

Kildare County Council

Remediation of Legacy Landfill Site at Digby Bridge, Sallins,
Co. Kildare,
Stage 1: Environmental Risk Assessment
and Remediation Plan

Attachment E1- Appropriate Assessment Screening

May 2020

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**CDM
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Document Control Sheet

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Section 1 Introduction

1.1 Background and Description of Proposed Project

Digby Bridge legacy landfill site is located south east of Digby Bridge which crosses the Grand Canal, in the townland of Barrettstown, less than three kilometres from Sallins.

Landfilling first started at Digby Bridge in 20/06/1980 and finished approximately on 31/12/1982. A Tier 1 Risk Assessment of the site was completed in 2008 by Kildare County Council, in line with the Environmental Protection Agency (EPA) Code of Practice: Environmental Risk Assessment for Unregulated Waste Disposal Sites 2007 (CoP). A preliminary Conceptual Site Model (CSM) of the site was developed and the Source-Pathway-Receptor (SPR) linkages were evaluated. The Tier 1 categorized the site as being of 'High Risk (Class A)' due to the number of high risk SPR linkages. The site was entered on Kildare County Council's Waste Management Act Section 22 Register, a list of unregulated waste disposal sites.

Kildare County Council appointed CDM Smith Ireland Ltd (CDM Smith) in 2017 to prepare a Stage 1 Environmental Risk Assessment and Remediation Plan in accordance with the Environmental Protection Agency (EPA) Code of Practice and comprising of Tier 2 Site Investigation and Tier 3 Refinement of CSM and Quantitative Risk Assessment which was then used to inform the Remediation Plan. This will provide the basis for the Council's application for a Certificate of Authorisation to the EPA as required under S.I. No. 524 of 2008 Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity), Regulations, 2008. It will also be required to inform Stage 2 of the Project: Remediation Works.

In accordance with the objectives of the project, as set out in the Project Brief, three reports will be prepared as part of the project deliverables.

- Tier 2: Site Investigations and Testing (Doc. Ref. 117838/40/DG/11);
- Tier 3: Refinement of Conceptual Site Model and Quantitative Risk Assessment (Volume 1 addressing Landfill Gas, and a second report forms Volume 2 addressing Groundwater) (Doc. Ref. 117838/40/DG/15); and
- Remediation Plan (this report).

An additional report (Doc. Ref. 117838/40/DG/10) has been prepared which reviews background information relevant to the project, including the Tier 1 Risk Assessment of the site completed in 2008 by Kildare County Council.

An Appropriate Assessment (AA) Screening Report is also required (this report). The purpose of this screening report is to determine if the proposed Remediation Plan could potentially have significant negative impacts on the conservation objectives on any Natura 2000 Special Areas of Conservation or Special Protected Area sites in the area.

The Tier 3 Risk Assessment identified landfill gas and the potential offsite movement of a leachate-impacted groundwater plume as significant risks. The Remediation Plan proposes that the risk posed by the landfill gas would be mitigated by in-situ management of the landfill gas via an onsite stationary extraction and flaring plant or vacuum extraction system. The

Remediation Plan also recommends the installation of offsite groundwater monitoring wells (Figure 1) to verify the findings of the groundwater risk assessment and to facilitate an adaptive monitoring programme for groundwater.

The proposed Remediation Plan comprises the following elements, which are subject to the Appropriate Assessment Screening and assessed in this report:

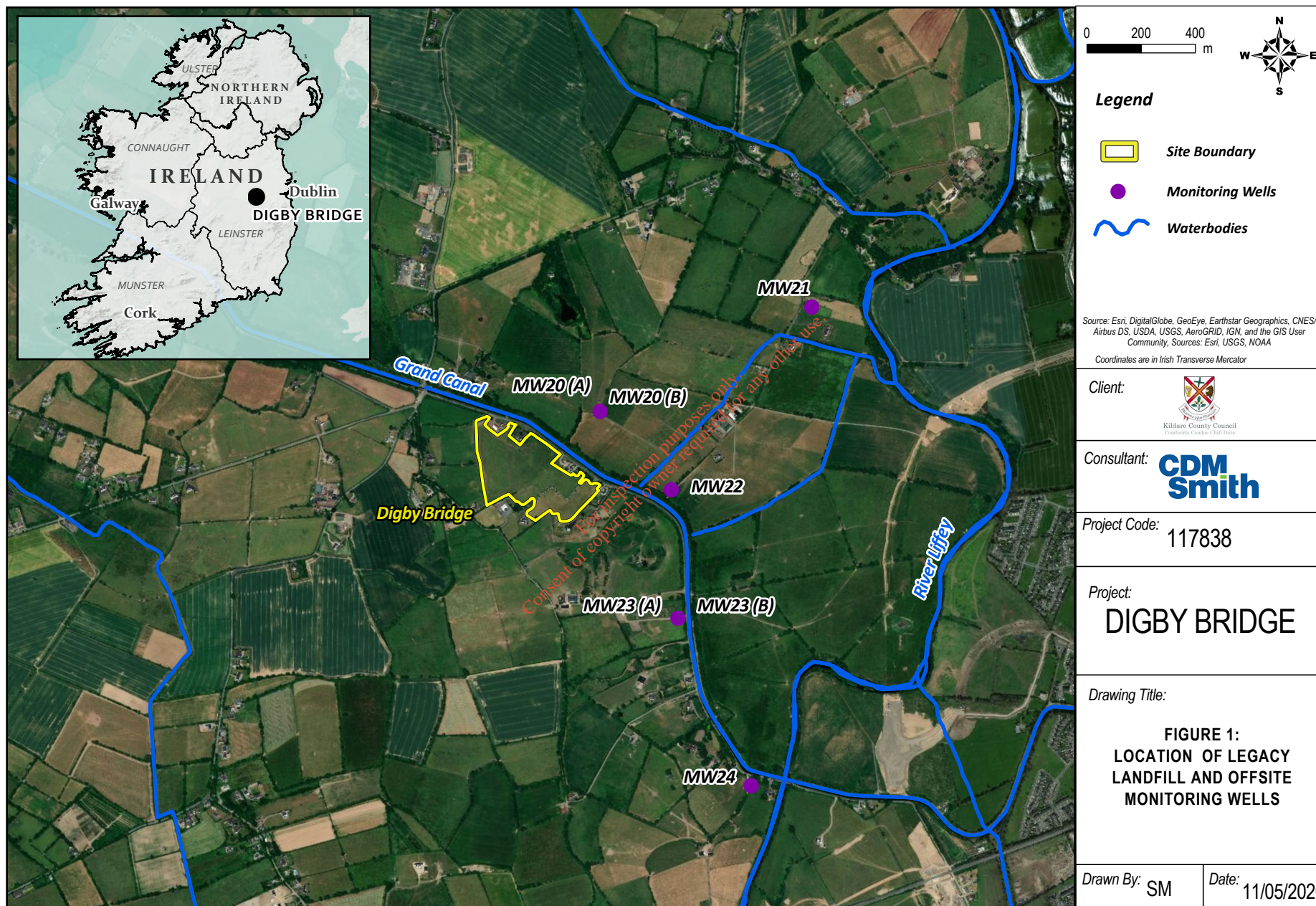
1. Drilling of gas boreholes;
2. Either a flaring gas extraction system or a venting to atmosphere extraction system. The exact system will be selected following a 12-week trial with a temporary flaring system. The chosen system will be installed, commissioned and decommissioned following the 12-week trial;
3. Drilling of offsite groundwater monitoring wells; and
4. Associated institutional controls for all works (signage and fencing).

1.2 Regulatory Context

The requirement for "Appropriate Assessment" is set out in Articles 6(3) and 6(4) of the Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora). The Habitats Directive is transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 as amended (hereafter referred to as the Habitats Regulations). European Sites are defined in Regulation 2(1) of the Habitats Regulations and comprise Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). Collectively, SACs and SPAs are referred to as Natura 2000 sites. In general terms, they are considered to be of exceptional importance in terms of rare, endangered or vulnerable habitats and species within the European Community.

The Habitats Regulations require that an Appropriate Assessment must be undertaken for any plan or project that is likely to have a significant effect on the conservation objectives of a Natura 2000 site. An Appropriate Assessment is an evaluation of the potential impacts of a plan or project on the conservation objectives of a Natura 2000 site. Where necessary, mitigation or avoidance measures should be proposed to preclude negative effects.

The statutory agency responsible for Natura 2000 sites is the National Parks and Wildlife Service (NPWS) of the Department of Culture, Heritage and the Gaeltacht.



1.3 Relevant Regulations and Guidance

The following regulations and guidance were consulted for the Appropriate Assessment Screening:

- Habitat Regulations (S.I. No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011), and amendments;
- Assessment of Plans and Projects significantly affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission, 2001;
- Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats Directive' 92/43/EEC, European Commission, 2000; and
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government. Dublin, 2009

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Section 2 Methodology

A desk study was carried out to collate the available information on the Natura 2000 sites and to review possible impacts of the proposed Remediation works for the Legacy Landfill Site at Digby Bridge, Sallins, Co. Kildare.

The AA GeoTool¹ application, developed by the EPA and the NPWS, was used to gather data. The AA GeoTool application helps with the data gathering process of Stage 1 and Stage 2 Appropriate Assessment. The application uses data directly from a web service provided by the NPWS. The data is current and reflects the most up-to-date information available.

The AA GeoTool allows the user to select a point on the map and then search for SACs and SPAs within a defined distance/ upstream/ downstream of the point. The distance selected by the user is dependent on the level of potential environmental impact from a plan or project. The information gathered for each European Site located within the selected distance range includes the following:

- Site type, e.g., SAC or SPA;
- Unique site code for the site;
- Site name;
- Distance of the site from the users selected starting point;
- Search direction selected by user;
- List of qualifying interests for each site; and
- URL link to the conservation objectives for each site.

¹ <https://gis.epa.ie/EPAMaps/AAGeoTool>

Section 3 Appropriate Assessment Screening

3.1 Identification of Relevant Natura 2000 Sites

There are six Natura 2000 sites located within a 15 km radius of the proposed works (onsite landfill remediation and offsite groundwater monitoring wells) (Figure 2). Five sites are SACs and one is a SPA. The six Natura 2000 sites are:

1. Ballynafagh Bog SAC (site code 000391) located 5.5 km north west of the works;
2. Ballynafagh Lake SAC (site code 001387), located 7 km north west of the site;
3. Mouds Bog SAC (site code 002331), located 7.4 km south west of site;
4. Pollardstown Fen SAC (site code 000396), located 11 km south west of site;
5. Red Bog SAC (site code 000397), located 12.1 km south east of site; and
6. Poulaphouca Reservoir SPA (site code 004063), located 14.3 km south east of site.

The qualifying interests for these Natura 2000 sites are given in Table 1 (NPWS 2011) and pertain to either habitats listed in Annex I, or species listed in Annex II of the EU Habitats Directive. In the case of SPAs, the Special Conservation Interests are all bird species listed in Annex I of the EU Birds Directive.

Table 1 Qualifying Interests (Habitats and Species) of Relevant Natura 2000 Sites

Qualifying Interests (Annexed habitats and species)	Poulaphouca Reservoir SPA	Ballynafagh Bog SAC	Ballynafagh Lake SAC	Mouds Bog SAC	Red Bog SAC	Pollardstown Fen SAC
Greylag Goose (<i>Anser anser</i>) [A043]	•					
Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183]	•					
Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210]						•
Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220]						•
Alkaline fens [7230]			•			•
Geyer's Whorl Snail (<i>Vertigo geyeri</i>) [1013]						•
Narrow-mouthed Whorl Snail (<i>Vertigo angustior</i>) [1014]						•
Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>) [1016]		•	•			
Active raised bogs [7110]				•		
Degraded raised bogs still capable of natural regeneration [7120]		•		•		
Depressions on peat substrates of the <i>Rhynchosporion</i> [7150]		•		•		
Marsh Fritillary (<i>Euphydryas aurinia</i>) [1065]			•			
Transition mires and quaking bogs [7140]					•	

The conservation objective for SAC Natura 2000 sites is to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. The conservation objective for SAC Natura 2000 sites is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for the SPA.

3.2 Assessment of Likely Effects

This section of the Appropriate Assessment Screening Report describes the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site(s). The likelihood of occurrence of such impacts and the likelihood of a significant effect of the predicted impacts on the integrity of the Natura 2000 site(s) are also described.

The various elements of the proposed development, which are addressed for their potential adverse impacts on the Natura 2000 sites, are as follows:

- Direct effects on the habitats within the Natura 2000 sites; and
- Indirect effects through potential release of contaminants from the construction site to any watercourses draining to the Natura 2000 sites.

3.2.1 Is the proposed project likely to have any direct effects on, or have the potential to adversely affect the integrity of, the Natura 2000 sites?

The location of the proposed works is entirely outside the boundaries of, and is remote from, any Natura 2000 site. There will be no direct impacts on habitats within the Natura 2000 sites.

3.2.2 Is the proposed project likely to have any indirect impacts in the Natura 2000 sites?

The sites of the proposed works (Digby Bridge legacy landfill and offsite groundwater monitoring wells) have no hydrological or other connection with Mouds Bog SAC, Pollardstown Fen SAC, Red Bog Kildare SAC or Poulaphouca Reservoir SPA. These Natura 2000 sites are located 7.4 km, 11 km, 12.1 km and 14.3 km, respectively, from the nearest point of the proposed works and are sufficiently remote to be unaffected by the proposed works.

The proposed location of Monitoring Well 24 (MW24) is ~120 m upgradient of the River Liffey. This is sufficiently distant from the river, the well is of sufficiently shallow depth (proposed depth of 10-15 m), and the drawdown of this monitoring well (rather than production well) is sufficiently low, so as to not impact the River Liffey.

The sites of the proposed works (Digby Bridge and the offsite monitoring wells) are located close to the Grand Canal. Ballynafagh Bog SAC and Ballynafagh Lake SAC may be hydrogeologically connected to the Grand Canal, however, these two Natura 2000 sites are located upstream of the proposed works and, thus, there is no possible way in which any potential contaminants from the proposed works could reach these Natura 2000 sites.

3.2.3 “In Combination” Impacts

The standard Guidance for Planning Authorities on Appropriate Assessment of Plans and Projects in Ireland (2009) states that the underlying intention of the in-combination provision is to take account of cumulative impacts, and as these effects often only occur over time. Plans or projects that are completed, approved but uncompleted, or proposed (but not yet approved) should be considered in this context.

As the proposed remediation works will not have any impacts, direct or indirect, on the nearest Natura 2000 sites, in-combination impacts with other developments will not arise.

3.3 Screening Conclusion and Statement

This screening report concludes that the proposed remediation works related to the Digby Bridge legacy landfill, Sallins, Co. Kildare will not have any effects on the conservation objectives of any Natura 2000 sites in the vicinity of the works. It is concluded that a full Appropriate Assessment is not required for this project.

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Section 4 References

European Commission (2001) *Assessment of Plans and Projects significantly affecting Natura 2000 Sites*: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.

European Commission (2000) *Managing Natura 2000 Sites*: The Provisions of Article 6 of the 'Habitats Directive' 92/43/EEC.

European Union Habitats Directive, (1992). Council Directives 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

European Union Birds Directive (1979) *Council Directive 79/209/EEC of 2 April 1979 on the conservation of wild birds*. Brussels: The Council of the European Communities.

NPWS (2009) *Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities*. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government. Dublin.

NPWS (2015) Conservation Objectives: Mouds Bog SAC 002331. Version 1. National Parks and Wildlife Services, Department of Arts, Heritage & the Gaeltacht.

NPWS (2015) Conservation Objectives: Ballynafagh Bog SAC 000391. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2018) Conservation objectives for Ballynafagh Lake SAC [001387]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht.

NPWS (2018) Conservation objectives for Pollardstown Fen SAC [000396]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht.

NPWS (2018) Conservation objectives for Poulaphouca Reservoir SPA [004063]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht.

NPWS (2019) Conservation Objectives: Red Bog, Kildare SAC 000397. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.

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