

MEMO			
TO:	Board of Directors	FROM:	Michael Henry
CC:		DATE:	23 rd April 2002
SUBJECT : Technical Committee Report on Objections to Proposed Decision – Reg. No. 30-2			

Application Details	
Applicant:	Kilkenny Co. Co.
Location of Activity:	Dunmore Landfill, Dunmore, Co. Kilkenny
Proposed Decision issued:	20/12/01
Objections received:	16/01/02
Submission on objections received:	06/03/02;11/03/02
Inspector:	Mr. Donal Howley

Consideration of the objections/submissions on the objections

Objections were received from Kilkenny County Council and Dunmore Residents Action Group in relation to the proposed decision while submissions on the objections were received from both parties. The Technical Committee (Michael Henry, Chairperson, Caoimhin Nolan and Helen Maher committee members) has considered all of the issues raised and this report details the Committee's recommendations following the examination of the objections/submissions on objections.

Objection A : Kilkenny County Council

General grounds

The objection is based on the increased environmental disturbance/nuisance arising from the removal of the existing capping layer from cells 1-7 and this is contrary to the Co. Co.'s commitment to local residents to minimise nuisance. The timeframe for reinstating the final cap is prohibitive. The Co. Co. will ensure the satisfactory restoration/aftercare of the facility but such works should be completed as SEW's in consultation with the Agency. Also the Co. Co. is committed to complying with any EPA requirements to ensure the facility is managed to the highest standards.

Technical Committees Evaluation:

The issues raised in this ground are dealt with under the specific grounds to the objection as detailed below.

Recommendation:

No Change

Specific Grounds

Ground No. 1 (Condition 4.1)

It is requested that the restoration and aftercare plan for the facility as specified in Condition 4.1 does not include Cells 1 to 7. The volumes of leachate production has reduced significantly due to the presence of a low permeability cap on these cells and landfill gas is currently passively vented to borehole vents. It is intended to (i) provide additional capping, (ii) complete a full study to determine the appropriate capping to achieve recommended minimum infiltration rates and (iii) design a gas extraction system for this area.

Technical Committees Evaluation:

The technical committee notes that Condition 4.1 of the proposed decision requires the submission of a revised Restoration and Aftercare plan to the Agency for its agreement. The

issues raised in the applicant's objection relate to the capping of Cells 1-7 and these are addressed in Grounds No. 2 & 3 below. The technical committee recommends that, in the interests of clarity, the reference to Condition 4.3.3 is removed from Condition 4.1.

Recommendation:

Amend Condition 4.1 as follows:

The licensee shall restore the facility on a phased basis. The Restoration and Aftercare Plans for the facility shall be based on the plans submitted in Attachment G, subject to any alterations required to comply with the conditions of this licence. Within six months of the date of this licence the licensee shall submit to the Agency a revised Restoration and Aftercare Plan to reflect changes due to requirements of this licence. This plan should include Cells 1-7 and a schedule detailing the various stages of restoration, including timescales.

Ground No. 2 (Condition 4.2)

The Co. Co. object to the final height of the facility (62mOD). If the final cap is to apply to Cells 1 to 7, then the height of these cells will have to be increased by 2.4 metres. In order to remain below the height of 62mOD, both the temporary capping and waste will have to be removed to facilitate installation of the 2.4m cap. This will cause increased nuisance and 8000 trees will have to be removed. It is requested that the final height of the facility should only apply to Cells 8 to 10 and the proposed extension.

Technical Committees Evaluation:

The technical committee considers that the final height of 62m OD Malin should apply to Cells 8 to 14 only. In relation to Cells 1-7, the technical committee notes that increased environmental nuisance is likely to arise if significant quantities of the existing waste in Cells 1-7 have to be excavated. The applicant has stated that additional capping will be provided and that a study is currently underway to determine the most appropriate capping system for Cells 1-7 with a view to minimising infiltration and controlling gas emissions. Therefore, Condition 4.3.3 should be amended to have regard to such intentions and in order to allow Kilkenny Co. Co. to implement the findings of the studies underway, the timeframe for completion of capping of Cells 1-7 should be extended to within twenty four months of the date of grant of the licence. The technical committee consider that the final height of Cells 1-7 can be agreed under the Restoration and Aftercare Plan which is required under Condition 4.1.

Recommendation:

Amend Condition 4.2 as follows:

The final profile of the facility shall be based on, and in any case no greater than, that proposed in Figure G.1.2 – final Contour Layout, subject to any amendments in cell **capping** required to comply with the conditions of this licence. The final height of **Cells 8-14** shall not exceed 62.0 mOD Malin.

Amend Condition 4.3.3 as follows:

Within six months of the date of grant of this licence, the licensee shall submit a report to the Agency for its agreement on the current capping system in place for Cells 1-7 together with a proposal for further capping of such cells. This proposal shall address the provision of appropriate capping in order to minimise infiltration and the collection/extraction of landfill gas. The final capping of Cells 1-7 shall be completed within 24 months of the date of grant of this licence.

Ground No. 3 (Conditions 4.3.1, 4.3.3)

The Co. Co. object to the requirement to provide a 500mm drainage layer as part of the final capping. This condition should be amended to allow increased flexibility to allow the installation of a geosynthetic material having an equivalent hydraulic conductivity of 1×10^{-4} m/s (as specified). The barrier layer should also be either a flexible membrane liner or 0.6m of compacted mineral layer/GCL. Both of these works will be agreed with the Agency as SEW's. Also the timeframe for capping Cells 1-7 (12 months) as specified in Condition 4.3.3 is prohibitive. This detail will form part of SEW's which will have to be agreed with the Agency.

Technical Committees Evaluation:

The technical committee considers that Condition 4.3.1 should be amended to refer to Cells 8- 14 only. Also, Condition 4.3.1 should provide for the use of a geosynthetic layer as a substitute for the drainage layer. Having regard to the status of the aquifer beneath this facility (extremely vulnerable, regionally important), the technical committee considers that a flexible membrane liner in addition to the compacted mineral layer/GCL is necessary. This is in keeping with the requirements of the Landfill Directive which recommends that an artificial sealing layer is provided in certain cases in order to prevent the formation of leachate. The flexible membrane liner will also augment the effects of the clay cap on areas intended for tree planting by preventing root penetration.

Recommendation:**Amend Condition 4.3.1 as follows:**

The final capping of Cells 8-14 shall consist of the following:

- a) top soil (150 -300mm);
- b) subsoils, such that total thickness of top soil and subsoils is at least 1m;
- c) drainage layer of 0.5m thickness having a minimum hydraulic conductivity of 1×10^{-4} m/s **or an equivalent geosynthetic layer;**
- d) a flexible membrane liner ;
- e) compacted mineral layer of a minimum 0.6m thickness with a permeability of less than 1×10^{-9} m/s or a geosynthetic material (e.g. GCL) or similar that provides equivalent protection; and
- f) gas collection layer of natural material (minimum 0.3m) or a geosynthetic layer.

Amend Condition 4.3.3 as recommended under Ground No. 2 above**Ground No. 4 (Condition 3.13.1)**

The Co. Co. object to the requirement to line cells with a 1.0m layer of compacted soil. Previous lining at the facility was carried out in accordance with waste licence Reg. No. 30-1 and no adverse impact has been detected on groundwater. It is requested that the lining of cells may be agreed under SEW's with the Agency and a GCL barrier may be used to achieve equivalent protection.

Technical Committees Evaluation:

As noted above, the aquifer beneath this facility is a regionally important aquifer with extreme vulnerability. The technical committee note from the inspector's report that under the Groundwater Protection Scheme guidelines (DoELG/EPA/GSI, 1999), the response category for the location of a landfill in the area in which the facility is located is R4. The technical committee also note that some landfills currently being developed in Cork and Kerry have themselves recommended that an additional geocomposite layer be incorporated into the composite liner to further reduce the risk to groundwater. Therefore, in order to minimise the risk to groundwater and ensure adequate protection of groundwater resources beneath the facility, the technical committee considers that:

1. the requirement for a composite liner should include 1.0 m of compacted soil (1×10^{-9} m/s)
2. an additional geocomposite layer (e.g. bentomat) is placed between the compacted soil layer and the 2mm HDPE.

Recommendation:**Amend part (i) of Condition 3.13.1 as follows:**

- (i) a composite liner consisting of a 1.0m layer of compacted soil with a hydraulic conductivity of less than or equal to 1×10^{-9} m/s, **overlain by an appropriate geocomposite layer such as bentomat** and which in turn is overlain by a 2mm thick high density polyethylene (HDPE) layer;

Objection B : Dunmore Residents Action Group

Grounds

The Action Groups objection is divided into a number of grounds

- 1. An oral hearing should be held.*
- 2. The Co. Co. had given a commitment that the landfill would be short term and it has failed to find an alternative landfill for the past 14 years. A time extension of 2 years would suffice.*
- 3. Nuisances have not been satisfactorily dealt with and flaring has done nothing to remove the revolting odours.*
- 4. The permanent recycling facility does not have to be located at this facility and would be better suited adjacent to a Co. Co. yard in the Hebron Industrial Estate.*
- 5. Negative impact of the facility on property value in the area. The residents are waiting for the Councils proposals and offers of compensation in this regard.*
- 6. The group queries the Non-technical summary of the EIS where it is stated that 'odours' are typical of a rural environment. Also what assurances have the residents that their health is not being threatened?*

Technical Committees Evaluation:

The Board of the Agency has already decided not to hold an oral hearing. The issue of any commitments Kilkenny Co. Co. has given to local residents in the past is a matter for the parties involved. The proposed decision contains a number of conditions related to the management and control of emissions and potential nuisances. Specific measures for the control of odours are specified in the proposed decision and these include the provision of filters on the passive gas vents. The issue of what location Kilkenny Co. Co. wishes to provide a Civic Waste Facility at is a matter for the Local Authority. The provision of a Civic Waste Facility at the Dunmore landfill will provide a service to the local community and will further reduce the quantities of waste sent for disposal by landfilling. The facility is required to be operated and managed in order to ensure no adverse environmental impacts result. Compliance with the conditions of the proposed decision should ensure no significant impact on the environment or health of the local community. The issue of compensating the local community living close to the facility is a matter between the parties involved. The EIS was assessed as being compliant with the regulations.

Recommendation:

No Change

Submission on the Objection by Kilkenny Co. Co. from Dunmore Residents Action Group.

Grounds

The following issues are raised:

- 1. The Action Group is disappointed that an oral hearing will not take place.*
- 2. EPA approval of the extension is against the wishes of the local residents who have tolerated a very badly run facility for 12 years.*
- 3. The land will have to be engineered to achieve impermeability. The tributary of the River Nore is under threat from any liner failure. Such failures have taken place in the past due to poor construction and fire damage.*
- 4. Odours and vermin are uncontrolled and one nearby house is infested with vermin.*
- 5. The interests of two local residents have not been addressed and one of the residents health is declining possibly as a result of living so close to the landfill. Reference is also made to research from NUI Maynooth and Queens University that residents living within 1.8 miles of landfills are 33% more at risk than those living between 1.8 and 4.2 miles from the sites.*
- 6. Planning criteria would not allow housing development so close to a landfill and likewise a landfill should not be allowed so close to existing houses. House prices are always affected by having a landfill in the area.*

7. *The proposed recycling facility should be located in an industrial area which will have easy access.*

Technical Committees Evaluation:

As stated above, the Agency has already decided not to hold an oral hearing on the review application for this facility. Any future cells which will be developed at the facility will have to be constructed to the highest standards and this includes the provision of modern lining and capping systems. The facility will be managed by a competent and trained manager and the licensee is required to establish an Environmental Management System. The technical committee consider the conditions of the proposed decision are adequate for the protection of groundwater and surface waters and thereby ensuring no adverse impact will result from the facility. On the issue of health impacts, the Action Group did not provide any direct evidence to support its statement that the facility is responsible for the poor health of nearby residents. Also, the health studies conducted by NUI Maynooth and Queens University were not submitted by the Action Group. The facility is required to be operated in accordance with the conditions of the proposed decision and this should ensure that the facility has no adverse impact on human health in the locality. The issues of nuisances and the location of the Civic Waste facility have been dealt with above while the planning issues referred to here are a matter for the planning authority.

Recommendation:

No Change

Submission on the Objection by Dunmore Residents Action Group from Kilkenny Co. Co.

Grounds

The Co. Co. consider that the points raised in the objection by Dunmore Residents Action Group have been dealt with sufficiently in the application for review and in the inspectors report.

Technical Committees Evaluation:

The technical committee notes the comments of Kilkenny Co. Co.

Recommendation:

No Change

Signed: _____

Michael Henry
Technical Committee Chairperson