An Bord Pleanála

Inspector's Report ABP313681-22

Development	Claremorris Closed Landfill Remediation Project.
Location	Clare, Claremorris, County Mayo.
Planning Authority	Mayo County Council.
Planning Authority Reg. Ref.	N/A.
Applicant	Mayo County Council.
Type of Application	Application under the provisions of Section 177AE.
Planning Authority Decision	N/A.
Observers	(i) Geological Survey Ireland, (ii) Transport Infrastructure Ireland.
Date of Site Inspection	28th September, 2022.
Inspector	Paul Caprani.

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1.0 Introduction

ABP313681-22 concerns an application for approval to An Bord Pleanála from Mayo County Council under the provisions of Section 177AE of the Planning and Development Act for the completion of remediation works at a historic landfill outside Claremorris, County Mayo. The application was accompanied by a number of reports including a Natura Impact Statement. The EPA determined that an Appropriate Assessment was required as per the Closed Landfill Certificate of Authorisation (CoA Ref: H0319-01)[1] issued in August 2021. Two observations were submitted from the Geological Survey of Ireland and from Transport Infrastructure Ireland.

2.0 Site Location and Description

2.1. The former landfill site at Claremorris, County Mayo is located contiguous to the eastern boundary of the N17 National Primary Route, approximately 1 kilometre to the east of Claremorris Town Centre in south-eastern Mayo.

2.2. The Dublin/Westport Railway Line runs along the northern boundary of the site while the eastern and southern boundary of the site are not demarcated on the ground. The N17 runs along the western boundary of the site. There are no dwellings adjacent to or contiguous to the site. A small farm and series of farm buildings are located approximately 600 metres to the east of the site. A local road which runs south-eastwards from the N17 towards Lisduff (L5572) is located approximately half a kilometre to the south of the site. There are a number of dwellinghouses along this access road.

2.3. The site itself comprises of a roughly rectangular plot 5.6 hectares in size. The site slopes downwards from the N17 in the form of an embankment along the western side of the site. It is currently overgrown and is surrounded by agricultural lands including cutaway bogland and some commercial forestry primarily to the south of the site. According to information submitted on file, the historic landfill capping area is 3.8 hectares in size and it is located centrally within the larger application site. The

[1] See Schedule 1 of Part III of EPA decision.

nearest residential development is located approximately 300 metres to the west of the site on the southern outskirts of Claremorris Town on the opposite side of the N17 National Primary Route.

2.4. According to information submitted, the site operated as a landfill site accepting municipal waste for a 14 year period between 1982 and March 1996. While the site was capped with clay no engineered remediation works have been completed on the site. The nature of the waste disposed at the site comprises of municipal and commercial waste to depths of 6.5 metres below ground level. Calculations indicate that the estimated waste volumes deposited on site range between 168,000 and 298,000 cubic metres. Initially calculations suggested that c.168,000 tonnes of waste were deposited on site, however this was later revised upwards to the latter figure.

2.5. The site generally falls from south to north towards the railway line and from west to east towards the cutover peatland at the eastern boundary of the site. There are a number of small streams to the east of the site travelling in a southern direction. The site is drained by a watercourse along the western and northern boundary of the site which ultimately discharges to the Kilbeg-Malone watercourse. The Kilbeg-Malone stream links up with the Lisduff stream and onwards towards the River Robe which ultimately discharges into Lough Mask c.44- 45 km (hydrological distance).

2.6. The site currently has a shallow soil cap where grass and shrub cover as well as more mature vegetation has been established.

2.7. A number of invasive species have been identified on site. These include Japanese Knotweed, Winter Heliotrope and Cherry Laurel. An invasive species management treatment plan is set out in a report submitted with the application.

2.8. Information submitted indicates that the majority of the application site is under the ownership of Mayo County Council. A portion of land (c.0.74 hectares in size) situated in the southern end of the application site is not under the ownership of the applicant. The title to this land is unregistered. Mayo County Council propose acquiring this land through the completion of a compulsory purchase order.

3.0 Development

3.1. Proposed Development

3.1.1. Mayo County Council are seeking approval from An Bord Pleanála under the current application for the completion and remediation of the closed landfill at Claremorris. The development will consist of the following:

- The construction of a temporary site compound and office area which will accommodate a material storage area, site offices and parking. The site offices will be in the form of portacabins a site canteen/welfare facility to be located at the north-eastern side of the landfill outside the capped area. A new access road will also be provided to the construction compound. The access road will be resurfaced with Clause 804. Any wastewater from the proposed temporary compound will be stored at portaloos for disposal and a licensed wastewater treatment plant off-site.
- It is also proposed to carry out site clearance works which will include clearing overgrown vegetation in the central area of the site. Areas of dense vegetation will be cleared and areas of existing fencing will be removed during the works. The site clearance plan will also involve an invasive species management plant. This will involve proposed locations for Japanese Knotweed burial.
- The regrading and reprofiling of the existing landfill area will also take place in order to facilitate surface and subsurface drainage and the safe execution of the site's remedial works together with safe access for the maintenance of the cap.
- An engineered landfill cap barrier will cover an area of approximately 3.8 hectares. The cap will involve the importation of granular "dust" material ranging in size from 50 millimetres to 100 millimetres in thickness and will provide the formation of the engineered cap. This aims at protecting the waste body from rainfall infiltration which would exacerbate the production of leachate. The engineered landfill capping system will also minimise the

potential for uncontrolled landfill gas migration to the atmosphere or adjacent lands. The cap will facilitate the controlled discharge of surface water run-off and subsurface drainage flows into the receiving waters. The cap shall comprise of the following:

  - Vertical wells shall be installed within the waste body prior to any reprofiling works being undertaken. Wells will be connected to overliner gas connection pipework to the gas management compound.
  - It is also proposed to put in an LLDPE barrier to isolate the waste body from rainfall an to prevent uncontrolled fugitive gas emissions from the waste body. This will comprise of a 1 millimetre thick plastic sheet that is impermeable to both water and gas and will prevent gas escaping into the overlying soils. The LLDPE sheets will be welded at joints around the perimeter of the site. An overliner HDPE solid pipe network will convey gas from the vertical wells to the gas management compound. This compound will be located in the central part of the capped area near the northern boundary at the highest elevation.
  - Under and overliner gas pipe systems will terminate at the gas management compound. Subject to landfill gas pumping trials, landfill gas will either be vented to the atmosphere via vent stacks or oxidised using a biological filter recessed into the cap to facilitate passive venting to the atmosphere. The biological filter and vent will be located in the landfill gas compound. The compound will be c.10 metres wide and 20 metres long and contained with stockproof fencing.
  - Alternatively the vent stack will comprise of a vertical pipe 300 millimetres in diameter with a cowl and a carbon filter and located at a height not less than 3 metres above the ground level.

- Subsurface drainage flows from the drainage geocomposite liners will be transferred via a pipework system to surface water drainage at the toe of the cap and ultimately into the downstream watercourse. The arrangements are indicated in Drawing P21-287-0300-002. Suitably sourced subsoils will be imported to the site and placed on top of the surface drainage geocomposite. This subsoil layer will be generally 850 millimetres deep. The purpose of the

layer is to protect the synthetic geocomposite materials and facilitate appropriate landscaping. On top of the subsoil layer an additional topsoil layer will be placed approximately 150 millimetres in depth. Details of the typical capping is set out on Drawing P21-287-0100-0009.

- Storage tanks will be provided for the safe storage of any leachate arisings during the construction works. Leachate arisings during construction works will be disposed of at a licenced wastewater treatment plant. Suspended solids will be prevented from entering watercourses by installing silt fences around the site perimeter and around stockpiles.
- Odour management is not expected to be an issue as the waste is older than 25 years. In the event that waste is exposed, it will be covered up at the end of each working day.
- Monitoring wells will be installed for groundwater and landfill gas monitoring. Two groundwater monitoring wells which exist will be retained and incorporated into the cap to allow for future environmental monitoring. The existing and proposed monitoring wells are indicated on Drawing P21-287-0100-006. Monitoring staff will be required to access the installed infrastructure and take samples and monitoring gas quality during the aftercare period post construction.

4.0 Application for Approval

4.1. Documentation Submitted with the Planning Application

4.1.1. The planning application was lodged with An Bord Pleanála on 27th May, 2022. The plans and particulars submitted with the application was accompanied by the following documentation:

- A cover letter for the Section 177AE Application to An Bord Pleanála.
- A Natura Impact Statement.
- A Planning and Environmental Report for the Proposed Development.
- An EIA Screening Report for the Proposed Development.
- A Construction and Environmental Management Plan.

- An Invasive Species Management Plan.
- A copy of the Newspaper Notice.
- Planning Drawing.

4.1.2. The following prescribed bodies were notified of the proposed development.

- CIE.
- TII.
- The National Transport Authority.
- The Environmental Protection Agency.
- The Railway Safety Commission.
- The Minister of the Environment, Climate and Communications.
- The Heritage Council.
- An Taisce.
- Irish Rail.

4.1.3. It was also indicated that a simultaneous application for the confirmation of the Claremorris Closed Landfill Remediation Project Compulsory Purchase Order was also submitted to the Board.

Planning and Environmental Report

4.1.4. The planning and environmental report sets out details of the background to the proposed development and provides details of the accompanying documents accompanying drawings submitted with the application. It also sets out details of the description of the site and the remediation works to be undertaken. Details of the relevant planning history and planning policy context is also set out in the report. It concludes that the proposed development aligns with and supports planning policy as set out in the Mayo County Development Plan and that the proposed development adheres to the principles of the proper planning and sustainable development of the area and on this basis should be granted planning permission.

Environmental Impact Screening Assessment Report

4.1.5. This sets out in detail the project description and assesses the development proposal in the context of the classes of development set out in Schedule 5, Part 1. It concludes that an EIAR is not mandatory.

4.1.6. Section 3.2 of the development undertakes a subthreshold EIA screening in accordance with the criteria set out in Schedule 7 and Annex 3 of the EIA Directive. In accordance with the EIA screening checklist set out in Table 3.1 of the Report, it concludes that no likely significant impacts are anticipated. It is noted that the proposed works will involve enhanced remediation works which will ultimately have a positive impact on the existing environment once the works have been completed. Any slight impacts of a negative nature relating to leachate, sedimentation, dust, noise and traffic are deemed to be negligible and not significant. It is concluded therefore that the proposed development does not individually or cumulatively fall into a class of development set out in Schedule 5 in either Part 1 or Part 2 of the Planning and Development Regulations. Any adverse impacts that would arise during the remediation works to be undertaken are deemed to be negligible and will be controlled through a comprehensive set of mitigation measures which are set out in the Construction and Environmental Management Plan and the Construction Traffic Management Plan. Therefore, the project's limited impact on the receiving environment would not result in any sub-threshold EIA being required when assessed against the criteria set out in Schedule 7 and Schedule 7A of the Planning and Development Regulations 2001.

Construction and Environmental Management Plan

4.1.7. Section 2 of this Plan sets out details of the existing environment and gives an overview of the construction works to be undertaken. Section 4 sets out details of the actual management plan providing details of the applicant's obligations under the NIS and any planning permission obligations specified by the Board. The Plan sets out details of the environment management systems to be put in place including training, awareness, competency, a register of responsibilities and a series of objectives and targets. Details of an ecological management plan is also set out with a suite of mitigation measures in respect of invasive species, noise, vibration, dust and air quality, surface water management, soil management, waste management

and traffic management. Section 5 of the report sets out details of a safety and health management plan. Finally, Section 6 of the Plan sets out an emergency response plan in the case of an emergency rising on site.

Invasive Species Management Plan

4.1.8. The plan notes that 3 invasive species types have been encountered on site.

- Japanese Knotweed.
- Cherry Laurel.
- Winter Heliotrope.

4.1.9. Section 5 of the Plan sets out recommended measures and these include containment, excavation, physical control and cut to stump, digout stump and bury. It is stated that the Plan to be undertaken will prevent the spread of identified non-native invasive species within and from the site and reduce the potential risk for the introduction and spread of new invasive species within the site during and post remediation.

Natura Impact Statement

4.1.10. A Natura Impact Statement was submitted with the planning application. It is noted that the EPA screening determination identified that potential for significant effects on both the Lough Cara/Mask Complex SAC (Site Code: 001774) and the Lough Mask SPA (Site Code: 004062) cannot be excluded. The NIS goes on to detail the works to be undertaken and assesses the relationship between the project and the European sites in question. It notes that the subject site has a hydrological connection with both the Cara/Mask Complex SAC and the Lough Mask SPA. Details of both surface water and groundwater quality results are presented in the NIS. The project was also assessed in terms of potential cumulative effects with other plans and projects including granting planning applications in the vicinity of the site over the previous 5 years. The proposed remediation works are assessed in accordance with the various qualifying interests associated with the SAC and a series of mitigation measures are set out to address any potential adverse impacts on water quality downstream. It is concluded that the proposed development with the implementation of appropriate mitigation measures will not adversely affect the integrity of any European sites concerned.

4.2. **Observations Submitted**

Two observations were submitted in respect of the application for approval, these are summarised below.

4.2.1. Submission from the Geological Survey of Ireland

The Geological Survey of Ireland would encourage the use of and reference to the various data sets available on the Geological Survey's website when assessing the proposed development at the Claremorris historic landfill. Reference is made to the National Inventory of Geoheritage Sites which was adopted under the National Heritage Plan and can be viewed under the Geological Heritage tab on the online map viewer.

It is also noted that the Groundwater and Geothermal Unit provides advice, data and maps relating to groundwater distribution, quality and use which is particularly important in securing drinking water supplies and healthy ecosystems. Proposed developments need to consider any potential impact on specific groundwater extractions and on groundwater resources in the area. It is noted that a Regionally Important Aquifer underlies the landfill remediation project. The Board are recommended to use the groundwater viewer to identify areas of high to extreme vulnerability in the vicinity of the site. The Geological Survey has also completed groundwater protection schemes which should also be consulted to assist in the decision-making relation to the application. There is also an extensive database in relation to boreholes to provide further details in any baseline geological assessment of the proposed development. The geochemistry of soils, surface water and sediments can also be accessed at this data base.

Should the development go ahead, the Geological Survey of Ireland would very much appreciate a copy of reports detailing any site investigations to be carried out and this data would be added to the National Database of Site Investigation Boreholes.

Submission from Transport Infrastructure Ireland

4.2.2. The authority notes that the subject site has direct access onto the N17 National Primary Road at a location where the 100 kmph speed limit applies. Official policy in relation to the development at such locations applies in accordance with the Section 28 Ministerial Guidelines "*Spatial Planning and National Road Guidelines for*

Planning Authorities". The construction period for the proposed development has been estimated to be in the region of 6 to 8 months and the application indicates that the contractor will be required to implement a traffic management plan to manage the safe access and egress of construction vehicles from the site. TII has no specific observations to make and will rely on An Bord Pleanála and Mayo County Council to abide by official policy in respect of development on/affecting national roads as outlined in the Guidelines referred to. Any road safety measures required at the junction of the access to the landfill remediation site and the N17 National Primary Route should be identified and addressed by the Council in the interest of road user safety. Any damage caused to the pavement of the existing national road arising from the proposed development including any temporary works to facilitate the development shall be rectified in accordance with TII pavement standards and details shall be agreed with the Road Authority prior to the commencement of any development on site. Any costs arising from the repair and maintenance of the national road network will be a matter for Council and will not be the responsibility of TII.

5.0 **Planning History**

5.1. The planning history is referred to in Section 3.1 of the Planning and Environmental Report. It is stated that the existing development at the Claremorris Historic Landfill was not subject to any planning process or application to grant planning permission.

5.2. A Part 8 Planning Consent for the development of a 5 megawatt solar PV farm which covers a significant portion of the application site as well as lands to the east of the application site was prepared and made by the Planning Authority. The proposed development was subject to a Part 8 planning procedure which was granted approval at the Claremorris/Swinford Municipal District meeting held at Mayo County Council Offices on 4th March, 2020. This development has not commenced but can be regarded as committed development on the application site. There are no other planning applications or extant permissions pertaining to the subject site.

6.0 Planning Policy Context

6.1. Introduction

6.1.1. The Planning and Environmental Report makes reference to the Mayo County Development Plan 2014 – 2020. The Board will note that the new Mayo County Development Plan 2021 – 2027 was adopted on 10th August, 2022.

6.2. Mayo County Development Plan 2021-2027

6.2.1. A strategic aim of the recently adopted plan is to protect and enhance the country's natural heritage and biodiversity and ensure that networks of green and blue infrastructures are identified, created, protected and enhanced during the life of the Plan.

6.2.2. Chapter 7 of the Plan specifically relates to infrastructure. Policy INP7 seeks to support the implementation of the Connaught/Ulster Regional Waste Management Plan 2015 – 2021 as amended or replacement plan with particular emphasis on reuse, recycling, disposal of residual waste in the most appropriate manner where it can be demonstrated that the development will not have significant adverse effect on the environment, integrity of Natura 2000 sites, traffic safety, residential or visual amenity.

6.2.3. There are numerous waste management objectives emphasising the need to reuse, recycle and recover waste in a sustainable manner contained in the plan.

6.2.4. Chapter 10 relates to the natural environment. NEP1 seeks to support the protection, conservation and enhancement of the natural environment and biodiversity of County Mayo including the protection of the integrity of European sites, that form part of the Natura 2000 site network, the protection of Natural Heritage Areas, proposed Natural Heritage Areas, Ramsar sites, nature reserves and wildfowl sanctuaries and other designated sites including any future designation. Policy NEO4 seeks to protect and enhance biodiversity and ecological connectivity in County Mayo including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, stone walls, geological and geomorphological systems, other landscape features and associated wildlife where these form part of the ecological network.

6.2.5. NEO6 seeks to protect surface waters, aquatic and wetland habitats and freshwater and water dependent species through the implementation of all appropriate and relevant directives and transpose legislation and seek to protect and conserve the quality, character and features of inland waterways by controlling developments close to navigable and non-navigable waterways.

6.2.6. NEP8 seeks to support measures for the prevention and eradication of invasive species as appropriate to the County. NEO16 seeks to ensure that where the presence of invasive species are identified at the site of any proposed development or where the proposed activity has an elevated risk of resulting in the presence of these species details as to how these species will be appropriately managed and controlled will be required.

6.3. The Connaught/Ulster Regional Waste Management Plan 2015 – 2021

6.3.1. Policy G5 seeks to ensure that the implementation of the Regional Waste Management Plan does not prevent achievement of the conservation objective of sites afforded protection under the EU Habitats and Birds Directive.

6.3.2. Strategic Objective G of the Waste Management Plan seeks to apply relevant environmental and planning legislation to waste activities in order to protect the environment in particular European sites and human health against adverse impacts of waste generated.

6.3.3. Policy G24 seeks to remediate high risk sites in accordance with the Plan agreed in the EPA Authorisation and in accordance with the requirements of the EU Habitats Directive and Water Framework Directive (subject to Department funding being available).

6.4. Draft River Basin Management Plan for Ireland 2022 – 2027

6.4.1. Section 5 of this report sets out details of a programme of measures of how we protect and restore Ireland’s water resources. In terms of ecological status Lough Mask has been awarded a status of “good ecological status” from 2013 to 2018. It is also identified as a water body as being “at risk”. In terms of identified pressures Section 5.4.8 identify historically polluted sites, invasive species and waste as being potential pressures on the water environment.

7.0 Planning Assessment

7.1. Introduction

7.1.1. Section 177AE of the Act requires that where an appropriate assessment is required in respect of a development which is being carried out by or on behalf of a local authority that is the Planning Authority, the local authority shall prepare an NIS and apply to the Board for approval and the provisions of Part XAB shall apply.

7.1.2. As per the provisions of Section 177AE(6) the Board in making a decision in respect of the proposed development under this section shall consider:

- The contents and conclusions of any NIS submitted.
- Any submissions and observations made in accordance with sub-section 4 or subsection 5 of 177AE.
- The likely effects on the environment of the proposed development.
- The likely consequences for the proper planning and sustainable development of the area.
- The likely significant effects of the proposed development upon a European site.

7.1.3. The proposed application is made to ensure compliance with conditions attached to a certificate granted by the EPA for a closed landfill Certificate of Authorisation (COA Ref. HO319-01). It is my considered opinion therefore that the proposed development would not fall within the scope of the provisions of Section177AE(10)(a) whereby an application under the provisions of Section 177AE specifically relates to development which comprises or is for the purposes of an activity for which an integrated pollution licence or waste licence is required would not apply. The Board therefore where it decides to approve the proposed development can in this instance attach conditions, should it deem it appropriate to control emissions from the development to be undertaken. I would ask the Board to note that conditions regarding the monitoring of emissions from the landfill and the landfill remediation works are contained in the Certificate of Authorisation issued by the EPA.

7.1.4. Having regard to the legislation as worded, I consider the current application before the Board can most appropriately be assessed under the following headings.

- The likely effects on the environment arising from the proposed development.
- The likely consequences for the proper planning and sustainable development of the area.
- The likely significant effects of the proposed development on a European Site/ Natura 2000 Sites in the vicinity
- EIAR Screening Determination.

7.2. The Likely Effects of the Proposed Development on the Environment

7.2.1. Information submitted with the application in conjunction with details obtained from documents submitted to the EPA for the closed landfill certificate of authorisation (CA Ref. H0319-01) suggests that the historic landfill was determined on foot of an initial risk assessment to have a moderate risk of leachate migration to the underlying groundwater body via groundwater pathways. Analysis of waste samples from the trail pits excavated, when assessed against inert waste acceptance criteria indicated that much of the waste material deposited on site was typically inert. Landfill gas monitoring from the perimeter well (BH02) at the site indicated that gas concentrations detected are below the threshold levels set out in the EPA Code of Practice. Higher gas concentrations at BH01 in 2012 yielded higher methane concentrations. The principal risk therefore identified from the landfill related to contamination of the underlying aquifer through the migration of leachate.

7.2.2. Currently the waste body is covered by a layer of topsoil between 0.3 metres and 0.9 metres in thickness. The table below taken from the EPA inspector's report in the case of the application for the certificate of authorisation indicates the monitoring results and the level of contamination of groundwater at the edge of the groundwater body (BH02) when compared with the concentration of contaminants downgradient within the water body indicates that the landfill is undoubtedly contributing to some extent to groundwater contamination.

Parameter	**EQS Limit**	**BH02 Upgradient**	**BH01 Downgradient**
Conductivity at 20°C [µS/cm]	1,875	903	**3,040**
Copper [µg/l]	1,500	3	91

Sodium [mg/l]	150	15	107
Chloride [mg/l]	187.5	28.9	135
Iron [µg/l]	200	**2,897**	**73,142**
Potassium [mg/l]	5	**11**	**130**
Magnesium [mg/l]	50	12	**66**
Ammonia as N [mg/l]	0.175	**3.2**	**161**
BOD [mg/l]	2.2	-	**23**
Arsenic [µg/l]	7.5	<.0.6	**13**
Manganese [µg/l]	50	**385**	**645**
Zine [µg/l]	75	**121**	**517**
Chromium [µg/l]	37.5	<.0.6	35
Boron [µg/l]	750	34	537
Cadmium [µg/l]	3.75	<.0.6	1
Calcium[mg/l]	200	177	**278**
Nickel [µg/l]	15	2	**36**
Lead [µg/l]	7.5	3	**75**
MRP[mg/l]	0.035	**2.09**	**2.01**
Mercury [µg/l]	0.75	0.01	<0.20

- Figures in Bold indicate an exceedance of the EQS Standards

7.2.3. However, it is also apparent that the exceedances of the EQs at the upgradient locations of the landfill indicates water pollution from other sources other than the landfill. This is particularly the case in respect of iron, manganese, zinc and phosphorous (MRP).

7.2.4. In terms of landfill gas, the EPA's Inspector's Report notes that there is a risk of vertical and lateral gas migration within the waste contained in the landfill. Methane and carbon dioxide measured during two monitoring events in 2010 and November 2020 are set out in the table below.

Monitoring Location	2010 Monitoring		2020 Monitoring	
	CH_4 (v/v%)	CO_2 (v/v%)	CH_4 (v/v%)	CO_2 (v/v%)
BH01	**78.1**	**32.2**	**53.7**	**22**

7.2.5. While the levels at BH01 are high and exceed the parameters set out in the legislation, the Board will note the significant decreases recorded in both methane and carbon dioxide levels over the 10 year period between 2010 and 2020. This suggests that, in terms of gas composition and generation, the landfill is reaching the latter period of Stage 4 in the landfill gas generation process with high levels of settlement and stabilisation within the waste. It is reasonable to conclude that landfill gas production within the site is waning and past its peak landfill gas production period.

7.2.6. The landfill gas assessment which was modelled in 2019 was predicated on estimated gas production from a quantity of waste amounting to 168,000 tonnes. However, more recent surveys undertaken increased the estimation of waste deposited at the site at c.280,000 tonnes. This suggests that more landfill gas may be generated at the landfill for a number of years to come.

7.2.7. It is clear therefore that remedial action is warranted to:

(a) Address the risk of leachate migrating from the site into the aquifer via groundwater and surface water recharge.

(b) Remedial action is warranted to address the risk of the migration of landfill gas to onsite and off-site locations which could potentially pose a hazard. Perhaps the landfill gas management is all the more important having regard to the future anticipated use of the site as a solar farm where works will be undertaken at the surface of the site and visits (albeit infrequent) will occur for personnel monitoring and maintaining the solar farm.

7.2.8. The current proposal before the Board involves a series of remediation works aimed to reduce the environmental impact arising for both leachate and gas migration into the surrounding environment.

7.3. Leachate Management

7.3.1. The principal remediation works relate to the provision of a new landfill capping area covering a total of 3.8 hectares (the extent of the waste body within the footprint of the site is estimated at 3.2 hectares). The engineered landfill gap barrier will comprise (from bottom up) imported fill of various depths throughout the site in order to create a level base on which to construct the capping. Above the imported fill it is proposed to place a 75 millimetre dust layer. Above the dust layer it is proposed to install a below liner gas collection geo-composite which would be rolled out on top of the dust layer. Above this a 1 millimetre LLDPE barrier will be installed with a minimum fall of 1:30; on top of which an 850 millimetre subsoil layer will be placed. Finally, a 150 millimetre layer of topsoil will be placed on the summit of the cap in order to accommodate planting and reinstatement.

7.3.2. This would create an effective barrier across the former landfill, virtually eliminating rainfall percolation through the cap and into the waste. This will significantly in turn reduce the amount of leachate that can contaminate the underlying aquifer. I note that insufficient details are provided with regard to the depth of the water table below the existing ground levels on site. It appears from the EPA's inspector's report that groundwater was encountered at a depth of less than 1 metre below the surface. Such information is not contained in the application placed before the Board. Thus, while the remediation measures to be undertaken will significantly reduce the potential for leachate generation, there remains the potential for leachate contamination through groundwater moving latterly through the waste. No information is provided as to whether or not waste was placed within engineered cells as part of the landfill activities on site. However, having regard to the historic nature of the landfill which commenced in the early 1980s it is in my view reasonable to assume that no such engineered barrier was incorporated beneath the waste which would reduce groundwater ingress to the waste.

7.3.3. Notwithstanding the above point, there can be little doubt that all rainwater intercepted by the barrier cap will flow off the reprofiled landfill area and into surrounding surface water channels which would be the subject of surface water monitoring at 6 separate locations around the landfill site. This will eliminate the generation of leachate through rainfall and will undoubtedly reduce the quantity and toxicity of leachate migration into surrounding surface and groundwater bodies. It is

noted that a total of 6 groundwater monitoring locations will also be provided to allow for comprehensive groundwater within and surrounding the site. The Board will note that the monitoring requirements will be implemented fully in accordance with the monitoring regime set out in the EPA's inspector's report.

7.4. Landfill Gas Management

7.4.1. In terms of gas monitoring and treatment, the geo-composite line forms a "cavity" to intercept and collect the gas emissions from the underlying waste body. Gas collection pipework will be slotted and laid in the gravel between the gas collection geo-composite and will facilitate the collection and congregation of landfill gas generated by the landfill. The gas collected in the underliner gas system will be transferred via solid HDPE pipes and will terminate at the landfill gas management compound. The layout of the proposed underliner gas collection infrastructure is set out on Drawing P21-289-200-001. The gas management compound is located centrally and close to the northern boundary of the capped area. The pipe collection system (both underground and overground) will terminate at the gas management compound and depending on the calorific value of the gas, the landfill gas will either be vented to the atmosphere via vent stacks or oxidised prior to venting. Oxidation will be carried out using a biological filter incorporated into the top layer of the capping and will allow for the oxidation and passive venting of the gas into the atmosphere. Alternatively, a 3 metre high vertical vent will be inserted into the compound management area and gas will be vented into the atmosphere by way of a carbon filter appended to the top of the vent. If necessary, high temperature flaring can also be carried out within the gas management compound.

7.4.2. In conclusion therefore it is considered that the remediation measures to be undertaken will significantly reduce leachate generation and will allow for the collection and rehabilitation of landfill gas which in turn will greatly assist in reducing the landfill's potential to adversely impact on the environment. As such, I consider the Board can reasonably conclude that the proposed development is likely to have a positive impact on the environment.

7.5. The Likely Consequences for the Proper Planning and Sustainable Development of the Area

7.5.1. The remediation works to be undertaken have already been detailed above in my assessment. I have argued that the works to be carried out will have a positive impact in environmental terms by reducing groundwater contamination and appropriate managing and diffusing landfill gas generated at the site. With regard to other issues concerning the proposal in the context of the proper planning and sustainable development of the area I would assess the potential impacts under the following headings.

Visual and Recreational Amenity Impact

The proposed development will not give rise to any significant visual impacts. It will involve minor excavation works and the reprofiling of the existing land surface together with replanting and landscaping. The overall land cover will remain the same[2]. The site is not located in any designated scenic area. The site is not used for any recreation or amenity purposes and therefore the works to be undertaken will not adversely impact on the recreation or amenity potential of the area. Landscaping is proposed post remediation works and on this basis, it is reasonable to conclude that the proposed development will not in any way adversely impact on the visual or recreational amenity of the area.

Waste Generation

It is anticipated that some waste generation will occur from the works to be undertaken, but any waste generation will be modest primarily due to the limited amounts of excavation that will take place on site. Any municipal waste encountered during the reprofiling works will, according to the information submitted, be removed by a licensed waste operator and disposed of at a licensed facility. All excavated soils will be utilised on site during the undertaking of the grading/reprofiling works.

[2] Prior to the establishment of a Solar Farm on site.

Traffic Impacts

In terms of traffic generation, the proposed development will not result in any appreciable increase in traffic volumes. While traffic volumes may increase to some extent during the construction period, this will be temporary in nature. There is an existing access to the site off the N17 and it is expected that the use of this access will intensify during the construction period. The N17 at the point of access is a good quality national primary route with excellent sightlines afforded in each direction at the proposed access point. The road network therefore is in my opinion capable of accommodating any additional traffic increase from construction activities. I note that the TII acknowledges that the closed landfill remediation project has been prepared to comply with the EPA closed landfill Certificate of Authorisation. While reference is made to the *Spatial Planning and National Road Guidelines for Planning Authorities* which generally prohibits direct access onto national primary routes, the TII acknowledge that the construction period is temporary (in the period of 6 to 8 months) and that rather than objecting to the proposed development outright, the TII request that the contractor implement a traffic management plan to manage safe access and egress of construction vehicles in and out of the site. Subject to the implementation of an appropriate traffic management plan, the proposed development is deemed to be accepted.

Impact on Residential Amenity

Noise

The construction work will give rise to elevated noise levels over and above that which currently exists in the area. The nearest noise sensitive receptors are located to the west of the site on the opposite side of the N17, on the outskirts of Claremorris. These residential dwellings are located approximately 280/300 metres away from the subject site. The bulk of the settlement within the town of Claremorris is located c.1 kilometre away. At these distances it is very unlikely that any residents or other sensitive receptors would be unduly disturbed by the proposed development. Furthermore, the N17 is located between the subject site and the town of Claremorris. This national primary route is in itself a noise corridor and it is likely that to some extent, traffic travelling along the N17 route will mask and subsume any noise associated with the construction activities as part of the remediation project.

Construction activity will take place during normal business hours when the N17 is likely to be at its most busiest.

There are also noise sensitive receptors to the south along the local road to Lisduff (the L5572), the closest of which are c.500 metres to the south of the site. Again, I consider that this constitutes a sufficient separation distance to ensure that noise generation from the site will dissipate over this distance. Furthermore, the intervening heavy vegetation will also assist in arresting and dampening noise propagation from the site. Again, I would reiterate that any noise generation associated with the site will be restricted to the constructed period only and will therefore be temporary in nature i.e. 6 to 8 months.

Odour

Landfill gas varies in composition over time. The main components comprise of methane and CO2. Neither in its pure form are odorous. However, methane (CH4) when oxidised takes on a distinctive unpleasant smell particularly when mixed with hydrogen sulphide - another component of landfill gas. I detected no odour during my site inspection. The fact that remediation works will include, where necessary, the flushing of gas collected at the landfill through biological filtered media will attenuate and treat the gas so as to ensure that no odour occurs on site post reinstatement.

Risk of Major Accidents or Hazards

In the absence of proper management, methane can present a problem where gas builds up and occurs in concentrations of the air between 5% (lower exposure limits) and 15% (upper exposure limit). Methane at this concentration can be highly flammable and can lead to major accidents. However, with the proper collection, treatment and venting of gas in a controlled and monitored way, the landfill site post reinstatement will not pose a risk as a major accident or hazard.

Archaeology and Cultural Heritage

There are no listed monuments or archaeological features contained on site. Any features which previously existed would have most likely been removed when site preparation works were undertaken to accommodate a landfill site at this location in the early 1980s. Therefore, issues regarding archaeology and cultural heritage do not exist.

Flooding

Reference to the OPW flood maps indicates that the subject site is not subject to flooding nor or are any of the streams including the Kilbeg - Malone stream in the vicinity of the site subject to any historical flood events. It can be reasonably concluded therefore that flooding does not present itself as an issue in assessing the proposed remedial works to be carried out.

Conclusion

I would conclude therefore that the proposed development as a whole, will have positive consequences for the environment and will have negligible impact on the amenities of the area either during the construction or operational phases. The overall consequences therefore in terms of the proper planning and sustainable development of the area are at worst neutral and at best positive.

7.6. The Likely Significant Effects of the Proposed Development on a European Site

7.6.1. The application was accompanied by an NIS. The EPA during the certification process determined that there was a need for an appropriate assessment due to the potential for significant effects on European sites due to the hydrological connection between the subject site and the Lough Cara/Mask Complex SAC (Site Code: 001774) and the Lough Mask SPA (Site Code: 004062).

7.6.2. Having regard to the screening determination issued by the EPA, and the fact that an NIS has been submitted, it is my view that it is not necessary for the Board to carry out a separate screening determination as it is a requirement for the applicant in order to comply with the EPA Closed Landfill Certification Process to carry out a Stage 2 Appropriate Assessment. It is appropriate therefore that the Board carry out an independent assessment of the conclusions contained in the NIS and whether or not the information contained in the document are accurate and robust.

7.6.3. It is however important to note that I would agree with the conclusions contained in the EPA's screening determination that the two Natura 2000 sites identified are the only two sites that could potentially be affected by the proposed remediation works. While there are a number of European sites in closer proximity such as the Corrib

SAC (c.10 kilometres from the site) and the Carrokeel Turlough SAC (c.7 kilometres from the site) and the River Moy SAC (c.7.6 kilometres north of the subject site) none of these aforementioned sites are hydrologically or in any way connected with the subject site.

7.6.4. Details of the two Natura 2000 sites which are located c.20 to 21 kilometres to the west of the landfill are set out below.

Lough Carra /Mask Complex SAC (site code 001774)

Site Description

Lough Mask, at over 8,000 ha, is the sixth largest lake in the country and with a maximum depth of 58 m it is one of the deepest. It is an excellent example of an oligotrophic lake. Aquatic and wetland plant species present which are characteristic of this habitat include several pondweed species (*Potamogeton spp.*), Water Lobelia (*Lobelia dortmanna)* and Shoreweed (*Littorella uniflora*). The eastern part of the lake is shallow and is edged by a low-lying shoreline which is subject to winter flooding. An intricate mixture of plant communities has developed on the limestone, with bare pavement, scrub-dominated pavement, dry grassland and heath.
Lough Carra, which is hydrologically linked to Mask, is one of the best examples in Ireland of a hard water marl lake. It is a shallow (mostly less than 2 m), predominantly spring fed, lake with only a few streams flowing into it. Its well known pellucid green colour is due to calcareous encrustations. It has well developed stonewort communities in the submerged zones, with *Chara curta, C. desmacantha, C. rudis* and *C. contraria* recorded. Lough Carra, like the eastern and southern shores of Mask, is fringed by a diverse complex of limestone and wetland habitats. A wide range of wetland habitats occur around Lough Carra and along parts of the eastern and southern shores of Lough Mask, including Cladium fen and alkaline fen. Great Fen-sedge *(Cladium mariscus)* occurs as pure stands in places but also grades into areas of alkaline fen, where it is intermixed with Black Bog-rush *(Schoenus nigricans)*, Common Club-rush *(Scirpus lacustris)*, Common Reed *(Phragmites australis)* Version date: 08.12.2015 3 of 4 001774_Rev15.Docx and a number of sedge species *(Carex spp.).* The areas of alkaline fen are more extensive than the Cladium fens, and here Black Bog-rush is generally the dominant species. A rich diversity of flowering plant occurs in the fen communities. In addition to the fen

habitats, there are sparse but widespread reed swamps, wet grassland and some freshwater marsh communities around the lake shores.
Broadleaved deciduous woodland occurs fairly frequently around much of the shores of the lakes and on some of the islands. This is often scrub-type woodland, which may be either dry (dominated by Hazel, Hawthorn and Ash) or wet. In the case of the latter, dominant species include birches (*Betula spp*.), willows (*Salix spp*.) and Alder (*Alnus glutinosa*). The wet areas of woodland flood seasonally and represent alluvial woodland, a habitat that is listed with priority status on Annex I of the E.U. Habitats Directive.
The site provide excellent habitat for Otter, also an Annex II species, and the area has Pine Marten (*Martes martes*), a species listed in the Irish Red Data Book.
This site is of considerable conservation importance as it has good examples of nine habitats listed on Annex I of the E.U. Habitats Directive, four of which are listed with priority status. Some of these habitats are amongst the best examples of their kind in the country. It is also selected for two Annex II mammal species and an Annex II moss. The site is of ornithological importance for both wintering and breeding birds.

Qualifying Interests

Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110]

Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130]

Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140]

European dry heaths [4030]

Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (important orchid sites) [6210]*

Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210]

Alkaline fens [7230]

Limestone pavements [8240]

Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]

Rhinolophus hipposideros (Lesser Horseshoe Bat) [1303]

Lutra lutra (Otter) [1355]

Hamatocaulis vernicosus (Slender Green Feather-moss) [6216]

Lough Mask SPA

Site Description

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Greenland White-fronted Goose, Tufted Duck, Black-headed Gull, Common Gull, Lesser Black-backed Gull and Common Tern. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds. Lough Mask is one of the most important sites in the country for breeding gulls and a survey in 1999 recorded Black-headed Gull (329 pairs), Common Gull (124 pairs) and Lesser Black-backed Gull (286). Whilst higher numbers of nesting gulls have been recorded in the recent past, the 1999 populations of the three species still accounted for 2.4%, 7.8% and 6% of the respective national totals. The lake is also a traditional breeding site for Common Tern, with 44 pairs in 1995 and 39 pairs in 1999. In winter the site has a range of waterfowl, especially diving duck, with the Tufted Duck population (453) being of national importance - all figures are mean peaks for 4 of the 5 winters in the period 1995/96 to 1999/2000. It also supports Whooper Swan (54) and is visited at times by part of the Erriff/Derrycraff population of Greenland White-fronted Goose (peak count of 62 in 1995/96). Other species using the site include Mute Swan (49), Whooper Swan (54), Wigeon (84), Teal (99), Mallard (101), Pochard (65), Goldeneye (89), Red-breasted Merganser (12), Little Grebe (17), Cormorant (36), Coot (112) Lapwing (31) and Curlew (75). Lough Mask is one of the most important inland gull breeding sites in the country, with nationally important populations of three gull species. It also has a nationally important colony of Common Tern. The site supports a good diversity of wintering waterfowl, including a nationally important population of Tufted Duck. The site is also regularly utilised by a proportion of the Erriff/Derrycraff population of Greenland White-fronted Goose. The occurrence of three species, Whooper Swan, Greenland White-fronted Goose and Common Tern is of note as these species are listed on Annex I of the E.U. Birds Directive. Part of Lough Mask SPA is a Wildfowl Sanctuary

Qualifying Interests

Tufted Duck (Aythya fuligula) [A061]

Black-headed Gull (Chroicocephalus ridibundus) [A179]

Common Gull (Larus canus) [A182]

Lesser Black-backed Gull (Larus fuscus) [A183]

Common Tern (Sterna hirundo) [A193]

Greenland White-fronted Goose (Anser albifrons flavirostris) [A395]

Wetland and Waterbirds [A999]

7.6.5. The closed landfill is located within the hydrometric area 306 (Corrib Catchment) and within the River Robe sub-catchment. The Kilbeg – Malone Stream flows southwards along the eastern portion of the site. It links with the Robe River (via the Lisduff Stream) c.2 kilometres to the south of the site. It in turn links with the Robe River and this river travels a distance of c.44 kilometres in a west and south-west direction before passing through the settlement of Ballinrobe and discharging into Lough Mask SAC and SPA. The Kilbeg – Malone, Lisduff and Robe Rivers have all been assigned 'good status' under the Water Framework Directive.

7.6.6. Mayo County Council have undertaken water quality samples both upstream and downstream of the landfill site for monitoring and assessment purposes. Details of which are set out in the NIS in Table 2.3 and Table 2.5.

7.6.7. A total of 32 parameters were assessed including BOD, COD, MRP, Dissolved Oxygen, PH, Nitrogen and Conductivity. A host of heavy metals concentrations in the water were also recorded during the surveys. The parameters were assessed in the context of the EQS's set out in the Surface Water Regulations (2009). Details of two separate surveys for 2009 and 2020 are contained in Table 2.3 of the report. The salient points that can be derived from the table including the following:

- High levels of ammoniacal nitrogen as N were recorded both upstream (on both occasions) and downstream (on one occasion) in excess of the EQS's set out in the Regulations.

- MRP levels in the 2020 survey (no survey for MRP was carried out in 2009) upstream exceeded the EQS's. However, the EQS's was not exceeded downstream.
- High levels of chromium were also recorded downstream in 2009. However, the more recent survey of 2020 recorded levels of chromium well above the limit permitted.
- All other parameters were EQs parameters are stated were within the limits set.

Groundwater

The groundwater status according to the NIS submitted has been consistently classed as 'good' under the Water Framework Directive. It is clear however from the EPA website that the Cong – Robe Catchment is designated as being 'at risk'. Groundwater monitoring results were undertaken at BH02 on the periphery of the site and down-gradient in both 2010 and 2020. They were assessed in accordance with the limits set out in the EPA Interim Guidelines and the limits set out in the Groundwater Regulations (S.I. No. 9 of 2010).

The main points of note are:

- Ammoniacal nitrogen as N exceeded the thresholds at BH02 during the 2020 survey by a significant margin.
- Orthophosphate (MRP) exceeded the limits set out during the 2020 survey by a significant amount (neither parameter was surveyed in the 2010 assessment).
- A number of heavy metals also exceeded the thresholds set out by a significant amount and these included manganese, zinc, potassium and iron.

The high level of potassium and other heavy metals is likely to be an indication of contamination of groundwater associated with leachate derived from the landfill. High levels of nitrogen and phosphorous are likely to be due to agricultural activities whereas iron, zinc and manganese can be attributable to both the leachate concentration and the inherent chemistry of the bedrock.

7.7. **Potential Impact on Natura 2000 Sites in the Vicinity**

7.7.1. As already mentioned, the Lough Mask and Lough Cara SAC and the Lough Mask SPA are hydrologically connected at a distance of approximately 44 kilometres from the subject site. There is no direct point of discharge of leachate from the landfill to the surrounding surface waters therefore no assimilative capacity calculations can be carried out to ascertain to what extent any surface water river pollution can be directly attributed to leachate produced by the landfill. Any contamination that would occur therefore, would be diffuse contamination associated with groundwater recharge of surface water bodies in the vicinity. The surface water bodies would therefore provide direct and the fastest pathways for any potential contamination to affect European sites. It is clear from the surface water quality samples taken upstream and downstream that leachate from the landfill is not contributing significantly in terms of adverse impacts on water quality. This is reflected in the fact that the status of the surface waterbody has been assigned a status of 'Good' under the WFD.

7.7.2. Any contamination associated with leachate is extremely unlikely to impact on the SAC 44 kilometres downstream. While I fully acknowledge that the qualifying interests associated with Lough Mask and Lough Cara SAC include oligotrophic and oligo-mesotrophic waters which would be very sensitive to pollution, the main threat to the nature of these waters arise from eutrophication and nutrient enhancement. Both phosphate and nitrate are the main factors which would contribute to such eutrophication. Ammoniacal nitrogen (as N) through the oxidation process would change to nitrate and in its latter form could contribute to eutrophication. However, it is clear from the information contained from the surveys undertaken that while nitrogen and phosphate levels within the water samples are high, it is highly unlikely that these can be attributed to the leachate and are more likely to be attributed to organic waste (human or animal) and more probably agricultural practices in the area. Therefore, it is reasonable to conclude that even if the leachate produced by the landfill were to reach the sensitive receptors, the leachate in itself is very unlikely to alter the oligotrophic and oligo-mesotrophic status of the waters.

7.7.3. Notwithstanding the above point, heavy metal concentration has the potential to impact on aquatic species which form part of the qualifying interests most notably the otter. However, any heavy metal concentrations associated with the leachate would be significantly dispersed and diluted over the 44-kilometre route. As the water body

flows and progresses within the Corrib Catchment between the source and target i.e. the Kilbeg – Malone Stream into the Lisduff Stream and on into the Robe River the volume of water substantially increases and this significant volumetric increase in water flow within the river channel together with the level of dispersion and dilution which would occur within this flow, would result in the level of heavy metal pollutants arriving at the lake which could be directly attributable to the leachate from landfill would be infinitesimal.

7.7.4. In addition to the above, the proposed mediation works involves a new landfill cap over the waste deposition area and will significantly reduce leachate production which in turn will reduce the amount of leachate contamination of adjoining surface waters. Thus, the amount of polluted surface water entering the Lough Mask/Lough Cara SAC directly attributable to the leachate from the landfill, which is presently estimated to be infinitesimal, will be further reduced when remediation works take place.

Groundwater

It cannot be realistically argued that groundwater poses a threat to the Natura 2000 sites in question having regard to the fact that the Natura 2000 sites are located (as the crow flies) in excess of 20 kilometres away. There are no details in relation to the transmissivity or hydrological conductivity of the underlying aquifer however, it is reasonable to deduce, even in the context of the underlying karstic aquifer and on the whole the relatively free draining soils between the site and the target Natura 2000 sites (as indicated in the Geohive Environmental Sensitivity Mapping website) that the risk of groundwater contamination does not pose a risk to either Natura 2000 sites due to the separation distances involved. Over a distance of 20 kilometres groundwater flows can be expected to be very slow. Even in a well fissured karstic limestone aquifer it is unlikely that groundwater flow rates in excess of 1.5 metres per day (10^{-5} m/s) would be achieved. Hence, even under a worst-case scenario where transmissivity levels within the aquifer are in the region of 1.5 metres per day, it would take c.37 years for groundwater in the aquifer beneath the landfill to reach the shores of Lough Mask. Any groundwater contamination associated with the landfill in the form of leachate would be well treated and attenuated by natural processes over such a distance and over such a time.

I would therefore fully support the conclusions set out in the NIS that any effects from the landfill on groundwater contamination would be localised and would not impact on European sites in the vicinity. As in the case of surface water, the remediation works would reduce the amount of leachate production which in turn would ensure that any potential localised impact would be lessened.

Lough Mask SPA

With regard to the Lough Mask SPA, it is not anticipated that the proposed remediation works would give rise to any direct impacts on the SPA. The Lough Mask SPA is (as the crow flies) c.21 kilometres from the subject site. The remediation of the site would not present any threats to breeding, foraging or nesting habitats associated with species of conservation interest nor will the remediation works present a collision risk for birds in the area. The only potential indirect effects which could occur would be the impact on the feeding grounds for birds within the confines of the Lough Mask SPA primarily through water pollution/contamination. However, as already indicated, the level of pollution that can be specifically attributed to leachate associated with the landfill at Lough Mask would be nanoscopic and therefore would not present a threat. The hypothetical threat would be further reduced with the reduction in leachate production post remediation.

Cumulative Impacts

The NIS sets out details of other developments in the wider area that could result in a cumulative impact. These are set out in Table 3.2 of the NIS. It is noted that the developments listed are minor in nature and will not result in any cumulative impact. I have concluded above that the leachate from the landfill will in no way impact on the qualifying interests associated with Natura 2000 sites in question. As the proposed development will have no impact on the qualifying interests on the Natura 2000 sites in isolation, it will therefore not result in any cumulative impacts with other plans and projects in the area.

Overall Conclusions

Based on my analysis above and having regard to the nature of the pollution associated with the landfill, the separation distances between the landfill and the Natura 2000 sites in question and the assimilative capacity of the groundwater and surface water linking the former landfill with the Natura 2000 sites, there is no scope

for any significant impacts on European sites in question. Notwithstanding the fact that the EPA requested a Stage 2 Appropriate Assessment as part of the Certification of the Closure of the landfill, on foot of my assessment above, I do not consider that a Stage 2 Appropriate Assessment and the production of an NIS was warranted in this instance.

Following an Appropriate Assessment, it has been determined that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the European site No 001774, European Site 004062, or any other European site, in view of the sites Conservation Objectives.' This conclusion is based on a complete assessment of all aspects of the proposed project and there is no reasonable doubt as to the absence of adverse effects.

7.8. **EIAR Determination**

7.8.1. The Board will note that the application was accompanied by an Environmental Impact Assessment screening report was submitted with the application. It assesses the proposed development in the context of:

- EIA project types.
- Sub-threshold EIA screening.
- Under Schedule 7 and Annex 3 of the EIA Directive and under Schedule 7A sub-threshold development screening.

7.8.2. Under the EIA project types reference is made to Class 11B "installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule. While the proposed development relates to landfill it does not relate to an operational landfill whereby waste would be disposed of at the facility. The application relates to the remediation of an existing landfill and therefore in my view does not constitute a class of development for which EIAR is required.

7.8.3. With regard to any significant effects on the environment. The Board is referred to the information contained in the screening report which correctly concludes in my opinion that a sub-threshold EIA is not required due to the project's limited impact, it is considered that the assessment carried out in my report above, clearly demonstrates that the proposed development likewise will not have a significant impact on the environment and on this basis an EIAR is not required.

8.0 Conclusions and Recommendation

8.1. Arising from my assessment above I consider that the proposed remediation works to be carried out at the Claremorris Landfill will on the whole have positive consequences on the environment and would not adversely affect the integrity of European sites in the vicinity. The proposed development would therefore be in accordance with the proper planning and sustainable development of the area, and I therefore recommend that the Board grant planning approval in accordance with the provisions of Section 177AE.

9.0 Decision

Grant planning approval for the proposed development based on the reasons and considerations set out below.

10.0 Reasons and Considerations

In coming to its decision the Board had regard to the following:

(a) The nature and extent of the proposed works which seeks to incorporate a cap on the existing landfill thereby reducing leachate production.

(b) The EU Habitats Directive (92/43/EEC).

(c) The European Communities (Birds and Natural Habitats) Regulations 2011.

(d) The EU Water Framework Directive 2000 (2000/60/EEC).

(e) The European Communities Environmental Objectives (Surface Water Regulations) 2009 (S.I. 272 of 2009).

(f) The likely consequences for the environment and the proper planning and sustainable development of the area which it is proposed to carry out the proposed development and the likely significant effects of the proposed development on a European site.

(g) The submissions and observations received in relation to the likely effects of the environment.

(h) The report and recommendation of the inspector.

11.0 **Appropriate Assessment**

11.1. The Board agreed with the screening assessment and conclusion carried out in the inspector's report that the Lough Mask/Lough Cara SAC (Site Code: 001774) and the Lough Mask SPA (Site Code: 004062) are the only European sites in respect of which the proposed development has the potential to significantly effect.

11.2. The Board considered the Natura Impact Statement and associated documentation submitted with the application for approval, the mitigation measures contained therein, and the inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development on the above mentioned affected European sites in view of the site's conservation objectives. The Board consider that the information before it was adequate to allow the carrying out of appropriate assessment.

11.3. In completing the appropriate assessment the Board considered in particular the following:

(i) The likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans and projects.

(ii) The separation distance between the landfill and the Natura 2000 sites in question.

(iii) The assimilative capacity of the rivers in terms of dilution and dispersion of potential pollutants generated by the leachate.

(iv) The conservation objectives of the European sites.

11.4. In completing the appropriate assessment, the Board accepted and adopted the screening and the appropriate assessment carried out in the inspector's report in respect of potential effects of the proposed development on the aforementioned European sites, having regard to the site's conservation objectives.

11.5. In overall conclusion the Board is satisfied that the proposed development would not adversely affect the integrity of a European site in view of the site's conservation objectives.

12.0 **Conditions**

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.

   Reason: In the interest of clarity.

2. A suitably qualified person shall be appointed by the local authority to oversee the design and construction of the proposed landfill cap including the excavation and storage of all material within the site. Upon completion of the works a report of all site works shall be prepared by the appointed person and submitted to the local authority to be maintained on record and shall be made available for public inspection during normal office hours.

   Reason: In the interest of orderly development and public access to environmental information.

3. A suitably qualified person shall be appointed by the local authority to oversee the planting and landscaping of the restored landfill. Any plants which die or are removed or become seriously damaged or diseased shall be replaced within the next planting season with other of similar size and species.

   Reason: In the interest of orderly development.

4. The planning authority shall prepare and fully implement a landscaping scheme which shall provide planting throughout the site. All planting shall be adequately protected from damage until established. Any plants which die are removed or become seriously damaged or diseased within a period of five years from the completion of the proposed development shall be replaced within the next planting season with others of similar size and

species.

Reason: In the interest of visual amenity.

5. In the case that external lighting is to be provided at the site all external lighting shall be sufficiently cowled so as to ensure that light spillage beyond the boundary of the site is minimised.

   Reason: In the interest of amenity.

6. The Construction and Environmental Management Plan shall be implemented in full in carrying out the proposed development.

   Reason: To protect the amenities of the area.

7. The proposed measures for the management of invasive species set out in the Invasive Species Management Plan submitted with the application shall be implemented in full in carrying out the proposed remediation works.

   Reason: To arrest the spread of invasive species on site and its surroundings.

8. All conditions attached to the closed landfill certificate of authorisation and in particular Condition No. 3 in respect of management and monitoring shall be fully complied with.

   Reason: In order to prevent pollution and to ensure appropriate monitoring of the development.

9. A traffic management plan shall be prepared and shall be the subject of a written agreement with Transport Infrastructure Ireland to manage the safe access and egress of construction vehicles to and from the site. Details of the traffic management plan shall be the subject of agreement prior to the commencement of development.

   Reason: In the interest of traffic safety

Paul Caprani,
Senior Planning Inspector.

14th October, 2022.