



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE &
PLANNING

CLAREMORRIS CLOSED LANDFILL REMEDIATION PROJECT

ENVIRONMENTAL IMPACT ASSESSMENT SCREENING REPORT

Prepared for: **MAYO COUNTY COUNCIL**



Comhairle Contae Mhaigh Eo
Mayo County Council

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ENVIRONMENTAL IMPACT ASSESSMENT SCREENING REPORT

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Abstract: This report comprises an Environmental Impact Assessment Screening of the proposed remediation works at the Closed Landfill at Claremorris, Co. Mayo

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1. INTRODUCTION AND BACKGROUND

Fehily Timoney and Company (FT) was engaged by Mayo County Council to undertake an Environmental Impact Assessment (EIA) Screening Report in respect of the proposed Claremorris closed landfill remediation. From the outset, it is noted that a Tier 1, Tier 2 and Tier 3 Risk Assessments have been carried out in accordance with the EPA's Code of Practice: Environmental Risk Assessment for Unregulated Waste Disposal. Mayo County Council subsequently applied for a Certificate of Authorisation (CoA) from the Environmental Protection Agency (EPA) and Certificate of Authorization Ref: H0319-01 was issued for the site on 19th August 2021 (Appendix 1).

The purpose of certificates of authorisation is to specify control and remediation measures required at a closed landfill to ensure that waste disposed or recovered in the closed landfill is not causing, or is not likely to cause, environmental pollution. A Certificate of Authorization is developed by the EPA to ensure compliance with the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations, 2008.

The CoA application was accompanied by a Stage 1 Appropriate Assessment Screening. The EPA, as the Competent Authority, screened in the site for appropriate assessment due to the site's conductivity with two European sites on the Lough Carra/Mask Complex (site code: 001774) and Lough Mask (site code: 004062).

More recently, complex issues have arisen in relation to how local authorities should approach planning and planning exemptions for closed landfill remediation works and the associated effect of screening for Appropriate Assessment (AA) on the process. In this regard, the Regional Waste Management Planning Offices (RWPO) obtained legal advice in relation to such issues and concluded the following:

- Section 177AE of the Planning and Development Act 2000 (as amended) provides that where an Appropriate Assessment is required in respect of development to be carried out by a local authority then the local authority must apply to An Bord Pleanála for approval.
- In instances where the EPA has made a positive screening determination under regulation 42 of the Birds and Natural Habitats Regulations 2011, the local authority must make an application for development consent pursuant to Section 177AE of the PDA 2000.

In addition to the above, the RWMPO guidance document issued in November 2021 entitled '*Closed Landfill Remediation: Planning Procedures. A Guidance Note for Local Authorities*' states that the local authority must carry out a screening for EIA in accordance with Article 120 of the Planning and Development Regulations 2001 and where the remediation works are screened in for EIA, an EIAR must be prepared. Thus, having regard to the foregoing, FT has been engaged to assess whether the proposed remediation works would have a significant effect on the environment and therefore require a full Environmental Impact Assessment Report (EIAR).

1.1 Description of Existing Site

Claremorris closed landfill is located in the townland of Clare, Claremorris, Co. Mayo. The site is approximately 800m south-east of Claremorris town. The closed landfill capping area footprint is 3.8ha and is located within a larger application site consisting of open land which has an area of 5.6ha. The site is currently vacant and in an overgrown state.



Neighbouring land uses include agricultural grassland, cutaway bogland, commercial forestry and residential properties located approximately 280m to the west of the site. An electrical substation is also located approximately 150m to the north of the site. The site is bound by the Dublin-Westport Railway line to the north, the Knock-Claremorris Bypass (N17) to the West, commercial forestry to the south and agricultural land (boggy ground) occupies the remaining land to the east of site.

The site operated as a landfill accepting municipal waste from 1982 to March 1996. The site was capped with boulder clay, but no remediation works have been completed.

Waste deposited at the site is understood to comprise of municipal and commercial wastes to depths of 6.5m below ground level (BGL). The interpreted landfill extent covers an area of 32,000 m² and initial calculations estimate an interred waste volume of approximately 168,000 – 297,623m³ at the site.

The western portion of the site (raised area) is inhabited by rough grassland and scrub. The eastern half of the site forms part of an area of harvested, drained peatland.

The site generally falls from south to north towards the railway and west to east towards the harvested and drained peatland. The KILBEG-MALONE (EPA code: 30K3711), a 1st order stream crosses the eastern portion of the site travelling in a southern direction. After flowing for 44km, this stream ultimately enters Lough Mask via the LISDUFF 30 (EPA code: 30L4313) and Robe River (EPA code: 30R0115).

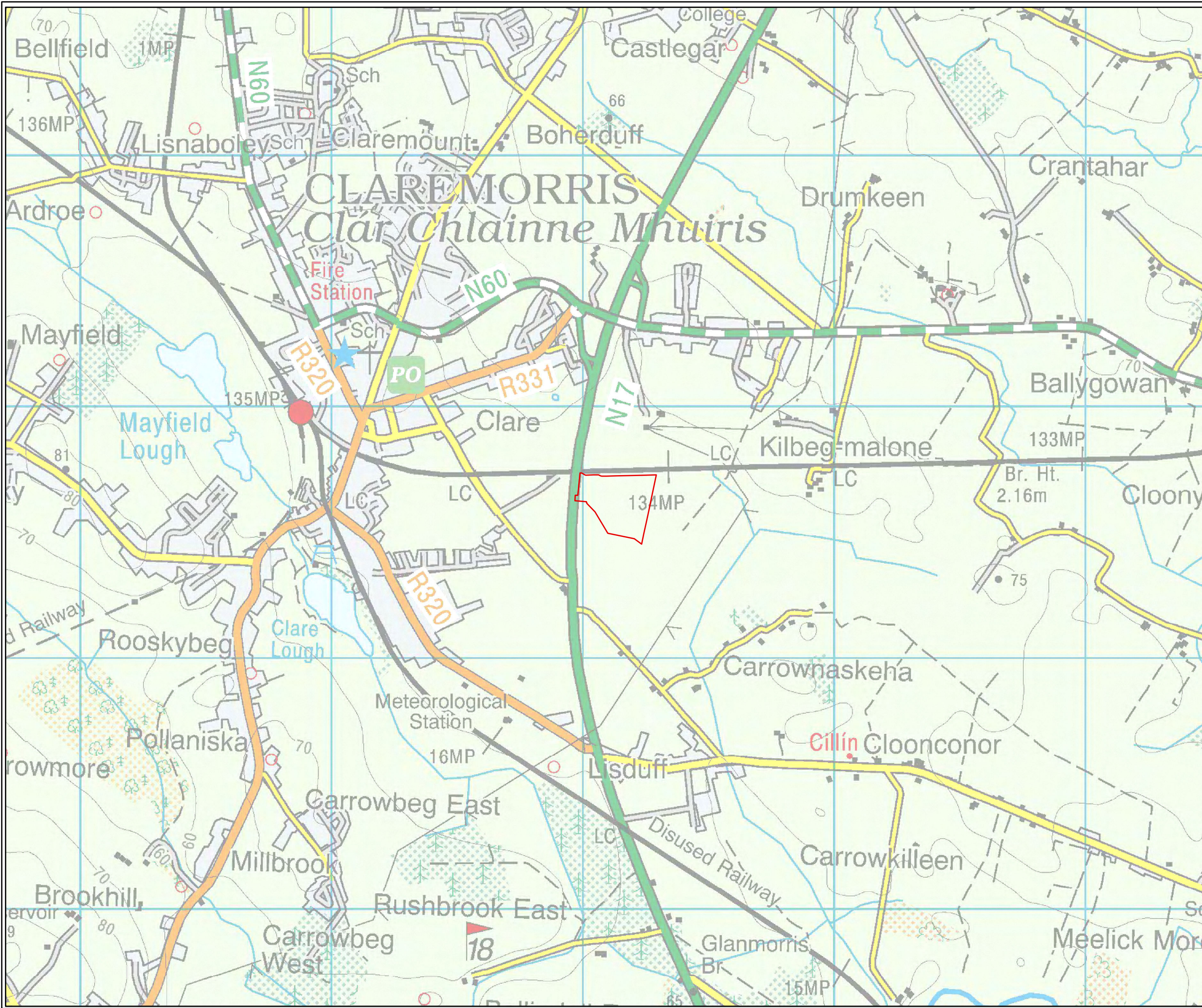
The site currently:

- Has a shallow soil cap with an established grass and shrub cover.
- Is drained by a watercourse along the western and northern boundary of the site which ultimately discharge to the Kilbeg-Malone River.
- Is secured by stock proof fencing along the western boundary of the site.

Invasive species identified on site include, Japanese Knotweed (*Fallopia japonica*), Winter Heliotrope (*Petasites fragrans*) and Cherry Laurel (*Prunus laurocerasus*). An Invasive Species Management and Treatment Plan has been developed to address the required works for invasive species in the site.

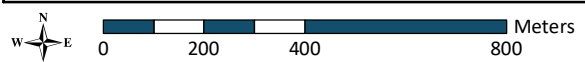
A Site Location Map drawing showing the site and its immediate environs is enclosed with this planning application (Drawing Reference: P21-287-0100-0001).

A GIS Figure showing the Site Location is shown in Figure 1-1.



Legend
 Site Boundary

TITLE:	Site Location	
PROJECT:	Claremorris Historic Landfill	
FIGURE NO:	1.1	
CLIENT:	Mayo County Council	
SCALE:	1:15000	REVISION: 0
DATE:	06/05/2022	PAGE SIZE: A3





1.2 Relevant Experience and Expertise of Assessor

Richard Deeney of Fehily Timoney and Company was responsible for completing the EIA Screening Assessment in this case. Richard is a Senior Environmental Scientist working as part of the Waste and Environment Team in Fehily Timoney and Company. Richard holds a B.Sc. First Class Honours degree in Environmental Management from Dublin Institute of Technology. Richard is a Chartered Environmentalist with the Society for the Environment. Richard has ten years' experience working in the area of environmental assessment/management.

Richard is vastly experienced in project managing and coordinating Planning Applications, Environmental Impact Assessment Reports and Environmental Assessment. He also has a vast amount of experience developing Environmental Management Plans and Systems, carrying out Environmental Auditing and assisting clients with Environmental/Permit/License Compliance.

Richard has a vast amount of experience coordinating and completing Environmental Impact Assessment Reports and EIA Screening Reports for a wide variety of development projects including landfill facilities, material recovery facilities, soil recovery facilities, healthcare waste management facilities, quarries, power generation facilities, metal processing facilities and tourism development. Richard has a wide and thorough understanding of the various environmental factors that need to be considered during the EIA process and has an in-depth understanding of the legislation and up-to-date case law governing EIA practice in Ireland and the EU. Richard has an in-depth understanding of every stage of the EIA process from the Screening Stage to the Scoping Stage, up to the EIAR completion stage.



2. PROJECT DESCRIPTION

2.1 Project Description

2.1.1 Overview of Description of the Project

Mayo County Council proposes to seek the approval of An Bord Pleanála for the completion of Closed Landfill Remediation Works at a Closed Landfill site in Clare, Claremorris, County Mayo.

The application site, as defined by the red line boundary in the accompanying drawings, is 5.6ha in size. The extent of the waste body with the site is 3.2ha. The proposed capping area within the application site is 3.8ha in size.

The proposed development will consist of the following:

- The development of a site access road
- The development of a temporary site compound and office area.
- Site clearance, including the removal of an existing gate, existing timber post and wire fencing and clearance of existing vegetation
- Grading/profiling of the existing site area.
- Installation of an engineered landfill capping system covering an area of 3.8 hectares.
- The installation of stock proof fencing, and a new access gate on-site.
- Landscaping of the final formation of the capping area using a high value native grass cover.

The following will be carried out on-site following on from completion of the proposed development works:

- Ongoing environmental monitoring.
- Oxidation of methane in landfill gas
- Maintenance of engineered cap on-site.
- Maintenance of surface water drainage system on-site.

2.1.2 Purpose of/Rationale for the Project

Mayo County Council is responsible the remediation of Claremorris Closed Landfill, located in the townland of Clare. The landfill is a closed landfill having received waste from 1982 to March 1996. Waste deposited at the site is understood to comprise of municipal and commercial wastes to depths of approximately 6.5 m.

The site is bounded by a railway to the North and by the Knock-Claremorris Bypass (N17) to the West, the other sides are bounded by agricultural land (boggy ground).



The EPA issued a Certificate of Authorisation (CoA) for the site on the 19th of August 2021 (Licence number: H0319-01). Condition 3 of the CoA requires MCC to implement remediation works to this closed landfill in order to ensure “..proper closure of the activity ensuring protection of the environment”. The CoA is issued under Regulation 7 (6) of the Waste Management (Certificate of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008. The purpose of the proposed remediation works is to implement CoA Condition 3.

Construction of an engineered cap is required to isolate the waste body from rainfall inputs which contribute to leachate generation which has the potential to contaminate surface and groundwaters. The proposed engineered cap will also be designed to mitigate the risk of landfill gas migration.

2.1.3 Construction Phase

It should be noted at this stage of the report that the ‘construction’ phase of the project relates to the remediation ‘works’ to be undertaken in the case of a closed landfill, as well as enabling works.

The construction period for the proposed development has been estimated to be in the region of 6-8 months.

A detailed design will be prepared for the works prior to commencement. The works will take place in accordance with a Construction Environmental Management Plan.

The remediation works will include:

- Development of a temporary site compound outside of the proposed engineered capping area footprint.
- Invasive species management
- Site Clearance.
- Grading/Profiling of Existing Profile
- Installation of engineered landfill capping system.
- Landscaping.

2.1.3.1 *Traffic Management*

The Contractor will be required to implement a traffic management plan to manage safe access and egress of construction vehicles from the site.

The Proposed Traffic Management Plan is shown in a drawing enclosed with this planning application (Drawing Reference: P21-287-0100-0008).

2.1.3.2 *Development of Temporary Site Compound and Office Area*

The temporary site compound shall comprise a materials storage area, site offices and a parking area. Material storage compound, parking area and site offices in the form of portacabins and site canteen/welfare facilities (Contractor and Employers Representatives) will be provided to the north-east of the site outside the footprint of the capping area.



The temporary site compound shall be founded on a small area that will be levelled, compacted and overlaid with gravel surfacing overlying a geogrid and geotextile. These materials will be removed from site following completion of the works.

Existing access to the site off the N17 will be extended to the proposed temporary site compound and will be re-surfaced with Clause 804.

Waste from the welfare facilities (i.e., Portaloo(s)) will be stored temporarily prior to disposal at a licensed wastewater treatment plant.

Generators will be used on-site for power supply during the temporary works. Water will be provided via water tankers.

Periodic road sweeping will be required where necessary.

2.1.3.3 Site Clearance

Following completion of the invasive species management, overgrown vegetation on the central area of the site will be cut back, mulched and re-spread on-site. Any vegetation left will be dispatched to an authorized waste facility for disposal.

A Demolition and Site Clearance Plan enclosed with this application shows the areas of dense vegetation that will be cleared from the site and the areas of existing fencing which will be demolished during the works (Drawing Reference: P21-287-0100-0005).

2.1.3.4 Invasive Species Management

The full extent of Invasive Species rhizomal growth including potential vector material will be removed and encapsulated in a dedicated geocomposite lined invasive species management cell. Upon completion of the excavation works the lined cell will be buried with a minimum 2.0m cover within a dedicated "fill" location within the waste body prior to placing the engineered cap.

Respective areas where invasive species are present will be isolated and have appropriate signage following the completion of the proposed works.

The Proposed Locations for Japanese Knotweed Burial is shown in a drawing enclosed with this planning application (Drawing Reference: P21-287-0100-0014).

2.1.3.5 Grading/Profiling of Existing Profile

The existing waste body was covered following cessation of waste filling with an intermediate soil cap.

The existing finished surface will require re-profiling to facilitate:

- Surface and sub surface drainage.
- Safe execution of the site remediation works.
- Safe access for maintenance of the cap.



Re-profiling will principally involve the (shallow) cutting of material at local high spots. These “cut” materials will be used as “fill” in local depressions. All cut and fill works will be carried out within the site boundary.

Thereafter imported granular “dust” material 50mm to 100mm thick will be used to provide formation for the engineered cap.

The re-profiled surface will provide the foundation for the engineered landfill cap (Drawing Reference: P21-287-0100-0010).

2.1.3.6 Installation of Engineered Landfill Capping System

The engineered landfill cap “barrier” system will:

- Cover an area of approximately 38,000m².
- Isolate the waste body from rainfall inputs which might otherwise produce leachate. This will protect underlying ground water and adjacent surface waters.
- Minimise the potential for uncontrolled landfill gas migration to the atmosphere or adjacent lands.
- Provide a physical barrier between the finished surface and buried wastes.
- Facilitate controlled discharge of surface water runoff and sub surface drainage flows into the receiving surface waters.

The cap shall comprise of the following:

- Vertical Wells
- A passive below liner landfill gas venting system.
- A LLDPE barrier to isolate the waste body from rainfall inputs and prevent uncontrolled fugitive gas emissions from the waste body.
- Over liner gas management system.
- Landfill gas compound.
- A subsurface drainage system.
- A surface drainage system.
- A subsoil layer average thickness 850 mm.
- A topsoil layer average thickness 150 mm barrier.

The Proposed Landfill Capping Area is shown in a drawing enclosed with this planning application (Drawing Reference: P21-287-0100-0009).

Vertical Wells

Vertical wells shall be installed within the waste body prior to reprofiling works. Well arisings will be placed in dedicated low spots on site prior to re-profiling.



Well arisings will be covered at the end of each working day to minimise odour nuisance. Wells will be connected to over liner gas collection pipework to the gas management compound.

Well diameter will comprise a slotted HDPE pipe with a gravel surround.

Below Liner Landfill Gas System

Currently landfill gas as may be present vents gas to atmosphere via diffuse surface emissions. Once the LLDPE barrier is installed this preferential pathway to atmosphere will be isolated.

Below the LLDPE barrier a gas collection geocomposite and pipework system will be constructed to collect and direct landfill gas as may be present to the proposed temporary gas compound to manage landfill gas via passive ventilation.

The below liner gas collection geocomposite is a cusped synthetic product that is rolled out above the granular “dust” material overlying the re-profiled intermediate cap which overlies the waste. The gas collection geocomposite forms a “cavity” to intercept gas emissions from the underlying body.

Gas collection pipework will be slotted and laid in gravel surround below the gas collection geocomposite and it will facilitate collection of landfill gas; and soakage, if required, of condensate or other as may collect in pipework.

Landfill gas collected in the under-liner gas system will be transferred via solid HDPE pipes and terminate in the landfill gas management compound.

The Proposed Passive Gas Collection System has been enclosed with this planning application (Drawing Reference: P21-287-0200-0001 & P21-287-0200-0002)

LLDPE Barrier

The LLDPE barrier will be a 1.0 mm thick “plastic” sheet that is impermeable to both water and gas. It prevents gas escaping into the overlying soils and stops water from rainfall entering the underlying waste body.

The LLDPE sheets will be welded at joints and will terminate in a vertical cut-off trench about the perimeter of the site.

Over-liner Gas System

Over-liner HDPE solid pipework will convey gas from vertical wells to the gas management compound

Connections to wells will be via below ground valve chambers and/or above ground manifold boxed less than 1.0 m in height. All above ground structures will be fenced using stock proof fencing or similar approve.



Landfill Gas Compound

The under and over liner gas pipe systems will terminate in the gas management compound.

Landfill gas quality will change over time. Subject to landfill gas pumping trials and the calorific value/quality of the landfill gas present at the site, landfill gas will be either vented to atmosphere via vent stacks or oxidised prior to venting.

Oxidation will be carried out using a biological filter recessed into the cap to facilitate passive venting to atmosphere.

The biological filter and vent will be located in the landfill gas compound. The compound will be circa. 10.0 m wide by 20.0 m long and contained within stock proof fencing.

Alternatively, the vent stack will comprise a vertical pipe 300 mm diameter with a cowl and/or carbon filter located at a height of not less than 3.0 m above surrounding ground level.

The compound will also have provision for temporary plant to accommodate: gas pumping trials, or oxidation by high temperature flaring, if required.

Subsurface Drainage

The over liner sub surface drainage collection geocomposite is a cusped synthetic product that is rolled out above the LLDPE barrier. It forms a “cavity” to intercept rainfall inputs into the cap. Subsurface drainage flows from the drainage geocomposite are transferred via a supporting pipework system to a surface drainage system at the toe of the cap and ultimately to the downstream watercourse.

A drawing showing the proposed surface and subsurface drainage system is enclosed with this planning application (Drawing Reference: P21-287-0300-0001).

Surface Drainage

French drains around the capping perimeter will collect and direct surface water runoff to the receiving watercourses. Proposed French drains will be provided with 300 mm diameter HDPE SDR 17 slotted pipes.

A drawing showing the proposed surface and subsurface drainage system is enclosed with this planning application (Drawing Reference: P21-287-0300-0001).

Subsoil Layer

Suitably sourced subsoils will then be imported to the site and placed atop of the sub surface drainage geocomposite and /or geogrid on side slopes. The subsoil layer will generally be 850mm deep.

The purpose of the subsoil layer will be to protect the synthetic geocomposite materials and to support landscaping.



Topsoil Layer

Suitable sourced topsoil will be placed atop the subsoil. The topsoil will have no stones greater than 50 mm diameter. Stones greater than 50 mm will be removed by a proprietary stone picker or similar prior to seeding.

The topsoil layer will be 150 mm deep.

Stones will be reused on site in site roads or as fill to sub surface drains.

2.1.3.7 Temporary Works

Leachate Management

Storage tanks will be provided for the safe storage of any leachate arisings during the construction works. Leachate arising during construction works will be disposed at a licensed wastewater treatment plant.

Daily Cover of Exposed Waste

In the unlikely event that waste is exposed it will be covered with soil or similar approved at the close of each working day.

Suspended Solid Management

Suspended solids will be prevented from entering watercourses by installing silt fences around the site perimeter and around stockpiles.

Refer to drawing P21-287-0100-0007 for proposed location of silt fences.

Odour Management

Odour management is not expected to be an issue as the waste is older than 25 years and the works have been designed to reduce the risk of exposing waste.

In the event that it is exposed, waste will be covered up at the end of each working day.

Traffic Management

The Contractor will be required to implement a traffic management plan to manage safe access and egress of construction vehicles from the site.

Stock Proof Fencing

Clearance of shrub on the perimeter will result in damage to existing stock proof fencing. Following placement of the cap a replacement perimeter stock proof fence 1.3 m high will be installed around the landfill footprint.



The existing access gate to the site will be replaced. Redundant fences and gates will be transported and disposed of offsite in a licenced facility.

Installation of Landfill Gas/Leachate Management Infrastructure

New monitoring wells (3 no. ground water and landfill gas monitoring and 2 no. groundwater monitoring wells) will be installed to monitor landfill gas and groundwater. Arisings from boreholes will be managed on site below the LLDPE barrier and gas collection geocomposite.

Monitoring wells will have a chamber and a cover atop the wells at the same elevation as the surrounding ground. The wells will have monitoring ports to support monitoring of landfill gas quality and or groundwater quality as may be required by the Environmental Protection Agency (EPA).

The construction works will make provision for additional wells within the waste body and ports will be installed at wells heads or manifolds to support monitoring of gas quality and pressure.

Existing wells (2 no. groundwater monitoring wells) as are present within the waste footprint will be retained and incorporated into the cap to support future environmental monitoring as may be required by the EPA.

A drawing showing the existing and proposed monitoring wells is enclosed with this planning application (Drawing Reference: P21-287-0100-0006).

Grass Cover/Landscaping for Pasture

Post capping and placement of the subsoils and topsoil layers it is proposed to landscape the site using a high value native grass cover.

Grass is used to prevent erosion of the soils and to provide an attractive final visual appearance for the site.

2.1.4 Construction Working Hours

The hours of construction activity will avoid unsociable hours and will be agreed with the planning authority in advance of site start. It is anticipated that this will restrict working hours at the site during the construction phase to between 07:00 to 19:00 Monday to Saturday inclusive. Work on Sundays or public holidays will only be conducted in exceptional circumstances and subject to prior notification insofar as possible with the local community.

2.1.5 Operational/Post Construction Phase

The Operational/Post Construction works will include:

- Ongoing environmental monitoring.
- Ongoing management of Landfill Gas.
- Ongoing maintenance of engineered cap on-site.
- Ongoing maintenance of drainage systems on-site.



2.1.5.1 *Environmental Monitoring*

Monitoring staff will be required to access installed infrastructure (wells, the landfill gas compound and surface water monitoring locations) to take samples and/or monitor gas quality during the aftercare period post construction.

2.1.5.2 *Management of Landfill Gas*

Post completion of the weeks and installation of the proposed landfill gas management infrastructure, there will be an on-going requirement to:

- Maintain landfill gas infrastructure on a periodic basis.
- Monitor landfill gas quality within and external to the facility at dedicated monitoring locations.
- Reinststate/replace biological filter media.

2.1.5.3 *Maintenance of Cap*

The grass cover will require maintenance. This may be provided either by grazing and or by mowing. Fertiliser supplements may also be required periodically during the aftercare period subject to stocking density.

2.1.5.4 *Maintenance of Surface Drainage*

Sub surface drainage pipes may require periodic jetting of pipes if they become compromised with roots or silt.



3. EIA SCREENING

3.1 EIA Project Types

The European Union Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment, requires member states to ensure that a competent authority carries out an assessment of the environmental impacts of certain types of project, as listed in the Directive, prior to development consent being given for the project.

The EIA Directive requires that, *“in order to ensure a high level of protection of the environment and human health, screening procedures and EIA assessments should take account of the impact of the whole project in question, including where relevant, its subsurface and underground, during the construction, operational and, where relevant demolition phases”*.

The Requirement for the EIA of various types of development are transposed into Irish legislation under the Planning and Development Act and the Planning and Development (Amendment) Regulations 2001-2021. Schedule 5, Part 1 of the Planning Regulations includes a list of projects which are subject to EIA based on their type. Part 2 of the same schedule includes a list of projects which by reason of scale also fall into the EIA category for example, wind farms with more than 5 no. turbines or having a total output greater than 5 megawatts or waste handling facilities that handle more than 25,000 tonnes of waste per annum all fall into Part 2. Schedule 5 also includes a section on extensions or changes to developments for example, any change or extension to existing projects which would result in the development being of a class listed in Schedule 5 or result in an increase in size greater than 25% or 50% of the appropriate thresholds would fall into Schedule 5 and thus require an EIA.

The EIA criteria above are quite clear and prescriptive however in addition to the above Schedule 5 also includes a section relating to ‘sub threshold’ (discretionary) EIA. This is where any project listed in Schedule 5 Part 2 which does not exceed a quantity, area or other limit specified in respect of the relevant class of development (e.g., waste facility handling 20,000 tonnes per year or two turbines having an output less than 5 megawatts) should be subject to EIA where the project would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7 of the Regulations.

The proposed development does not fall into a class of development set out in Schedule 5, Part 1 and therefore an EIA is not mandatory. The relevant classes of development from Schedule 5, Part 2 are as follows:

- 11(b): *‘Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule’.*
- 15: *‘Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.’*

As part of the proposed remediation works, the site will not accept waste, thus the development cannot be regarded as a development falling within Class 11(b) of Part 2 of Schedule 5 of the Planning and Development Regulations 2001.



In the circumstances, although a mandatory EIA is not triggered for the proposed project, an assessment of the likelihood of the proposed works to have a significant effect on the environment having regard to the criteria set out in Schedule 7 will be undertaken. If it is likely that the project will have a significant effect on the environment having regard to the criteria set out hereunder, an EIA will be required.

The Draft EPA 2017 *Guidelines on Information to be contained in an Environmental Impact Assessment Reports* notes that even where a proposed project is not a type that is included in the statutory EIA project list, the determination of sub-threshold EIA Screening is an increasingly complex issue and should not be decided on without full consideration of the 2014 EIA Directives 'wide scope and broad purpose', as set out in the EU Documents of Interpretation of definitions of project categories of Annex I and Annex II of the EIA Directive 2008.

3.2 Sub-Threshold EIA Screening

This section of this report screens the project in the context of the criteria set out in Schedule 7 and Annex III of the EIA Directive. The screening demonstrates that there will be no significant impacts associated with the proposed development on the receiving environment in isolation or cumulatively with other projects or proposals in the area. This EIA Screening considers the 'whole project' including all secondary ancillary/subsidiary elements essential to the construction and maintenance of the remediation works.

Annex III of the EIA Directive details the criteria to be used to determine whether a project should be subject to EIA and Schedule 7 of the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 implements this Directive in Ireland.

These criteria are as follows:

1. Characteristics of the proposed development

The characteristics of proposed development, in particular:

- *The size and design of the whole of the proposed development*
- *Cumulation with other existing and/or development the subject of a consent for proposed development for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment.*
- *The nature of any associated demolition works*
- *The use of natural resources in particular land, soil, water and biodiversity.*
- *The production of waste.*
- *Pollution and nuisances.*
- *The risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge; and*
- *The risks to human health (for example due to water contamination or air pollution).*



2. Location of Projects

The environmental sensitivity of geographical areas likely to be affected by proposed development, having regard to:

- *The existing and approved land use.*
- *The relative abundance, quality and regeneration capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground.*
- *The absorption capacity of the natural environment, paying particular attention to the following area:*
 - *Wetlands, riparian areas, river mouths.*
 - *Coastal zones and marine environment.*
 - *Mountain and forest area.*
 - *Nature reserves and parks.*
 - *Areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive.*
 - *Areas in which there has already been a failure to meet the environmental quality standards, laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure.*
 - *Densely populated areas.*
 - *Landscapes and sites of historical, cultural, or archaeological significance.*

3. Characteristics of potential impacts

The potential significant effects on the environments of proposed development in relation to criteria set out under paragraphs 1 and 2, with regard to the impact of the project on the factors specified in the definition of 'environmental impact assessment report' and taking into account-

- *The magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected).*
- *The nature of the impact.*
- *The transboundary nature of the impact.*
- *The intensity and complexity of the impact.*
- *The probability of the impact.*
- *The expected onset, duration, frequency and reversibility of the impact.*
- *The cumulation of the impact with the impact of other existing and/or approved projects.*
- *The possibility of effectively reducing the impact.*

This assessment utilises the Screening Checklist as detailed in the European Commission Guidance on EIA Screening, June 2001, to screen the proposed development with regard to EIA requirements and this checklist encompasses the details required under Annex III of the EIA Directive and in Schedule 7 of the 2018 EIA Regulations – refer to Table 3.1. Any potential impacts are then assessed with regard to their characteristics.

CLIENT:

Mayo County Council

PROJECT NAME:

Claremorris Closed Landfill Remediation Project - Environmental Impact Assessment Screening Report



In completing this screening assessment regard has also been had to EIA Screening Guidelines contained in the Office of the Planning Regulator's Practice Note PN02 Environmental Impact Assessment Screening.



Table 3-1: EIA Screening Checklist

Checklist Questions	Yes/No/Briefly describe	Is this likely to result in a significant impact? Yes/No/Why?
<p>1. Will construction, operation, decommissioning, or demolition works of the Project involve actions that will cause physical changes in the locality (topography, land use, changes in waterbodies, etc.)?</p>	<p>There will be minor excavations as part of the proposed remediation works. Also included as part of the works, is the re-profiling of the existing land surface and the provision of a subsoil and topsoil layer.</p> <p>Site clearance works will be undertaken as part of the proposed development. This will involve the removal of ground vegetation and boundary fencing.</p> <p>As part of the site clearance works, invasive species will be excavated and buried on site with the extent of the engineered cap to prevent any further spread.</p>	<p>No, due to the small scale and temporary nature of proposed excavations. The works area will be reinstated upon completion of the works. All cut materials will be used as fill in local depressions and all cut and fill works will be carried out within the site boundary.</p> <p>Site Clearance works will be undertaken as part of the proposed development. Site clearance works will however be relatively minor in scale (involving only ground clearance and the removal of site fences). These works will not have a significant impact on any environmental receptor given their minor and time limited nature and given that the site clearance and construction works as a whole will be carried out in accordance with a Construction Environmental Management Plan (CEMP).</p> <p>An invasive species management plan is in place for the ongoing treatment of the identified invasive species on site.</p>
<p>2. Will construction or the operation of the Project use natural resources such as land, water, materials or energy, especially any resources which are non-renewable or are in short supply?</p>	<p>Natural resources will be used in the form of materials for construction including granular dust material for the cap, sub-soils, top-soils, geocomposite material, HDPE pipework, and LLDPE material. Diesel fuel will also be used to power the on-site generator and mobile plant to be utilized during remediation works.</p>	<p>The proposed development will not involve the use of significant levels of natural resources such as construction materials or energy. The proposed development is not likely to result in a significant impact in this regard and is in line with existing and established trends in terms of carrying out remediation works on closed landfill sites as that to which this report pertains.</p>



Checklist Questions	Yes/No/Briefly describe	Is this likely to result in a significant impact? Yes/No/Why?
<p>3. Will the Project involve the use, storage, transport, handling or production of substances or materials which could be harmful to human health, to the environment or raise concerns about actual or perceived risks to human health?</p>	<p>The project is concerned with the remediation of a closed landfill. Materials associated with the project which create potential hazards include buried wastes, unknown waste, made ground, landfill gas and leachate. Whilst no extensive excavations of waste materials are proposed, contact with possible waste materials cannot be completely eliminated. Fuel will be delivered to site as necessary during the proposed works. Re-fuelling will be undertaken in a designated re-fuelling area within the proposed site compound. Potential exists for an accidental fuel leak or spill resulting in the occurrence of environmental pollution.</p>	<p>Soils excavated from on-site will be used for infilling /grading (i.e. cut and fill techniques will be utilized). The remaining soils required as part of the engineered cap will be imported to site..</p> <p>No, this is not likely to result in significant impacts on human health or the environment. The proposed remediation works will be undertaken in accordance with Health and Safety standards and legislation/regulations. A comprehensive Safety and Health Management Plan will be adopted and adhered to by the Contractor to ensure minimal risk in terms of human health and the environment.</p> <p>During the proposed remediation works on site there is a risk for siltation to occur. In order to mitigate against this occurrence, protection measures (siltation fencing) will be placed around stockpiles of imported material over the course of the work as defined in the CEMP.</p> <p>It is not likely that fuels on-site will be released to and have an effect on the environment given control measures in place to prevent such loss of containment and discharges, as defined in the CEMP for the proposed works.</p> <p>The proposed remediation works will be undertaken in accordance with the terms and conditions of the EPA Certificate of Authorization (Ref: H0319-01) for Landfill Closure relating to environmental protection and site remediation. No significant environmental impacts will occur as a result of this.</p>



Checklist Questions	Yes/No/Briefly describe	Is this likely to result in a significant impact? Yes/No/Why?
<p>4. Will the Project produce solid wastes during construction or operation or decommissioning?</p>	<p>There will be minor waste material generated as a consequence of the site clearance works undertaken on-site.</p> <p>Invasive species identified on site include, Japanese Knotweed, Winter Heliotrope and Cherry Laurel. As part of the site clearance works, these invasive species will be excavated and buried on site with the extent of the engineered cap to prevent any further spread.</p>	<p>No. The waste will be removed by a licenced waste operator and disposed of at a licenced facility. It is noted that no significant levels of solid waste will be produced during the operation or decommissioning. All excavated soils will be utilised on-site during grading/profiling works.</p> <p>An invasive species management plan is in place for the ongoing treatment of the identified invasive species on site. All invasive species will be buried with a minimum 2.0m cover within a dedicated “fill” location within the waste body prior to placing the engineered cap, thereby preventing its spread.</p>
<p>5. Will the Project release pollutants or any hazardous, toxic or noxious substances to air or lead to exceeding Ambient Air Quality standards in Directives 2008/50/EC and 2004/107/EC?</p>	<p>Construction machinery will likely cause release of pollutants in the form of exhaust emissions. Similarly, vehicular transport associated with the facility will cause exhaust emissions.</p> <p>As a result of natural biodegradation of waste which was deposited in the landfill during operation, gases have formed. As part of the remediation works, an LLDPE barrier will be installed, above and below which a gas collection geocomposite and pipework system will be constructed to collect and direct landfill gas that may be present to controlled venting outlets. The venting outlets will allow venting and/or oxidation of landfill gas that may be present to the atmosphere.</p>	<p>No likely significant impact. Vehicular transport associated with the construction and operational phases of the facility produces negligible impact to air quality given the scale of the construction phase and anticipated traffic levels. Materials generated during works on-site will be reutilised on-site thereby minimizing traffic associated with the proposed development.</p> <p>Whilst there will be some emissions released from the site given its previous use (i.e., landfill gas), it is noted that the proposed remediation works will ultimately have a positive impact on air quality within the surrounding area following construction of the engineered cap. The design of the engineered cap will facilitate the controlled venting and flaring of gas to the atmosphere.</p>



Checklist Questions	Yes/No/Briefly describe	Is this likely to result in a significant impact? Yes/No/Why?
<p>6. Will the Project cause noise and vibration or the releasing of light, heat energy or electromagnetic radiation?</p>	<p>During construction noise emissions will occur from construction plant.</p>	<p>No. Noise emissions during construction will be temporary and it is unlikely that the EPA prescribed noise limits will be exceeded. A CEMP will be prepared to mitigate noise emissions during construction. In addition, there are no Noise Sensitive Locations within relatively close proximity to the site. Furthermore, the site is located adjacent to a busy stretch of road (N17), as such, the project is unlikely to cause significant noise impacts on the receiving environment.</p>
<p>7. Will the Project lead to risks of contamination of land or water from releases of pollutants onto the ground or into surface waters, groundwater, coastal waters or the sea?</p>	<p>Existing and proposed wells within and external to the landfill footprint will be used to monitor gas, groundwater and leachate qualities. The EPA will require regular monitoring of landfill gas quality. Subject to gas quality at venting locations landfill gas will be vented to atmosphere via a biological filter following installation of the LLDPE barrier. Ongoing surface water discharge monitoring is proposed to ensure that no polluting surface water discharges are released from the site. The proposed LLDPE barrier will provide an engineered barrier that will isolate the waste body from rainfall inputs and prevent leachate production that might otherwise contaminate groundwater.</p>	<p>No. The proposed works relate to enhanced remediation. Following remediation works, leachate will continue to be produced and enter groundwater for a time. However, remediation works will prevent rainwater from infiltrating the interred waste body therefore reducing the potential for leachate to be produced in the short term and ultimately preventing leachate production. The proposed remediation works will ultimately have a positive impact on water quality within the river network downstream because leachate generation will reduce following construction of the engineered cap.</p>
<p>8. Will there be any risk of accidents during construction or operation of the Project that could affect human health or the environment?</p>	<p>The works will be conducted safely and in accordance with the Safety, Health and Welfare at Work Act and associated Regulations.</p>	<p>No. There is a low risk of accidents during the construction and operation of the Project. A Health and Safety Plan will be developed to prevent health and safety impacts.</p>



Checklist Questions	Yes/No/Briefly describe	Is this likely to result in a significant impact? Yes/No/Why?
		<p>An Environmental Management System and an Emergency Response Procedure will be in place to prevent the occurrence of accidents which may affect environmental receptors.</p>
<p>9. Will the Project result in environmentally related social changes, for example, in demography, traditional lifestyles, employment?</p>	<p>No, there will be no generation of employment as a result of the Project once operational.</p>	<p>The project will not have a significant impact on demography, lifestyles or employment.</p>
<p>10. Are there any other factors that should be considered such as consequential development which could lead to environmental impacts or the potential for cumulative impacts with other existing or planned activities in the locality?</p>	<p>Following the completion of the remediation works it is proposed By Mayo County Council in a separate Part 8 planning application the develop a 5MW solar PV farm at the application site and lands to the east. It is proposed that the solar farm will be connected to the existing electrical substation located 150m north of the site.</p>	<p>The carrying out of the remediation works followed by the development of a solar PV farm at the application are not likely to have a significant effect on the environment when the projects are considered cumulatively. The remediation works will be subject to environmental control and mitigation measures to ensure that there will be no adverse environmental effects associated with them. A separate EIA Screening Report has been completed for the Solar PV Farm Development which has determined that there is no real likelihood this project will have significant environmental effects. The carrying out of the remedial works followed by the development of the solar farm will not lead to any significant cumulative effects, given the lack of interacting and combining effects between the two projects. The construction phases of both projects will not overlap (the landfill remediation works will be carried out before Solar PV Farm construction commences). Operational/Post Construction Works and maintenance activities at the landfill are limited in magnitude will not result in any significant environmental effect that may combine with effects generated by solar farm construction or operation.</p>



Checklist Questions	Yes/No/Briefly describe	Is this likely to result in a significant impact? Yes/No/Why?
<p>11. Is the Project located within or close to any areas which are protected under international, EU or national or local legislation for their ecological, landscape, cultural or other value, which could be affected by the Project?</p>	<p>There are no international, EU or nationally designated areas in the immediate vicinity of the Project. There is a hydrological connection between the subject site and two of the European Sites (Lough Carra/Mask SAC & Lough Mask) which are located approximately 45km downstream.</p>	<p>The Natura Impact Statement which accompanies this report, concludes beyond reasonable scientific doubt that there is no potential for adverse effects on the integrity of any European site identified either alone or in combination with other plans or projects, with the adoption of the proposed mitigation measures.</p>
<p>12. Are there any other areas on or around the location that are important or sensitive for reasons of their ecology e.g., wetlands, watercourses or other waterbodies, the coastal zone, mountains, forests or woodlands, that could be affected by the Project</p>	<p>There are no habitats within the subject site that conform to those listed under Annex I of the EU Habitats Directive.</p>	<p>No. There are no habitats within the study area that conform to those listed under Annex I of the EU Habitats Directive.</p>
<p>13. Are there any areas on or around the location that are used by protected, important or sensitive species of fauna or flora e.g., for breeding, nesting, foraging, resting, overwintering, migration, which could be affected by the Project?</p>	<p>The Lough Carra/Mask Complex SAC and Lough Mask SPA are located approximately 45km downstream of the closed landfill. The conservation objective of which is to maintain or restore the favourable conservation condition of the Annex I habitats and Annex II species for which the SAC has been selected.</p>	<p>Whilst it has been acknowledged that there could be potential for the proposed closed landfill remediation works to have significant effects on the Lough Carra/Mask Complex SAC and Lough Mask SPA, with the implementation of the detailed mitigation measures identified in the NIS and set out in Condition 3 of the certification of authorisation, it is concluded beyond reasonable scientific doubt that the integrity of the Lough Carra/Mask Complex SAC and Lough Mask SPA will not be adversely affected.</p>
<p>14. Are there any inland, coastal, marine or underground waters (or features of the marine environment) on or around the location that could be affected by the Project?</p>	<p>The Carrowkeel Turlough SAC is located c. 6.8 km from the subject site. At present and prior to the initiation of remediation works, leachate could percolate to groundwater and surface waters.</p>	<p>No. Post construction the LDPE barrier will provide an engineered barrier that will isolate waste body from rainfall inputs and prevent leachate production that might otherwise contaminate groundwater.</p>



Checklist Questions	Yes/No/Briefly describe	Is this likely to result in a significant impact? Yes/No/Why?
<p>15. Are there any areas or features of high landscape or scenic value on or around the location which could be affected by the Project?</p>	<p>The proposed remediation works will prevent rainwater from infiltrating the interred waste body, therefore reducing the potential for leachate to be produced.</p> <p>The Landscape Appraisal of the County Development Plan characterised the site by area 'L' i.e., South East Mayo Plains. This area is defined as a mosaic of high quality pasture with intermittent area of urban settlement.</p> <p>The dominant sensitivity associated with the South East Mayo Plains has been categorised as 'normal' in the landscape appraisal for the county.</p> <p>Having regard to the above it is noted that there are no features of high landscape or scenic value that could be affected, and the works are restricted in nature.</p>	<p>The proposed remediation works will have a positive impact on water quality within the River network downstream because leachate generation will reduce following construction of the engineered cap.</p> <p>No, the relatively small scale of the development and lack of landscape/visual sensitivities in the study area will mean that it is unlikely to have a significant impact on the landscape. In addition, on-site works will be temporary in nature and only give rise to temporary landscape of visual impacts. All excavation works will be fully reinstated.</p> <p>Notwithstanding the above, it is noted that the proposed remediation works will significantly improve the visual amenity of the immediately surrounding area given the ground clearance and the more aesthetically appealing site grading/profiling and landscaping that will be carried out as part of the development.</p>
<p>16. Are there any routes or facilities on or around the location which are used by the public for access to recreation or other facilities, which could be affected by the Project?</p>	<p>McMahon Park Lake, Mayfield Lake, Clare Lake Loop Walk and The Land of Giants Walking Trail are all located in the surrounding area of Claremorris to the west of the subject site. Due to the distance of these facilities from the subject site and visual screening present, there is no potential for the remediation works to adversely impact the amenity value associated with these sites.</p>	<p>There are no likely significant impacts anticipated in this regard.</p>



Checklist Questions	Yes/No/Briefly describe	Is this likely to result in a significant impact? Yes/No/Why?
<p>17. Are there any transport routes on or around the location that are susceptible to congestion or which cause environmental problems, which could be affected by the Project?</p>	<p>The proposed project will not affect transportation routes. Additional traffic will be generated on the surrounding road network during the construction phase; however this is of a minor and limited scale.</p>	<p>No likely significant effects due to limited number of HGVs/LGVs required and the time limited nature of the works. Material generated during earthworks on-site will be reutilized on-site thereby substantially reducing traffic movements associated with the construction phase of the project. Soil inputs will not need to be imported to the site and waste soil outputs will not need to be exported to the site. Traffic movements to the site will also take place in accordance with a Construction Traffic Management Plan.</p>
<p>18. Is the Project in a location in which it is likely to be highly visible to many people?</p>	<p>The temporary construction works may be visible from the surrounding network at isolated locations along the N17 and railway track, however, existing site is separated from nearby residential properties by the N17 Road, mature tree lining and hedgerows which aid in the visual screening of the site.</p>	<p>There will be no significant visual impacts given the scale and nature of the works, their temporary nature and the visual screening (i.e. N17, mature tree lining and hedgerows) surrounding the site. Notwithstanding this, the proposed remediation works will significantly improve the visual amenity of the immediately surrounding area given the ground clearance and the more aesthetically appealing site grading/profiling and landscaping that will be carried out as part of the development</p>
<p>19. Are there any areas or features of closed or cultural importance on or around the location that could be affected by the Project?</p>	<p>There were no entries on the Record of Monuments and Places located within the subject site boundary: However, the following entries were located within 500m of the subject site: A burnt mound (MA101-100) is located c. 200m north-west of the site. An enclosure (MA101-042) is located c. 300m north of the site.</p>	<p>As there are no closed or cultural important features present on site, there are no likely significant impacts anticipated in this regard. The subject development is an appropriate distance from the remaining existing listed monuments, buildings and RPS structures as to not interfere with the amenity and setting of the listed sites.</p>



Checklist Questions	Yes/No/Briefly describe	Is this likely to result in a significant impact? Yes/No/Why?
	<p>A Burnt Mound (MA101 099) is located approximately 400m north of the site and an enclosure (MA101-089) is located approximately 450m north-east of the site.</p> <p>There was 1 no. structure listed on the Mayo County Development Plan (2014 - 2020) 'Record of Protected Structures' which was located within a 500m distance of the subject site (Castlemagarrett Estate).</p> <p>Following a review of the available datasets and consulted sources, there is no evidence of potential unrecorded archaeological features within the proposed work areas.</p> <p>Although ground excavation will be required during the proposed works, given the previous disturbance associated with the landfill facility, combined with the low archaeological potential of the proposed work location, the potential for impacts occurring to any unrecorded archaeological artefacts, features or deposits as a result of the proposed works is considered to be very low.</p>	
<p>20. Is the Project located in a previously undeveloped area where there will be a loss of greenfield land?</p>	<p>There will be no loss of greenfield land as a result of the proposed project. The site is a closed landfill.</p>	<p>No, there will be no permanent loss of greenfield land.</p>
<p>21. Are there existing land uses within or around the location e.g., homes, gardens, other private property, industry, commerce, recreation, public open space, community facilities, agriculture, forestry, tourism, mining or quarrying that could be affected by the Project?</p>	<p>Existing land uses around the works areas are agricultural fields, wetlands and residential in nature. An electrical substation is located approximately 150m to the north of the subject site.</p>	<p>Existing land uses will not be affected by the proposed works given the environmental control and mitigation measures that will be in place during the construction and operational phases of the proposed development.</p>



Checklist Questions	Yes/No/Briefly describe	Is this likely to result in a significant impact? Yes/No/Why?
		<p>In addition, given the proximity of certain sensitive land uses to the site (E.g., housing) measures have been defined for controlling polluting aqueous emissions, dust, noise and traffic.</p>
<p>22. Are there any plans for future land uses within or around the location that could be affected by the Project?</p>	<p>Following the completion of the remedial works it is proposed that a 5MW solar farm will be developed on site. It is proposed that the solar farm will be connected to the existing electrical substation located 150m north of the site.</p>	<p>The proposed development will not have a significant effect on the future development of the surrounding land, given the limited nature and scale of the proposed remediation works. The proposed remediation works will also significantly improve the appearance and functioning of the existing site, and will facilitate future regeneration and reuse of the site as a solar farm.</p> <p>Additional mitigation measures have been defined in the accompanying CEMP and NIS which will serve to protect areas earmarked for future land use.</p>
<p>23. Are there areas within or around the location which are densely populated or built-up, that could be affected by the Project?</p>	<p>The subject development is located approximately 1km south-east of Claremorris Town. The most proximate residential dwellings to the subject lands are present in the Clareville residential estate which is located c.280 metres west of the subject site.</p> <p>Nuisance effects (i.e. noise, traffic, dust) in the local population may arise due to the location of the site in proximity to an urban area.</p>	<p>Some minor, time limited nuisance effects may arise due to the location of the works in proximity to an urban area. However, the works will be temporary and a comprehensive set of mitigation measures will be in place to prevent, minimize and control noise, dust and traffic related impacts.</p>
<p>24. Are there any areas within or around the location which are occupied by sensitive land uses e.g., hospitals, schools, places of worship, community facilities, that could be affected by the Project?</p>	<p>There are three no. schools located within 1km of the subject site, these include Mount Carmel Academy Montessori School, MSLETB Further Education School and Claremorris Boys National.</p> <p>In addition, the Claremorris GAA Club is located approximately 810m north-west of the subject site.</p>	<p>Given the limited nature and scale of the proposed works, given proposed mitigation measures, and given the distance from the site to these various sensitive receptors, it is not likely that the subject development will impact negatively on these sensitive land uses.</p>



Checklist Questions	Yes/No/Briefly describe	Is this likely to result in a significant impact? Yes/No/Why?
<p>25. Are there any areas within or around the location which contain important, high quality or scarce resources e.g., groundwater, surface waters, forestry, agriculture, fisheries, tourism, minerals, that could be Affected by the Project?</p>	<p>In respect of religious facilities, Life and Spirits Church is located approximately 780 metres south-west of the subject site on the southern side of Claremorris Town.</p> <p>There are no areas of scarce natural resources within or in the vicinity of the site.</p> <p>The site is underlain by a regionally important aquifer which is karstified with a diffuse flow.</p> <p>The site is hydrologically connected to the Lough Carra/Mask Complex SAC. No other areas containing high quality resources are situated within the vicinity or sphere of influence of the site.</p>	<p>No. There will be no impacts on high quality or scarce natural resources. Enhanced remediation will reduce the generation of leachate affecting groundwater and will consequently result in positive impacts. Mitigation measures will be in place to prevent polluting discharges to groundwater or surface waters as a consequence of proposed development activities.</p>
<p>26. Are there any areas within or around the location which are already subject to pollution or environmental damage e.g., where existing legal environmental standards are exceeded, that could be affected by the Project?</p>	<p>The subject site comprises 3 no. invasive plant species, which is inclusive Japanese knotweed.</p> <p>Historic leachate monitoring results from 2010 and 2020 showed multiple parameters, namely ammoniacal nitrogen, potassium iron, manganese, zinc and molybdate reactive phosphorus exceeded the EPA Interim Guideline Values (IGVs) and the Overall Threshold Value Range (OTVR) for Groundwater.</p> <p>Historical surface water monitoring from 2009 and 2020 showed elevated levels of ammonia, molybdate reactive phosphorus, biological oxygen demand and cyanide were also recorded in the surface water monitoring results.</p> <p>Currently landfill gas as may be present vents gas to atmosphere via diffuse surface emissions.</p>	<p>An invasive species management plan has been prepared and an invasive species specialist or qualified ecologist will supervise cordoning and ongoing eradication (through burial) of any invasive species present at the time of construction.</p> <p>Having regard to the proposed remediation works and associated mitigation measures outlined in the accompanying NIS, it is noted that the project will not result in additional emissions or discharges which could cause pollution, and will in fact improve the current conditions and emission at the site.</p>



Checklist Questions	Yes/No/Briefly describe	Is this likely to result in a significant impact? Yes/No/Why?
	<p>Once the proposed LLDPE barrier is installed this preferential pathway to atmosphere will be isolated. Above and below the LLDPE barrier a gas collection geocomposite and pipework system will be constructed to collect and direct landfill gas as may be present to controlled venting outlets to allow venting and/or oxidation of landfill gas as may be present to atmosphere.</p> <p>The gas collection geocomposite forms a 'cavity' to intercept gas emissions from the underlying body.</p>	
<p>27. Is the Project location susceptible to earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions e.g., temperature inversions, fogs, severe winds, which could cause the Project to present environmental problems?</p>	<p>The project is not susceptible to natural disasters.</p>	<p>No, no natural disasters likely at the works location. The development site is not situated in a flood risk zone as designated in the OPW's flood risk maps (CFRAM Maps or National Indicative Fluvial Mapping).</p>



3.3 Schedule 7A Sub- Threshold Development Screening

3.3.1 Information Required

Directive 2014/52/EU contains guidance for Member States on the information that should be provided by developers and applicants for the purposes of screening sub-threshold developments for EIA.

The guidance is provided by way of criteria set out in Annex III of the Directive and are included in Schedule 7A of the Planning and Development Regulations, 2001 as amended, under the heading: *'Information to be provided by the applicant or developer for the purposes of screening sub-threshold development for Environmental Impact assessment'* and are grouped under four headings.

The requirements are as follows:

1. A description of the proposed development, including in particular:
 - (a) A description of the physical characteristics of the whole proposed development, and, where relevant, of demolition works, and
 - (b) A description of the location of the proposed development, with particular regard to the environmental sensitivity of geographical areas likely to be affected.
2. A description of the aspects of the environment likely to be significantly affected by the proposed development.
3. A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from:
 - (a) The expected residues and emissions and the production of waste, where relevant, and
 - (b) The use of natural resources, in particular soil, land, water and biodiversity.
4. The compilation of the information at paragraphs (1) to (3) shall take into account, where relevant, the criteria set out in Schedule 7.

3.3.2 Sub-Threshold Development Screening Under Schedule 7A

The criteria for evaluating the significance of environmental impacts of the proposed development under Schedule 7A was used in Table 3-2.



Table 3-2: Schedule 7A Environmental Impact Assessment Screening Criteria

Schedule 7A Requirement	Description
1. A description of the proposed development, including in particular –	A detailed description of the proposed development is in Section 2 and has been assessed with regard to Schedule 7 criteria in Table 3.1
(a) A description of the physical characteristics of the whole proposed development, and, where relevant, of demolition works, and	A description of the physical characteristics of the whole proposed development is in Section 2 and has been assessed with regard to Schedule 7 criteria in Table 3.1. A description of site clearance works associated with the proposed development is provided in Section 2.2.3
(b) A description of the location of the proposed development, with particular regard to the environmental sensitivity of geographical areas likely to be affected.	A description of the location of the proposed development, with particular regard to the environmental sensitivity of geographical areas likely to be affected is in Section 1.1 and has been assessed with regard to Schedule 7 criteria in Table 3.1.
2. A description of the aspects of the environment likely to be significantly affected by the proposed development.	A description of the aspects of the environment likely to be significantly affected by the proposed development has been assessed with regard to Schedule 7 criteria in Table 3.1.
3. A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from: (a) The expected residues and emissions and the production of waste, where relevant, and	A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from the expected residues and emissions associated with the proposed development has been assessed with regard to Schedule 7 criteria in Table 3.1.
(b) The use of natural resources, in particular soil, land, water and biodiversity.	A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from the use of natural resources, in particular soil, land, water and biodiversity has been assessed with regard to Schedule 7 criteria in Table 3.1.
4. The compilation of the information at paragraphs (1) to (3) shall take into account, where relevant, the criteria set out in Schedule 7.	The criteria as set out in Schedule 7 is addressed in Section 3.2 and compilation of information in paragraphs (1) to (3) is in Section 2. This information has been assessed with regard to Schedule 7 in Table 3.1 of this report.

When assessing the proposed development with relation to Schedule 7A criteria listed in Section 3.3.2 and Table 3.2, it was noted that all aspects were already covered in the information provided under Schedule 7 and as such no additional assessment under Schedule 7A was considered necessary.



3.4 Impact Characterization

In summary, it is noted that the proposed works which involve enhanced remediation works will ultimately have a positive impact on the existing environment once the works have been completed. Post-construction phase the proposed LLDPE barrier will provide an engineered barrier that will isolate waste body from rainfall inputs and prevent leachate production that might otherwise contaminate groundwater. The proposed remediation works will have a positive impact on water quality within the river network downstream because leachate generation will reduce following construction of the engineered cap.

However, as detailed in Table 3.1, there are some potential slight negative impacts relating to leachate, sedimentation, dust, noise, invasive species and traffic associated with the proposed works which may impact upon hydrological, ecological and human receptors respectively. These effects are deemed to be negligible to slight but not significant due to the duration of the works and given the environmental control and mitigation measures that will be in place during the construction and operational phases of the proposed development.

Prior to any remediation works, it is noted that historic leachate monitoring results showed multiple parameters, namely ammoniacal nitrogen, potassium iron, manganese, zinc and molybdate reactive phosphorus exceeded the EPA Interim Guideline Values (IGVs) and the Overall Threshold Value Range (OTVR) for Groundwater. Elevated levels of ammonia, molybdate reactive phosphorus, biological oxygen demand and cyanide were also recorded in the surface water monitoring results.

Whilst it has been acknowledged that there could be potential for the proposed closed landfill remediation to have significant effects on the Lough Carra/Mask Complex SAC, with the implementation of the detailed mitigation measures identified in this NIS and set out in Condition 3 of the Certification of Authorisation, it is concluded beyond reasonable scientific doubt that the integrity of the Lough Carra/Mask Complex SAC will not be adversely affected by the remediation works and the development site post remediation. The findings of this NIS are in line with the EPA's Stage Two Appropriate Assessment determination which informed their decision to grant the CoA. On the basis of objective scientific information, the proposed development will not, either alone or in combination with other plans or projects, adversely affect any of the constitutive interests of the Lough Carra/Mask Complex SAC, in light of the site's conservation objectives.

The carrying out of the remediation works followed by the development of a solar PV farm at the application are not likely to have a significant effect on the environment when the projects are considered cumulatively.

The potential impact to the local population is limited to the construction phase. Sensitive human receptors may be slightly affected by construction phase activities resulting in noise, dust and visual impacts. However, these impacts will be temporary in nature and mitigation measures, as defined in the CEMP for the proposed development, will be implemented to prevent, minimize and control such impacts. The effects are thus not likely to be significant.

In terms of Health and Safety, the Health and Safety at Work Act and its associated Regulations will be implemented. The Contractor will act as PSCS and will be required to prepare a Designer's Risk Assessment for all elements of the work. These measures will minimise the risk of impacts to human health.



4. CONCLUSION

The Requirement for the EIA of various types of developments are transposed into Irish legislation under the Planning and Development Act and the Planning and Development (Amendment) Regulations 2001-2021. Schedule 5 lists the different project types, and this is not a project type that mandatorily requires an EIA.

The subject works which relate to the remediation of a closed landfill, located to the south-east of Claremorris does not individually or cumulatively fall into a class of development set out in Schedule 5, Part 1 and 2 of the Planning and Development Regulations 2001 - 2021 (as amended) and therefore, the requirements for a mandatory EIA can be screened out.

However, sub-threshold EIA may be required where the project would be likely to have significant effects on the environment. Criteria for the consideration of sub-threshold EIA is set out in Schedule 7 and Schedule 7A of the Planning and Development Regulations 2001 - 2021 (as amended). These criteria have been set out within this document with respect to the subject development.

As above-mentioned, there could be potential for the proposed closed landfill remediation to have significant effects on the Lough Carra/Mask SAC, however with the implementation of the detailed mitigation measures identified in the accompanying NIS, it is concluded beyond reasonable scientific doubt that the integrity of the Lough Carra/Mask SAC will not be adversely affected.

Potential impacts to the receiving environment during construction have been set out. Slight traffic, air quality and noise impacts are likely during the construction phase of the project due to the operation of construction machinery and the carrying out of other construction activities.

These impacts will be prevented, minimized and controlled through a comprehensive set of mitigation measures, which are defined in the Construction Environmental Management Plan and Construction Traffic Management Plan which adjoins this application.

Slight visual impacts as a result of the subject development during construction are noted, however, these impacts are not considered significant with regard to the visual vulnerability of the area, given the site is not visible to the nearby residential properties. Notwithstanding this, it is noted that the subject works will significantly improve the visual appearance of the site as a whole once remediation works are completed.

The carrying out of the remediation works followed by the development of a solar PV farm at the application are not likely to have a significant effect on the environment when the projects are considered cumulatively.

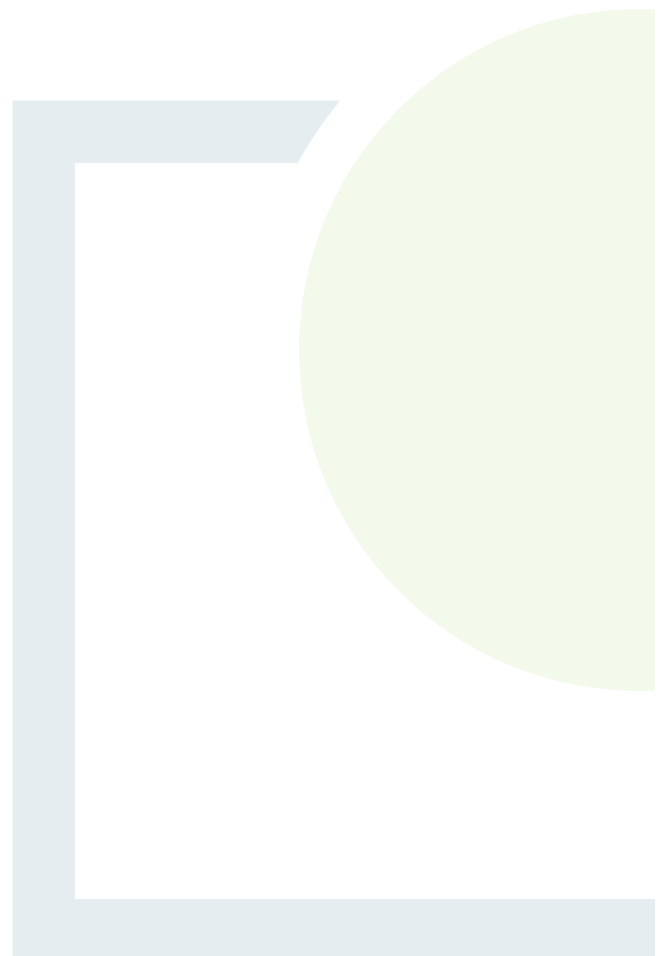
It is therefore submitted that sub-threshold EIA is not required for the subject remediation works, due to the project's limited impact on the receiving environment with respect to Schedule 7 of the Planning and Development Regulations 2001-2021, Annex II of the EIA Directive and the screening checklist provided in the EC guidance document for EIA Screening, as set out in this document.



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

APPENDIX 1

Certificate of Authorisation
(Licence Number: H0319-01)



Headquarters
P.O. Box 3000
Johnstown Castle Estate
County Wexford
Ireland

Closed Landfill Certificate of Authorisation

Certificate of Authorisation Number:	H0319-01
Certification of Authorisation Holder:	Mayo County Council
Location of Facility:	Claremorris Historic Landfill Kilbeg Claremorris County Mayo

HEADQUARTERS
JOHNSTOWN CASTLE ESTATE
COUNTY WEXFORD, IRELAND
PHONE: +353-53-9160600
FAX: +353-53-9160699

**WASTE MANAGEMENT (CERTIFICATION OF HISTORIC UNLICENSED
WASTE DISPOSAL AND RECOVERY ACTIVITY) REGULATIONS 2008**

HISTORIC LANDFILL

CERTIFICATE OF AUTHORISATION

Decision of Agency, under Regulation 7(6) of the Waste Management (Certification of
Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008

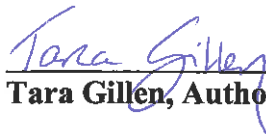
Reference Number: H0319-01

In pursuance of the powers conferred on it by the Waste Management (Certification of
Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008, the
Environmental Protection Agency (the Agency) grants, under Regulation 7(6) of the said
Regulations, this Certificate of Authorisation to Mayo County Council, Áras an Chontae,
Castlebar, County Mayo, in respect of the closed landfill at Kilbeg, Claremorris, County
Mayo, subject to conditions set out in the Certificate of Authorisation.

A copy of the Decision is attached.

Sealed by the Seal of the Agency on this the 19th day of August 2021

**PRESENT when the seal of the Agency
was affixed hereto:**



Tara Gillen, Authorised Person



Glossary of Terms

All terms in this Certificate of Authorisation should be interpreted in accordance with the definitions in the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008 (S.I. No. 524 of 2008) unless otherwise defined in the Certificate of Authorisation.

Agency	Environmental Protection Agency.
Agreement	Agreement in writing.
Annually	At approximately twelve-monthly intervals.
Application	The application by the local authority for this Certificate of Authorisation including the risk assessment, any amendments to the risk assessment, additional information received from the local authority and other documents provided by the local authority.
Certificate of Authorisation	Includes this document and the application.
Closed Landfill	As defined in the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008.
Code of Practice	As defined in the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008.
Biannually	All or part of a period of six consecutive months.
Documentation	Any report, record, results, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this Certificate of Authorisation.
Drawing	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this Certificate of Authorisation.
Environmental Pollution	As defined in the Waste Management Act 1996 as amended.
Heavy Metals	This term is to be interpreted as set out in "Parameters of Water Quality, Interpretation and Standards" published by the Agency in 2001. ISBN 1-84095-015-3.

Incident	<p>The following shall constitute an incident for the purposes of this Certificate of Authorisation:</p> <ul style="list-style-type: none">(i) an emergency;(ii) any emission which does not comply with the requirements of this Certificate of Authorisation;(iii) any trigger level specified in this Certificate of Authorisation which is attained or exceeded; and(iv) any indication that environmental pollution has, or may have, taken place.
Inert Waste	<p>Waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater.</p>
Maintain	<p>Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to perform its function adequately.</p>
Necessary Measures	<p>As defined in the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008.</p>
Relevant Heavy Metals	<p>Heavy metals for analysis shall include, as a minimum, those metals identified as relevant, having regard to the risk assessment and surface water and groundwater monitoring results as required by this Certificate of Authorisation.</p>
Risk Assessment	<p>As defined in the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008.</p>
Sample	<p>Unless the context of this document indicates to the contrary, the term sample or samples shall include measurements taken by electronic instruments.</p>
Status	<p>As defined in the Water Framework Directive, in relation to surface water and groundwater.</p>
The Local Authority	<p>Mayo County Council, Áras an Chontae, Castlebar, County Mayo.</p>
Trigger Level	<p>A parameter value the achievement or exceedance of which requires certain actions to be taken by the local authority.</p>

Part I Authorisation of a Closed Landfill

The Environmental Protection Agency (the Agency) grants, under Regulation 7(6) of the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008 (the Regulations), this Certificate of Authorisation to Mayo County Council, Áras an Chontae, Castlebar, County Mayo, in respect of the closed landfill at Kilbeg, Claremorris, County Mayo, subject to Conditions set out in Part II and the Reasons for the Decision in Part III.

Part II Conditions

Condition 1. Scope

- 1.1 For the purposes of this Certificate of Authorisation, the closed landfill authorised by this Certificate of Authorisation is the area of land outlined in red on Drawing No. P2348-0400-0002_Rev.B (drawing dated 03.03.20) submitted with the application. Any reference in this Certificate of Authorisation to “closed landfill” shall mean the area thus outlined in red.
- 1.2 No waste shall be accepted at the closed landfill.
- 1.3 No waste shall be burned at the closed landfill.
- 1.4 The facility shall be controlled, operated and maintained, and emissions shall take place as authorised by this Certificate of Authorisation. No material change that will result in an increase in the actual or potential nature or quantity of any emission shall be carried out or commenced without the agreement of the Agency.
- 1.5 Nothing in this Certificate of Authorisation shall prohibit authorised beneficial uses of the site of the closed landfill provided that such uses do not interfere with the integrity of the remediation measures adopted.

Reason: <i>To clarify the scope of this Certificate of Authorisation.</i>
--

Condition 2. Notifications, Records and Reports

- 2.1 The local authority shall notify the Agency, in a format as may be specified by the Agency, two months in advance of the intended date of commencement of the remediation works.
- 2.2 The local authority shall notify the Agency as soon as practicable after the occurrence of any incident. The incident notification shall be provided in a format as may be specified in relevant guidance issued by the Agency.
- 2.3 The local authority shall keep the following documents available for inspection by the Agency at all reasonable times and to members of the public by request:
 - (a) Records of all sampling, analyses, measurements, examinations, calibrations and maintenance;
 - (b) Records of incidents;
 - (c) Records of all complaints of an environmental nature;
 - (d) The validation report prepared on completion of the remediation; and
 - (e) Other documentation required by this Certificate of Authorisation or as may be otherwise directed by the Agency.
- 2.4 The local authority shall assign the necessary resources, including financial, to complete the remediation measures specified in this Certificate of Authorisation and risk assessment and to respond to any incident.
- 2.5 The local authority shall annually pay to the Agency €1,083, or such sum as the Agency from time to time determines in accordance with charges policy, for the performance of its functions under the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008 in relation to the closed landfill regulated by this Certificate of Authorisation.

Reason: *To provide for the collection and reporting of adequate information on the activity. To provide for adequate resources for monitoring and measures to protect the environment.*

Condition 3. Management and Monitoring

3.1 The local authority shall implement the following measures within 18 months of the date of grant of this Certificate of Authorisation, or as otherwise specified or agreed by the Agency:

- (a) Minimise the disturbance of deposited waste to the extent possible;
- (b) Remove, for disposal or recovery at an appropriate facility, the waste from the surface of the landfill within three months of the date of grant of this Certificate of Authorisation;
- (c) Carry out repairs to the monitoring borehole BH02;
- (d) Install a low permeability landfill cap over the entire waste body, minimum 1m, with 1mm thick low permeability geomembrane having a hydraulic conductivity of less than or equal to $1 \times 10^{-9} \text{m/s}$;
- (e) Install a gas management system in the waste body, within six months of the date of grant of this Certificate of Authorisation.

The gas management system shall include the following elements:

- (i) Gas vent pipes with fans or cowls, as appropriate;
- (ii) The gas vent pipes shall not be perforated above the ground level;
and
- (iii) Spacing between the gas vent pipes shall be in accordance with EPA Landfill Manuals – Landfill Site Design.

On agreement by the Agency, the gas vent pipes and associated infrastructure may be removed or altered in accordance with any recommendations arising from the trial in accordance with Condition 3.1(i).

- (f) Install three additional combined landfill gas/groundwater monitoring boreholes outside the waste body (boreholes BH03, BH04 and BH05);
- (g) Install one additional groundwater monitoring borehole (borehole BH06) downgradient of the waste body;
- (h) Install two additional leachate monitoring boreholes within the waste body (monitoring boreholes LW01 and LW02);
- (i) The local authority shall, within twelve months of the date of grant of this Certificate of Authorisation, following gas monitoring, as required under Condition 3.9(d), seek agreement of the Agency regarding whether to carry out a gas pumping trial for the purpose of determining the quantity and quality of landfill gas;
- (j) The local authority shall implement any recommendations arising from the gas pumping trial, subject to the agreement by the Agency; and
- (k) Reseed grass within the site.

3.2 Site Notice Board

- (a) The local authority shall, within one month of the date of grant of this Certificate of Authorisation and for the duration of the remediation works, provide a Site Notice Board on the closed landfill site so that it is legible to persons outside the main entrance to the closed landfill site. The minimum dimensions of the board shall be 1200 mm by 750 mm.
- (b) The board shall clearly show:
 - (i) The name of the Certificate of Authorisation holder;
 - (ii) The name of the closed landfill site;
 - (iii) The Certificate of Authorisation reference number;
 - (iv) The contact telephone in relation to the closed landfill site; and
 - (v) Where information relating to the closed landfill site can be obtained.

3.3 The local authority shall manage the closed landfill to ensure that discharges and emissions from the closed landfill do not cause environmental pollution or deterioration in the status of the receiving surface water body or groundwater body.

3.4 The integrity of the landfill cap shall be maintained at all times and shall not be compromised by the installation of any future developments.

3.5 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 30 months of the date of grant of this Certificate of Authorisation.

3.6 The local authority shall assess the results of all monitoring carried out to confirm whether the closed landfill continues to achieve the objectives set for it in the risk assessment or this Certificate of Authorisation.

3.7 The local authority shall submit to the Agency, by the 31st March of each year, an annual update covering the previous calendar year. This update, which shall be to the satisfaction of the Agency, shall include as a minimum the information specified in Condition 3.9 of this Certificate of Authorisation.

3.8 The local authority shall, within 24 months of the date of grant of this Certificate of Authorisation, submit a drawing showing the following elements interpolated:

- (i) Extent of the waste body and the area capped, as required under Condition 3.1(d);
- (ii) The locations of the gas vents, as required under Condition 3.1(e) and any gas infrastructure as may be required following the gas pumping trial; and
- (iii) All monitoring points for landfill gas, leachate, groundwater and surface water.

3.9 The local authority shall annually, or as otherwise prescribed by the Agency, conduct and record:

- (a) A visual inspection of the landfill to ensure that the condition of the site has not deteriorated;

- (b) Monitoring for leachate (sample, analyse, characterise, and measure the level of leachate) on a quarterly basis in the existing leachate monitoring borehole BH01 and the two additional monitoring boreholes required under Condition 3.1(h). The monitoring shall, as a minimum, include the following parameters: Biochemical Oxygen Demand (BOD) (mg O₂/l), Total Ammonia (mg N/l), Ammonium (µg/l N), Molybdate Reactive Phosphorus (MRP) (µg P/l), Electrical Conductivity (µS/cm), Potassium (µg/l), Iron (µg/l), Manganese (µg/l), Zinc (µg/l) and other relevant Heavy Metals.
- (c) A screening of leachate for trace organic substances in accordance with the EPA Landfill Manuals – Landfill Monitoring and any subsequent amendments.
- (d) Monitoring, on a quarterly basis, to detect the presence and concentration of landfill gas in:
- (i) The existing monitoring boreholes BH01 & BH02; and
 - (ii) The three monitoring boreholes required under Condition 3.1(f).

The local authority shall have regard to the Agency's Air Guidance (AG) Notes and Landfill Manual – Landfill Monitoring, 2nd Edition, 2003, and any subsequent amendments, when carrying out gas monitoring;

- (e) Monitoring (sample, analyse and characterise) on a quarterly basis at the following locations:
- (i) The adjacent drain upstream of the closed landfill (monitoring locations SW1, SW2 and SW3);
 - (ii) The Kilbeg-Malone River upstream of the closed landfill (monitoring location SW4);
 - (iii) The Kilbeg-Malone River downstream of the closed landfill (monitoring locations SW5 and SW6); and
 - (iv) The Listduff River south-east of the closed landfill (monitoring location SW7).

The monitoring shall, as a minimum, include Biochemical Oxygen Demand (BOD) (mg O₂/l), Total Ammonia (mg N/l), Molybdate Reactive Phosphorus (MRP) (mg P/l) and other relevant parameters listed in European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended.

- (f) Monitoring (sample, analyse and characterise) on a quarterly basis of groundwater from the groundwater monitoring borehole BH02, the three additional combined boreholes required under Condition 3.1(f) and one additional borehole required under Condition 3.1(g). The monitoring shall, as a minimum, include the following parameters: Ammonium (µg/l N), Molybdate Reactive Phosphorus (MRP) (µg P/l), Electrical Conductivity (µS/cm), Potassium (µg/l), Iron (µg/l), Manganese (µg/l), Zinc (µg/l) and other relevant Heavy Metals and other relevant parameters listed in European Communities Environmental Objectives (Groundwater) Regulations 2010, as amended, and EPA Interim Guideline Values (IGV).

- (g) The sensitivity of the monitoring methods utilised for monitoring under Condition 3.9 shall have an appropriate limit of detection to allow for comparison of pollutant concentrations against the relevant trigger levels and/or standard reference values as set out in Condition 3.9(h).
 - (h) The assessment and reporting of monitoring results against trigger levels and/or standard reference values for relevant pollutants including environmental quality standards in the European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended, European Communities Environmental Objectives (Groundwater) Regulations 2010, as amended, EPA Interim Guideline Values (IGV) and the Agency Landfill Manuals - Landfill Monitoring, 2nd Edition, 2003, and any subsequent revisions.
- 3.10 The location, frequency, methods and scope of surveys, monitoring, visual inspections, sampling and analyses, as set out in this Certificate of Authorisation, may be amended with the agreement of the Agency following evaluation of test results.
- 3.11 Soil and stone
- 3.11.1 Soil and stone imported for use in remedial, corrective or other engineering works at the closed landfill shall be greenfield soil and stone or soil and stone of equivalent nature and character in terms of chemical and physical contamination.
 - 3.11.2 Documented acceptance, storage/stockpiling and utilisation procedures shall be operational in advance of receipt of such materials. Records shall be maintained showing the site of origin of the soil and stone and its nature.
- 3.12 No emissions, including odours and noise, from works carried on at the site shall result in an impairment of, or an interference with amenities or the environment beyond the facility boundary or any other legitimate uses of the environment beyond the facility boundary.
- 3.13 The local authority shall ensure, at all times after the grant of this Certificate of Authorisation, that all infrastructure cap and all equipment required under this Certificate of Authorisation has been and is:
- (i) installed;
 - (ii) commissioned;
 - (iii) present on site, and
 - (iv) maintained in full working order.
- 3.14 The local authority shall ensure that the closed landfill does not result in an impairment of, or an interference with, amenities or the environment at the facility or beyond the facility boundary (including those arising from emissions (including odours, noise, dust, litter and mud), vermin and birds).
- 3.15 Wells and boreholes
- 3.15.1 Groundwater monitoring wells shall be constructed having regard to the guidance given in the Agency's landfill manual "Landfill Monitoring".

- 3.15.2 All wellheads shall be adequately protected to prevent contamination or physical damage.
- 3.15.3 All wells and boreholes shall be adequately sealed to prevent surface contamination and, as may be appropriate, decommissioned according to the UK Environment Agency guidelines “Decommissioning Redundant Boreholes and Wells”, unless otherwise agreed by the Agency.
- 3.16 The local authority shall clearly label and provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the risk assessment or this Certificate of Authorisation. The requirement with regard to off-site points is subject to the prior agreement of the landowners concerned.
- 3.17 Incidents
- In the event of an incident the local authority shall immediately:
- (a) If necessary, contact the emergency services;
 - (b) Carry out an investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
 - (c) Isolate the source of any such emission;
 - (d) Evaluate the environmental pollution, if any, caused by the incident;
 - (e) Identify and execute measures to minimise the emissions/malfunction and the effects thereof;
 - (f) Identify the date, time and place of the incident; and
 - (g) Notify the Agency (in accordance with Condition 2.2) and all other relevant authorities including, where relevant, the Water Services Authority and Inland Fisheries Ireland.
- 3.18 Invasive Species Prevention and Eradication Plan
- The Certificate of Authorisation holder shall establish, maintain and implement an invasive species prevention and eradication plan, to cover at least, Japanese Knotweed, Giant Knotweed, Bohemian Knotweed and any other relevant invasive species. The plan shall as a minimum identify specific actions for:
- (a) The prevention, to the extent possible, of acceptance of invasive species in loads of soil and stone or of topsoil arriving at the facility, actions to include requesting of information on the presence and management of invasive species at source sites;
 - (b) Quarterly surveys of the facility for the detection of the growth of invasive species during remediation and during the implementation of the invasive species prevention and eradication plan, moving to annual surveys following validation in accordance with Condition 3.18(f);
 - (c) The method for plant detection and identification;
 - (d) The remedial actions for eradication of invasive species growing at the facility;
 - (e) Staff training on plant identification and eradication; and

- (f) Validation to confirm the absence of invasive species at the restored facility.

The Certificate of Authorisation holder shall maintain evidence of having obtained the advice and implemented the recommendations of an independent and appropriately qualified consultant, in the establishment of the Plan and any amendments to it that concern the action items listed above.

3.19 Communications Programme

3.19.1 The Certificate of Authorisation holder shall establish, maintain and implement a Communications Programme to ensure that members of the public can obtain information from the local authority concerning the closed landfill.

3.19.2 The Communications Programme shall inform members of the public what they can and should do to protect their property and health.

3.19.3 The local authority shall, as part of the Communications Programme, publish landfill gas, landfill leachate, groundwater and surface water monitoring data biannually in a manner accessible by the public.

<p>Reason: <i>To make provision for the proper closure of the activity ensuring protection of the environment.</i></p>

Part III: Schedules

Schedule 1: Reasons for the Decision

In granting this Certificate of Authorisation, the Agency determines that the risk assessment submitted by the local authority as part of the application for a Certificate of Authorisation is adequate. To ensure appropriate protection for human health and the environment and to ensure conformity with the provisions of Council Directive 2008/98/EC and Council Directive 2006/118/EC, the conditions set out in Part II of this Certificate of Authorisation are specified as further necessary measures in addition to those identified by the risk assessment.

The Agency also considers that the activity will not adversely affect the integrity of any European Site and has decided to impose conditions for the purposes of ensuring it does not do so. It has determined that the activity, if managed, operated and controlled in accordance with the Certificate of Authorisation, will not have any adverse effect on the integrity of any of those sites.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activity, individually or in combination with other plans or projects is likely to have a significant effect on any European Site. In this context, particular attention was paid to the European Sites at Lough Carra/Mask Complex SAC (site code: 001774), Lough Mask SPA (site code: 004062), Lough Carra SPA (site code: 004051), Carrowkeel Turlough SAC (site code: 000475), River Moy SAC (site code: 002298), Lough Corrib SAC (site code: 000297), Lough Corrib SPA (site code: 0004042), Kilglassan/Caheravoostia Turlough Complex SAC (site code: 000504), Balla Turlough SAC (site code: 000463), Greaghans Turlough SAC (site code: 000503), Towerhill House SAC (site code: 002179), Ardkill Turlough SAC (site code: 000461) and Ballinafad SAC (site code: 002081).

The activity is not directly connected with or necessary to the management of any European Site and the Agency considered, for the reasons set out below, that it cannot be excluded, on the basis of objective information, that the activity, individually or in combination with other plans or projects, will have a significant effect on any European Site and accordingly determined that an Appropriate Assessment of the activity was required.

The reason for this determination is as follows:

- There is a hydrological connection between the closed landfill and Carra/Mask Complex SAC (site code: 001774) and Lough Mask SPA (site code: 004062) and, despite the fact that these European Sites are located approximately 45km downstream of the site, it cannot be excluded, based on the submitted monitoring results for surface water and groundwater, that the closed landfill will have no effect on these European Sites.
- There is no hydrological connection between the closed landfill and the rest of the European Sites.

The Agency has completed the Appropriate Assessment of potential impacts on these sites and has made certain, based on best scientific knowledge in the field and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 as amended, pursuant to Article 6(3) of the Habitats Directive, that the activity, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site, in particular Lough Carra/Mask Complex SAC (site code: 001774), Lough Mask SPA (site code: 004062), Lough Carra SPA (site code: 004051), Carrowkeel Turlough SAC (site code: 000475), River Moy SAC (site code: 002298), Lough Corrib SAC (site code: 000297), Lough Corrib SPA (site code: 0004042), Kilglassan/Caheravoostia Turlough Complex SAC (site code: 000504), Balla Turlough SAC (site code: 000463), Greaghans Turlough SAC (site code: 000503), Towerhill House SAC (site code: 002179), Ardkill Turlough SAC (site code: 000461) and Ballinafad SAC (site code: 002081), having regard to their conservation objectives and will not affect the preservation of these sites at favourable conservation status if carried out in accordance with this Certificate of Authorisation and the conditions attached hereto for the following reasons:

- specifically, the remedial works will be undertaken to minimise the potential for water pollution in the Lough Carra/Mask Complex SAC (site code: 001774) and Lough Mask SPA (site code: 004062) and will ensure that there will be no significant impact on these European Sites;
- the project alone, which consists of the remediation of the closed landfill, or in combination with other projects, will not adversely affect the integrity and conservation status of any of the qualifying interests of the Lough Carra/Mask Complex SAC (site code: 001774) and Lough Mask SPA (site code: 004062); and
- there is no hydrological connection between the closed landfill and Lough Carra SPA (site code: 004051), Carrowkeel Turlough SAC (site code: 000475), River Moy SAC (site code: 002298), Lough Corrib SAC (site code: 000297), Lough Corrib SPA (site code: 0004042), Kilglassan/Caheravoostia Turlough Complex SAC (site code: 000504), Balla Turlough SAC (site code: 000463), Greaghans Turlough SAC (site code: 000503), Towerhill House SAC (site code: 002179), Ardkill Turlough SAC (site code: 000461) and Ballinafad SAC (site code: 002081).

The Agency is satisfied that no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of those European Sites: Lough Carra/Mask Complex SAC (site code: 001774), Lough Mask SPA (site code: 004062), Lough Carra SPA (site code: 004051), Carrowkeel Turlough SAC (site code: 000475), River Moy SAC (site code: 002298), Lough Corrib SAC (site code: 000297), Lough Corrib SPA (site code: 0004042), Kilglassan/Caheravoostia Turlough Complex SAC (site code: 000504), Balla Turlough SAC (site code: 000463), Greaghans Turlough SAC (site code: 000503), Towerhill House SAC (site code: 002179), Ardkill Turlough SAC (site code: 000461) and Ballinafad SAC (site code: 002081).

No representation having been received to the proposed Certificate of Authorisation, the Certificate of Authorisation is granted in accordance with the terms of the proposed Certificate of Authorisation and the reasons therefor.

Part IV: SIGNATURE

Sealed by the seal of the Agency on this the 19th day of August 2021.

PRESENT when the seal of the Agency
was affixed hereto:



Tara Gillen, Authorised Person





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