



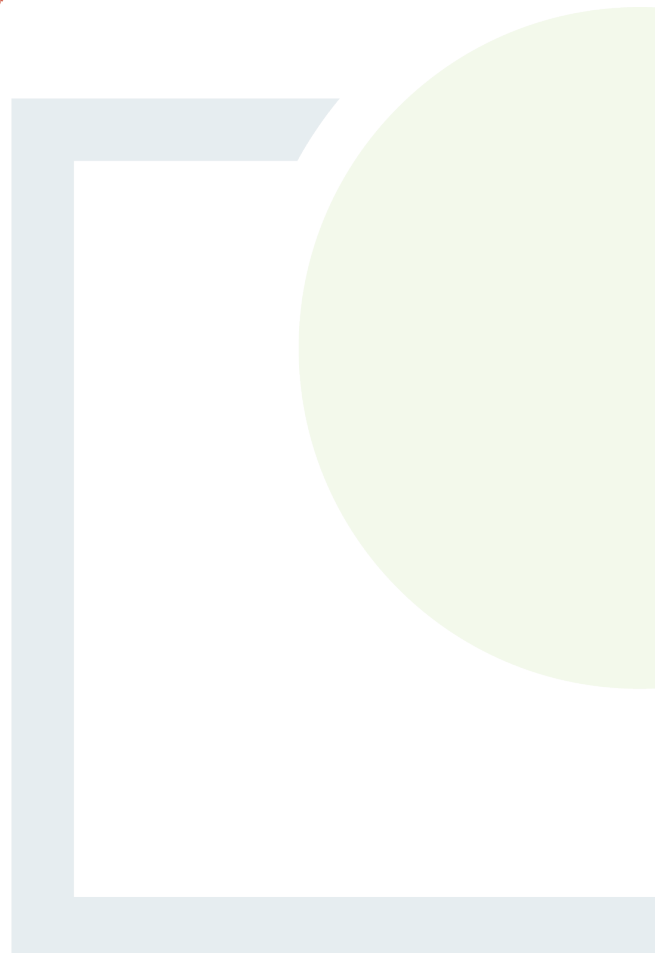
**FEHILY
TIMONEY**

**CONSULTANTS IN ENGINEERING,
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Attachment **A.1**

Non-Technical Summary

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HISTORICAL LANDFILL AT BALLYMULVEY, CO. LONGFORD

NON- TECHNICAL SUMMARY

Prepared for: Longford County Council



Date: August 2021

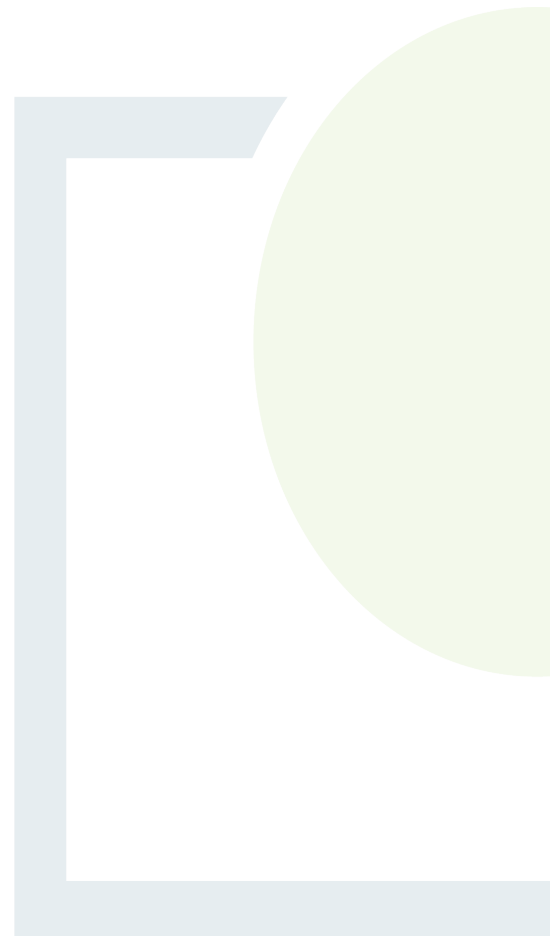
J5 Plaza, North Park Business Park,
North Road, Dublin 11, D11 PXT0, Ireland

T: +353 1 658 3500 | E: info@ftco.ie

CORK | DUBLIN | CARLOW

www.fehilytimoney.ie

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NON- TECHNICAL SUMMARY HISTORICAL LANDFILL AT BALLYMULVEY, CO. LONGFORD

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Abstract: This report presents a non-technical summary of the Tier 2 and Tier 3 risk assessment for the Ballymulvey, Historic Landfill, Co. Longford. The non-technical summary has been prepared to accompany the certificate of authorisation application for the site.

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1. NON-TECHNICAL SUMMARY

1.1 Overview

Fehily Timoney and Company (FT) was appointed by Longford County Council (LCC) to complete a Tier 2 environmental risk assessment (ERA), a Tier 3 ERA and Certificate of Authorisation Application Form (COA) for the Ballymulvey Historic Landfill. The ERA was conducted in accordance with the Environmental Protection Agency (EPA) Code of Practice (CoP) (2007): Environmental Risk Assessment for Unregulated Waste Disposal Sites.

1.2 Site Location and History

The site is located in Ballymulvey, approximately 1.5km north-east of Ballymahon, Co. Longford and situated 250m from the junction with the N55 road to the north-west, Toome Cross Roads.

From available maps it is estimated that the site is 4.3 ha in area, with 50% of the site occupied by the waste body which is made up of two profiled and capped landfill mounds covered in vegetation. An open water lagoon area which is overgrown with vegetation is situated along the eastern boundary of the site. Previously installed landfill monitoring infrastructure (leachate / groundwater wells) are located across the footprint of the site.

It is understood that the site began operation as a landfill sometime in the mid-1960s and ceased sometime in the mid-1990s, following a High Court Order. Despite the lack of written records, it is understood that the site accepted municipal waste/domestic refuse, but no chemical/hazardous waste; although, asbestos containing material (ACM) was accepted and deposited in a discrete area of the landfill.

Remediation works at the site are likely to have commenced sometime between 1998 and 2000.

1.3 Hydrogeology and Ecology

The Quaternary Map provided by GSI Online identifies the quaternary sediments at the site as cut-away raised bog, with limestone gravel to the north of the L1121 and in zones to the south of the site. To the west, overburden is comprised of glacial till derived from sandstone gravels and cherts.

The GSI online 1:100,000 scale bedrock geology map, shows the bedrock beneath the site is Waulsortian Limestone – massive, unbedded, pale grey limestone and mudstone of the Carboniferous era. The closest outcrop of bedrock to the site is 1km to the west at Ballybranigan. A well record for the townland of Ballymulvey indicates that the depth to bedrock at that location was 0.6 m. Limestone bedrock was encountered at a depth of 10.5m bgl in boreholes GW02 and GW03 during borehole installations.

The GSI shows that the groundwater body (GWB) is named Inny and has a poorly productive bedrock flow regime. There are no recorded groundwater dependent ecosystems in the area. The GSI Online mapping data set identifies the vulnerability of groundwater to contamination immediately underlying the site is classified as moderate vulnerability, given the presence of cut-away raised bog and deep glacial till overburden.

At its closest point the River Inny is 900m south of the site. The River Inny flows from north-east to southwest along the south-eastern boundary of Cloonkeen Woods.



Approximately 1.5km south-east of the site the flow direction of the River Inny changes course to a more westerly direction, and the river passes through Ballymahon 1.6km southwest of the site. Approximately 350m north-west of the site is the Royal Canal at Toome Bridge.

An unnamed tributary of the River Inny, flowing from north to south, is mapped along the N55 approximately 700m west of the site. Several land drains are also mapped between the site and this tributary which appear to feed into the Inny.

The EPA has classified the River Inny as being of Good Status (Q4) at the nearest monitoring locations.

There are no Special Areas of Conservation or Special Protection Areas within a 5km radius of the site. The Royal Canal proposed National Heritage Area (pNHA) flows east-west approximately 500m north of the site. The Royal Canal is a man-made waterway linking the River Liffey at Dublin to the River Shannon near Tarmonbarry. There is a branch line from Kilashee to Longford Town. The canal pNHA comprises the central channel and the banks on either side of it. The main water supply is from Lough Owel (also an NHA) via a feeder channel into the canal at Mullingar.

1.4 Risk Assessment and Environmental Impacts

A Tier 1 study was conducted by AECOM and determined the site to be a high-risk classification (Class A). The primary risks identified relate to the risk of leachate runoff entering surface water and the risk of leachate migration to groundwater.

The Tier 2 study completed by FT consisted of a desktop study, geophysical survey, intrusive site investigation works, environmental monitoring (surface water and groundwater sampling) and laboratory analysis. The results of these works informed the development of the CSM (conceptual site model) and risk screening model.

The results of the Tier 2 assessment and risk model indicate that the site is being maintained as a **High-Risk Classification (Class A)**. The principal risks identified on the site are the migration of leachate from the site to the groundwater aquifer and the risk posed to the unnamed tributary stream of the River Inny from the migration of landfill leachate from the site.

The Tier 3 assessment concluded that additional site remediation works are not required to further reduce the impact the site may have on underlying groundwater and beyond the site. The Tier 3 assessment concludes that groundwater impacts are relatively minor and likely to remain localised to the site. It is considered based on the ground conditions and remediation works undertaken to date that no major works are required.

1.5 Proposed Remediation

It is recommended that the surrounding boundary drains be cleared and maintained. Continued surface water monitoring immediately downstream of the site is recommended. Evidence suggests that leachate from the site is not a significant contributor to the elevated sulphate concentration observed at surface water monitoring location in 2018. Sulphate concentrations in the leachate in 2018 were significantly below the level in the surface water.

Additional groundwater monitoring wells are recommended both upgradient and downgradient of the site. These will be installed and monitored to further investigate groundwater conditions.



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CORK OFFICE

Core House
Pouladuff Road,
Cork, T12 D773,
Ireland
+353 21 496 4133

Dublin Office

J5 Plaza,
North Park Business Park,
North Road, Dublin 11, D11 PXT0,
Ireland
+353 1 658 3500

Carlow Office

Unit 6, Bagenalstown Industrial
Park, Royal Oak Road,
Muine Bheag,
Co. Carlow, R21 XW81,
Ireland
+353 59 972 3800

