



COMHAIRLE | CLARE
CONTAE AN CHLÁIR | COUNTY COUNCIL

Ms. Ewa Babiarczyk.

Inspector,

Circular Economy Programme,

Office of Environmental Sustainability.

Reg No. H0035-01

Date: 07 March 2022

Re. Request to supply information in accordance with Regulation 7(4) received by Clare County Council and dated 27th January 2022.

Dear Ewa,

As there were a number of issues raised, I have addressed each one individually and numbered to correspond with your further information request. Furthermore, I have attached an updated Tier 3 assessment report and a monitoring point map.

- 1 The site boundaries detailed in the Tier 1 and Tier 2 documents refer to the total land holding owned by Clare County Council at the site. The site boundary in Tier 3 report refers to the landfill area specifically as defined by on site investigations. There is no landfilling outside to the boundary as detailed in the Tier 3 document.
- 2 As stated in the report the site covers c.8ha. However the waste footprint covers 1.19ha.
- 3 The site covers 1.19ha.

**An Roinn Chomhshaoil
An Stiúirthóireacht Forbairt Fhisiceach**

Áras Contae an Chláir, Bóthar Nua, Inis, Co. an Chláir, V95 DXP2

**Environment Department
Physical Development Directorate**

Áras Contae an Chláir, New Road, Ennis, Co. Clare, V95 DXP2

- 4 (i) The purpose of installing the trial pits closer to the margins was to confirm the lateral extent of the waste. The waste is consistent in its composition across the site. Based on the observations of the waste in the pits in the north and south of the site it was considered unnecessary to install pits in the centre of the waste mass.
- (ii) As indicated in the trial pit log for TP-6 it contained no waste. It contains sand and rubble. This trial pit was considered to be outside the landfill footprint.
- (iii) The liquid in the trial pits comprised rainfall recharge through the waste mass and leachate as a result of rainfall moving through the waste. It is not perched groundwater and is not the water table.
- 5 (i) The blue oval is a water body it has a local name (Crooked Lough). Not all such water bodies are mapped on EPA website of surface water features.
- (ii) SW-10 is a local land drain and not a surface water stream or river. This drain which is up stream of the landfill is included in the updated map as a dashed line/surface water feature as it only intermittently contains water (confirm) It runs parallel to the road and likely seeps across as indicated on drawings.
- 6 Sample locations for the data in Appendix 4a and 4b are listed below

Appendix 4a Reference Table

Date	Sample Reference	Sample Location
23/04/2021	21-0289	SW-6
23/04/2021	21-0290	SW-10
23/04/2021	21-0291	SW-1
23/04/2021	21-0292	GW-10
23/04/2021	21-0293	GW-1
23/04/2021	21-0294	SW-11

Appendix 4b Reference Table

Date	Sample Reference	Sample Location
24/04/2021	21-0390	SW-6
24/04/2021	21-0391	SW-1
24/04/2021	21-0392	GW-10
24/04/2021	21-0293	GW-1
24/04/2021	21-0294	SW-11

- 7 It is highly likely that the leachate quality will be different since it was established in 2009. Given the extent of rainfall recharge through the waste over the past 13 years it is highly likely that the leachate is now much weaker and the associated risk posed by it is also much lower than when it was monitored in 2009. We do not therefore consider that the expense of installing leachate wells now is justified and that any investment in managing the site risk should focus on remediation works such as capping to diverting the rainfall recharge that is generating any remaining leachate.
- 8 The site is situated in a remote location with the closest gas sensitive receptor more than 600m to the north of the site. The Risk Assessment as detailed in the **EPA Code of Practice, 'Environmental Risk Assessment for Unregulated Waste Disposal Sites'**, clearly demonstrates that landfill gas is not a risk. (SPR 10 and SPR 11 , Tier 1 report). Any residual gas is currently freely venting to atmosphere therefore the gas risk is insignificant. As part of the proposed remedial measures gas ventilation wells will be installed to mitigate any gas risk once the site is capped. It is therefore considered that installing landfill gas monitoring wells at this time is unwarranted.
- 9 The wells that are currently monitored are the closest groundwater sensitive receptors to the site and are therefore considered the most suitable groundwater monitoring locations. As outlined in the Tier 3 report, given the nature of the subsoil (peat) and the underlying bedrock aquifer which is a poorly productive aquifer, groundwater pathways are short with discharge to adjacent streams and rivers. It is highly likely that the rainfall recharge predominantly discharges to the drains and streams around the landfill and does not percolate to any significant degree through the peat. For this reason it is considered that installing groundwater wells at the site will not provide any significant additional information and the budget for the site should therefore focus on the remedial measures required to mitigate the risk posed which is to the surface water receptors.
- 10 It is not possible to show all the monitoring points on a single drawing. The points on the site would be too cluttered relatively to surface water and groundwater monitoring points further away from the site. We have prepared a drawing showing all of the trial pits, leachate sampling and surface water sampling points in the vicinity of the landfill. The surface water monitoring points which are further away and groundwater monitoring points are already shown on the figures in the report.
- 11 There is no Hazardous Waste deposited in the landfill site.
- 12 An amended Figure 5.3 has been prepared. The proposed capping thickness as stated in the report is 500mm.
- 13 Section 5 refers to surface water drainage along the boundaries. What this means is that the compacted capping layer will cover the waste mass which will be pulled back from the surrounding surface water drains and stream along the boundaries. The capping layer will be contoured to allow surface water runoff from the central more elevated portion of the site to the perimeter with runoff into the surrounding surface water courses. It is not intended to have a single surface water discharge point.

14 Retained closed landfill returning to wild habitat.



Cathal Brodie

Chartered Environmental Scientist.

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