

**BUILT ON KNOWLEDGE** 

# Bord na Móna

Derryadd, Derryaroge and Lough Bannow Bogs – Application for Substitute Consent

**Remedial Environmental Impact Assessment Report** 

Non-Technical Summary (NTS)

March 2025



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## 1.0 INTRODUCTION

This remedial Environmental Impact Assessment Report (remedial EIAR) has been prepared by TOBIN on behalf of Bord na Móna Energy Ltd (hereafter 'the Applicant'), as part of an application for substitute consent for peat extraction and all peat extraction related activities from July 1988 to the present day that have been carried out at Derryadd, Derryaroge and Lough Bannow bogs (which are hereafter referred to as the 'Application Site', as shown in Figure 1-1 below), located in County Longford. This remedial EIAR presents the findings of a remedial assessment of the environmental effects (both in isolation and cumulatively with other projects and plans) resulting from Bord na Móna's historic peat extraction and associated works, ongoing decommissioning and management activities, and proposed future rehabilitation measures at lands at the Derryadd, Derryaroge, and Lough Bannow bogs. These lands are collectively referred to as the 'Application Site' while all related past, present, and proposed future activities are referred to collectively as the 'Project'.

Section 177E of the Planning and Development Act 2000, as amended, permits an application to be made for substitute consent in respect of development which has been carried out where an Environmental Impact Assessment (EIA), screening for EIA and/or Appropriate Assessment (AA) was or is required.

The application for substitute consent is seeking consent for development which took place from July 1988,<sup>1</sup> the timeframe for when the EIA Directive was required to be transposed into Irish Law, to present day.

## The Applicant

Bord na Móna Energy Ltd is an Irish, semi-state climate solutions company helping lead Ireland towards a climate neutral future. Bord na Móna has been serving communities for over 90 years, always rising to meet the needs of the day. It was founded in 1934 as The Turf Development Board to enhance national energy security through peat harvesting and became Bord na Móna in 1946.

The functions of Bord na Móna as set out under Section 17(1) of the 1946 Act were:

"(a) to produce and market turf and turf products, and (b) to foster the production and use of turf and turf products, and (c) to acquire bogs and other lands, and (d) to manage, develop and work bogs and other lands vested in the Board, and (e) generally to do all such other things as arise out of, or are consequential upon, the duties mentioned in the preceding paragraphs of this section."

Today, the company has radically changed its approach to face an even greater challenge: climate change. Bord na Móna have ended peat harvesting and now focus on developing climate solutions in renewable energy, sustainable waste management, carbon storage, and biodiversity conservation. Ireland has committed to ambitious climate goals and Bord na Móna's climate solutions are helping to achieve them. Bord na Móna's vision is to help Ireland reach net zero greenhouse gas emissions by 2050.

<sup>&</sup>lt;sup>1</sup> Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment

To power a net zero future, Bord na Móna are expanding its renewable energy infrastructure. Although they have been constructing and maintaining large-scale infrastructure for decades, the company is now using that experience to build renewable energy developments across the country. These developments are transforming the way the nation generates and consumes energy. Ireland has committed to generating 80% of electricity from renewable sources by 2030 and Bord na Móna is working across wind, solar, biomass and biogas to help achieve this target and to provide energy security for future generations.

Bord na Móna currently provides employment for approximately 1,500 people and manages a land holding of over 80,000 hectares located mainly in the Irish midlands. At their peak, employment numbers exceeded 7,400 in the early 1960s, with the workforce dropping to approximately 2,000 by the late 1990s.

In July 2023, Bord na Móna Powergen Ltd., a subsidiary of Bord na Móna Plc., requested to close preapplication consultation and issue SID determination from An Bord Pleanála (Ref. 314965-22) for a development consisting of between 22 no. wind turbines and associated works at Derryaroge, Derryadd and Lough Bannow Bogs, known as Derryadd Wind Farm (<u>https://www.derryaddwindfarm.ie/</u>). This position was confirmed by An Bord Pleanála in correspondence to the Applicant dated 16<sup>th</sup> August 2023. The proposed Derryadd Wind Farm will be cumulatively assessed with the Cutaway Bog Decommissioning and Rehabilitation plans for the Application Site bogs in this remedial EIAR.

## **Project Description**

Substitute consent is being sought by the Applicant of their own volition to regularise, without prejudice, the planning status of the Application Site to facilitate appropriate future uses of these lands in compliance with the requirements of the planning system. Substitute consent is being sought for the relevant peat extraction and related activities that were undertaken at the Application Site from 1988 onwards, which consist of the following:

- Industrial scale peat extraction (milled peat);
- Use and maintenance of pre-existing ancillary supporting infrastructure and services to facilitate peat extraction (e.g., railway infrastructure, fixed fuel tanks, drainage (drains, silt ponds, pumps), machine passes etc.), from 1988 to July 2019;
- Control Measures associated with the above, inclusive of the IPC Licence measures (Ref. P0504-01) which commenced from 2000 onwards to the present day; and,
- All associated site development and ancillary works.

These peat extraction activities are referred to as the 'Project' as appropriate. A full description of the Project is included in Section 4.5 Chapter 4 Description of the Development.

For the purposes of this remedial EIAR, the development is defined under three different timeframes termed 'phases':

- **'Peat Extraction Phase'**: peat extraction activities and all ancillary works at the Application Site from July 1988 to the cessation of peat extraction in July of 2019 (July 1988 July 2019). The Peat Extraction Phase is described in detail in Chapter 4.
- **'Current Phase'**: the management of the Application Site since July 2019 (July 2019 to present day). The Current Phase is described in detail in Chapter 4.
- **'Remedial Phase'**: the activities intended to be carried out at the Application Site into the future. The Remedial Phase is described in detail in Chapter 4.

## Site Location

The Application Site is located approximately 1 km east of Lanesborough in County Longford as shown in Figure 1-1 and comprises an area of approximately 2,244 ha. The Application Site is made up of three distinct bog units, Derryadd Bog, Derryaroge Bog and Lough Bannow Bog, which are described in more detail in Chapter 4 – Description of Development of the remedial EIAR.

The landcover and uses surrounding the Application Site comprises a mixture of forestry, agricultural land, cutover and cutaway peatland, one-off rural housing and small rural settlements. Cutaway peatlands are those areas where all commercially viable volumes of peat have been extracted. Cutover peatlands are those areas where peat extraction has occurred, and commercially viable peat volumes remain. Lough Ree SAC and pNHA [IE0000440], Lough Ree SPA [IE0004064], Lough Bawn pNHA [0001819], Royal Canal pNHA [0002103], and Lough Bannow pNHA [0000449] are all located within 2km from the Application Site.





## Purpose and Scope of this Remedial EIAR

The purpose of this remedial EIAR is to document the current state of the environment in the vicinity of the Application Site and to assess, in accordance with the requirements of the EIA Directive, the likely significant effects which have occurred, or which are occurring, or which can reasonably be expected to occur on the environment due to peat extraction and peat extraction related activities at the Application Site. The scope of the impact assessment is peat extraction and all peat extraction related activities from July 1988 to the present day.

It is important to distinguish the remedial Environmental Impact Assessment (EIA) to be carried out by the Board, from this remedial EIAR which is accompanying the substitute consent application. The remedial EIA is the assessment carried out by the competent authority, which includes an examination that identifies, describes and assesses in an appropriate manner, in the light of each individual case and in accordance with Articles 4 to 11 of the EIA Directive (2011/92/EU as amended by 2014/52/EU), the direct and indirect effects of the Development on the following:

- (a) Population and human health
- (b) Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC
- (c) Land, soil, water, air, and climate
- (d) Material assets, cultural heritage and the landscape
- (e) The interaction between the factors referred to in points (a) to (d)

This remedial EIAR submitted by the Applicant provides the relevant environmental information to enable the remedial EIA to be carried out by the competent authorities. The information to be contained in the remedial EIAR is prescribed in Article 5 and Annex IV of the revised EIA Directive and Article 94 and Schedule 6 of the Planning and Development Regulations 2001 (as amended). Further detail on the content, methodology, and scope of the remedial EIAR is provided in Chapter 2 - Remedial EIA Methodology.

## 2.0 REMEDIAL EIA METHODOLOGY

This chapter presents details on the requirements of remedial Environmental Impact Assessment (rEIA) for the project as well as the temporal scope applied to the rEIA process. An overview of the methodology used for the identification and evaluation of impacts on the environment is also presented as well as the approach to identifying mitigation and monitoring measures. The approach to residual effects, cumulative effects, transboundary effects and the do-nothing scenario are also described.

#### Remedial Environmental Impact Assessment Scoping

Scoping for the Project at the Application Site was carried out in accordance with the relevant EIA guidance documents. A scoping letter, providing details of the Application Site and the Project, was prepared by TOBIN and was circulated in August 2022. TOBIN requested the comments of the relevant bodies in their respective capacities as consultees with regards to the rEIAR process. A further round of scoping was conducted in September 2024. The recommendations of the consultees have informed the rEIAR preparation process and the contents of the same.

## Remedial Environmental Impact Assessment Methodology

Section 177F(1) of the Planning Acts state that a remedial EIAR shall contain the following:

"(a) a statement of the significant effects, if any, on the environment, which have occurred or which are occurring or which can reasonably be expected to occur because the development the subject of the application for substitute consent was carried out;

(b) details of – (i) any appropriate remedial measures undertaken or proposed to be undertaken by the applicant for substitute consent to remedy any significant adverse effects on the environment; (ii) the period of time within which any proposed remedial measures shall be carried out by or on behalf of the applicant."

There are no specific guidelines available for the information to be contained within a remedial EIAR and, therefore, the Environmental Protection Agency (EPA) Guidelines (*Guidelines on the information to be contained in Environmental Impact Assessment Reports*, May 2022) have been used in this regard. As per these Guidelines, the main purpose of an EIAR is *'to identify, describe and present an assessment of the likely significant effects of a project on the environment'*. The description of the likely significant effects on the environmental factors will cover the direct, indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project.

## 3.0 CONSIDERATION OF REASONABLE ALTERNATIVES

This chapter in the remedial EIAR sets out the need for the project and provides the background of the development programmes which led to the peat extraction activities at the Application Site (i.e., Derryadd, Derryaroge & Lough Bannow Bogs). This chapter also explores the alternatives considered and an indication of the main reason for the final choice, taking into account the environmental effects.

Taking consideration of the legislative and guidance requirements into account, this chapter addresses alternatives under the following headings:

- 'Do Nothing' Option;
- Alternative Locations;
- Alternative Industries;
- Alternative Layout;
- Alternative Processes;
- Alternative Control Measures; and,
- Alternative to the Rehabilitation Plan.

As outlined in the EPA Guidelines (May 2022), the description of 'Do-Nothing Effects' relates to the environment as it would be in the future should the proposed project not be carried out. The assessment period of this remedial EIAR commenced in 1988, a time at which peat extraction was already well-established at the Application Site with peat extraction activities having commenced in 1949 with the installation of drainage.

The 'Do-Nothing' option is defined as the Project having ceased at the Application Site in 1988.

In the event of the cessation of the Project at the Application Site in 1988, it is assumed that those lands which by that point had not been subject to the installation of drainage and peat extraction would have remained as a relatively intact raised bog with varying raised bog habitats (such as bog woodland, fen, sphagnum mosses). Subsequently, other land-use practices may also

have taken place on the Application Site such as agricultural or commercial forestry, or other commercial or non-commercial uses.

The location, nature, landcover and scale of the Application Site determined its selection by Bord na Móna, under powers vested by the Turf Development Act, 1946, as a strategic and important national asset to generate considerable fuel sources for the State. Alternative industries or uses were not possible at the Application Site in 1988, and alternative locations could only be other large scale peat sites which were acquired by the State and underwent largescale peat extraction. Thus, alternative locations or industries are not considered a reasonable alternative. Similarly, as peat extraction was already ongoing in 1988 and continued until July 2019, a 'Do-Nothing' option is not credible as the Project has already occurred. Building on the success of operations from 1949 to 1988, the further expansion of peat extraction activities and all ancillary works was undertaken from 1988 at the Application Site in the form of expanding the footprint of the areas subject to active peat extraction.

With the implementation of Bord na Móna's 2018 'Brown-to-Green' Strategy<sup>2</sup> and the permanent cessation of extraction at the Application Site in July 2019, the Applicant recognises the opportunity to transform the site into a sustainable, clean, and renewable energy source while simultaneously facilitating peatland rehabilitation at the site and providing opportunities for amenity, tourism and employment. Thus, the selected future proposal for the Application Site's renewable energy potential without significant environmental impact and can coincide harmoniously with peatland rehabilitation plans which are statutory obligation of Bord na Móna under Condition 10 of the Integrated Pollution Control (IPC) Licence. Any future use of the Application Site will be subject to a separate planning application and accompanying environmental assessment as required.

## 4.0 **PROJECT DESCRIPTION**

This chapter of the remedial EIAR provides a description of the activities at the Application Site from 1949, where the timing of the installation of drainage and initiation of peat extraction activities varied. A description of the baseline as of July 1988 is presented as well as a description of activities from 1988 until the cessation of peat extraction in July 1988. The management of the Application Site since July 2019 is described as well as the activities intended to be carried out at the Application Site into the future.

As described above and in Chapter 1 of the remedial EIAR, July 1988 is taken as the baseline assessment year for the remedial EIAR as this is the latest date that the EIA Directive (Council Directive 85/337/EEC) was required to be transposed into Irish legislation. This approach has been taken on a precautionary basis and strictly without prejudice, as EIA may not have been a legal requirement at that time. The assessment period for the remedial EIAR is from the July 1988 to the present day.

The peat extraction activities and all ancillary works undertaken at the Application Site, which comprise the Project for which Substitute Consent is being sought and for which this remedial EIAR is prepared, consist of the following:

<sup>&</sup>lt;sup>2</sup> 2018 Brown to Green Strategy referenced in Bord na Móna Annual Reports – latest accessed 2024 Annual Report, pg 2. <u>https://www.bordnamona.ie/wp-content/uploads/2024/07/M15957-</u> <u>BnM Annual-Report-2024-Interior Front-back-V6.pdf</u>

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- Vegetation clearance to facilitate peat extraction activity from 1988 to July 2019;
- Industrial scale peat extraction (milled peat);
- Use and maintenance of pre-existing ancillary supporting infrastructure and services to facilitate peat extraction (e.g., railway infrastructure, fixed fuel tanks, drainage (drains, silt ponds, pumps), machine passes etc.), from 1988 to July 2019;
- Control Measures associated with the above, inclusive of the IPC Licence measures (Ref. P0504-01) which commenced from 2000 onwards to the present day; and,
- All associated site development and ancillary works.

For the purposes of the remedial EIAR, the Project is defined under three different timeframes termed 'phases':

- 'Peat Extraction Phase': peat extraction activities and all ancillary works at the Application Site from July 1988 to the cessation of peat extraction in July of 2019 (July 1988 July 2019).
- 'Current Phase': the management of the Application Site since July 2019 (July 2019 to present).
- 'Remedial Phase': the activities intended to be carried out at the Application Site into the future.

## July 1988 - Remedial EIAR Baseline

By 1988, the land use at the Application Site was well established as industrial peat extraction. All bogs were fully drained and milled peat extraction was the only form of peat extraction taking place across the Application Site in 1988. In 1988, milled peat extracted from the Application Site was transferred via rail to Lanesboro Power Station for Station for electricity generation. The main entrance points to the Application Site were located at the Mountdillon Works off the N63 in the north of Derryadd bog, in the south of Derryaroge bog on the N63, and at the south of Lough Bannow via a local access road. Mountdillon Works, which comprised a canteen, storage sheds and maintenance buildings, is still in situ at present day. Ancillary infrastructure established then included railway infrastructure, internal machine passes/ tracks, silt ponds and drains, and pumping stations.

## Peat Extraction Phase (1988 – July 2019)

By 1988, peat extraction was well established at the Application Site. Drainage was installed in all bogs and railway infrastructure was laid on all bogs as required. During the Peat Extraction Phase, the deepening and maintenance of drainage channels continued beyond 1988, up until the cessation of peat extraction in 2019. As the areas subject to peat extraction from 1988 to 2019 reduced in their extent and the depth of peat available was subsequently reducing, the extent and number of drains requiring deepening and maintenance reduced accordingly.

The volumes of peat extracted at the Application Site varied from year to year and were influenced by weather conditions. Between July 1988 and July 2019, an average of 288,215 tonnes of peat were extracted each year, with a total of approximately 9,222,879 tonnes extracted between July 1988 and the cessation of peat extraction in July 2019.

Environmental Monitoring and Conditions under IPC Licence

Bord na Móna was granted an IPC Licence (Reg. No. P0504-01) for the Mountdillon Bog Group (within which the Application Site is located) in May 2000. Following the grant of the IPC Licence in 2000, Bord na Móna staff underwent an EPA IPC Licence Compliance training programme, which resulted in the development of an environmental management system. This system addresses emissions to water and air, noise, vibration and odour emissions, waste management, use of natural resources, visual effects and the natural environment and ecosystem.

The conditions of the IPC Licence are intended for the protection of the environment and apply from the time of grant of the IPC Licence. The EPA has undertaken Technical Amendments of the IPC Licence for the purpose of aligning the conditions of the IPC Licence to the objectives of national and European environmental protection legislation enacted over the lifetime of the IPC Licence.

The IPC Licence is subject to 14. no conditions pertaining to the ongoing monitoring and maintenance to ensure any emissions from site activities will comply with and not contravene, any of the requirements of Section 83(3) of the Environmental Protection Agency Act, 1992 outlined below:

(3) The Agency shall not grant a licence or revised licence for an activity unless it is satisfied that—

(a) any emissions from the activity will not result in the contravention of any relevant air quality standard specified under section 50 of the Air Pollution Act, 1987, and will comply with any relevant emission limit value specified under section 51 of the Air Pollution Act, 1987,

(b) any emissions from the activity will comply with, or will not result in the contravention of, any relevant quality standard for waters, trade effluents and sewage effluents and standards in relation to treatment of such effluents prescribed under section 26 of the Local Government (Water Pollution) Act, 1977,

(c) any emissions from the activity or any premises, plant, methods, processes, operating procedures or other factors which affect such emissions will comply with, or will not result in the contravention of, any relevant standard including any standard for an environmental medium prescribed under regulations made under the European Communities Act, 1972, or under any other enactment,

(d) any noise from the activity will comply with, or will not result in the contravention of, any regulations under section 106,

(e) any emissions from the activity will not cause significant environmental pollution, and

(f) the best available technology not entailing excessive costs will be used to prevent or eliminate or, where that is not practicable, to limit, abate or reduce an emission from the activity,

and, where appropriate, the Agency shall attach conditions relating to the matters specified in the foregoing paragraphs to the licence or revised licence.

Conditions 1 to 4 of the IPC Licence outline the Scope, Management, Interpretation and Notification procedures required by the Applicant, respectively. Conditions 11 to 14 detail the

Monitoring (equipment use), Recording and Reporting, Emergency Response and Financial Provisions duties of the Applicant. Conditions 5 to 10 pertain to environmental monitoring and management:

- Condition 5 Emissions to Atmosphere
- Condition 6 Emissions to Water
- Condition 7 Waste Management
- Condition 8 Noise
- Condition 9 Water Protection
- Condition 10 Cutaway Bog Rehabilitation

It is the intention of the of the Applicant to continue implementing and practising the monitoring measures as listed in the Licence after the site is decommissioned, where applicable.

## Current Phase (July 2019 – Present Day)

#### **Decommissioning and Rehabilitation Process**

In January 2021, Bord na Móna formally announced that peat extraction across all bogs within its landholding had ceased, although peat extraction at the Application Site had ceased prior to this in July 2019. The Application Site still operates under the requirements of IPC Licence, and any decommissioning works undertaken with respect to peat extraction activities and all ancillary works are in accordance with Condition 10 of the IPC Licence.

In compliance with Condition 10.1 of the IPC Licence, it is a requirement of the licensee to decommission the Application Site by removing/disposing/recovering buildings, equipment, waste etc. from the Application Site. Typically, these items/infrastructures would be any remaining, unconsolidated plant, equipment and attachments, waste materials, unused raw materials such as land drainage pipes, remaining peat stockpiles, stockpile covering, pumps, septic tanks and fuel tanks. Ongoing decommissioning at the Application Site included removal of peat stockpiles which was completed in November 2022, as well as decommissioning of other infrastructure, which is to follow at a later date.

#### Peatland Climate Action Scheme

The Peatland Climate Action Scheme (PCAS) is a programme of enhanced peatland rehabilitation measures with the primary aim of optimising climate action benefits of rewetting former industrial peat extraction areas by creating soggy peatland conditions that will allow compatible peatland habitats to redevelop. These measures are separate to those defined by the IPC Licence. This programme has been developed to optimise ecosystem service benefits of peatland rehabilitation and restoration, particularly carbon storage and reducing carbon emissions. In addition, this will also benefit biodiversity and water (water quality and catchment management), as well as providing space for local communities and people to enjoy the outdoors. The scheme is supported by Government through Ireland's National Recovery and Resilience Plan administered by the Department of Environment, Climate and Communications (DECC).

## Remedial Phase (Future)

Following the conclusion of the decommissioning activities, Bord na Móna are required under Condition 10.2 of the IPC Licence to prepare (to the satisfaction of the EPA) and implement, a Cutaway Bog Rehabilitation Plan.

Bord na Móna has produced a draft Cutaway Bog Decommissioning and Rehabilitation Plan for each of the three bogs within the Application Site (i.e., Derryaroge Bog, Derryadd Bog, and Lough Bannow Bog). Bord na Móna has finalised the rehabilitation plan for part of Derryaroge Bog (see Derryaroge Cutaway Bog and Decommissioning and Rehabilitation Plan 2023) and this area is currently being rehabilitated. It is the intention of Bord na Móna to rehabilitate the bogs in a phased approach under the requirements of the IPC Licence.

## Future Use of the Site

In line with the Applicant's vision to assist in achieving a climate neutral Ireland by 2050, it is intended to utilise the Application Site for both peatland remediation and wind energy infrastructure and to facilitate environmental stabilisation of the Application Site and the optimisation of climate action benefits.

In July 2023, Bord na Móna Powergen Ltd., a subsidiary of Bord na Móna Plc., requested to close preapplication consultation and issue SID determination from An Bord Pleanála (Ref. 314965-22) for a development consisting of between 22 no. wind turbines and associated works at Derryaroge, Derryadd and Lough Bannow Bogs, known as Derryadd Wind Farm (<u>https://www.derryaddwindfarm.ie/</u>). This position was confirmed by An Bord Pleanála in correspondence to the Applicant dated 16<sup>th</sup> August 2023. The proposed Derryadd Wind Farm will be cumulatively assessed with the Cutaway Bog Decommissioning and Rehabilitation plans for the Application Site bogs in this rEIAR.

The overall permanent footprint of the proposed wind farm will be less than 4% of the total area of the Application Site, and therefore does not impact or change the overall goals and outcomes of the proposed rehabilitation plans.

Both the remedial measures and the proposed Derryadd Wind Farm are cumulatively assessed with the future remedial measures that will be carried at the Substitute Consent Application Site.

## 5.0 PLANNING POLICY

This remedial EIAR provides a strategic planning context for regularizing peat extraction works within the Application Site. It considers national, regional, and local planning policies, including the Climate Action Plan 2024 (CAP24). The chapter also outlines the historical background of peat extraction, highlighting policies that initiated and facilitated its development.

Peatlands have been a significant cultural and economic resource in Ireland for over a thousand years, with turf being a major fuel source by the 17<sup>th</sup> century. The Turf Development Board Ltd, later known as Bord na Móna, was established to manage national peat resources. The use of peat as an indigenous fuel resource gained prominence during World War II due to depleted coal reserves in the UK. Government projects and development programmes were implemented to acquire boglands, develop fuel sources, and create power generation stations for increased energy security and employment.

## National Policy Context

Ireland has historically favoured the use of peat for power generation, recognizing its role in diversifying the fuel mix and supporting rural economies. The National Climate Change Strategy 2000 and 2007 endorsed peat as a source of electricity, establishing new plants for efficient use, and co-firing biomass to reduce greenhouse gas emissions.

However, the National Peatlands Strategy was published by the National Parks and Wildlife Service (NPWS) in 2016 which aims to provide a long-term framework within which all of the peatlands within the State can be managed responsibly in order to optimise their social, environmental and economic contribution to the well-being of this and future generations. Several policies within the strategy encourage the move away from peat extraction and a move toward bog rehabilitation and renewable energy.

This policy shift was further emphasised by the publication of the National Planning Framework (NPF) and the National Development Plan (NDP). In particular, Section 9.2 of the NPF addresses "Resource Efficiency and Transition to a Low Carbon Economy", requiring a shift from fossil fuels to predominantly renewable energy sources. *The NPF also states that future renewable energy planning will focus "in particular on the extensive tracts of publicly owned peat extraction areas in order to enable a managed transition of the local economies of such areas in gaining the economic benefits of greener energy"*.

The revised NPF amends the previous National Strategic Outcome 8 (which outlines the key steps to 'transition to a low carbon and climate resilient society') to reflect the updated legally binding renewable energy and greenhouse gas emissions targets.

Separately, the National Energy and Climate Plan (NECP) 2021-2030 which aims to diversify and decarbonise Ireland's electricity generation sector, reiterates the plan to move away from peat-fired power generation and the implementation of the Just Transition Plan for the midland's region particularly in response to the closure of two ESB power stations and the decision to cease all peat extraction a number of years earlier than had been planned.

With the introduction and enactment of the Climate Action and Low Carbon Development (Amendment) Act 2021, legally binding targets have been set to reduce emissions and increase renewable energy targets. To achieve these targets, annual Climate Action Plans have been produced in Ireland. The Climate Action Plan 2024 (CAP24) is the latest of such plans and provides a roadmap for taking decisive action to halve Ireland's emissions by 2030 and reach net zero by no later than 2050. Priorities 1, 2 and 3 of CAP24 seek to generate employment for former peat communities, to support the rehabilitation and restoration of degraded peatlands and to provide former peat communities with smart sustainable mobility. CAP 24 also identifies the EU's Recovery and Resilience Facility, which is a scheme aimed at rehabilitating peatland and recognises that, once rehabilitated, the peatlands will support peat forming habitats and a mosaic of wetlands, heathlands and grasslands, native woodlands, as well as storing millions of tonnes of carbon, enhancing biodiversity, and contributing to Ireland's target of carbon neutrality by no later than 2050. The EU's Recovery and Resilience Facility, through the National Recovery and Resilience Programme, is investing up to €108 million in the Enhanced Decommissioning, Rehabilitation and Restoration Scheme (EDRRS) to rehabilitate 33,000 ha of peatlands over 82 no. Bord na Móna bogs, previously used for peat extraction for electricity generation.

## **Regional Policy Context**

The Regional Spatial and Economic Strategy (RSES) for the Eastern and Midlands Region provides a high-level development framework and supports the implementation of the NPF and the relevant economic policies and objectives of Government. The RSES includes guiding principles to be applied to development on peatlands, such as, consideration of the potential contribution of peatlands for renewable energy production, existing or proposed greenway/blueway/peatway network, ecosystem services and tourism potential.

## Local Policy Context

The Application Site lies within the functional area of Longford County Council (LCC), and therefore the local policy context is determined by the current and previous Longford County Development Plans (CDPs) and the relevant provisions set out therein.

In respect of historical activities carried out at the Application Site between 1988 and 2019, it is prudent to consider historical county development plans which would have been in force and supportive of peat extraction activities that were being carried out. From the outset it should be noted that as peat extraction has until recent years been exempt from the requirement to obtain planning permission.

Section 8 of the Longford County Development Plan 1990 acknowledges the role of peatlands in agriculture and rural development, specifically, recognising the planned reduction in peat extraction as a "loss of off-farm employments" which "will have serious consequences for the viability of many rural communities in the hinterland of the bogs."

From the perspective of electricity generation, the Longford County Development Plan 2009 – 2015 sought to support the development of the Lough Ree Power Station which was facilitated by the historic peat extraction works within the application site, via policy EC 1 *which aimed "to facilitate the provision, upgrading and maintenance of electricity infrastructure within the County subject to meeting the relevant development management standards."* It also acknowledged the transition to renewable energy sources and potential for future development on bogs within the county under policy ENV 17 and AGR 4.

Since 2015, Longford CDP 2015 – 2021 began to further recognise the tourism and natural amenity potential to restore and develop bogs. The CDP described plans for the Mid Shannon Wilderness Park and to work with Bord na Móna to re-habilitate boglands as *"natural biodiversity locations thus providing Longford with potentially large areas of natural amenity with tourism potential."* 

The Longford CDP 2021 – 2027 continues to support the previous vision of Longford CDP 2015 – 2021 and also reiterate the objectives within the National Peatland Strategy to enable positive restoration works within peatlands. Specific policy objectives such as CPO 10.43 and CPO 10.44 support the enhancement of peatlands enable recreation and tourism while also providing integrated green and blue infrastructure. The CDP also aims to support Bord na Móna under CPO 12.53 and CPO 14.34 to prepare after use framework plans within peatlands to enable future sustainable and environmentally sensitive use of large industrial peatlands sites where peat harvesting is finished. There is also now focus on controlling and regulating development within peatlands under CPO 12.55 and CPO 12.57 to ensure no adverse environmental impacts on local habitats and biodiversity to comply with the Habitats and EIA directives.

The policy objectives listed above highlight the Council's desire to support future sustainable use and access to peatlands across the county. Regularisation of the planning status of sites such as the Application Site through the substitute consent process is an important step in this process.

## Bord na Móna Policy Context

Today, the company has radically changed its approach to face an even greater challenge: climate change. Bord na Móna have ended peat extraction and now focus on developing climate solutions in renewable energy, sustainable waste management, carbon storage, and biodiversity

conservation. Ireland has committed to ambitious climate goals and Bord na Móna's climate solutions are helping to achieve them. Bord na Móna's vision is to help Ireland reach net zero greenhouse gas emissions by 2050 through the implementation of the Brown to Green Strategy 2018. Sustainability 2030 Strategy and Biodiversity Action Plan 2016 -2021, and the Peatland Climate Action Scheme.

## 6.0 POPULATION AND HUMAN HEALTH

This chapter of the rEIAR examines the receiving environment and investigates the potential significant effects on population and human health resulting from Bord na Móna's peat extraction activities and all ancillary works, at the Application Site during the Peat Extraction (1988-2020), Current and Remedial phases at out at the Application Site.

For the purposes of this assessment, while the activities associated with the Project assessed have occurred over the past decades, beginning in 1988 and continuing to present day. Impacts have been assessed against available historical and recent datasets. A baseline condition of the population, socio-economic and local community health in 1988 was established during a desktop study which reviewed national guidance documents, publicly available statistics, surveys, datasets, and resources to assess the past and potential impacts of the project and to provide mitigation and monitoring measures where required.

#### Peat Extraction Phase (1988 – July 2019)

In terms of population, the effects of the industrial peat extraction work on population receptors, such as land use, demographics, employment and economy, property, community facilities and tourism and recreation, were reviewed and assessed, and has been summarised below:

- Land use: The change in land use from the baseline year of 1988 to 2019 is considered to have had a, moderate, neutral, permanent effect in terms of land use at the Application Site;
- Demographic effects: It is considered that from the baseline year of 1988 to 2019, activity at the Application Site would have resulted in a moderate, positive, long-term effect in terms of demographic effects (i.e., on the local population);
- Economic effects: It is considered that activity at the Application Site resulted in a moderate, positive, long-term effect in terms of employment and economy;
- Property values: It is considered that any effects on property value in the area, associated with activity at the Application Site, would have resulted in a neutral, positive, long-term effect in terms of property value;
- Community facilities: It is considered that activities during the peat extraction phase would have resulted in moderate, positive, long-term effects on community facilities;
- Tourism and recreation: It is considered that activities at the site would have resulted in a not significant, neutral, long-term effect on tourism and recreation in the area.

In terms of human health, the effects of the industrial peat extraction work, such as dust nuisance, noise, traffic, and visual effects, have been assessed in the relevant environmental chapters of this rEIAR and referenced in Chapter 6 Population and Human Health. Significant negative effects on the health of sensitive receptors in the local population are considered unlikely due to their distance from the production areas and the seasonal nature of the activity.

#### Current Phase (July 2019 - Present Day)

The current phase would have resulted in job loss and potentially has negatively impacted on the local population. It is therefore considered that the current phase of the Application Site resulted in a moderate, negative, short-term effect in terms of employment and economy in the area. The current phase would have had slight, positive, short-term effect on human health due to the end of peat extraction activities that would have potentially resulted in dust and noise nuisance and emissions.

#### **Remedial Phase**

The future remedial phase is unlikely to have any measurable effects on employment or population numbers in the locality, as the employment numbers are likely to remain similar to those during the current phase. It is considered that the future rehabilitation of the bogs at the Application Site and the potential opportunities for future development will have a moderate, positive, long-term effect on local population and human health.

#### **Residual Effects**

The shift from large-scale peat extraction by Bord na Móna to the current phase has resulted in a decline in direct employment opportunities associated with the Application Site. However, seeking Substitute Consent aims to address the residual impacts of this phase by potentially creating new employment prospects. Despite the reduction in direct employment, the historical positive influence on the local economy, housing development, and economic stability stemming from peat extraction remains. While direct employment opportunities have decreased, the potential for new jobs, along with the continuation of recreational amenities and tourism opportunities, is expected to contribute positively to the local population and economy.

## 7.0 **BIODIVERSITY**

Chapter 7 (Biodiversity) of the remedial EIAR presents the findings of a remedial assessment of the effects on biodiversity (both in isolation and cumulatively with other projects and plans) resulting from Bord na Móna's historic peat extraction and associated works, ongoing decommissioning and management activities, and proposed future rehabilitation measures at the Application Site. Specifically, the effects on biodiversity of the Project are considered across three distinct Phases.

To inform the assessment of the ecological impacts of the Project required for the rEIAR, a range of desktop studies, scoping exercises, consultations, and multidisciplinary field surveys were conducted to gather ecological data on the Application Site and its surrounding area, to establish baseline ecological conditions in July 1988 and the present day.

The desktop studies involved a thorough review of ecological data from multiple sources, including Bord na Móna habitat surveys and rehabilitation plans, aerial imagery and historical maps, NPWS records and national biodiversity databases, and relevant environmental reports.

These desktop studies informed a series of scoping exercises and consultations conducted as part of the EIA process in 2022 and again in 2024, engaging key consultees, including the NPWS.

A comprehensive suite of ecological surveys, conducted between 2010 and 2023, was used to identify the presence or likely presence of habitats and protected species within the Zone of Influence of the Project, establishing the ecological baseline for the Application Site. These surveys, which cover various aspects of biodiversity such as flora, fauna, aquatic environments,

birds, and invasive species, provided the necessary data to assess the impacts of past peat extraction activities, current and ongoing activities, and the future activities proposed for the rehabilitation plans.

Once the ecological baselines were established, the value of key ecological receptors characterising the baselines were determined, and the potential impacts of the Project in the past, present and future were assessed.

#### Peat Extraction Phase (1988 – July 2019)

In July 1988, the Application Site was already in a degraded ecological condition, having undergone extensive land stripping, peat extraction, and related activities. Much of the site was characterised by cutover bog and exposed peat, with only small patches of intact raised bog remaining. As part of its operations at the Application Site, Bord na Móna had established operational control measures prior to 1988 to manage the environmental risks associated with peat extraction. These measures included drainage maintenance, silt pond management, machinery controls, spill response, and proper waste disposal. These control measures, implemented for all operations at the site, were further enhanced by the introduction of additional controls measure to ensure compliance with the IPC Licence that was issued for the Application Site in 2010, which primarily focused on monitoring and managing emissions to water. Despite the control measures, activities during the Peat Extraction Phase have had longterm moderate negative effects on habitats, flora, and fauna at the Application Site. Additionally, these activities affected sites that were hydrologically and ecologically connected to the Project, including areas important for protected plant and animal species. This included proposed Natural Heritage Areas (pNHAs) and designated European sites including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

#### Current Phase (July 2019 - Present Day)

In July 2019, the cessation of peat extraction at the Application Site marked a shift in activities towards removing peat stockpiles, decommissioning infrastructure, and maintaining existing drainage. This transition led to a significant reduction in the level machinery, plant operations, and human activity at the Application, resulting in a notable decrease in the potential for disturbance to habitat and fauna at the Application Site. Careful planning of ongoing decommissioning works, including restricted machinery use, designated activity zones, and ongoing environmental monitoring, have prevented further habitat loss or degradation of water quality. The reduction in site activity has also reduced the risk of pollutant transfer at levels that could significantly impact aquatic habitats or species at pNHAs and designated European sites. While some recovery has taken place at the Application Site, with transition habitats becoming more prevalent, habitats and species populations have not yet returned to pre-impact levels, and legacy impacts continue to impede ecological recovery.

#### Remedial Phase

Future rehabilitation plans for the Application Site aim to restore and enhance the ecological integrity of the peatland through active rehabilitation measures and natural colonisation. These measures will support peatland restoration, soil recovery, and long-term biodiversity enhancement. This restoration process is expected to have a lasting, significant, and positive impact on habitats and water quality within the Application Site, improving overall ecological conditions. Furthermore, enhanced water quality at the site will contribute to the improved condition of water flowing from the Application Site to adjacent proposed pNHAs and designated European sites.

In addition to the rEIAR a separate remedial Natura Impact Statement (rNIS) has been prepared for the Project. The rNIS concludes that the Project has not, and will not, adversely affect the integrity of any European Site, either alone or in combination with other plans or projects.

## 8.0 LAND SOILS AND GEOLOGY

This chapter reports on the results of assessment of any significant effects on Land, Soils and Geology as a result of peat extraction and all ancillary works at the Application Site (Derryaroge, Derryadd and Lough Bannow Bogs) during the Peat Extraction Phase, the Current Phase, and the Remedial Phase.

#### Peat Extraction Phase (1988 – July 2019)

By 1988 industrial peat extraction by the Applicant was well-established at the Application Site. Derryaroge Bog was first drained in 1949, with peat extraction beginning there in 1952. Site preparation and drainage works commenced at Derryadd and Lough Bannow bogs in 1960, with milled peat extraction commencing there in 1964.

Therefore, by 1988 the soils/land at these bogs had already been significantly altered and ancillary structures already in place. In 1988 these areas were utilised for industrial peat extraction with landcover consisting of drained bare or vegetated peat fields separated by field drains. The effect of the excavation of the peat on soils, geology and land did not result in a loss of peat habitat due to the disturbance of bare peat.

The baseline sensitivity of the receiving land use has been assessed as Low on the basis of the no removal of raised bogs (post-1988) in the context of the Application Site. Based on the low sensitivity, low magnitude change of land use during the 1988-2019 Peat Extraction Phase, the potential effects on land use change are not significant and medium term.

#### Current Phase (July 2019 - Present Day)

Following the cessation of peat extraction activities in July 2019, land-use at the Application Site is no longer classified as industrial peat extraction. The Application Site is no longer subject to peat extraction, and the current phase of peat extraction activities will have a positive effect on land and land-use. The Cutaway Bog Decommissioning and Rehabilitation Plans entail the removal of all tea centres, maintenance sheds and railway lines from the peatland areas.

The decommissioning of the bog from peat extraction activities will have positive effects on land use in terms of facilitating alternative uses and sustainable energy development on these peatlands, for example the proposed development of a wind farm.

In terms of the land itself the Current Phase will have a slight positive effect on the landscape of the bog as peat layers are no longer being stripped for harvesting and redundant infrastructure around the bogs will be removed. There are no significant effects during the Current Phase on land and land-use, soils and geology.

#### Remedial Phase

This section presents an assessment of likely significant effects resulting from the Applicant's final and draft Cutaway Bog Decommissioning and Rehabilitation plans for the 3 no. bogs comprising the Application Site on the land, soils and geological environment. Industrial peat extraction has now ceased, and several other decarbonisation measures are being implemented.

The potential effect is considered to be not significant, positive, direct, long-term, certain effect on land use. Any works undertaken as part of the Cutaway Bog Decommissioning and Rehabilitation plans will be completed in compliance with the licence from the EPA until the IPC Licence is surrendered.

## 9.0 HYDROLOGY, HYDROGEOLOGY & WATER QUALITY

This chapter reports the findings of a retrospective assessment of the likely significant effects on Hydrology, Hydrogeology and Water Quality as a result of the Applicants historic peat extraction activities at the Application Site.

The baseline against which the environmental effects of the development required to be assessed has therefore, been identified as being the position as of July 1988. The baseline environment has been established by a desk-based study including, but not limited to, such information sources as the (IPC) Licence, extraction records, Bord Na Móna databases on pet depth and drainage. This data review was supported by site investigation data over the past eight years, in addition to site monitoring which has been undertaken by the Applicant since 2000 as part of the IPC Licence requirements.

The overall area of the Application Site is approximately 2,244 hectares, of which approximately 2,000 hectares were used for the extraction of milled peat. Peat extraction was ongoing on the site prior to the baseline assessment year of 1988 with all areas within the Application Site subject to peat extraction. Drainage for milled peat extraction was in place pre-1988 and there were limited changes to the drainage design since this time. Annual maintenance occurred on the peat drainage channels and silt ponds.

#### Peat Extraction Phase (1988 – July 2019)

Due to the fact that drainage of the peatland occurred between the 1940s and 1960s and peat extraction commenced across all areas by 1964, the main effects of draining the Application Site occurred 25-40 years prior to 1988. Drainage from the Application Site was regulated by limiting discharges via drainage design, and specifically by routing all drainage via field drains, main drains, headland drains, then to silt ponds to outfalls, with final discharge to natural watercourses. In some areas, pumps assist with the discharge of surface water in this hierarchy.

The effects on drainage (hydrology) and bog hydrogeology between 1988 and 2019 are characterised by small annual changes in topography (ground levels reducing) as peat was extracted, with minimal additional changes in baseline hydrology or hydrogeology. The concentration of suspended sediments increased but was within the IPC Licence emission limit values and accepted limits for aquatic organisms.

The Application Site is located in the catchment area for Lough Ree SAC and SPA. As a result, changes to the hydrological/hydrogeological environment at the Application Site would most likely have had an indirect impact on the hydrological/hydrogeological environment of the SAC/SPA. It must be noted, however, that Natura sites were not designated at the commencement of drainage and peat extraction (further information is provided in the Natura Impact Statement). The potential impact on Lough Ree SAC & SPA during the Peat Extraction Phase was not significant, negative and medium term.

Two groundwater abstraction sites were active during the Peat Extraction Phase, i.e., the Lanesborough PWS (ESB borehole) abstraction and the Lisrevagh borehole. According to the

GSI Source Protection Zone Maps<sup>3</sup> there is one Source Protection Zones within the Application Site or in the surrounding region. Due to the low permeability of the soils and subsoils and limited potential groundwater recharge, there is no known significant source pathway receptor and therefore peat extraction and ancillary activities would not have a significant effect

Between 1988 and 2019, hydrological and hydrogeological changes at the Application Site are limited. The main effects were the ongoing discharge of surface water runoff which was controlled by a series of pumps and silt ponds. All effects and risks associated with the peat extraction works were suitably mitigated and controlled in order to prevent and/or minimise the significance of any potential impact. Overall, the hydrological and water quality impact for the period of 1988 to 2019 was slight, direct negative and reversible. The hydrogeological impact for the period of 1988 to 2019 was slight, indirect negative and reversible.

#### Current Phase (July 2019 - Present Day)

The Current Phase includes the period of time between the cessation of peat extraction at the Application Site in 2019 to the present day. Decommissioning of the peat extraction activities is currently underway across the Application Site in accordance with Condition No. 10 of the IPC Licence.

The Peatland Climate Action Scheme (PCAS) is a programme of enhanced peatland rehabilitation measures with the primary aim of optimising climate action benefits of rewetting former industrial peat extraction areas by creating soggy peatland conditions that will allow compatible peatland habitats to redevelop. This scheme is in addition to the IPC Licence requirements and therefore does not form part of this Substitute Consent application and is being applied at specific locations across the Bord na Móna landbank that are identified as suitable for the prescribed enhancement measures.

The Current Phase involves stabilising the remaining peat deposit and setting it on a path to rehabilitation. This process is continuously improving the conditions of the bogs which will continue to reduce the effect of residual effects. Where shallow depths of water occur, rapid colonisation by wetland species is occurring. The Current Phase impact on hydrology, hydrogeology and water quality is slight, direct, long term and positive.

#### Remedial Phase

During the Remedial Phase the Application Site will operate in accordance with IPC Licence requirements until such a time as the licence is surrendered. Silt ponds will be maintained as required. The Cutaway Bog Decommissioning and Rehabilitation Plans aim to rehabilitate the bogs of the Application Site. The Application Site cannot be restored back to raised bog, as the majority of peat has been removed and the environmental conditions have been modified. However other natural habitats have started to develop, such as poor fen, heath, wetlands/reedbeds and birch woodland on shallower peat. In time areas of *Sphagnum* rich embryonic bog communities (on deeper peat) and areas or naturalised peatland can be developed.

The Cutaway Bog Decommissioning and Rehabilitation Plans, PCAS and the delivery of peatland rehabilitation by the Applicant is expected to have a positive impact on water quality and will help the deliver its objectives in relation to the Water Framework Directive and is one of the five key actions.

<sup>&</sup>lt;sup>3</sup> <u>https://www.gsi.ie/en-ie/programmes-and-projects/groundwater/Pages/Data-and-Maps.aspx</u>

The Remedial Phase of the bogs life cycles will further stabilise the remaining peat deposit and set it on a path to rehabilitation. Based on the PCAS and Decommissioning and Rehabilitation Plans, this process will improve the conditions of the bogs and continue to reduce the effect of residual effects on hydrology and hydrogeology. The Remedial Phase impact on hydrology, hydrogeology and water quality is slight to moderate, direct, long term and positive.

## 10.0 AIR QUALITY

This chapter of the remedial EIAR describes and assesses the residual direct and indirect air quality effects of the peat extraction activities and all ancillary works, at the Application Site. The air quality impact assessments have been prepared for the Peat Extraction Phase, the Current Phase and the Remedial Phase.

For the purposes of this assessment, while the activities associated with the Project assessed have occurred in the past, beginning in 1988 and continuing to present day, impacts have been assessed against the most recently published air quality standards which are likely more stringent than historical standards from previous years. Therefore, if it can be determined that, based on the most recent standards, no significant effects occurred as a result of the Project, then it is unlikely that significant effects occurred based on historical standards.

The baseline environment of 1988 has been established with reference to published air quality data from the Environmental Protection Agency (EPA). Historic air quality monitoring data from the EPA for the pollutants nitrogen dioxide (NO<sub>2</sub>), particulate matter less than 10 microns (PM<sub>10</sub>) and particulate matter less than 2.5 microns (PM<sub>2.5</sub>) for representative rural locations was reviewed. The air quality in the region of the Application Site is of generally good quality with concentrations of pollutants below the ambient air quality standards. Historic dust deposition monitoring results for the Application Site were reviewed in order to establish the baseline dust deposition environment. In addition, a number of dust-related complaints have been received in previous years and were reviewed as part of the assessment. Air quality has continued to improve in recent years as a result of the implementation of national plans and policies.

#### Peat Extraction Phase (1988 – July 2019)

Dust emissions during the Peat Extraction Phase had the potential to impact nearby human and ecological sensitive receptors. The Study Area of 250 m outside the Application Site boundary was deemed of medium sensitivity in relation to dust soiling and of low sensitivity to dust related human health impacts. The Study Area is considered of high sensitivity in relation to dust related ecological impacts due to the presence of the Lough Bawn pNHA and Royal Canal pNHA. It was determined that there was an overall medium risk of dust soiling impacts, a low risk of dust-related human health impacts and a high risk of dust related ecological impacts. As part of the IPC licence for the Application Site a number of dust control measures were required to be implemented. In addition, dust monitoring was required to ensure dust emissions were not causing issue at nearby sensitive receptors. Considering the predicted level of dust emission risk and the historic dust complaints it has been assessed that dust emissions from peat extraction works were direct, long-term, localised, negative and slight.

Exhaust emissions from vehicles accessing the Application Site had the potential to impact air quality. The historical traffic figures were reviewed, and it was determined that the traffic generated from the peat extraction and all ancillary works had an imperceptible impact on the local traffic flows.

The impact to air quality as a result of the Peat Extraction Phase was assessed to be long-term, negative, localised and slight.

Current Phase (July 2019 – Present Day)

During the Current Phase, the activity was limited to decommissioning and rehabilitation works. There is the potential for dust emissions associated with the removal of stockpiled peat (which was completed in 2022). The dust control measures stipulated within the IPC licence for the Application Site are required to be in place to avoid potential dust issues. Due to the low number of sensitive receptors and the minimal works involved in removing the stockpiled peat from the Application Site, dust emissions are predicted to have been imperceptible.

Due to the low volume of vehicles and machinery involved in the Current Phase, exhaust emissions are predicted to have an imperceptible impact on air quality.

Impacts will be direct, long-term, localised, negative, and imperceptible with respect to air quality.

#### Remedial Phase

There are minimal works involved in the Remedial Phase that have the potential to impact air quality. The primary activities will involve re-vegetation of the Application Site, drain blocking and re-wetting of the bogs where possible. There is a worst-case low risk of dust soiling, human health and ecological impacts as a result of dust emissions during the Remedial Phase. The impact to air quality from dust emissions will be direct, long-term, localised, negative, and imperceptible.

Emissions from site machinery and vehicles accessing the Application Site during the Remedial Phase will result in a neutral impact to air quality due to the low volume of vehicles involved.

Impacts to air quality during the Remedial Phase will be long-term, localised, negative and imperceptible.

## 11.0 NOISE AND VIBRATION

This chapter of the remedial EIAR describes and assesses the residual direct and indirect noise and vibration effects of the peat extraction activities and all ancillary works, at the Application Site. The noise and vibration impact assessments have been prepared for the Peat Extraction Phase, the Current Phase and the Remedial Phase.

Reference is made to the noise survey carried out in the preparation of the proposed Derryadd Wind Farm planning application (Ref. ABP PA14.303592) to determine baseline noise levels in the receiving environment.

The assessment of noise and vibration due to onsite activity has been conducted in accordance with best practice guidance contained in BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Noise.

The significance of effects of peat extraction and related activities is described in accordance with the EPA guidance document 2022 Guidelines on the information to be contained in Environmental Impact Assessment Reports (EIAR).

#### Peat Extraction Phase (1988 – July 2019)

The noise assessment concluded that noise emissions and vibration generated during the Peat Extraction Phase were not significant as only in a very limited number of areas, the peat extraction activity had the potential to be within 200 m of a noise-sensitive location. The potential effects at the nearest noise sensitive associated with the Peat Extraction Phase are described as negative, not significant and long-term.

Peat was transported solely by internal rail network during the Peat Extraction Phase. In terms of the additional traffic on local public roads due to activity on site, the effects at the nearest noise sensitive were also long-term negative and not significant.

#### Current Phase (July 2019 - Present Day)

Peat extraction activities ceased in July 2019. Decommissioning is underway across the site and includes removal of all tea centres, maintenance sheds, rail tracks, diesel storage tanks, septic tanks and removal of materials from site.

The potential effects at the nearest noise sensitive location associated with the Current Phase are described as negative, not significant and short-term.

#### Remedial Phase

At the beginning of the rehabilitation works, the main activities will be the blocking of drains in the bog in general and the ploughing of gravel slopes. Predicted noise levels are likely to be lower than those predicted for the decommissioning phase as works will be localised and short-term. No significant noise effects are likely at noise-sensitive locations. Similarly, vehicle movements to and from the site will be minimal.

Given the nature of the works discussed above, no vibration effects are expected at off-site locations.

The potential effects at the nearest noise sensitive location associated with the Remedial Phase area described are as negative, not significant, and long-term.

## 12.0 LANDSCAPE & VISUAL

The assessments in this chapter determined the landscape and visual effects that have occurred (or are likely to occur) during three differing timeframes termed 'phases' (as described in Chapter 4).

**Landscape assessment** relates to changes in the physical environment, brought about by a development, which may alter its character.

**Visual Impact Assessment** relates to changes in the composition of views as a result of changes to the landscape, how these are perceived and the effects on visual amenity. Such impacts are population-based, rather than resource-based, as is the case of landscape impacts.

On balance of the geographical extent of likely landscape and visual effects and the need for a proportionate yet robust assessment, a 5km radius Study Area for the rLVIA was used for the assessment.

Given that peat extraction had been long established and was underway across the expanse of the Application Site by 1988, the landform, land cover and drainage would have appeared much the same at the baseline date as at present day.

#### Peat Extraction Phase (1988 – July 2019)

In terms of landscape effects, there was a broad-scale and comprehensive physical landscape impact on the bog itself from the extraction operations. In combination with the extraction activities and associated transport infrastructure, this would have contributed to an industrialisation of the previously naturalistic bog landscape, but most of this had already occurred prior to 1988. For this reason, the landscape impacts of the Peat Extraction Phase from 1988 to cessation in 2019 are not considered to have been significant.

In terms of visual impacts, in 1988 peat extraction activities would have been at peak extraction during the summer months and a considerable portion of the bog had been cutaway or drained and prepared for extraction. Visual impacts would have related to movement of workers and machinery, transport and transport infrastructure, as well as accommodation and welfare facilities. From most receptor locations it is likely that the full extent of the Application Site was not visible as there are relatively few open views across the bogs from the public realm. From some locations, such as sections of the N63 road that passes between the Derryaroge and Derryadd bogs, there would have been notable visual impacts. Likewise, from the R398 that runs between Derryadd Bog and Lough Bannow Bog. Given that industrial-scale peat extraction was a long-established feature of summer months, it is not likely that significant visual impacts occurred between 1988 and the cessation of peat extraction in 2019. Cumulative effects were considered to be most noticeable in combination with the associated construction and operation of original Lanesborough Power Station and later Lough Ree Power Station as well as the ash disposal fields. However, cumulative effects are not considered to have been significant.

#### Current Phase (July 2019 - Present Day)

The current phase from 2019 to the present day, following the cessation of peat extraction works, represents lesser landscape and visuals effects, which are not deemed to be significant.

#### **Remedial Phase**

The remedial phase involves the rewetting of bogs and establishment of biodiversity measures which will have a positive effect on the landscape and visual setting.

## 13.0 CULTURAL HERITAGE

Chapter 13 of the remedial EIAR presents the results of a cultural heritage impact assessment of the historical peat extraction and all associated ancillary works carried out by the Applicant at the Application Site.

#### Peat Extraction Phase

Over the course of the extraction/operational phase (1988-2019) a total of four hundred and forty eight SMRs and numerous archaeological artefacts have been recorded in the Application Site. Peat extraction activities and all ancillary works, including drains, milling, and extraction could have resulted in a significant, direct negative effect on the cultural heritage. However with the mitigation measures implemented the works have had a direct positive effect on the cultural heritage. There has been an increase in the level and understanding of the archaeological and

historical landscape as a result of archaeological assessments, subsequent excavations and preservation works.

The various acts (National Monuments Acts, Turf Development Acts 1946 - 1998 (section 56) and the 2012 Code of Practice) have afforded appropriate protection for the environment and archaeological heritage.

### Sub-Surface Archaeology

Bog landscape features were often utilised throughout all periods of history and the anaerobic conditions preserve organic matter, such as wood and leather, which does not often survive in more usual terrestrial archaeological conditions. Objects can be preserved in peatlands because of the acidity of peat and the anaerobic environment which exists within peatland deposits. Peatland Surveys within the Application Site were first carried out in the late 1980's, 1991 and subsequent reassessment surveys in 1999, 2013 and 2018. These surveys allowed for the identification of any finds, features or deposits on either the peat fields, or along drain sections which led to mitigatory investigations and excavations in selected areas.

It is possible that the proposed rehabilitation activities such as drain blocking, re-wetting etc will also effect potential archaeological finds, features and deposits. These activities fall under the Code of Practice 2012 in the same way as peat extraction works are dealt with. All such activities are being undertaken under the IPC licence and in this regard, therefore, any mitigation measures implemented are under the remit of the Applicant and the now Department of Housing, Local Government and Heritage and will mitigate the potential for significant effects.

#### Built Heritage (Protected Structures)

The NIAH maintains a non-statutory register of buildings and structures recorded on a county basis. The register indicates that no structures have been directly impacted by the Application Site. Some of the structures recorded in the NIAH are part of the infrastructure of the peat development works located outside the Application Site boundary. These consisted Lough Ree Power Station and buildings- Reg. Nos. 13310014-15; 13310021) and the bridge Reg. No. 13401202.

#### **Current Phase and Remedial Phase**

Current activities include decommissioning and rehabilitation, both of which fall under the IPC licence in the same way as past peat extraction activities and all ancillary works and in this regard any effects as a result of drain blocking or trekking over peat as part of the restoration programme fall under the current Code of Practice (2012) between the Applicant and the now Department of Housing, Local Government and Heritage.

An AIA of Derryaroge Bog, Co. Longford recommended a 20m buffer zone to be established around the recorded monument LF017-028. The report also recommended 'should any previously unknown archaeological material be uncovered during the rehabilitation works, it should be avoided and reported to the Bord na Móna Archaeological Liaison Officer and the National Museum of Ireland." (2023)

Potential indirect effects (visual impacts) of the Current Phase are scoped out as the current phase of activities are not considered to have a wider landscape negative effect on the Cultural Heritage Environment. Archaeological monuments and features of architectural heritage merit which are located away from the Application Site are not capable of having their settings affected by localised / transient works within the Application Site.

The Applicant has produced a Cutaway Bog Decommissioning and Rehabilitation Plan for all bogs of the Application Site, and it is the intention of the Applicant to rehabilitate the bogs in a phased approach under IPC licence. Mitigation measures to be implemented as part of the Cutaway Bog Decommissioning and Rehabilitation Plan programme are under the remit of the aforementioned bodies, therefore the Archaeology Code of Practice will mitigate against the potential for significant effects during this phase. Remedial activities such as drain blocking or tracking over peat fields may have a negative effect on any sub-surface archaeological finds or features that may be present on or beneath the surface of the peat. This may result in a permanent, negative and significant effect. Since peat activities associated with the Applicant fall under the 2012 Archaeological Code of Practice, any potential effects may be dealt with in the same way as past peat extraction activities and all ancillary works and in this regard the overall significance of effects will be slight – moderate.

## 14.0 MATERIAL ASSETS INCLUDING TRAFFIC TRANSPORTATION

This chapter of the remedial EIAR assesses the likely significant effects of the historical peat extraction activities and all ancillary works on Material Assets. Following detailed EIA scoping and evaluation of the Project, the Material Assets brought forward for assessment in this chapter are Traffic and Transportation and Other Material Assets, namely Electricity, Water Supply Infrastructure, Wastewater Services & Infrastructure and Waste Management and Telecommunications & Aviation.

## **Traffic and Transport**

Between 1952 and 2021, peat which was extracted from the Application Site was transported via internal private rail network was predominantly utilised for the transportation of peat to the power station (originally Lanesborough Power Station, and subsequently the Lough Ree Power Station). Less frequently, this rail network also facilitated the transportation of materials to locations on the bog for operations or maintenance purposes as required. Post-2021, peat stockpiles were transported by heavy goods vehicles (HGVs) via the local road network. A review of potential impacts on the road network from the movement of peat since 2021 has been undertaken, in addition to a review of the staff traffic movements during the Peat Extraction Phase, Current Phase and Remedial Phase.

The assessment for the Peat Extraction Phase focuses on the impact of staff vehicles travelling to work for peat extraction on the surrounding road network, and the impact of both staff vehicles and Heavy Goods Vehicle traffic movements on the surrounding road network during the Current Phase and future Remedial Phase.

Staff traffic volumes from 1988 were compared with existing traffic conditions to assess the impacts of the peat extraction to the traffic volumes of the area. The traffic generated due to historic peat extraction activities have had a minimal impact on road users, as peat was transported via the rail network. Where road transport was utilised by staff, the facilities are in close proximity to the national and regional road networks, which they do not saturate. Traffic generated to and from the Application Site during the Peat Extraction Phase between 1988 and 2019 is considered to have had an imperceptible long-term negative effect on traffic volumes, roads and road users.

The traffic generated to and from the Application Site during the Current Phase (including peat stockpile transport, which has ceased) is considered to be a negative, short term, imperceptible effect on traffic volumes, roads and road users.

The Remedial Phase will have a imperceptible negative impact on traffic volumes, roads and road users.

## Other Material Assets

This chapter also reviews other Material Assets, namely Electricity, Water Supply Infrastructure, Wastewater Services & Infrastructure and Waste Management and Telecommunications & Aviation.

There is no public water supply or gas infrastructure within the Application Site. Electricity supply to Mountdillon Works buildings and workshops, and also to the surface water pump stations across the Application Site, was powered by mains electricity from the national electricity grid supplied from overhead 110kV and 38kV electrical power lines which cross the Application Site to the south of the Mountdillon Works and at the northern end of Derryaroge Bog. Onsite welfare facilities for Mountdillon Works staff were contained to an onsite septic tank and percolation system. These other material assets were not impacted by the Peat Extraction Phase and Current Phase activities, and will continue during the Remedial Phase. A scoping exercise with the Irish Aviation Authority indicates no telecommunication or aviation assets have been impacts by the Peat Extraction Phase and Current Phase activities.

Bord na Móna was granted an IPC Licence for the Mountdillon Bog Group (within which the Application Site is located) in May 2000. Since the grant of the IPC Licence, control measures are in place to monitor emissions to water, protection of water and all waste materials are to be recorded, weighed, recycled or reused where possible, and removed from site by licensed contractors.

## 15.0 CLIMATE

This chapter of the rEIAR describes and assesses the residual direct and indirect climate impacts of the peat extraction activities and all ancillary works, at the Application Site. The climate impact assessments have been prepared for the Peat Extraction Phase, the Current Phase and the Remedial Phase.

For the purposes of this assessment, while the activities assessed have occurred over the past decades, beginning in July 1988 and continuing to present day, impacts have been assessed against the most recently published climate guidance and policies which are likely more stringent than historical policies from previous years. Therefore, if it can be determined that, based on the most recent standards, no significant effects occurred as a result of the Project, then it is unlikely that significant impacts occurred based on historical standards. The climate impact assessment comprised a quantitative assessment of the carbon emissions as a result of the peat extraction activities and all ancillary works.

Historic climate data was reviewed in reference to Ireland's weather for the surrounding area of the Application Site over the period July 1988 to present day. Climate is defined as the average weather over a period of time, whilst climate change is a significant change to the average weather. Climate change is a natural phenomenon but in recent years human activities, which have resulted in the release of GHGs, have impacted on the climate. Climate change has led to an increase in the frequency of extreme weather conditions such as storms, floods and droughts. Historic National greenhouse gas (GHG) emissions published by the Environmental Protection Agency (EPA) were also reviewed and used to inform the climate baseline assessment. National greenhouse gas (GHG) emissions are required to meet EU specific targets, however Ireland's annual GHG emissions have been in exceedance of these targets thus far.

Peat Extraction Phase (1988 – July 2019)

The CO<sub>2</sub> emissions associated with the peat extraction activities and all ancillary works over the period July 1988 – 2019 were calculated. On average over this 31-year period there was 274,149 tonnes of CO<sub>2</sub> per annum released from the Application Site. Annually this equates to 0.84% of Ireland's non-ETS 2030 target of 33,381 KtCO<sub>2</sub>e (as set out in *Commission Implementing Decision (EU) 2020/2126 of 16 December 2020 on setting out the annual emission allocations of the Member States for the period from 2021 to 2030 pursuant to Regulation (EU) 2018/842 of the European Parliament and of the Council*). The removal of the carbon store of the Application Site and the subsequent release of CO<sub>2</sub> from the peat extraction

activities and all ancillary works resulted in a long-term, negative and significant impact to climate.

#### Current Phase (July 2019 - Present Day)

As peat extraction has ceased since July 2019, carbon losses associated with peat removal and the subsequent impact to climate are not relevant to this phase.

There is the potential for some minor GHG emissions associated with vehicles accessing the Application Site for removal of stockpiled peat or for monitoring works. However, the number of vehicles accessing the Application Site will be minimal and GHG emissions associated with these are not predicted to be significant in relation to Ireland's climate budgets and sectoral emissions ceilings. The impact to climate is short-term, negative and imperceptible which is overall not significant.

#### Remedial Phase

The primary focus of the rehabilitation plans is re-wetting the bogs which will aid in restoring the carbon store function and promote the carbon sink potential of the land. The purpose of the Remedial Phase of the Project is in line with a number of key actions and priorities within the Climate Action Plan 2024 in relation to the rehabilitation of peatlands, specifically those within the mid-lands area. With the enhancement of the carbon sink potential of the land, albeit, to a lesser extent than the potential prior to the historic removal of the peat, the Application Site will aid in Ireland's trajectory towards net zero by 2050, the project will aid in Ireland's trajectory towards net zero by 2050.

The impact to climate is considered long-term, neutral and not significant.

## 16.0 INTERACTIONS

Chapters 6 to 15 of this remedial EIAR identify and outline the potential significant environmental effects that may have occurred, and which are likely to occur into the future, in terms of Population and Human Health, Biodiversity, Land, Soils and Geology, Hydrology, Hydrogeology and Water Quality, Air Quality, Noise and Vibration, Landscape and Visual, Cultural Heritage (Archaeological, Architectural and Cultural Heritage), Material Assets (including Traffic and Transport), and Climate as a result of the Project.

This Chapter of the remedial EIAR presents the potential for interaction of environmental effects. For any project with the potential for significant environmental effects there is also the potential for interaction to occur between these potential significant effects. The result of interactive effects may exacerbate the magnitude of the effects, or improve them, or have a neutral effect. An interaction matrix is presented as part of this chapter in the remedial EIAR.

This identifies potential interactions between the various environment aspects assessed in this rEIAR. The matrix highlights the occurrence of potential interaction (either positive or negative effects) during the Peat Extraction Phase, Current Phase, and Remedial Phase.

**TOBIN** 

## www.tobin.ie

Limerick

V94V298 Ireland



**Galway** Fairgreen House, Fairgreen Road, Galway, H91 AXK8, Ireland. Tel: +353 (0)91 565 211

Dublin Block 10-4, Blanchardstown Corporate Park, Dublin 15, D15 X98N, Ireland. Tel: +353 (0)1 803 0406

Castlebar Market Square, Castlebar, Mayo, F23 Y427, Ireland. Tel: +353 (0)94 902 1401 @tobinengineers

Sligo First Floor, Carroll House, 15/16 Stephen Street Unit 4, Crescent Court, St Nessan's Road, Dooradoyle, Co Sligo Tel: +353 (0)71 9318 844 Tel: +353 (0)61 976 262

