

**Churchtown Landfill Reg. No. H0291-01**

**Date: 19<sup>th</sup> June 2019**

**Response: EPA Information Request dated 11<sup>th</sup> June 2019**

## **Background**

Limerick City and County Council applied for a Certificate of Authorisation for Churchtown landfill from the EPA on 22<sup>nd</sup> June 2018.

This report is Limerick City and County Council's response to the Notice issued by the EPA in accordance with Regulation 7(4) of the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008.

### **Point 1.**

Limerick City and County Council are aware of the discrepancies in the site boundary as presented in Tier 1 and Tier 2 reports. As part of the Tier 2 report *Minerix Geophysics Ltd.* carried out a geophysical survey in 2012 consisting of EM31 ground conductivity, 2D resistivity and seismic refraction profiling. The main objective of the survey was to determine the extent and volume of the waste body and depth to bedrock.

In June 2013, Minerex carried out a further seismic survey of 8 short profiles in properties located along the eastern boundary of the site. The aim of the survey was to define the landfill boundary as precisely as possible.

The defined site boundary is presented in Attachment 1.

### **Point 2**

The Non-Technical Summary stated;

The site was used locally as a dump since 1935. This implies that some locals were dumping on the site before Limerick County Council acquired it.

### **Point 3:**

Mr. Finbarr Murhy, Executive Engineer, Limerick City & County Council, was the qualified person at the time Tier 1, Tier 2 and Tier 3 investigations were carried out. I attach qualified persons letter as Attachment 2.

**Point 4:**

The tonnage presented in Tier 1 was an estimate. The final tonnage of 207,500 was determined following the geophysical survey carried out by Minerix Geophysics Ltd. This has already been detailed under point 1 of this report. The final tonnage of 207,500 has been entered on the Section 22 Register.

**Point 5:**

Up to date gas monitoring results are presented attachment 3.

Up to date Leachate analysis results are presented in Attachment 4. The leachate sample was taken from the on-site pumping station. This pumping station is piped directly to the sewer which in turn is piped to the Newcastle West Waste Water Treatment Plant.

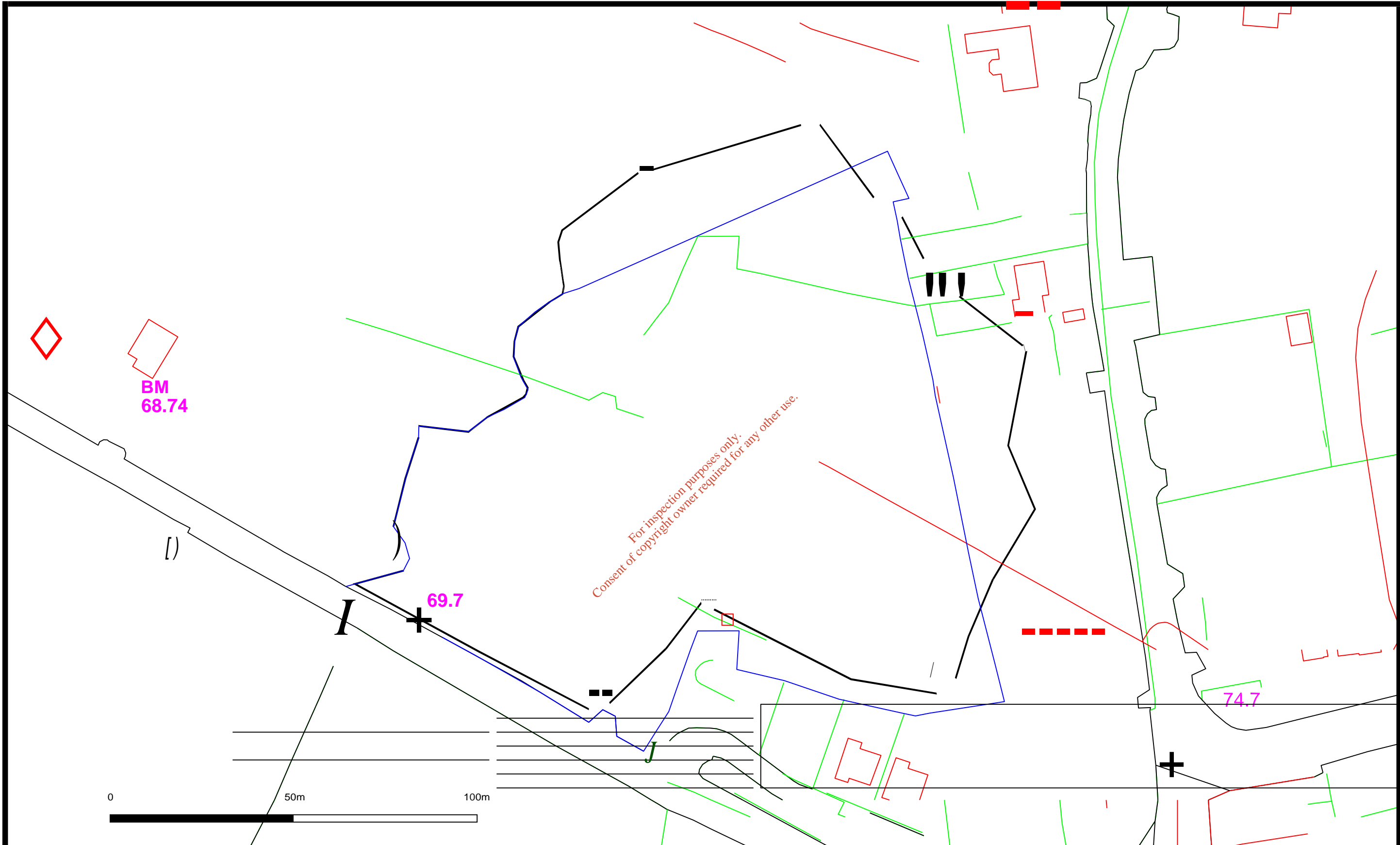
**Point 6:**

There are no temporary water courses within the closed landfill.

**Signed:** \_\_\_\_\_

John O Carroll,  
Executive Scientist,  
Limerick City & County Council

For inspection purposes only  
Consent of copyright owner required for any other use.



**Minerex**  
Geophysics Limited

Unit F4, Maynooth Business Campus  
Maynooth, Co. Kildare  
Tel. (01) 6510030  
Fax. (01) 6510033  
Email: info@mgx.ie  
Web: www.mgx.ie

Attachment No. 1

CLIENT Limerick County Council  
PROJECT Churchtown Landfill, Newcastle W.  
Geophysical Survey  
TITLE Map 4: Boundaries Map

SCALE: 1:1000 @ A3  
PROJECT: 5611  
DRAWN: HK  
DATE: 06/09/2013  
MGX FILE: 5611f\_Maps.dwg  
STATUS: Final

LEGEND:

-  Landfill Waste Boundary (Best Fit)
-  Site Boundary



Finbarr Murphy  
Limerick County Council  
Lissanalta House  
County Hall  
Co Limerick

**Re: Credentials in accordance with section 2.3 of Code of Practice: *Environmental Risk Assessment for Unregulated Waste Disposal Sites* (EPA, 2007)**

Dear Mr Murphy, Chartered Engineer, MIEI

Engineers Ireland is satisfied to state that you are a person who is qualified, trained and experienced to the standard set out in section 2.3 of Code of Practice: *Environmental Risk Assessment for Unregulated Waste Disposal Sites* (EPA, 2007) and has achieved chartered status or equivalent.

This notice is valid for a period of two years from today's date.

Signed:

A handwritten signature in black ink that reads "Aidan Harney".

Aidan Harney  
Continuing Professional Development (CPD) Director  
Engineers Ireland  
T: +353 (0)1 665 1314  
aidanh@engineersireland.ie

# LANDFILL GAS MONITORING

LANDFILL GAS MONITORING FORM				
<b>Operator: LIMERICK CITY &amp; COUNTY COUNCIL</b>			<b>Site Name: Newcastle West</b>	
<b>Site Status: Closed</b>			<b>Date: 17/06/2019</b>	<b>Time: 14:00</b>
<b>Instrument: GFM-435-1</b>	<b>Normal Analytical Range:</b> Methane-----0-100 % Carbon dioxide-----0-50 % Oxygen-----0-21 %		<b>Date: Next Calibration- July 2019</b>	
			<b>Temperature : 16 °C</b>	<b>Atmospheric Pressure:m-bar 998</b>
Results				
Sample Station No.	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Comments
<b>GW1</b>	46.2	27.5	1.2	No Flow Recorded
<b>GW 2</b>	22.0	18.2	2.5	No Flow Recorded
<b>GW3</b>				<b>Inaccessible due to heavy over growth</b>

Note: Monitoring carried at locations shown in figure 2 page 15 of Tier 2 report

## Attachment No. 4

**Table D: Churchtown Landfill- Newcastle West - Leachate Monitoring Results(ex-pumping station) – May 2019**

Sample Location	pH	Electrical Conductivity	Arsenic	Ammoniacal Nitrogen	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Sulphate
	-	µS/cm	µg/l	mg/l	µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	mg/l
<b>SW1</b>	6.87	870	<2.5	9.98	<0.5	<1.5	<7	<5	<1	3	<3	5.6
<b>SI 272 of 2009 Standards<sup>1</sup></b>	pH 6-9	N/A	25	0.04 - 0.14	0.6	3.4	30	7.2	0.05	20	N/A	N/A
<b>EPA Water Quality<sup>2</sup></b>	5.5 - 8.5	1,000	50	0.2	5	50	30	50	1	20	10	200

<sup>1</sup>- European Communities Environmental Objectives (Surface waters) Regulations 2009

<sup>2</sup>- Parameters of Water Quality - Interpretation and Standards, Environmental Protection Agency, 2001

For inspection purposes only  
Consent of copyright owner required for any other use.