



**OFFICE OF ENVIRONMENTAL  
SUSTAINABILITY**

**REPORT OF THE TECHNICAL COMMITTEE ON REPRESENTATIONS MADE ON A  
DRAFT CERTIFICATE OF AUTHORISATION**

TO:	Each Director
FROM:	Technical Committee      Environmental Licensing Programme
DATE:	25 March 2020
RE:	Representation on a draft Certificate of Authorisation issued to Limerick City and County Council for a closed landfill at Knocknacarriga, Cappamore, County Limerick.  Certificate of Authorisation Register Number H0277-01.

**Application Details**

Type of facility:	Closed landfill as defined in the Regulations <sup>1</sup>
Application received:	12 March 2019
Draft Certificate issued:	17 September 2019
First party representation received:	15 October 2019

**1. Background to this report**

The site is located within a disused limestone quarry on the northern slope of Knocknacarriga Hill, Cappamore, County Limerick.

The site is surrounded by agricultural lands, with four houses, farmyard agricultural buildings, and a commercial building within 250m of the site. The Lower River Shannon SAC (Site Code: 002165) is located 600m North of the landfill site.

The risk assessment has categorised the site as low risk (Class C) with the pollutant linkages identified as:

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<sup>1</sup> Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008 (S.I. No. 524 of 2008).

- Potential for landfill leachate migration to surface water and surface water dependent ecosystems, aquifer and groundwater terrestrial ecosystem and human receptors such as buildings and wells.
- Potential for gas migration to human receptors (there are four houses, a farmyard and a commercial building within 250m of the site).

## **2. Consideration of the Representation**

This report considers one valid first party representation from Limerick City and County Council in relation to a number of requirements set out in the draft Certificate of Authorisation which are summarised below.

The representation should be referred to at all times for greater detail and expansion of particular points.

The Technical Committee (TC) comprising of Caitríona Collins (Chair) has considered all the issues raised in the representation and this report details the Committee's comments and recommendations following the examination of the representation.

### **2.1. Condition 3.1 (c) "install three gas monitoring boreholes"**

The applicant expressed concern in relation to the requirement to install three gas monitoring boreholes, given that the SPR score in relation to landfill gas migration was low. The applicant has not specified what it is seeking in terms of any amendment to the draft Certificate of Authorisation.

Technical Committee's Evaluation: The Technical Committee (TC) considers that landfill gas migration is one of the key risks associated with the presence of closed landfills. although the particular Source-Pathway-Receptor (SPR) score for landfill gas migration in this instance is low, a hazard may still be present and it is considered that the requirement to install three gas monitoring boreholes is appropriate.

<b>Recommendation:</b> No change
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### **2.2. Condition 3.1(d) "install a low permeability landfill cap, minimum 1m..."**

The applicant expressed concern about the requirement to install a cap with a minimum of 1m depth, citing health and safety grounds on the basis of the steepness of the slope. The applicant is seeking that proposed remediation in relation to capping, as described in the Certificate of Authorisation application be authorised.

Technical Committee's Evaluation: The TC notes that the remediation proposal outlined in the Certificate of Authorisation application (Tier 3) provides for the removal of the existing topsoil and the installation of a Geogrid (to prevent the upward migration of waste), along with the placement of 350mm of subsoil and 300mm of topsoil and reseeded of grass on the site. The TC considers that a capping layer of less than 1m may be appropriate, given the site characteristics and that this may be agreed by the Agency, after the Certificate of Authorisation issues.

Reason for Decision:

The Technical Committee propose to amend condition 3.1(d) as set out below and has reached its decision having regard to the following reason:

- To provide for flexibility that takes into account the physical characteristics of the site.

**Recommendation:** Amend condition 3.1(d) to read as follows:

**Unless otherwise agreed by the Agency,** install a low permeability landfill cap, minimum 1m, with 1mm thick low permeability geomembrane having a hydraulic conductivity of less than or equal to  $1 \times 10^{-9} \text{m/s}$ .

### **2.3. Condition 3.5(b) "monitoring on a biannual basis for leachate (sampling, analysis, characterise, and measure the level of leachate) in all leachate monitoring boreholes"**

The applicant contends that the monitoring frequency specified in condition 3.5 (biannually for leachate, surface waters, groundwater and visual inspection and quarterly for landfill gas) is unnecessary, citing the findings of the Tier 2 report in relation to low levels of leachate and the fact that no leachate monitoring boreholes are required to be installed.

Technical Committee's Evaluation: The TC considers that leachate migration is one of the key risks associated with the presence of closed landfills. The geophysical survey carried out in 2013 indicated the presence of a small leachate plume on one of the profiles. Although the particular SPR scores for leachate migration to private wells and aquifer in this instance are low, a hazard may still be present and it is considered that the requirement to carry out biannual monitoring of leachate may be appropriate. However, it is further noted that the draft Certificate of Authorisation does not provide for the installation of leachate monitoring boreholes and the TC considers that such a requirement should be provided for in condition 3.1.

Reason for Decision:

The Technical Committee propose to amend condition 3.1 as set out below and has reached its decision having regard to the following reason:

- To provide for clarity around leachate monitoring requirements.

**Recommendation:** Amend condition 3.1 to include a new condition 3.1 f) as follows:

f) Install three leachate monitoring boreholes within the waste body, unless otherwise agreed by the Agency.

**2.4. Condition 3.5 (c) "monitoring on a quarterly basis and for a period of at least two years to detect the presence and concentration of landfill gas in all monitoring boreholes"**

The applicant contends that this requirement is not in accordance with the findings of the site investigation. The applicant has not specified what it is seeking in terms of any amendment to the draft Certificate of Authorisation.

Technical Committee's Evaluation: The TC considers that landfill gas migration is one of the key risks associated with the presence of closed landfills. although the particular SPR score for landfill gas migration in this instance is low, a hazard may still be present and it is considered that the requirement to carry on monitoring is appropriate. The TC further notes that the monitoring frequency can be amended in accordance with condition 3.6, with the approval of the Agency following evaluation of results.

**Recommendation:** No change

**2.5. Condition 3.5 (d) "monitoring (sample, analyse and characterise) on a biannual basis of discharge from the pipe and the receiving surface water drain upstream and 500m downstream of the outlet from the pipe"**

The applicant indicates that the parameters to be monitored are not specified in the draft Certificate of Authorisation.

Technical Committee's Evaluation: The TC notes that the condition, as drafted, includes a requirement to analyse and characterise the discharge, and for that reason, the parameters to be monitored will depend on the characteristics of the discharge, which is to be established on a biannual basis.

**Recommendation:** No change

**2.6. Condition 3.5 (e) "monitoring (sample, analyse and characterise) on a biannual basis of groundwater from at least three groundwater monitoring boreholes, two of which shall be downgradient of the closed landfill"**

The applicant contends that the requirement is not necessary based on the findings of the site investigation, citing the findings of the Tier 2 report and the low SPR scores for leachate migration via groundwater.

Technical Committee's Evaluation: The TC considers that leachate migration is one of the key risks associated with the presence of closed landfills. The geophysical survey carried out in 2013 indicated the presence of a small leachate plume on one of the profiles. Although the particular SPR scores for leachate migration to aquifer in this instance are low, a hazard may still be present and it is considered that the requirement to carry out biannual monitoring of groundwater may be appropriate. The TC further notes that monitoring frequencies can be amended in accordance with condition 3.6, with the approval of the Agency following evaluation of results.

**Recommendation:** No change

**2.7. Condition 3.10.1 "groundwater monitoring wells shall be constructed having regard to the guidance given in the Agency's landfill manual "Landfill Monitoring".**

The applicant states that there is no requirement to install groundwater monitoring wells and that this condition is not applicable.

Technical Committee's Evaluation: The TC notes that groundwater monitoring is required in accordance with condition 3.5(e), from at least three groundwater monitoring boreholes. The TC further notes that the proposed Certificate of Authorisation does not require the installation of groundwater monitoring boreholes. The TC considers that such a requirement should be provided for in condition 3.1, as the waste is in direct contact with the underlying bedrock and as such there is a risk to groundwater quality.

Reason for Decision:

The Technical Committee propose to amend condition 3.1 as set out below and has reached its decision having regard to the following reason:

- To provide for clarity around groundwater monitoring requirements.

**Recommendation:** Amend condition 3.1 to include a new condition 3.1 g) as follows:

g) Install three groundwater monitoring boreholes within the waste body, two of which shall be downgradient of the landfill.

## 2.8. Condition 3.13 (i) – (iv) Communications

The applicant contends that a communications programme in relation to the risks posed by landfill gas and its migration does not appear to be necessary, given the findings of the site investigation.

Technical Committee's Evaluation: The TC considers that the communications programme, as required in the draft Certificate of Authorisation includes requirements that may not be in proportion to the findings of the site investigation and an alternative communications programme is recommended.

### Reason for Decision:

The Technical Committee propose to amend condition 3.13 as set out below and has reached its decision having regard to the following reason:

- To provide for more proportionate communications requirements.

**Recommendation:** Amend condition 3.13 to read as follows:

#### Condition 3.1 Communications Programme

- (i) The certificate of authorisation holder shall establish, maintain and implement a Communications Programme to ensure that members of the public can obtain information from the local authority concerning the closed landfill.
- (ii) The communications programme shall inform members of the public what they can and should do to protect their property and health.
- (iii) The local authority shall, as part of the communications programme, publish groundwater and surface water monitoring data bi-annually in a manner accessible by the public.

## 2.9. Condition 2.3 Environmental Liabilities

The applicant seeks information on what financial provision is required considering the low risk classification of the site and that the works will be undertaken by adequately insured contractors.

Technical Committee's Evaluation: The TC considers that the matter of appropriate financial provision is a matter that will be dealt with as part of the implementation and enforcement of the Certificate of Authorisation.

**Recommendation:** No change

### **3. Appropriate Assessment – Technical Committee Review**

The TC has reviewed the inspector's Appropriate Assessment in the Inspector's Report and, taking into account the representation received, and the content of this TC report, the TC is satisfied that the Inspector's Report provides an adequate examination and evaluation of the effects of the activities on the European Sites concerned, Lower River Shannon SAC (Site Code: 002165), Slievefelim to Silvermines Mountains SPA (Site Code: 004165) and River Suir SAC (Site Code: 002137) in the light of their conservation objectives.

### **4. Overall Recommendation**

It is recommended that the Board of the Agency grant a certificate of authorisation to the applicant

- (i) for the reasons outlined in the Draft Certificate of Authorisation,
- (ii) subject to the conditions and reasons for same in the Draft Certificate of Authorisation, and
- (iii) subject to the changes recommended in this report.

Signed

*Caitríona Collins*

Caitríona Collins

Date 25/03/20

Senior Inspector

for and on behalf of the Technical Committee