

This Report has been cleared for submission to the Board, by Warren Phelan,
Warren Phelan Programme Manager, on 12 December 2023.

Signed: Eve O'Sullivan

Dated: 14 December 2023



OFFICE OF ENVIRONMENTAL SUSTAINABILITY

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

TO:	Board of Directors	
FROM:	Technical Committee	Circular Economy Programme
DATE:	14 December 2023	
RE:	Representation on draft Certificate of Authorisation issued to Kildare County Council for a closed landfill at Digby Bridge, Barrettstown, Sallins, County Kildare. Certificate of Authorisation Register Number H0223-01.	

APPLICATION DETAILS

Type of facility:	Closed landfill as defined in the Regulations ¹ .
Application received:	06 November 2020
Draft Certificate issued:	29 November 2021
First party representation received:	20 December 2021

1. Background to this report

The privately owned site is located south-east of Digby Bridge, in the townland of Barrettstown, 2km north-east of Sallins in County Kildare and covers an area of 9ha. The site is surrounded by agricultural lands. A private driveway traverses the site. There are residential dwellings immediately adjacent to the north-eastern, southern and western site boundary. The landfill operated from 1980 to 1982 and comprises approximately 513,240 tonnes of municipal solid waste (MSW), construction and demolition waste (C&D), end-of-life vehicles (ELVs), scrap metal and industrial waste. The extent of the waste body is approximately 4.9ha. The Grand Canal (pNHA) flows along the north-eastern boundary of the site, at approximately 50m at the nearest point to the site. The nearest European Site is Ballynafagh Bog SAC (site code: 000391) and is approximately 5.7km north west of the site. Post remedial works, it is intended the site will

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

continue to be used as a grazing area for sheep and horses. Appendix 1 shows the location of the site and a site diagram is provided in Appendix 2.

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

- Migration of landfill leachate into the underlying aquifer (SPR 5); and
- Lateral migration of landfill gas into nearby buildings potentially impacting human health (SPR 10).

2. Consideration of the Representation

This report considers one valid first party representation from Kildare County Council. The applicant has made 5 main points of representation relating to the draft certificate of authorisation (CoA). The main points of the representation 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 Martin Doyle (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 No. 3.2(b) Install a low permeability landfill cap to achieve a hydraulic conductivity of 1×10^{-9} m/s.

The applicant requests that Condition 3.2 (b) be removed and replaced with adaptive monitoring for groundwater.

The applicant makes a number of points and requests in relation to the requirements of Condition 3.2(b) as follows:

- A. The applicant states consideration was given to the installation of a low permeability landfill cap in the Remediation Plan however it was concluded that one would not be warranted. This was due to the scale of such works on lands that were not in the ownership of Kildare County Council and that the risks identified to groundwater at the site did not warrant such an undertaking.
- B. The applicant contends installation of an impermeable cap would lead to lateral migration of the landfill gas to nearby residential dwellings in the short term (SPR 10).
- C. The applicant further states that a minimum viable solution of adaptive monitoring for groundwater was recommended in the Environmental Risk Assessment to address migration of leachate to the underlying aquifer (SPR 5).
- D. The applicant states that agreement for such works as identified in Condition 3.2 (b) have not been agreed with the landowner and is highly unlikely to be agreed. The applicant contends to proceed with remediation works would likely require the purchase of these lands.
- E. The applicant raises concerns about the viability of complying with Condition 3.2 (b) of the draft CoA and in particular with the associated 24-month deadline.

Technical Committee's Evaluation:

The TC considers the following points:

1. The application documentation notes that rainwater ingress is not being prevented by the existing cover sufficiently enough to reduce the generation of leachate. The existing landfill cover is predominantly sandy gravelly clay of variable depth measured between

0.3 to 2.4m. Furthermore, the range of hydraulic permeability values of the current cover were determined to range from 8.07×10^{-9} m/s to 2.02×10^{-7} m/s, hence not achieving the required low permeability value (1×10^{-9} m/s) for capping of a landfill of this nature.

2. Condition 3.2(c) requires the installation of an effective gas management system specifying locations of gas collection wells, minimum gas piping network requirements, gas intercept trenches between the waste body and relevant buildings and domestic dwellings and a gas flaring system. Such provisions will prevent the lateral migration of landfill gas to nearby residential dwellings. Furthermore, Condition 3.12 requires indoor and outdoor air monitoring for methane and carbon dioxide in all relevant buildings, including domestic dwellings on a quarterly basis, beginning immediately after the installation of the landfill cap.
3. Leachate with high ammoniacal nitrogen concentrations has the greatest potential to adversely impact upon surface waters and groundwaters. Ammoniacal nitrogen concentrations measured in one leachate sample within the waste body, ranged from 12mg/l N (monitoring location MW-13) to 40mg/l N (monitoring location MW-09) exceeding the maximum groundwater regulation value ² of 0.065mg/l N. A number of parameters (including orthophosphate, calcium, manganese, nickel, potassium, sodium and cyanide) in the leachate also exceeded relevant standards ²; the leachate sampling results obtained from monitoring location MW-13 shows that the concentration for manganese 8,300 µg/l (2018), 6,530 µg/l (2019) and potassium 14mg/l (2018), 11.8 mg/l (2019), exceeded the guideline values³ for the protection of groundwater (50µg/l manganese and 5mg/l potassium).
4. The groundwater monitoring results show the landfill is impacting on groundwater quality, with ammoniacal nitrogen concentrations exceeding the groundwater regulation value ² of 0.065mg/l at groundwater monitoring locations MW-05 (66.7mg/l N) and MW-07 (24.7mg/l N), located downgradient of the waste body. Electrical conductivity also exceeded regulation values ² (1,990 µS/cm v's 1,875 µS/cm) at MW-05, and faecal and total coliforms exceeded drinking water parametric values ⁴ in MW-07 (1,120 mpn/100ml and 613 mpn/100ml respectively v's 0 mpn/100ml)
5. Groundwater vulnerability across the site is classified as "High" by the Geological Survey Ireland and the risk assessment classified the site as high risk regarding migration of leachate into the underlying aquifer.
6. The applicant's proposed alternative measure, namely, the adaptive monitoring of groundwater would not break the leachate source-pathway-receptor linkage and is therefore not considered an appropriate remediation measure. No other measures are proposed by the applicant.
7. Regarding the applicant's concerns in relation to the agreement of the landowner to the implementation of measures set out in Condition No. 3.2(b) of the draft certificate of authorisation, the TC notes that the regulations ⁵ state the following:
 - a. Regulation 6(3) *"Where a closed landfill, ..., is situate on property in the ownership or control of a person other than the local authority concerned, then that authority shall request the owner or occupier of such property, ..., to permit its authorised persons, ..., to enter onto such property for the purposes of preparing the Risk Assessment described in Regulation 6(1) or for any other purpose and any local authority*

² European Communities Environmental Objectives (Groundwater) Regulations, 2010, as amended.

³ 'Towards setting guideline values for the protection of groundwater in Ireland-Interim Report' EPA 2003.

⁴ European Union (Drinking Water) Regulations 2023.

⁵ Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008 (S.I. No. 524 of 2008).

concerned shall discharge any reasonable costs or expenses incurred by any such owner or occupier by reason of such actions as described herein."

- b. Regulation 6(4) "A person on whose land consent is required under Regulation 6(3) to access such land **shall grant such consent in relation to the closed landfill to the local authority** or its authorised officials, servants or agents."
- c. Regulation 6(5) "The local authority may give such direction, as it considers appropriate, to the person in Regulation 6(3), **to require that person to permit the carrying out of the necessary measures pursuant to Regulation 6(3)**".
- d. Regulation 6(6) "A **person commits an offence if that person fails to comply with a direction under Regulation 6(5)**."

The TC therefore considers that the regulations support Local Authorities in obtaining consent from landowners and equally require landowners to permit the implementation of the required remediation measures.

Taking account of the above, the TC recommends that Condition 3.2 (b) of the draft CoA is not amended.

Regarding the applicant's concerns on the timeframe of 24 months, the TC considers that an additional 6 months is provided to Condition 3.2 to enable adequate time for the Local Authority to implement all requirements. The TC recommends that Condition 3.2 is also updated to enable the Agency to amend timeframes as required. Consequently, an additional 6 months is also provided on Condition 3.6 which requires the submission of the validation report within 36 months.

Reason for Decision:

The TC has reached its conclusion on the basis of the following consideration:

- (i) In the interest of the protection of the environment and human health from leachate migration to groundwater.

Recommendation: Amend Condition 3.2 to read as follows:

The local authority shall implement, unless otherwise agreed by the Agency, the following measures within **30** months of the date of grant of this Certificate of Authorisation, **or as otherwise agreed by the Agency:**

Amend Condition 3.6 to read as follows:

The local authority shall compile a validation report in accordance with the requirements of the Code of Practice. Unless otherwise agreed, the validation report shall be submitted to the Agency within **42** months of the date of grant of this Certificate of Authorisation.

3. Appropriate Assessment – Technical Committee Review

The TC has reviewed the Inspector's Appropriate Assessment Screening in the Inspector's Report and, taking into account all representations 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 activity on the European Sites concerned, North Dublin Bay SAC (site code: 000206), North Bull Island SPA (site code: 004006), South Dublin Bay SAC (site code:000210), South Dublin Bay and River Tolka Estuary SPA (site code:004024), Ballynafagh Bog SAC (site code: 000391), Ballynafagh Lake SAC (site code: 001387), Mouds Bog SAC (site code: 002331),

Pollardstown Fen SAC (site code: 000396), Red Bog, Kildare SAC (site code: 000397) and Poulaphouca Reservoir SPA (site code: 004063) in the light of their conservation objectives.

The TC notes that updated Conservation Objectives have been issued by the National Parks and Wildlife Service for European Site(s), Ballynafagh Lake SAC (site code: 001387), Pollardstown Fen SAC (site code: 000396) and Poulaphouca Reservoir SPA (site code: 004063), as per Table 1 below since completion of the Inspector's Report. These updated Conservation Objectives have been reviewed and considered and the TC is satisfied that the Inspector's Report provides an adequate examination and evaluation of the effects of the activity on the European Site(s) concerned, in light of their updated conservation objectives.

Table 1. Updated Conservation Objectives
NPWS (2021) Conservation objectives for Ballynafagh Lake SAC [001387]. Generic Version 1.0. Department of Housing, Local Government and Heritage.
NPWS (2022) Conservation objectives for Pollardstown Fen SAC [000396]. Generic Version 1.0. Department of Housing, Local Government and Heritage.
NPWS (2022) Conservation objectives for Poulaphouca Reservoir SPA [004063]. Department of Housing, Local Government and Heritage.

The EPA was notified on 12 July 2023 by the Department of Housing, Local Government and Heritage of the Minister's intention to designate a new European site, namely the North-west Irish Sea candidate Special Protection Area (site code 004236). I have reviewed and considered the Appropriate Assessment Screening and the new qualifying interests and conservation objectives of the North-west Irish Sea SPA and I am satisfied that inclusion of the North-west Irish Sea SPA does not change the determination that an Appropriate Assessment of the activity is not required. I am satisfied that the reasons stated in the screening determination are still appropriate.

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 and
- (ii) subject to the conditions and reasons for same in the draft certificate of authorisation, and
- (iii) subject to the amendments proposed and the reasons set out in this report.

Signed



Date 14 December 2023

Martin Doyle
Inspector
for and on behalf of the Technical Committee

Appendix 2 Groundwater flow direction and groundwater monitoring wells

