

## Eve O'Sullivan

**From:** Licensing Staff  
**Sent:** 03 March 2021 15:29  
**To:** Ewa Babiarczyk  
**Cc:** Eve O'Sullivan  
**Subject:** FW: Michael Mac Giolla Coda shared the folder "Digby BridgeRegulation 7(4) Notice H0223-01" with you.

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**From:** Michael Mac Giolla Coda <mmacgiollacoda@kildarecoco.ie>  
**Sent:** Wednesday 3 March 2021 15:26  
**To:** Licensing Staff <licensing@epa.ie>  
**Subject:** Michael Mac Giolla Coda shared the folder "Digby BridgeRegulation 7(4) Notice H0223-01" with you.



### Michael Mac Giolla Coda shared a folder with you

Please find response to notice in accordance with Reg. No. H0223-01 - Regulation7(4) of the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations, 2008 - Digby Bridge Landfill



Digby BridgeRegulation 7(4) Notice H0223-01



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Tá an ríomhphost seo príobháideach agus ní ceadmhach úsáid an ríomhphoist seo d'éinne ach don té ar seoladh chuige é. D'fhéadfadh go mbeadh eolas ann atá faoi phribhléid agus rúnda de réir an dlí. Munar duit an ríomhphost seo, déan teagmháil leis an seoltóir chomh luath agus is féidir. D'fhéadfadh nach iad tuairimí Chomhairle Contae Chill Dara na tuairimí atá curtha in iúl sa ríomhphost seo. Déanann Comhairle Contae Chill Dara iarracht ríomhphoist a chosaint ó víris. Mar sin féin, moltar duit gach ríomhphost a scanadh, mar ní ghlacann an Chomhairle aon dliteanas i leith damáiste do do chórais. Le haghaidh eolas ar do chearta príobháideachta agus ar conas a bhainistimid sonraí



Administration  
Environmental Licensing Programme  
Office of Environmental Sustainability  
Environmental Protection Agency  
Headquarters  
PO Box 3000  
Johnstown Castle Estate  
County Wexford

3<sup>rd</sup> March 2021

Reg. No. H0223-01

**Re: Digby Bridge Landfill – Notice in accordance with Regulation 7(4) of the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations, 2008**

Please see responses below numbered as per your original request for information.

1. The Section 22 Register Number for the closed landfill is S22-02432.
2. As per the Tier 2 Report Section 3.3.2: *The volume of waste is estimated as 366,600 m<sup>3</sup>. Using a standard density of 1.4 tonnes/m<sup>3</sup> for municipal waste, the tonnage is estimated at 513,240 tonnes.*
3. The correct site boundary is shown on Figure 2 titled 'Site Investigation' of the Tier 2 Report.
4. The specific detail and operation of the proposed landfill gas extraction and flaring system, including the initial testing phase will be designed by a specialist consultant procured by Kildare County Council. The Remediation Plan, Figure 1: 'Gas Remedial Plan' shows the location of proposed gas extraction infrastructure. The final location of this infrastructure is subject to detailed design, and consultation with the landowners.
5. Please see 'Figure 2A: Made Ground & Waste Boundaries with Existing & Proposed Onsite Monitoring Locations'. This shows the extent of the waste body with the following elements interpolated:
  - (i) the extent of "Made Ground/ Fill (not waste material)" referred to in Section 3.2.2 of the Tier 2 Assessment;
  - (ii) the existing and proposed monitoring locations for gas, leachate, groundwater and surface water (note SW-03 is included but it was not sampled as it was found to be dry on all sampling rounds). There are also proposed additional offsite groundwater monitoring locations shown in the Remediation Plan, on 'Figure 3: Groundwater Remedial Plan'; and,
  - (iii) the site boundary around the entire site.
6. The only ditch that was discovered in the Site Investigation, as described in the Tier 3 Assessment, Volume 2 Section 2.3 was: *A shallow drainage ditch is present at the north-western margin of the site alongside a single farmyard and dug to divert surface runoff from the landfill away from the farmyard. The only discharge evident was an overflow from the ditch onto the adjacent road was witnessed, where it pooled.* 'Figure 2A: Made Ground & Waste Boundaries with Existing & Proposed Onsite Monitoring Locations' shows the location of this ditch.



7. Consideration was given to the installation of a Low Permeability Cap in the Remediation Plan, Section 2.2 Overview of Remedial Options, where it was concluded that one would not be warranted:

*Installation of a Low Permeability Cap – while this addresses SPR5 and SPR6 by significantly reducing the leachate generated at the site (and accordingly would indirectly mitigate SPR10 by reducing the potential for LFG generation), it would be a significant project to undertake at this site, particularly as the site is not owned by Kildare County Council. Such a scheme would not be warranted by the current known risks to groundwater at the site.*

Section 4 of the Remediation Plan outlines the proposed approach for adaptive groundwater monitoring and Section 4.3 states: *If it is found in due course that Trigger Values for determinands are being exceeded significantly and/or frequently, this may trigger further assessment which may recommend additional remedial options at site. These remedial options include but are not limited to:*

- *Pump and Treat System for Groundwater; and*
- *Installation of a Low Permeability Cap.*

Additionally, Table 11 of Tier 3 Vol. 1 11 States: *It has been proven that the landfill cap/cover acts as a barrier to gas flow.* It is also felt that any decrease in the gas permeability of the cap, whilst reducing the generation of landfill gas in the long term, could have a detrimental effect on SPR 10 (lateral migration of landfill gas) in the short term.

8. As per Attachment C.4:

*Currently the site is laid out in fields for grazing sheep and horses. There is currently no intention to use the site for other purposes. Should any other use be proposed in the future it would be subject to Kildare County Council's planning procedures. Any such change of use would be subject to Environmental Risk Assessment in accordance with the EPA Code of Practice.*

The information supplied in compliance with the notice does not impinge on the non-technical summary. Accordingly, a revised non-technical summary is not included.

Yours Sincerely,

Micheál MacGiollaCoda  
Executive Engineer

**Encl.** FIGURE 2A: MADE GROUND & WASTE BOUNDARIES WITH EXISTING & PROPOSED ONSITE MONITORING LOCATIONS  
Digby Bridge Landfill – Updated List of Figures





# Digby Bridge Landfill – Updated List of Figures

## Tier 1: List of Figures

Figure 1: Site Location

Figure 2: GSI Quaternary Geology map

Figure 3: Teagasc Soils Map

Figure 4: GSI Bedrock Geology map

Figure 5: GSI National Bedrock Aquifer map

Figure 6: GSI Groundwater Vulnerability map

Figure 7: Updated CSM

Figure 8: Updated CSM

## Tier 2: List of Figures

Figure 1: Site Location

Figure 2: Site Investigation

**Figure 2A: Made Ground & Waste Boundaries with Existing & Proposed Onsite Monitoring Locations – New drawing provided as part of response to Regulation 7(4) – Feb 2021.**

Figure 3: Offsite Well Survey

Figure 4: Offsite Gas Survey

Figure 5: Site Topography

Figure 6: Cross Section Overview

Figure 7: Cross Section 1

Figure 8: Cross Section 2

Figure 9: Cross Section 3

Figure 10: Cross Section 4

Figure 11: Cross Section 5

Figure 12: Landfill Cover Cross-Section

Figure 13: Groundwater Contour – Gravel (December 2018)

Figure 14: Groundwater Contour – Gravel (March 2019)

Figure 15: Groundwater Contour – Gravel (May 2019)

Figure 16: Groundwater Contour Map – Limestone (June 2019)

Figure 17: Landfill Gas Results

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### **Tier 3, Volume 1: List of Figures**

Figure 1: Changes in the Production and Composition of Landfill Gas Over Time

Figure 2: Gas Forecast

Figure 3: Methane Formation

Figure 4: Monitoring Locations and Adjacent Properties

Figure 5: MW03 Extraction Test Results

Figure 6: MW05 Extraction Test Results

Figure 7: MW07A Extraction Test Results

Figure 8: MW08A Extraction Test Results

Figure 9: MW09 Extraction Test Results

Figure 10: MW12 Extraction Test Results (with Observation Well MW13 Results)

Figure 11: MW13 Extraction Test Results (with Observation Well MW12 Results)

Figure 12: MW14 Extraction Test Results

Figure 13: Conceptual Site Model – LFG

Figure 14: Processed Atmospheric Pressure Data from Parnell Park

Figure 15: Permeability Anisotropy

Figure 16: LFG Plume Migrating Within the Subsurface

### **Tier 3, Volume 2: List of Figures**

Figure 1: Conceptual Site Model - Plan View

Figure 2: Conceptual Site Model - Cross-Section SW-NE Across the Site

Figure 3: (A) Mechanical dispersion through a porous aquifer. (B) Axis relative to groundwater flow.

### **Remediation Plan: List of Figures**

Figure 1: LFG – Remedial Plan

Figure 2: Example of Flare System

Figure 3: Groundwater – Remedial Plan

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