monitoring system in the site office and other enclosed structures at landfill facilities as an essential element of modern landfill infrastructure.

Recommendation

No change to Condition 3.20.1(b)

Ground 5: Condition 3.19.2(e) (telemetry system – landfill gas recording): *The Objector objects to the requirement to provide a telemetry system for the recording of landfill gas levels from the permanent gas monitoring system. They state the reasons for this are given in Ground 4 above.*

Technical Committee's Evaluation

The TC considers that a permanent gas monitoring system in enclosed structures should be provided and that the gas levels should be recorded by the telemetry system.

Recommendation

No change to Condition 3.19.2(e)

Ground 6: Condition 4.6(a) and Condition 4.6(b) (final capping): *The Objector objects to the timeframe of 12 months to provide final capping to cells 1 to 5 and to operational cells and request a timeframe of 24 months. They state that filling of cells 3, 4 and 5 was completed in June 2003, while filling of cells 1 and 2 was completed in 2001. They state that site experience has shown that settlements can be as much as 1m for the first year of settlement. The applicant states that, in order to maintain the integrity of newly installed capping and landfill gas collection system, a one-year settlement period be allowed i.e. a timeframe of two years to provide the final capping to cells 3, 4 and 5.*

Technical Committee's Evaluation

Condition 4.6(a) and (b) state:

- (a) Previously deposited waste in Cells 1 to 5 shall be finally capped within twelve months of the date of grant of this licence, unless otherwise instructed by the Agency;*
- (b) Operational cells shall be finally capped within twelve months of the cells having been filled to the required level, unless otherwise agreed with or instructed by the Agency; and*

The TC considers that the issues raised within the objection can be dealt with under this condition as part of the licence enforcement. For clarification, the TC recommends adding 'unless otherwise agreed with the Agency' to Condition 4.6(a) as detailed below.

Recommendation

Change Condition 4.6 (a) to read as follows:

Previously deposited waste in Cells 1 to 5 shall be finally capped within twelve months of the date of grant of this licence, unless otherwise **agreed with or** instructed by the Agency;

No change to Condition 4.6(b).

Ground 7: Condition 5.8.1.1 (Waste Handling - Sludges): *The Objector objects to the restriction on sludge acceptance to only treated sewage sludges with greater than 25% solids and request a timeframe of 36 months to implement the condition. The objector states that the facility currently accepts untreated sludges that contain the theoretical solids upper limit of 18% to 20% for biological sludge and that there has been no environmental emissions or nuisances as a result of this practice. As part of the Sludge Management Plan for County Laois, a sewage sludge treatment facility will be constructed. This project is due to commence in March 2004 with a projected completion date of November 2005. The objector states that they consider the treatment of sewage sludge prior to landfilling in the interim to the completion of the Sludge Treatment Facility to be unfeasible and unwarranted.*

Technical Committee's Evaluation

The TC notes the applicants concerns. The TC also notes that Condition 5.13 of WL26-1, which was issued on 05/11/00, required the licensee to submit proposals on alternatives for the recovery or disposal of sludges. Taking into consideration the projected timeframe

for the development of the sludge treatment facility, the TC recommends that a date be set in the licence by which all sludges must be treated.

Recommendation

Change Condition 5.8.1.1 to read as follows:

From 1st March 2006, only treated sewage sludge with greater than 25% solids shall be accepted at the facility. The hours of acceptance for sludges shall be between the hours of 08.30 hrs and 14.00 hrs Monday to Friday inclusive. All sewage sludge shall be covered immediately with other waste.

Change ‘Waste Type’ in Schedule A TableA.1 ‘Waste Categories and Quantities to be accepted for disposal:

From Treated Sewage Sludge to **Sewage Sludge**

Ground 9: Condition 7.6.1 (Bird Control Techniques). *The objector objects to the use of bird control techniques every day, from before dawn to after dark. They contend that as waste disposal is carried out Monday to Saturday only between the hours of 08:00 and 16:30 bird control measures outside these hours is unnecessary. They state that the main method of bird control is the compaction and covering of waste at the end of the operational day. They state that they also employ other techniques for bird control including birds of prey, kites and bangers. They also contend that the use of these techniques are supplementary and may cause nuisance outside of operational hours.*

Technical Committee’s Evaluation

Condition 7.6.1, to which the objector objects, states: *Birds shall be prevented from gathering on and feeding at the facility by the use of birds of prey and/or other bird scaring techniques. The birds of prey and/or other techniques shall maintain their presence every day, from before dawn to after dark, until the waste activities cease and all the waste is capped to the written satisfaction of the Agency.* The TC considers that the condition as worded allows, in addition to the birds of prey, for the referred supplementary techniques to be employed. It is necessary to have the supplementary techniques on site, which can be the birds of prey and/or other methods, to prevent the gathering on and feeding at the facility. In relation to the objectors statement that these would result in nuisances to local residents during the early morning and evening recreational hours, the TC notes that condition 7.1 requires the licensee to ensure birds do not give rise to nuisance and any method used to control such nuisance shall not cause environmental pollution.

Recommendation

Change Condition 7.6.1 as follows:

Birds shall be prevented from gathering on and feeding at the facility by the use of birds of prey and/or other bird scaring techniques. The birds of prey and/or other techniques shall maintain their presence every day, from before dawn to after dark, until the waste activities cease and all the waste is capped to the written satisfaction of the Agency. **The use of gas operated bird scaring devices is prohibited at the facility.**

Ground 10: Schedule A: Waste Acceptance: *The objector objects to the 1,000 tonnes per annum limit on the quantity of biodegradable waste that can be composted and requests that the limit be increased to 2000 tonnes per annum. The objector refers to a two-phase approach to the development of composting infrastructure with 1,000 tonnes per annum being the proposed quantity for the first phase. Once this quantity is exceeded phase two would be constructed and would accommodate an additional 1,000 tonnes per annum.*

Technical Committee's Evaluation

The TC notes that quantity of biodegradable waste to be accepted for composting, as set out in Schedule A.2, is given as 1,000 tonnes or as agreed with the Agency. The TC considers that this allows for the consideration of an increase in the limit following implementation of the first phase of composting. However, for clarification the TC recommends Schedule A2 be changed as below.

Recommendation

Change 'Maximum (tonnes per annum)' for 'Biodegradable waste for composting' in Schedule A TableA.2 'Waste Categories and Quantities for recovery, restoration and site development works'

From '1,000 or as agreed with the Agency' to **2,000** ^{Note 4}

Add Foot Note 4:

Note 4: 1,000 tonnes per annum for Phase 1; Subject to Agency approval an additional 1,000 tonnes per annum for Phase 2.

Ground 11: Schedule C: Emission Limits (C.5 Emission Limits for Treated Leachate Discharged to Surface Water)

The objector requests amendments to the discharge limits for (i) Volume to be Emitted and (ii) Total Ammonia (as N). The objector requests a flow proportionate discharge limit, commensurate with leachate generation rates, be used rather than the discharge limit of 103m³/day, and that the emission limit of 20mg/l for total ammonia be amended to 50mg/l.

The objector states that leachate generation rates will increase from 103m³/day in 2002 to 116m³/day in 2008 and that the daily mean leachate generation rate will vary throughout the year with seasonal rainfall patterns and will be high as 200m³/day during peak rainfall events.

The objector states that the assessment on the impact of the revised quality emission limit values, which were detailed in Attachment D.4.2 of the application as 'Kyletalesha Landfill Site – efficiency of On Site Leachate Treatment Systems' and included as an attachment of the objection, demonstrated that the available dilution capacity in the River Triogue is the controlling factor on the impact of treated leachate. The objector states that leachate emission limit in the proposed decision restricts the time of the emissions to periods when the river flow is at least equal to the 95%ile flow (140l) and have greater than 117 dilutions of effluent at all times.

The objector contends that during the period October to May there are between 220 and 1900 dilutions available and during June to September there are between 180 and 1300 dilutions available.

They contend that a flow proportionate discharge of treated leachate, at current and future generation rates and which meets the requested total ammonia (as N) emission limit value of 50mg/l, to the River Triogue will not result in any significant impact on water quality.

Technical Committee's Evaluation

The TC notes from the Inspector Report that the emission limits set out in the recommended proposed decision (RPD) for treated leachate are based on the assimilative capacity of the River Triogue and the existing water quality of the river. The RPD sets a maximum flow of 103m³/day and requires that the river flow must be at least equal to the 95%ile flow and that there must be greater than 117 dilutions of effluent available at all times

The TC notes that within the conclusion of the report '*Kyletalesha Landfill Site – efficiency of On Site Leachate Treatment Systems*', it is stated that '*leachate will not be discharged when the flow in the river Triogue falls below 140l/sec, or when there is less than 200 dilutions of the discharged effluent.*' The discharge of treated leachate, based on 200 dilutions (hence a maximum discharge 60.5m³/day based on a 95%ile river flow of 12,096m³/day) and an emission limit for total ammonia (as N) of 50 mg/l, would result in an increase in the concentration of total ammonia in the River Triogue of 0.25 mg/l. The total ammonia ELV of 20mg/l in the RPD would result in an increase in the background concentration in the River Triogue of 0.17mg/l. However at the lower ELV a greater volume could be emitted, 103m³/day as opposed to 60.5m³/day at the ELV suggested by the objector, for flows greater than the 95%ile river flow. The TC notes that the objector requests the use of *flow proportionate discharge of treated leachate*. The TC consider that the discharges to the River Triogue should be based on an assessment of the 95%ile river flow and that more emphasis should be placed on treating the leachate prior to discharge and to ensuring the quality of the River Triogue is not further impacted to that already occurring upstream. In relation to more leachate being generated, the TC considers that the licensee needs to provide leachate storage capacity at the facility, as required by Condition 3.13, to satisfy both leachate generation requirements and discharge limit criteria. The TC notes that monitoring results submitted on 27/05/03 indicate leachate treatment at the facility has attained values for total ammonia of less than 20mg/l, which is set in the RPD.

The TC notes that the toxic form of ammonia is the un-ionised state, NH₃, for which the maximum permissible concentration for fish is 20µg/l NH₃. Un-ionised fractions of ammonia increase with rising pH value and with rising temperature. It is not practicable to determine the un-ionised ammonia concentrations directly and quickly and total ammonia concentration limits are used, which at a given pH/temperature contain the limiting amount of 20µg/l NH₃. Monitoring results for the period February 2001 to April 2003, submitted by the licensee on 27/05/03, for the River Triogue at monitoring stations

Kyle Bridge (upstream of leachate treatment plant) and the Bridge near Eyne (downstream of leachate treatment plant) indicates that temperature and pH range from 5.9°C to 17.6°C and from 7.8 to 8.5 respectively. Ammonia (as N) ranged from 0.06mg/l to 5.03mg/l. The un-ionised ammonia concentration exceeded 20µg/l NH₃ on several occasions. It is noted from the monitoring results that the un-ionised concentration has not been exceeded since April 2002. The TC notes that leachate has not been discharged to the River Triogue since June 2001.

The TC considers that the emission limit value and the maximum volume to be emitted in the RPD should be retained. It is important that the licensee monitors the quality of water in the River Triogue and ensure that any discharge of treated leachate will not impact on the quality of the River or contravene any standard including that for un-ionised ammonia, for which a standard of 0.02mg/l is set in the European Communities (Quality of Salmonid Waters) Regulations, 1988.

Recommendation

No Change to Schedule C.5 Emission Limits for Treated Leachate Discharged to Surface Water:

Change Schedule D.5 Monitoring - Surface Water, Groundwater, Leachate as follows.

For parameters Ammoniacal Nitrogen, pH and temperature relating to surface water amend to read 'quarterly^{note 13},

Add Footnote 13:

Monitoring points – (to be agreed with the Agency) one upstream and one downstream of discharge point to River Triogue to be monitored monthly. The monitoring results to be used to calculate un-ionised ammonia values in the River Triogue.

Signed: _____
Peter Carey
Technical Committee Chairperson

Dated: _____
21 October 2003