

1st August 2017

Ms. Aisling Ryan,
Office of Environmental Enforcement,
Environmental Protection Agency,
Regional Inspectorate,
John Moore Road,
Castlebar,
Co. Mayo.

Dear Ms Ryan.

Re: LR028403, “Re-profiling in advance of Cell 4 & 5 Capping works”

Galway County Council wishes to use materials as may become available in late 2017/early 2018 to re-profile the intermediate cap above cells 4 and 5. See cell location in Figure 1 below.



Figure 1 Overview of Cell layout

Re-profiling works will be required in advance of the engineered cap construction work which is programmed to occur between 2017 and 2020. The proposal advocated herein under requires a mechanism to facilitate placement of engineered fill materials below the liner albeit that under the current regime this would exceed intake rates to the facility as defined in Schedule A of Waste Licence W0178-02.

The purpose of this License Change Request is to seek permission to import up to 36,702 tonnes of additional recovery materials over the next 12 months for engineered fill use below the gas collection geocomposite and LLDPE liners in order to re-profile the intermediate cap formation in advance of the “final” engineered cap installation. The tonnage quantity outlined above is as derived from the report entitled ‘*Engineering Fill Cells 4 & 5 Below LLDPE Liner Calc Set 09*’ which was compiled by Fehily Timoney & Company and lodged with EPA on behalf of Galway Co. Co. 20/03/2017.

Re-profiling is required to ensure sufficient falls will be present to mitigate the risk of condensate lodging in over liner and under liner gas collection pipework and to mitigate localised surface drainage problems on the cap. Because there are local difficulties in sourcing suitable engineered materials and because the material will be placed in advance of capping works below the liner, the intent is to source inert or non-hazardous materials with little or no degradable materials that will be subject to limited long term settlement.

A summary overview of pertinent issues is presented below:

- Tender documents for final capping were issued in spring 2017 and a contract is about to be awarded for the backwall cell development and capping works programmed to be constructed between August 2017 and December 2020.
- The existing intermediate cap profile is extremely flat in a localised area and there are concerns that long-term differential settlement may compromise lateral gas collection pipework vertical alignments and surface drainage. Accordingly, the final cap design requires the intermediate cap to be re-profiled with steeper falls to mitigate these risks.
- In September 2012 the EPA granted the previous licensee permission to place an additional 2.5m lift of municipal solid waste (MSW) in the area of cells 2 and 3, onto waste that had been placed for approximately four years previous (Ref W0178-02/(12)Gen 81MM).
- Two further similar consents were granted later in 2012 by the EPA for placement of two additional 0.5m lifts of waste in this area, (Ref W0178-02(12)Gen83MM and email correspondence of 15/10/2012 and 07/11/2012) resulting in a total 3.5 m depth of additional waste placed in Cells 2 & 3. This raised the pre settlement level to 129 m at the time.
- This waste was then profiled into the existing freshly placed waste in cells 4 to 5. Differential settlement occurred between fresh waste in Cells 4 & 5 and the area where the consented additional waste was placed onto a waste base that had achieved primary settlement in Cells 2 & 3. As a consequence of these consents by the EPA to the previous licensee this created a lower profile in adjacent cells 4 & 5 which Galway County Council are now seeking to correct and are endeavouring to infill and re-profile so that capping works can follow. Appendix C of the 2016 AER shows a topographical survey as of December 2016. This survey reflects the lower profile in adjacent cells 4 & 5 which Galway Co. Co. must now address.
- The cap profile design requires additional materials to be placed to depths that vary between 1.0m and 4.0m. If materials were to be applied immediately prior to capping by the Contractor, varied surcharge loads will cause long term differential settlement which may compromise gas collection pipework and may cause condensate to lodge in low points and block gas extraction.
- To mitigate future gas collection problems, Galway County Council proposes to re-profile the intermediate cap where required using imported materials at least one year in advance of Contractor

capping related works. It is not possible to win these materials from site. There are, and will continue to be in the future, difficulties in sourcing local inert soils for the cap.

- The primary technical objectives are to:
 - Place re-profiling materials as early as is possible. The earlier material is sourced and placed the lower the risk that differential settlement will compromise future gas pipe alignments.
 - Source suitable materials with little or no biodegradable waste that will not be subject to significant settlement.
- The tonnage required may be up to 36,702 tonnes depending on material densities and settlement. The allowance in Schedule A for inert waste for restoration and aftercare is only 27,320 t/annum and this quantity will be fully required separately for operational purposes (for landfill daily and intermediate cover purposes).
- If Galway County Council were to continue to accept waste within the limitations of the waste license as it stands, the final capping profile that would ensure an enduring environmental solution will not be achieved within the planning timelines available.

In summary this License Change Request seeks Agency approval for a mechanism that will:

- Allow Galway County Council to use suitable recovery or other materials, in excess of provisions defined in Waste License W0178-02 Schedule, for engineered fill below the engineered cap to create a suitable profile in advance of final capping works; and that
- Acceptance criteria for said engineered fill will allow inert soils, C&D wastes, contaminated soils or other suitable recovery materials as may become available within the next 12 months to be used as engineered fill to facilitate re-profiling in advance of capping works to be carried out by the Contractor.

Galway Co. Co. will endeavour to achieve the required levels exclusively using 17 05 04 'Soil & Stones' material and believe that this is achievable. Only material within limit values for acceptance at non-hazardous landfills as per section 3 of *Council Decision 2003/33/EC* will be accepted.)

Regards



Colin Ryder
Landfill Manager
East Galway Landfill
Galway County Council