



DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

LONGFORDPASS, LITTLETON, LANESPARK AND DERRYVELLA BOGS – APPLICATION FOR SUBSTITUTE CONSENT

Non-Technical Summary (NTS)

Prepared for:
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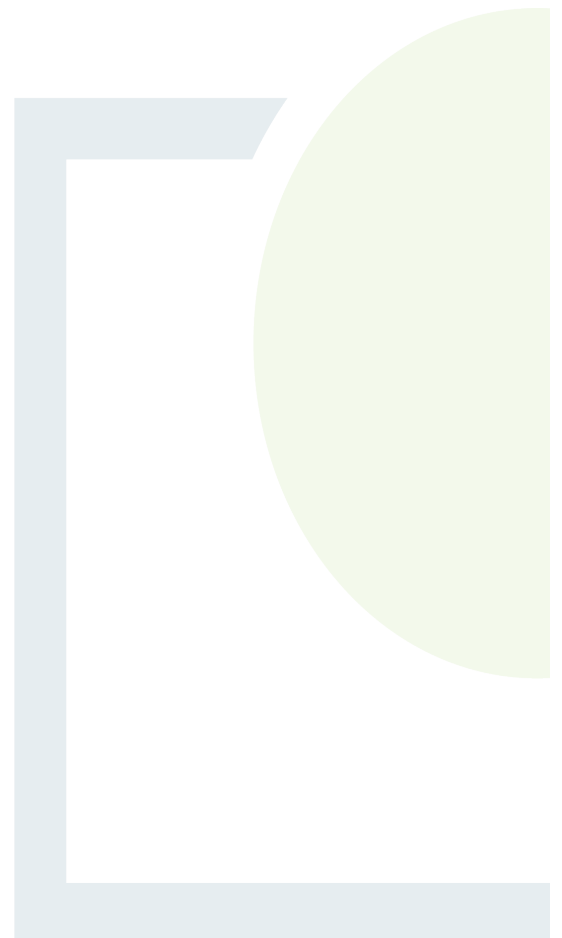


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1. INTRODUCTION

1.1 Introduction

This Remedial Environmental Impact Assessment Report (rEIAR) has been prepared in support of an Application for Substitute Consent for peat extraction and ancillary activities carried out at Longfordpass, Littleton, Lanespark and Derryvella bogs in County Tipperary, from July 1988 to the present day.

The rEIAR accompanies an application made by Bord na Móna Energy Ltd. (hereafter 'the Applicant'), to An Coimisiún Pleanála under section 177E of the Planning and Development Act 2000 (as amended). It also includes a remedial Natura Impact Statement (rNIS).

1.2 Legislative and Planning Context

European environmental legislation, including the EIA Directive and the Habitats Directive, does not apply retrospectively to development that took place before their transposition into Irish law. The EIA Directive was required to be transposed into Irish law by 1988, and this date therefore forms the baseline for the assessment.

Irish planning legislation subsequently introduced specific procedures for substitute consent applications, including requirements for:

- Demonstration of exceptional circumstances; and
- Preparation of a remedial Environmental Impact Assessment Report addressing environmental effects that have occurred, are occurring, or may reasonably be expected to occur.

The rEIAR has been prepared in accordance with these legislative requirements and with current EPA guidance on Environmental Impact Assessment Reports.

1.3 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.

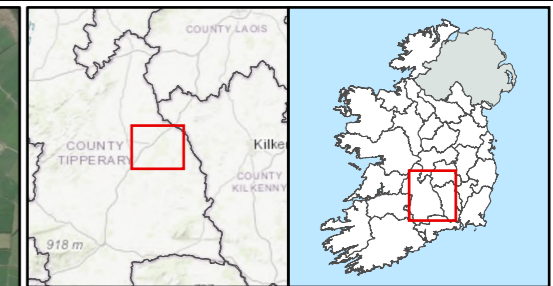
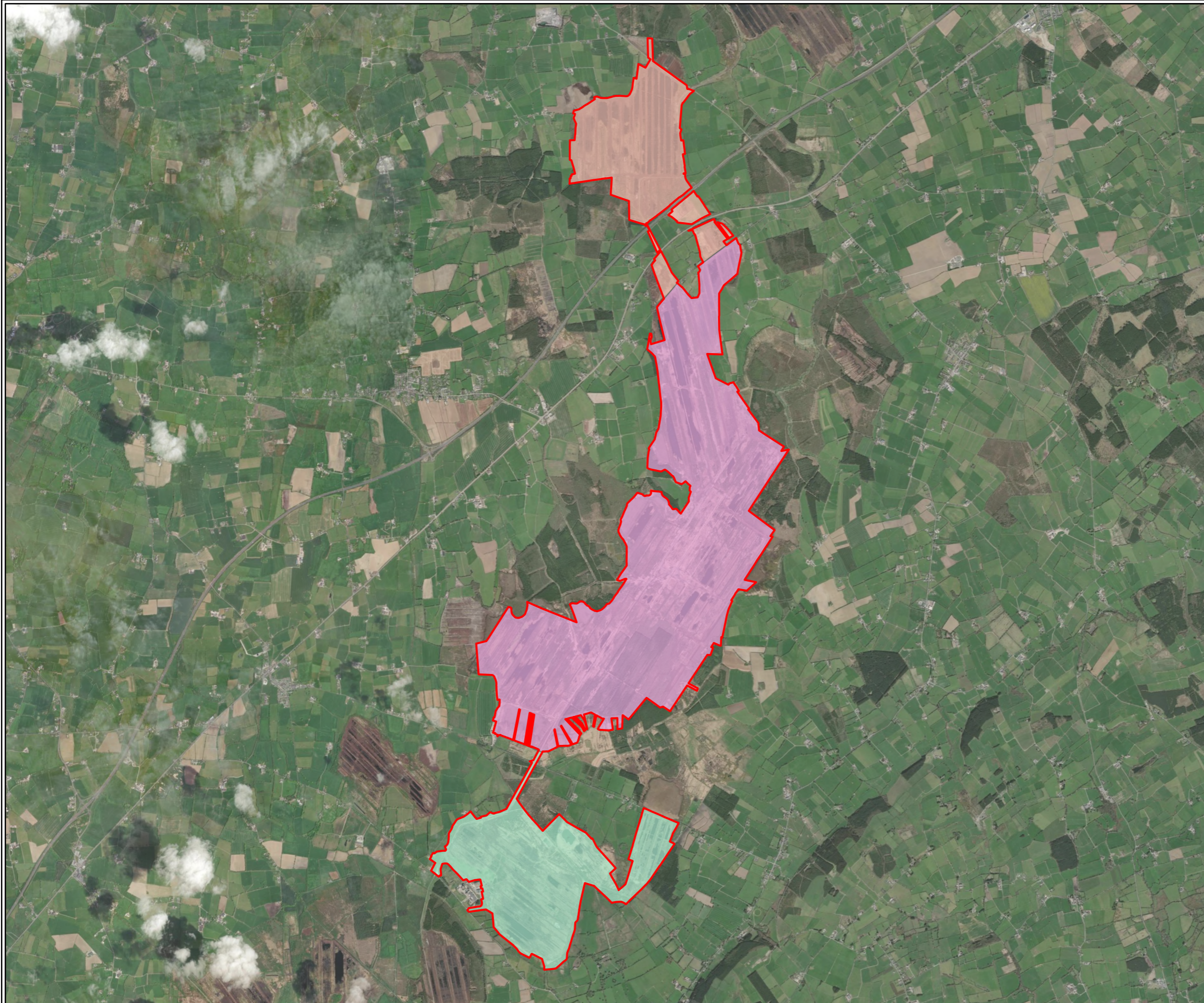
To power a net zero future, Bord na Móna are expanding its renewable energy infrastructure. Although they have been constructing and maintaining large-scale infrastructure for decades, the company is now using that experience to build renewable energy developments across the country. These developments 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.

1.4 The Application Site

The Application Site forms part of the Littleton Bog Group and comprises four bogs:

- Longfordpass Bog;
- Littleton Bog;
- Lanespark Bog;
- Derryvella Bog.

Together, these bogs cover an area of approximately 1,616 hectares and are located in north County Tipperary, approximately 3 km east of Littleton village. The Application Site has been subject to drainage and peat extraction activities since the mid-20th century and includes extensive drainage networks and associated infrastructure. The site is identified in Figure 1-1 below.



- Legend**
- Site Boundary
 - Lanespark Derrylvella
 - Littleton
 - Longford Pass

TITLE:	Site Location		
PROJECT:	Littleton Peat Extraction Substitute Consent		
FIGURE NO.:	1.1		
CLIENT:	Bord na Móna Energy Limited		
SCALE:	1:50,000	REVISION:	0
DATE:	07/05/2026	PAGE SIZE:	A3





1.5 Project Phases

For the purposes of the rEIAR, the Project is assessed across three defined phases:

- ‘Peat Extraction Phase’: peat extraction and ancillary activities at the Application Site from July 1988 to the cessation of peat extraction in 2017 (July 1988 – 2017). The Peat Extraction Phase is described in detail in Sections 4.4 to Section 4.7 of Chapter 4 - Description of Development, Volume 2.
- ‘Current Phase: the management of the Application Site since 2017 to present day including decommissioning works and Rehabilitation Phase 1 works. The Current Phase is described in detail in Section 4.7 and Section 4.8 of Chapter 4 - Description of Development, Volume 2.
- ‘Remedial Phase’: the activities intended to be carried out at the Application Site into the future (Rehabilitation Phase 2 works). The Remedial Phase is described in detail in Section 4.9 of Chapter 4 - Description of Development, Volume 2.

1.6 Purpose and Scope of the rEIAR

The purpose of the rEIAR 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 ancillary activities at the Application Site.

The rEIAR provides the environmental information required by An Coimisiún Pleanála to carry out a remedial Environmental Impact Assessment (rEIA) as part of its determination of the substitute consent application.



1.7 Structure of the rEIAR

The rEIAR is structured using a grouped format, with individual chapters addressing specific environmental topics.. These chapters include:

- Chapter 1 – Introduction
- Chapter 2 – Background
- Chapter 3 – Consideration of Reasonable Alternatives
- Chapter 4 – Description of the Development
- Chapter 5 – Population and Human Health
- Chapter 6 – Biodiversity
- Chapter 7 – Land, Soils and Geology
- Chapter 8 – Hydrology, Hydrogeology and Water Quality
- Chapter 9 – Air Quality
- Chapter 10 – Noise and Vibration
- Chapter 11 – Landscape and Visual Impact Assessment
- Chapter 12 – Cultural Heritage
- Chapter 13 – Material Assets (including Traffic and Transport)
- Chapter 14 – Climate
- Chapter 15 – Interaction of the Foregoing
- Chapter 16 – Schedule of Mitigation and Monitoring Measures

1.8 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.



2. BACKGROUND

2.1 Introduction

Chapter 2 of the rEIAR sets out the historical, planning and policy context that underpins the Application for Substitute Consent for historical peat extraction and ancillary activities at the Application Site,.

The chapter explains why peat extraction took place, how it was historically regulated, how national planning and climate policy has evolved over time, and how the current substitute consent application fits within today's legislative and policy framework.

2.2 Historical Background of Peat Extraction in Ireland

Peatlands have played an important role in Ireland's economic and social history for centuries, particularly as a local fuel source. Large-scale, organised peat extraction emerged during the 20th century as part of national efforts to improve energy security and reduce reliance on imported fuels.

From the early 1900's, increasing attention was given to peat as a national resource. During the Second World War, shortages of imported coal highlighted the importance of indigenous fuel supplies, providing a significant impetus for the expansion of peat production across Ireland.

2.2.1 The Turf Development Board and the Establishment of Bord na Móna

The Turf Development Board Ltd. was established in 1934, and tasked with surveying and developing Irish peatlands. Extensive surveys of bogs across the country were undertaken to identify areas suitable for mechanised peat extraction.

In 1946, the Turf Development Board was replaced by Bord na Móna, which was given statutory responsibility for the development, management and use of the State's peat resources. This marked the beginning of a long period of structured peat extraction and associated infrastructure development across large areas of the Irish midlands.

2.2.2 National Development Programmes and Expansion of Peat Extraction

Following the establishment of Bord na Móna, a series of national development programmes were implemented:

- First Development Programme (post-1946): Focused on mechanised peat extraction, peat-fired electricity generation and employment creation in rural areas.
- Second Development Programme (from the early 1950s): Expanded peat production significantly, introduced milled peat, developed new power stations and extended associated rail and drainage infrastructure.
- Third Development Programme (from the early 1970's to late 1980's): Significant progress in drainage and development works.

These programmes led to the widespread development of bogs for industrial peat extraction, including the bogs that now comprise the Application Site.



2.3 Development at the Application Site

Peatland development for industrial peat extraction at Littleton, Longfordpass, Lanespark and Derryvella Bogs began in the early 1940s, with drainage works commencing from 1941 and peat extraction beginning in the 1950s.

Over subsequent decades, the Application Site was progressively developed for sod peat and milled peat extraction, supported by extensive drainage networks and rail infrastructure.

Industrial-scale peat extraction continued at the Application Site until 2017, when industrial peat extraction by the Applicant ceased. Remaining stockpiled peat was removed by 2019, and the Application Site has since entered a phase of decommissioning and rehabilitation.

2.4 Planning History and Regulatory Context

For much of the 20th century, peat extraction was considered either exempted development or lawful under earlier planning legislation. This changed gradually as European environmental legislation was introduced and transposed into Irish law.

Key developments included:

- The Environmental Impact Assessment (EIA) Directive, required to be transposed into Irish law in July 1988;
- The introduction of Section 4(4) of the Planning and Development Act 2000, as amended, clarifying that development is no longer exempt where EIA or Appropriate Assessment is required;
- A series of planning and court decisions from 2012 onwards, which confirmed that large-scale peat extraction requires environmental assessment and planning consent.

2.4.1 Integrated Pollution Control (IPC) Licensing

Peat extraction at the Application Site has been regulated since 2001 under an Integrated Pollution Control (IPC) Licence issued by the Environmental Protection Agency (EPA) (Licence No. P0499-01).

The IPC Licence sets strict conditions governing environmental protection, emissions, monitoring, waste management and rehabilitation. Although peat extraction has ceased, Bord na Móna continues to operate under the licence for site management, decommissioning and rehabilitation, with ongoing oversight by the EPA.

2.4.2 Planning Policy Context

Chapter 2 reviews a wide range of national, regional and local policies relevant to the Application Site. Key themes include:

- Climate Action and Decarbonisation: National policy now focuses on ending peat extraction, reducing greenhouse gas emissions and supporting a Just Transition for peat-producing regions.
- Peatland Rehabilitation: Policies support the restoration and re-wetting of degraded peatlands to improve biodiversity, carbon storage and water regulation.
- Future Use of Cutaway Peatlands: Strategic planning policy recognises the potential of cutaway bogs for appropriate after-uses, including renewable energy, amenity, biodiversity and tourism.



The cessation of peat extraction and the rehabilitation of the Application Site are considered consistent with these policy objectives.

2.4.3 Bord na Móna Policy and Transition Strategy

Bord na Móna's 'Brown-to-Green' Strategy, launched in 2018, formalised the company's transition away from peat extraction towards climate solutions, including renewable energy, peatland rehabilitation and biodiversity conservation.

In January 2021, Bord na Móna formally confirmed the permanent cessation of all industrial-scale peat extraction on its lands. The Application Site is now being managed in line with this strategic shift, with rehabilitation works required under company policy and IPC licensing conditions.

2.5 Cumulative Impact Assessment

Chapter 2 also describes the cumulative impact assessment process undertaken as part of the rEIAR. This examines whether peat extraction at the Application Site, when considered alongside other past, present and reasonably foreseeable developments, could give rise to cumulative environmental effects.

Relevant developments were reviewed across three phases:

- Peat Extraction Phase (1988–2017)
- Current Phase (2017–present day)
- Remedial Phase (future uses)

The assessment framework ensures that cumulative effects are considered consistently across all environmental topics considered in the rEIAR.

2.6 Scoping and Consultation

A scoping process was carried out to inform the preparation of the rEIAR. Statutory bodies, local authorities and relevant organisations were consulted in December 2022 and again in January 2026 to identify key environmental issues and information requirements.

In addition, a pre-planning consultation meeting was held with An Coimisiún Pleanála in February 2026 to confirm the scope, structure and submission requirements for the substitute consent application.



3. CONSIDERATION OF REASONABLE ALTERNATIVES

3.1 Introduction

Chapter 3 – Consideration of Reasonable Alternatives explains the alternative options considered in relation to peat extraction and future use of the Application Site, and the reasons why the selected approach has been adopted.

The consideration of alternatives is a required part of the Environmental Impact Assessment (EIA) process and ensures that environmental considerations inform decision-making.

3.2 Scope and Approach to Alternatives

The assessment of alternatives is undertaken in line with European and Irish EIA guidance. Given that peat extraction and ancillary activities at the Application Site began many decades ago and were already fully established by 1988 (the rEIA baseline year), the range of realistic alternatives is constrained.

The chapter therefore considers alternatives that were reasonably available at the relevant times, focusing on whether different approaches could realistically have been pursued having regard to legal, technical, economic and environmental factors.

The following types of alternatives are examined:

- The 'Do-Nothing' option
- Alternative locations
- Alternative industries or land uses
- Alternative layouts and processes
- Alternative control measures
- Alternatives to rehabilitation

3.3 'Do-Nothing' Option

The 'Do-Nothing' option considers what would have happened if peat extraction had ceased at the Application Site in 1988.

At that time, peat extraction was already well established, drainage infrastructure was fully in place and the activity operated under a clear statutory mandate. There was no legal or policy requirement in 1988 to halt peat extraction, and the uncertainty regarding its planning status did not arise until many years later.

As industrial peat extraction has already occurred and ceased in 2017, the 'Do-Nothing' option is not considered a realistic alternative. In the current context, a refusal of substitute consent would not result in a reversal of historic impacts, and rehabilitation would continue independently under IPC licensing requirements.



3.4 Alternative Locations

Alternative locations for peat extraction were not considered realistic by 1988. The Application Site had been selected following extensive national surveys of peatlands and had already benefited from decades of investment in drainage, rail infrastructure, processing facilities and a trained workforce.

Relocating peat extraction to new, undeveloped bogs would likely have resulted in greater environmental disturbance than continuing operations on an already modified site. Accordingly, alternative locations were not considered a reasonable option.

3.5 Alternative Industries and Land Uses

A wide range of alternative land uses for cutaway bogs were examined historically by Bord na Móna, including:

- Agriculture
- Forestry
- Horticulture

Extensive trials showed that these uses were generally technically challenging and economically unviable on cutaway peatlands due to peat depth variability, drainage conditions and poor productivity.

In contrast, cutaway bogs have since been demonstrated to be suitable for renewable energy development, particularly wind energy, alongside large-scale peatland rehabilitation. Renewable energy offers climate benefits, employment opportunities and compatibility with environmental rehabilitation.

3.6 Alternative Layouts, Processes and Control Measures

The layout and processes used for peat extraction and ancillary activities evolved over time based on operational experience and technological improvements. Drainage design, extraction methods and machinery were adapted to local conditions to maximise efficiency and minimise environmental effects.

Environmental control measures were progressively enhanced, including silt management, archaeological protection and, from 2001, comprehensive regulation under the EPA Integrated Pollution Control (IPC) Licence. These controls represent the most effective and appropriate measures available during the operational period.

No alternative layouts or extraction processes were identified that would have materially reduced environmental effects beyond those already implemented.

3.7 Alternatives to Rehabilitation

Rehabilitation of the Application Site is a statutory obligation under the EPA licence and is being implemented regardless of the substitute consent application.

Not undertaking rehabilitation is therefore not a realistic alternative. Rehabilitation measures are intended to address legacy impacts, stabilise peatlands and enhance biodiversity.



4. DESCRIPTION OF THE DEVELOPMENT

4.1 Introduction

This chapter describes the development and use of the Longfordpass, Littleton, Lanespark and Derryvella bogs, collectively referred to as the Application Site, from the early 1940s through to the present day, and outlines the future remedial and rehabilitation measures planned for the Application Site. The chapter supports an application by Bord na Móna for substitute consent for peat extraction and ancillary activities carried out after July 1988, when Environmental Impact Assessment (EIA) requirements first became a legal requirement in Ireland.

While peat extraction and ancillary activities began several decades before this date, July 1988 is used as the environmental baseline for assessment purposes. Earlier activities are described to provide background context and to allow cumulative environmental effects to be properly understood.

4.2 Project Description

The Application Site covers approximately 1,616 hectares in north County Tipperary, located around 3 km from Littleton village and adjacent to the M8 motorway. The development consists of peat extraction and associated drainage, vegetation clearance and infrastructure works carried out by Bord na Móna since July 1988. These activities include the use and maintenance of drainage networks, rail infrastructure, pumps and silt ponds, as well as environmental control measures required under the IPC Licence.

4.2.1 Project Phases

For assessment purposes, the project is divided into three main phases:

- ‘Peat Extraction Phase’: peat extraction and ancillary activities at the Application Site from July 1988 to the cessation of peat extraction in 2017 (July 1988 – 2017). The Peat Extraction Phase is described in detail in Sections 4.4 to Section 4.7 of Chapter 4 - Description of Development, Volume 2.
- ‘Current Phase: the management of the Application Site since 2017 to present day including decommissioning works and Rehabilitation Phase 1 works. The Current Phase is described in detail in Section 4.7 and Section 4.8 of Chapter 4 - Description of Development, Volume 2.
- ‘Remedial Phase’: the activities intended to be carried out at the Application Site into the future (Rehabilitation Phase 2 works). The Remedial Phase is described in detail in Section 4.9 of Chapter 4 - Description of Development, Volume 2.

4.2.2 Peat Extraction Processes

Two types of peat were historically extracted at the Application Site: sod peat and milled peat. Sod peat extraction took place mainly between the 1950s and early 1980s, while milled peat extraction became the dominant activity from the late 1970s until peat extraction ceased in 2017. These processes required extensive drainage of the bogs, preparation of peat fields, mechanical extraction, drying, stockpiling and transportation, primarily using an internal narrow-gauge railway network.



4.2.3 Ancillary Services and Infrastructure

Peat extraction and ancillary activities were supported by a range of infrastructure, including workshops and offices at Littleton Works, fuel storage areas, local holding areas, drainage systems, silt ponds and a dedicated railway network. While most buildings and facilities at Littleton Works pre-date the modern planning system and are not part of the substitute consent application, they are described to provide a complete understanding of how the site operated. Much of this infrastructure has now been removed or decommissioned.

4.2.4 Site Services

Water, wastewater, electricity and other services were primarily provided at Littleton Works and associated facilities. Wastewater was managed via septic tanks, electricity was supplied from the national grid, and fuels and materials were handled using established procedures designed to minimise environmental risks. Many of these services are no longer in use following the cessation of peat extraction.

4.2.5 1941 to 1988 – Initial Development and Peat Extraction (Pre-EIA)

Before peat extraction began, the Application Site was an intact raised bog, characterised by wet, nutrient-poor conditions and specialist bog vegetation. Drainage works commenced from the 1940s onwards, followed by large-scale vegetation clearance and peat extraction. By the late 1980s, all four bogs had been fully drained and were actively used for peat extraction. These early activities resulted in significant long-term changes to land use, hydrology and habitats.

By July 1988, peat extraction was established across the site. Drainage systems, rail infrastructure, pumps and silt ponds were all in place, and large areas of the bogs were already cutover. This condition forms the baseline against which environmental effects since 1988 have been assessed in the rEiAR.

4.2.6 Peat Extraction Phase 1988 to 2017

Between 1988 and 2017, peat extraction continued across the Application Site, though the extent of active extraction gradually reduced over time as peat reserves were exhausted. Extraction volumes varied from year to year, largely due to weather conditions affecting ground stability and drying. Over this period, more than five million tonnes of peat were extracted.

Prior to 2001, environmental controls included silt ponds, dust suppression measures, machinery maintenance programmes, fuel handling procedures and fire safety protocols. After the IPC Licence was granted in 2021, control measures were formalised and expanded to include systematic monitoring of water quality, emissions, waste management, noise and environmental performance, under the supervision of the Environmental Protection Agency.

4.2.7 Current Phase – 2017 to Present Day

Industrial peat extraction ceased at the Application Site in 2017. Since then, the focus has been on decommissioning remaining infrastructure, removing peat stockpiles and implementing peatland rehabilitation measures. Much of this work has already been completed, including the removal of rail infrastructure in certain bogs and the stabilisation of drainage systems.

Rehabilitation Phase 1 commenced in 2018 and focused on environmental stabilisation through measures such as drain blocking, re-wetting, and natural recolonisation of vegetation. Monitoring programmes are in place to assess the success of these measures. Significant areas of the site have already re-vegetated, with developing wetland, peatland and woodland habitats.



Rehabilitation works include blocking or modifying drains to raise water levels, managing surface water flows, and allowing natural vegetation to re-establish. These measures are based on best practice guidance and decades of experience in peatland rehabilitation. Ongoing monitoring ensures that any issues can be addressed promptly.

4.2.8 Remedial Phase

Additional rehabilitation works (Rehabilitation Phase 2) are proposed. These works are intended to enhance re-wetting, improve vegetation cover and further stabilise the peatland over the long term.

4.2.9 Potential Future Land Use

The site has potential for future uses that align with national climate and renewable energy objectives. In particular, a separate planning application is proposed for the Littleton Wind Farm. Any such development would be assessed in its own Environmental Impact Assessment and would be integrated with ongoing peatland rehabilitation measures. The future use of the Application Site aims to balance renewable energy generation with environmental rehabilitation and long-term sustainability.



5. POPULATION AND HUMAN HEALTH

5.1 Introduction

This section presents a summary of Chapter 5 – **Population and Human Health** of the Remedial Environmental Impact Assessment Report (rEIAR).

The purpose of this chapter is to describe the local population and human environment surrounding the Littleton bog complex and to assess how historical peat extraction activities, current site management, and proposed future rehabilitation works may have affected, or may affect, people and human health over time.

Population trends were assessed using Census data from 1986 to 2022 at national, county and local Electoral Division level. Over this period:

- Bord na Móna operations played an important role in **employment and economic** activity in the region for several decades. During the Peat Extraction Phase, both direct and indirect employment was supported, contributing positively to the local economy.
- Following cessation of peat extraction in 2017, employment levels reduced, reflecting wider structural changes within the peat industry. This reduction has been partly offset by decommissioning, rehabilitation works and emerging opportunities linked to renewable energy development and amenity uses.
- There were no formal **recreational or tourism** uses of the active peat extraction areas during the extraction phase, as access was restricted for safety reasons. However, Bord na Móna historically contributed to the development of community facilities and infrastructure in nearby settlements.

Since the cessation of industrial peat extraction, new amenity uses have emerged, including:

- The **Littleton Labyrinth Trail**, a walking and cycling route partly located within the site;
- The **Midlands Trail Network**, which has received planning approval and will further enhance recreational access to rehabilitated peatlands.

These developments are expected to provide long-term benefits for local communities in terms of recreation, tourism and quality of life.

Human health has been assessed primarily by considering how environmental factors such as air quality, noise, water quality, traffic and safety may influence people living or working near the Application Site.

5.2 Assessment of Effects by Project Phase

5.2.1 Peat Extraction Phase (1988–2017)

- **Population and Economy:** Moderate positive effects due to employment and economic activity.
- **Human Health:** Effects assessed were considered not significant, negative, long term effects relating primarily to dust and noise. However this was controlled through the implementation of control measures pre and post implementation of the IPC Licence.



5.2.2 Current Phase (2017–Present)

- **Population and Economy:** Imperceptible to slight negative effects due to reduced employment.
- **Human Health:** Slight positive effects, reflecting reduced emissions, lower noise levels and improved environmental conditions.

5.2.3 Remedial Phase (Future Rehabilitation)

- **Population:** Imperceptible, neutral effects due to limited staffing requirements.
- **Human Health:** Imperceptible, neutral effects, with potential longer-term benefits arising from improved environmental quality and amenity use.



6. BIODIVERSITY

6.1 Introduction

This Section summarises the findings of Chapter 6 – Biodiversity of the Remedial Environmental Impact Assessment Report (EIAR) for the Longfordpass, Littleton, Lanespark and Derryvella bogs. Application for Substitute Consent, County Tipperary. It describes how historic peat extraction has affected habitats, plants and wildlife across the Application Site, how conditions have changed since peat extraction ceased in 2017, and how ongoing and planned rehabilitation measures are expected to support long-term ecological recovery.

Biodiversity was assessed using:

- Review of historic maps, aerial photography and ecological records
- Extensive ecological surveys undertaken between 2012 and 2026
- Detailed surveys of habitats, birds, mammals, bats, amphibians, fish and aquatic ecology
- Consultation with relevant statutory and environmental bodies

6.2 Assessment of Effects by Project Phase

The assessment of biodiversity effects considers how ecological conditions have evolved across three main phases: the Peat Extraction Phase, the Current Phase and the Remedial Phase. Each phase is summarised below to explain how impacts have changed over time.

6.2.1 Peat Extraction Phase (1988–2017):

By 1988, the baseline, extensive drainage, habitat fragmentation, and the removal of surface vegetation had already occurred. Given the extent of these modifications, the Peat Extraction Phase from 1988 to the present is unlikely to have caused any additional significant negative effects on the site's habitats, flora, or fauna. By this stage, the original ecosystem had already been heavily degraded, with many species displaced due to habitat loss and fragmentation and water quality deterioration. As works declined across the Application Site and eventually ceased, habitats were allowed to recover, forming mosaics of interwoven habitats which in turn allow for the use of the Application Site by a range of species that require vegetative cover for foraging, commuting and nesting. Thus, in general overall the Application Site during the Peat Extraction Phase was primarily neutral or positive.

6.2.2 Current Phase (2017–present day):

Since industrial peat extraction ceased in 2017, the ecological condition of the Application Site has improved measurably. Drainage intensity has reduced, water levels have risen in parts of the Application Site, and areas of open water, wetland and regenerating vegetation have developed. This has led to increased habitat diversity and improved ecological connectivity across the bogs. A wider range of bird species now uses the Application Site for breeding, feeding and over-wintering, while mammals, bats, amphibians and invertebrates benefit from the more varied habitat mosaic. Although the Application Site remains modified and some habitats are still degraded, the overall trend is one of gradual ecological recovery.



6.2.3 Remedial Phase (future rehabilitation):

The remedial phase focuses on the gradual rehabilitation and stabilisation of the peatland environment over the longer term. Planned and ongoing measures such as drain blocking, re-wetting, re-profiling of peat surfaces and removal of redundant infrastructure are intended to improve hydrological conditions and reduce further degradation. While these measures are not expected to fully restore the Application Site to its original raised bog condition, they are designed to create more suitable conditions for natural regeneration to occur where possible.

Over time, rehabilitation is expected to support the development and maintenance of wetter habitats, reduce peat oxidation and erosion, and contribute to incremental improvements in habitat quality and water quality. The pace and extent of ecological recovery will vary across the Application Site and will depend on local conditions and long-term management. Overall, the remedial phase is predicted to result in neutral to positive effects on biodiversity, strengthening existing ecological trends rather than delivering rapid or complete restoration.



7. LAND, SOILS AND GEOLOGY

7.1 Introduction

This Section summarises the findings of Chapter 7 – Land, Soils and Geology of the Remedial Environmental Impact Assessment Report (rEIAR) for the Longfordpass, Littleton, Lanespark and Derryvella bogs Application for Substitute Consent, County Tipperary.

The chapter examines how land use, peat soils, underlying geology and peat stability have been affected by historic peat extraction and ancillary activities, how conditions have changed since peat extraction ceased in 2017, and how ongoing and planned rehabilitation measures influence long-term ground conditions.

The assessment of land, soils and geology was carried out in line with guidance from:

- The Institute of Geologists of Ireland (IGI);
- The Environmental Protection Agency (EPA); and,
- Relevant EU and Irish planning and environmental legislation.

The assessment is informed by:

- Desk-based review of published geological, soils and groundwater data;
- Historic mapping and aerial photography;
- Extensive site reconnaissance surveys and intrusive ground investigations undertaken between 2022 and 2025; and,
- Consultation with statutory bodies including Geological Survey Ireland (GSI).

7.2 Assessment of Effects by Project Phase

7.2.1 Peat Extraction Phase (1988–2017)

By 1988 industrial peat extraction by the Applicant was well-established at the Application Site. During this phase, land and soils were already heavily modified due to earlier drainage and peat removal. Continued peat extraction between 1988 and 2017 resulted in further reduction of peat thickness and ground levels, although the most significant land-use changes occurred prior to 1988.

Considering the low sensitivity and the limited magnitude of land-use change during the 1988–2017 Peat Extraction Phase, the potential post mitigation residual effects on land use are determined to be Positive, Slight, Short-Term and Likely in nature.

Based on the control measures and the absence of existing contamination, the residual effect on peat, subsoils, and bedrock is deemed Negative, Imperceptible, Short-term, Unlikely and Reversible. Therefore, the implementation of control measures ensures no significant effects on land, soil or geological receptors. “

“There were no significant long-term effects on peat stability from peat extraction and ancillary activities at the Application Site.



7.2.2 Current Phase (2017–present day)

Since the cessation of peat extraction, the Application Site has entered a recovery phase. Rehabilitation Phase 1 works, including drain blocking and site stabilisation, have been implemented between 2018 and 2021. These measures aim to reduce peat oxidation, stabilise ground conditions and encourage re-wetting and revegetation.

Ongoing site management continues under the IPC licence, with strict controls in place to prevent soil contamination and maintain peat stability.

The Current Phase is assessed as having a moderate beneficial effect, reflecting gradual recovery from historic disturbance, while recognising that residual long-term effects remain.

7.2.3 Remedial Phase (Future Rehabilitation)

The Remedial Phase relates primarily to Rehabilitation Phase 2 works and ongoing monitoring across the wider site. No further peat extraction is proposed.

Planned and ongoing measures include re-wetting, natural colonisation and long-term stabilisation of peat soils. While full restoration to original raised bog conditions is not possible, these measures are expected to support improved soil structure, hydrology and long-term ground stability.

The Remedial Phase is expected to result in a neutral to slight beneficial long-term effect on land, soils and geology, addressing some legacy impacts without fully reversing historic peat extraction effects.



8. HYDROLOGY, HYDROGEOLOGY AND WATER QUALITY

8.1 Introduction

Chapter 8 – Hydrology, Hydrogeology and Water Quality examines how peat extraction and ancillary activities at the Longfordpass, Littleton, Lanespark and Derryvella Bogs have affected water features, including surface water, groundwater and water quality, from 1988 to the present day. It also assesses the positive effects of rehabilitation works completed since peat extraction ceased in 2017, and the expected effects of further rehabilitation works.

8.2 Assessment of Effects by Project Phase

8.2.1 Peat Extraction Phase (1988–2017)

By 1988, the bogs had already been extensively drained and peat extraction was well established. As a result, the most significant hydrological changes occurred before 1988, when drainage was first installed.

During peat extraction:

- Surface water drainage networks directed runoff through silt ponds, designed to reduce sediment before discharge to local streams.
- Environmental controls were progressively improved, particularly following the introduction of an EPA Integrated Pollution Control (IPC) Licence in 2001.
- Water quality monitoring shows that downstream rivers typically fluctuated between moderate and good ecological condition, reflecting pressures from peat extraction as well as wider land uses such as agriculture and forestry.

Overall, the Peat Extraction Phase resulted in long-term modifications to bog hydrology, with moderate negative effects on local peat water levels and surface water quality, most of which occurred prior to modern environmental regulation.

8.2.2 Current Phase (2017–Present)

Peat extraction ceased in 2017, after which the Application Site entered a decommissioning and rehabilitation phase. Since then:

- Peat stockpiles and rail infrastructure have been removed.
- Rehabilitation Phase 1 works were completed between 2018 and 2021, including extensive drain blocking and hydrological management.
- Monitoring continued under existing EPA licence conditions.

These rehabilitation measures have:

- Raised peat water levels across the bogs,
- Reduced surface water runoff rates,



- Stabilised peat surfaces through re-vegetation,
- Reduced the risk of sediment entering downstream watercourses.

As a result, the Current Phase has had a positive effect on water quality and hydrology, reversing many of the historic impacts of drainage and peat extraction.

8.2.3 Remedial Phase (Future Works)

Further Rehabilitation Phase 2 works are proposed, primarily within Derryvella Bog, with ongoing monitoring and natural revegetation continuing across the other bogs.

These works will:

- Further improve peatland hydrology by slowing water flows and retaining water within the bog,
- Improve downstream water quality and water flow regulation,
- Support long-term peatland recovery and climate benefits.

Any short-term, localised effects (for example during drain blocking or fertiliser application to encourage vegetation growth) will be carefully managed using established best-practice measures to protect nearby watercourses.

8.3 Water Framework Directive (WFD)

The assessment confirms that:

- No deterioration in water quality status has occurred as a result of current or future activities,
- Underlying groundwater bodies have remained at Good status throughout all assessment periods,
- Rehabilitation works support the achievement of WFD objectives by improving water quality and hydrological stability.

8.4 Designated Sites and Water Supplies

There are no designated conservation sites within the Application Site. Downstream designated sites, including the Lower River Suir SAC, are located many kilometres away and receive water volumes far greater than those draining from the site.

No significant effects on designated sites or drinking water resources have been identified.



9. AIR QUALITY

9.1 Introduction

This non-technical summary describes the key findings of the Air Quality assessment undertaken as part of the Remedial Environmental Impact Assessment Report (rEIAR) for the Longfordpass, Littleton, Lanespark and Derryvella Bogs. The assessment considers how historical peat extraction, current site conditions and proposed remedial works have affected, or may affect, local air quality and nearby sensitive receptors.

The assessment follows Environmental Protection Agency (EPA) guidance and uses the most up-to-date air quality standards to provide a conservative and robust evaluation.

Baseline air quality has been established using long-term monitoring data published by the EPA for rural areas of Ireland. The Application Site is located in a rural setting, classified as Zone D, where air quality is generally good.

Key findings from the baseline assessment show:

- Background concentrations of nitrogen dioxide (NO₂), particulate matter (PM₁₀ and PM_{2.5}) are well below national and European air quality standards.
- Overall air quality in rural Ireland has improved over time due to cleaner fuels, improved vehicle standards and environmental regulation.

Although specific air quality data from 1988 is not available, the use of modern standards provides confidence that if impacts are acceptable under current limits, they would also have been acceptable historically.

Sensitive receptors are locations where people or environmentally sensitive habitats could be affected by dust or air pollutants. These include:

- Residential properties
- Schools and healthcare facilities
- Designated ecological sites

Within 250 metres of the Application Site boundary, there are no residential properties within 20 metres, and a limited number of residential receptors overall. Nearby designated ecological sites are several kilometres from the Application Site.

Based on distance and land use, the overall sensitivity of the area to air quality impacts is low.



9.2 Assessment of Effects by Project Phase

9.2.1 Peat Extraction Phase (1988–2017)

Peat was transported internally by rail during this phase, meaning there was no significant increase in heavy goods vehicle traffic on public roads. Staff traffic levels were low and did not exceed screening thresholds for air quality impacts. As a result, vehicle emissions during this phase had a neutral and imperceptible negative effect on air quality.

Peat extraction activities generated dust, which is the primary air quality concern for this phase. Monitoring recorded exceedances of dust deposition limits at some locations within the wider Littleton Bog Group. However:

- The surrounding area had low sensitivity to dust impacts.
- Dust control measures and monitoring were required under the site's Industrial Pollution Control (IPC) licence.
- No dust-related complaints were recorded from nearby residents.

Overall, dust impacts during this phase are assessed as long-term, localised, negative but slight in magnitude.

9.2.2 Current Phase (2017–Present Day)

Following the cessation of peat extraction, site activity has reduced significantly.

- Peat stockpiles were removed by 2019 using a limited number of vehicle movements.
- Ongoing works are limited to site management and early rehabilitation measures.

Dust and vehicle emissions during this phase are assessed as unlikely, and intermittent, resulting in an imperceptible effect on air quality.

9.2.3 Remedial Phase

The Remedial Phase involves low-intensity works focused on environmental restoration, including re-vegetation and re-wetting of the bog.

- These works will reduce exposed peat and significantly limit dust generation over time.
- Vehicle movements will be minimal and infrequent.

Any dust or vehicle emissions during this phase are predicted to result in a direct, localised, negative but imperceptible effect on air quality.



10. NOISE AND VIBRATION

10.1 Introduction

This chapter assesses noise and vibration associated with historic, current and future activities at the Bord na Móna bogs at Longfordpass, Littleton, Lanespark and Derryvella. Industrial peat extraction at the Application Site ceased in 2017.

The purpose of the assessment is to determine whether activities at the bogs have given rise, or could give rise, to significant noise or vibration effects at nearby noise-sensitive locations, such as houses.

The area surrounding the Application Site is generally rural in character. The main sources of existing noise are traffic on the M8 motorway, local roads, and occasional agricultural activity.

Measured background noise levels were found to be typical for a rural environment influenced by nearby transport routes. These measurements were used as the basis for assessing potential noise effects from historic, current and future site activities.

10.2 Assessment of Effects by Project Phase

10.2.1 Noise and Vibration During the Peat Extraction Phase (1988–2017)

During this period, noise was generated by peat extraction machinery and associated activities, including tractors and rail-mounted peat transport. These activities took place over extensive areas of bog and moved continuously rather than remaining in one location for prolonged periods.

Predicted noise levels at the nearest houses were generally well below the EPA IPC licence noise limits. In isolated situations where activities occurred temporarily close to individual properties, short-term increases in noise may have occurred; however, these were transient in nature.

Overall, noise effects during the Peat Extraction Phase ranged from imperceptible at properties furthest from activities to slight negative effects at properties closer to the bogs, and were long-term but compliant with EPA, IPC licence limits. No noise complaints were recorded during this period.

Vibration from vehicles and rail movements was assessed and screened out as significant effects, due to low vehicle speeds, infrequent movements, separation distances, and the natural attenuation provided by peat soils. Vibration impacts were therefore considered unlikely.

10.2.2 Noise and Vibration During the Current Phase (2017 to Present)

The Current Phase includes decommissioning works (such as removal of infrastructure and peat stockpiles) and Rehabilitation Phase 1 works, which focus on drainage management and bog restoration.

These activities are significantly smaller in scale than historic peat extraction and are intermittent rather than continuous. Noise predictions show that sound levels remain within EPA IPC licence limits at nearby houses.

At Derryvella Bog, works are restricted to a minimum setback distance of 50 metres from the nearest dwelling, further reducing potential noise impacts.



Overall, noise effects during the Current Phase range from imperceptible to slight negative, are compliant with EPA, IPC licence limits, and are temporary or intermittent in nature. No significant vibration effects are anticipated.

10.2.3 Noise and Vibration During the Remedial Phase (Future)

The Remedial Phase comprises Rehabilitation Phase 2 works, which will primarily occur at Derryvella Bog. These works involve small-scale, short-duration activities such as drain blocking and ongoing monitoring and maintenance across the sites.

Only limited plant machinery will be used, operating for short periods, and no works will take place within 50 metres of the nearest noise-sensitive properties at Derryvella.

Predicted noise levels during this phase remain within EPA IPC licence limits. Noise effects are therefore expected to range from imperceptible at more distant properties to slight negative at the closest properties, and to be long-term but very infrequent and localised.

As with earlier phases, vibration impacts are not anticipated due to the low intensity and temporary nature of the works.

10.2.4 Mitigation and Monitoring

Noise monitoring will continue to be undertaken if requested by the EPA, in line with the conditions of the IPC licence.



11. LANDSCAPE & VISUAL

11.1 Introduction

This Non-Technical Summary (NTS) summarises Chapter 11 – Landscape and Visual Impacts of the Remedial Environmental Impact Assessment Report (rEIAR)

The purpose of this chapter is to explain how historical peat extraction, current site management, and proposed future rehabilitation works at the Longfordpass, Littleton, Lanespark and Derrylvella bogs have affected, or may affect, the landscape character and visual amenity of the surrounding area.

The study area falls within two Landscape Character Areas (LCAs) identified in the Tipperary Landscape Character Assessment:

- LCA 8: Littleton Raised Bog – a distinctive peatland landscape with a generally higher sensitivity to change; and
- LCA 9: Littleton Farmland Mosaic and Marginal Peatlands – a more robust agricultural landscape with a greater capacity to absorb change.

By the baseline year of 1988, peat extraction had already been ongoing for several decades. As a result, the landscape character of the bogs had already been substantially altered by drainage, peat removal, rail infrastructure and associated works. Consequently, the sensitivity of the landscape to further change of a similar nature was assessed as low.

11.2 Assessment of Effects by Project Phase

11.2.1 Peat Extraction Phase (1988–2017)

Landscape Effects

By 1988, the majority of the physical transformation of the bogs had already taken place. Continued peat extraction and ancillary activities between 1988 and 2017 resulted in further modification of landform and vegetation. These changes were assessed as being of medium magnitude but occurring within a landscape of low sensitivity. Overall, the resulting landscape effects were assessed as moderate to slight and not significant in Environmental Impact Assessment (EIA) terms.

Visual Effects

Visual impacts during this phase were mainly associated with machinery, infrastructure and seasonal activity on the bogs. Due to limited visibility from surrounding areas, visual effects were generally confined to the immediate vicinity of the Application Site. The overall significance of visual effects is assessed as slight and not significant.

11.2.2 Current Phase (2017–Present Day)

Following the cessation of peat extraction in 2017, decommissioning and Rehabilitation Phase 1 works commenced in line with IPC licence requirements.



Landscape and Visual Effects

- Decommissioning activities have involved removal of redundant infrastructure and site clean-up, resulting in low-magnitude, short-term effects.
- Rehabilitation measures, including drain blocking, rewetting and vegetation establishment, are contributing to a more natural wetland character.

Overall, the Current Phase is assessed as having slight or neutral short-term effects, with positive longer-term outcomes for landscape character and visual amenity as natural regeneration progresses.

11.2.3 Remedial Phase (Future Rehabilitation Works)

The remedial phase includes additional Rehabilitation Phase 2 works planned at Derryvella Bog, with ongoing monitoring and maintenance across the wider site.

These measures are designed to stabilise peat surfaces, encourage wetland habitats and further reduce the visual presence of former industrial activity. The Remedial Phase is assessed as having low-magnitude, positive effects on the landscape, and imperceptible to slight effects on visual amenity.



12. CULTURAL HERITAGE

12.1 Introduction

This Non-Technical Summary (NTS) summarises Chapter 12 – Cultural Heritage of the Remedial Environmental Impact Assessment Report (rEIAR)

The Application Site forms part of the Littleton Bog Group in north County Tipperary and extends to approximately 1,616 hectares across four bogs: Longfordpass, Littleton, Lanespark and Derryvella. The bogs are located proximate to the M8 motorway and are surrounded by agricultural land, dispersed rural housing and small settlements.

Irish bogs are recognised as having high archaeological potential, particularly for the preservation of organic materials such as wood, leather and textiles, which survive due to the waterlogged and anaerobic conditions of peatlands. As a result, peat extraction landscapes such as Littleton have the potential to contain significant buried archaeological remains, even where no features are visible at ground level.

Extensive archaeological surveys and excavations have been undertaken within the Application Site since the 1960s, with major investigation programmes carried out from the 1990s onwards as part of Bord na Móna's peat extraction activities.

A total of 51 recorded archaeological sites are located within the boundary of the Application Site. These include:

- Prehistoric peatland trackways (toghers);
- Wooden platforms and structures;
- Areas of archaeological wood.

Many of these sites date to the Bronze Age and Iron Age and are concentrated in a narrow section of Littleton Bog, where prehistoric communities crossed the bog using substantial timber trackways.

No archaeological sites within the Application Site are designated as National Monuments in State Care, and none are subject to Preservation Orders.

A review of the Record of Protected Structures and the National Inventory of Architectural Heritage (NIAH) confirms that:

- There are no protected structures within the Application Site;
- There are no NIAH-listed buildings or designed landscapes within the site or within 1 km of its boundary;
- There are no Architectural Conservation Areas affected by the project.

As a result, peat extraction and ancillary activities did not affect any designated architectural heritage assets.



12.2 Assessment of Effects by Project Phase

12.2.1 Peat Extraction Phase (1988–2017)

During this phase, peat extraction and associated drainage works had the potential to directly affect sub-surface archaeological remains within the bogs. However, these potential impacts were addressed through:

- Systematic archaeological surveys;
- Targeted excavations of sites identified as being at risk;
- Ongoing implementation of Bord na Móna's Archaeological Code of Practice.

As a result, although some direct negative effects on buried archaeology may have occurred, these were mitigated through investigation and recording. The archaeological works carried out during this phase resulted in a permanent positive effect, through greatly increased understanding of the prehistoric and historic use of the bog landscape.

Overall, the significance of effects during the Peat Extraction Phase is assessed as slight to moderate and positive, following mitigation.

12.2.2 Current Phase (2017–Present Day)

Since industrial peat extraction ceased in 2017, activities at the Application Site have focused on decommissioning and Rehabilitation Phase 1, including drain blocking and hydrological management.

No direct effects on known archaeological or architectural heritage assets have been identified during this phase. All groundworks are governed by the 2012 Bord na Móna Archaeological Code of Practice, which ensures that any previously unknown archaeological material is identified and managed appropriately.

Overall, effects on cultural heritage during the Current Phase are assessed as positive, permanent and slight to moderate, reflecting improved protection and controlled site management.

12.2.3 Remedial Phase (Phase 2 Rehabilitation)

Future remedial works, including additional rehabilitation measures at Derryvella Bog, have the potential to affect previously unidentified sub-surface archaeological remains.

However, these works will be carried out in accordance with:

- The Bord na Móna Cutaway Bog Decommissioning and Rehabilitation Plans;
- The 2012 Archaeological Code of Practice;
- Site-specific mitigation measures, including buffer zones and archaeological inspections where required.

With these control measures in place, any potential effects will be appropriately managed. The overall significance of effects during the Remedial Phase is assessed as positive, permanent and slight to moderate, should archaeological remains be present.



13. MATERIAL ASSETS (INCLUDING TRAFFIC & TRANSPORTATION)

13.1 Introduction

This Section summarises Chapter 13 – Material Assets (Including Traffic and Transportation) of the Remedial Environmental Impact Assessment Report (rEIAR) for the Longfordpass, Littleton, Lanespark and Derryvella Bogs – Application for Substitute Consent.

Material assets include roads and transport infrastructure, utilities and services, waste management systems, and other built infrastructure that support human activity. This chapter considers how historic peat extraction, current site management, and proposed future remedial works have interacted, or may interact, with these assets.

Key elements of material assets within and around the Application Site include:

- The local and regional road network, including the L4101 and R639 roads;
- Electricity infrastructure associated with pumping and site operations;
- Surface water drainage systems, including drains, silt ponds and pumps;
- Waste management systems associated with peat extraction and site operations.

The M8 motorway, which now passes through the wider area, was constructed after the baseline year and has significantly altered regional traffic patterns.

13.2 Assessment of Effects by Project Phase

13.2.1 Peat Extraction Phase (1988–2017)

During peat extraction, staff travelled to and from the Application Site primarily by private vehicle. Importantly, harvested peat was transported internally by a private rail network, meaning that peat extraction itself did not generate heavy goods vehicle traffic on public roads.

Traffic assessments indicate that vehicle movements associated with staff commuting represented a small proportion of overall traffic volumes on surrounding roads. While this resulted in a slight increase in traffic, particularly on local roads, the overall effect on the road network was limited.

The significance of effects during this phase is assessed as long-term, slight and negative in traffic terms.

13.2.2 Current Phase (2017–Present Day)

Since the cessation of peat extraction in 2017, activities have focused on decommissioning and Rehabilitation Phase 1 works. These included the removal of peat stockpiles and some rail infrastructure.

Traffic volumes during this period were significantly lower than during peat extraction. Although limited heavy goods vehicle movements occurred during peat stockpile removal (2018–2019), these were temporary and made up a very small proportion of total traffic volumes on surrounding roads.



Overall, the effects of traffic and transportation during the Current Phase are assessed as short-term and imperceptible.

13.2.3 Remedial Phase (Future Rehabilitation Works)

Future remedial works will involve minimal staff numbers and very limited vehicle movements. Traffic volumes associated with these activities will be negligible in comparison with existing road traffic.

No significant effects on the road network or on vulnerable road users are predicted. The significance of effects during the Remedial Phase is assessed as long-term and imperceptible.

13.3 Other Material Assets

13.3.1 Utilities and Services

- Electricity: The Application Site is served by existing electricity infrastructure, primarily for pumping and monitoring. Activities across all phases have not adversely affected electricity supply or network capacity.
- Gas: There is no gas infrastructure within or adjacent to the Application Site.
- Water Supply: There is no direct water supply to the bogs. Welfare facilities were historically served at the adjacent Littleton Works.
- Wastewater: No wastewater infrastructure is located within the Application Site. Wastewater arising from welfare facilities was managed off-site.

Across all phases, effects on utility infrastructure are assessed as neutral and not significant.

13.3.2 Surface Water Infrastructure

Surface water drainage systems were an essential part of peat extraction and included drains, silt ponds and pump stations. From early in the development of the bogs, mitigation measures were in place to control suspended solids, with more robust controls introduced following the granting of the Integrated Pollution Control (IPC) Licence in 2001.

While peat extraction resulted in some increases in suspended solids prior to IPC licensing, ongoing monitoring and improved management significantly reduced impacts in later years.

Overall, effects on surface water infrastructure during the Peat Extraction Phase are assessed as long-term and slight, with no significant adverse effects during the Current or Remedial Phases.

13.3.3 Waste Management

Waste generated during peat extraction included used oils, filters, scrap metal and general waste. Over time, waste management practices improved significantly, particularly following the introduction of IPC licence controls, including detailed record keeping and use of licensed waste contractors.

- The Peat Extraction Phase is assessed as having a long-term slight negative effect on waste management, reflecting early practices prior to full licensing.



- The Current and Remedial Phases are assessed as having slight or negligible effects, due to strict controls and substantially reduced activity levels.

13.3.4 Telecommunications and Aviation

Activities at the Application Site have not interfered with telecommunications links or aviation operations. No mitigation measures were required, and effects are assessed as neutral across all phases.



14. CLIMATE

14.1 Introduction

This chapter provides a non-technical overview of the effects of historic peat extraction and ancillary activities at the Application Site on climate. The assessment considers greenhouse gas emissions and carbon storage in peatlands over three key stages: the Peat Extraction Phase (1988–2017), the Current Phase (2017 to present day), and the future Remedial Phase. July 1988 is used as the baseline year, reflecting the introduction of Environmental Impact Assessment requirements in Ireland.

The main climate issue associated with the Application Site relates to the loss of carbon storage functions following drainage and peat removal, and the extent to which these effects are being addressed through peatland rehabilitation.

The assessment follows Environmental Protection Agency (EPA) guidance on Environmental Impact Assessment and climate assessment. Greenhouse gases considered include carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O).

Climate effects have been assessed in the context of current Irish and European climate policy, including national Climate Action Plans and legally binding carbon budgets. Although these policies were not in place for much of the peat extraction period, they provide an appropriate and robust benchmark against which to assess significance.

Peatlands are important long-term carbon stores. When peatlands are drained and peat is removed, stored carbon is released to the atmosphere, primarily as CO₂. While drainage reduces methane emissions, it also converts peatlands from carbon sinks into net sources of greenhouse gases. Research shows that rewetting and rehabilitation can partially restore peatlands' carbon storage function over time.

The baseline climate context reflects Ireland's greenhouse gas emissions profile in the late 1980s, using national emissions data as a proxy where direct local data were unavailable. Ireland has since introduced increasingly stringent climate targets, making recent policy benchmarks more demanding than those applicable during the peat extraction period.

Meteorological data from the nearest long-term Met Éireann weather station indicate a temperate climate with mild winters, cool summers and evenly distributed rainfall, which is representative of conditions at the Application Site.

14.2 Assessment of Effects by Project Phase

14.2.1 Peat Extraction Phase (1988–2017)

During this period, peat extraction resulted in the release of greenhouse gases and the loss of a long-established carbon sink. The effects on climate were long-term, negative and significant, primarily due to the removal of peat and associated carbon storage capacity.



14.2.2 Current Phase (2017–Present Day)

Peat extraction ceased in 2017. Current activities are limited to decommissioning and rehabilitation works. Vehicle movements and site management activities generate only small amounts of greenhouse gas emissions, which are considered minimal. The use of rock phosphate fertiliser does not result in significant greenhouse gas emissions. Overall climate effects during this phase are short-term and neutral.

14.2.3 Remedial Phase

The Remedial Phase focuses on rewetting and rehabilitating the peatlands. These measures are expected to reduce ongoing carbon losses and gradually restore some carbon sink functionality. While the peatlands will not return to their original pre-extraction condition, the rehabilitation measures will contribute positively to national climate objectives. Effects on climate during this phase are long-term and neutral.



15. INTERACTIONS

The Chapters 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.



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