

1. INTRODUCTION

1.1 Introduction

This remedial Environmental Impact Assessment Report (rEIAR) has been prepared by MKO on behalf of Bord na Móna Energy Ltd a subsidiary of Bord na Móna plc. (hereafter 'the Applicant'), as part of an application for substitute consent for peat extraction and ancillary activities from July 1988 to the present day that have been carried out within Lemanaghan Bog (hereafter referred to as the 'Application Site'), located in County Offaly. 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.

Neither the European Union Council Directive 85/337/EEC of 27th June 1985 on the assessment of the effects of certain public and private projects on the environment (hereafter referred to as the 'EIA Directive') nor the European Union Council Directive 92/43/EEC of 21st May 1992 on the conservation of natural habitats and of wild fauna and flora (hereafter referred to as the 'Habitats Directive') has retrospective effect; neither directive imposes legal requirements to have carried out prior assessments of projects which had already commenced or been completed. There was, therefore, no legal requirement for EIA, screening for EIA or Appropriate Assessment in respect of any project prior to the latest dates for transposition of either directive. In the case of the EIA Directive, the latest date for transposition was 3rd July 1988. In the case of the Habitats Directive, the latest date for transposition was 10th June 1994.

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

This rEIAR provides a description of:

1. *The activities employed at the Application Site from 1950 at the onset of preparation works up to July 1988;*
2. *A description of the baseline environment as of July 1988;*
3. *A description of peat extraction and ancillary activities at the Application Site from July 1988 to the cessation of peat extraction in June 2020;*
4. *A description of the management of the Application Site since June of 2020; and,*
5. *A description of the activities intended to be carried out at the Application Site into the future.*

Under Article 1(2) of the EIA Directive, 'project' means:

*“ the execution of construction works or of other installations or schemes,
- other interventions in the natural surroundings and landscape including those involving the
extraction of mineral resources.”*

For the purposes of this rEIAR, the items outlined in **bold** above outline the 'Project', the effects on the environment of which, if any, will be examined in this rEIAR. The Project formed part of an overall development at the Application Site which commenced many years prior to July 1988. As such, to facilitate as complete an assessment as is possible of the project since July 1988, a description of the

¹ Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment

development pre-1988 is included in this rEIAR (see Section 4.3 in Chapter 4 of this EIAR). This rEIAR forms part of a substitute consent application which is made to An Coimisiún Pleanála (hereafter referred to as ‘the Commission’ or ‘ACP’ as appropriate throughout this rEIAR) as prescribed under Part XA 177F of the Planning and Development Act 2000 (as amended). It is accompanied by a remedial Natura Impact Statement (rNIS).

Industrial scale peat extraction was permanently ceased by the Applicant at the Application Site in June 2020. From June 2020 until the end of 2024, all remaining stockpiled peat was systematically removed from the Application Site. The Applicant’s statutory duties to discharge the conditions of its Integrated Pollution Control Licence (IPC) Licence (Ref. P0500-01; hereafter “IPC Licence”), from the Environmental Protection Agency for the Boora Bog Group, which encompasses the Application Site, also remain on-going. These ongoing duties, such as environmental monitoring, do not facilitate the continuation of peat extraction, but rather ensure compliance with the Applicant’s extant IPC Licence.

1.1.1 References to Project Phases

For the purposes of this rEIAR, the Project is defined under three different timeframes termed ‘phases’:

- **‘Peat Extraction Phase’:** peat extraction and ancillary activities at the Application Site from July 1988 to the cessation of peat extraction in June of 2020 (July 1988 – June 2020). The Peat Extraction Phase is described in detail in Sections 4.4 to 4.8 of Chapter 4.
- **‘Current Phase’:** the management of the Application Site since June 2020 (June 2020 to present). The Current Phase is described in detail in Sections 4.8 to 4.9 of 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 Sections 4.10 of Chapter 4.

1.2 Legislative Context

Prior to the 20th of September 2012, all industrial scale peat extraction activities were classified as exempted development. The Environment (Miscellaneous Provisions) Act 2011 came into effect on the 20th of September 2012 which inserted Section 4(4) to the Act. Section 4(4) legislates that development which is typically exempt (e.g. industrial peat extraction pre-2012) is no longer exempt if an EIA or an AA of the development is required. Notwithstanding this provision, the legal planning status of commercial peat extraction remained uncertain and unclear in practice up until September 2019, as described below.

The Planning & Development (Amendment) Act 2010 introduced Part XA – Substitute Consent to the legislation. Procedural details on substitute consent applications were inserted by Article 26 of S.I. No. 476/2011 – Planning and Development (Amendment) (No. 3) Regulations 2011.

Substitute consent is the statutory planning application process to allow for regularisation of historical development of land that would require EIA if that development were to be the subject of a planning application under current legislation. The substitute consent process also provides for circumstances where an EIA, a determination as to whether an environmental impact assessment is required, or an appropriate assessment, was or is required and has not been carried out. The local authority can serve a notice on the developer requiring an application for substitute consent to be made to An Coimisiún Pleanála.

Alternatively, in circumstances where a notice has not been served by the local authority the developer may opt to make an application for substitute consent to An Coimisiún Pleanála. It is this alternative circumstance that is applicable to this application.

Sections 6, 7 and 8 of the Planning and Development, and Residential Tenancies, Act 2020 and the Planning and Development (Amendment) (No. 2) Regulations 2020 introduced changes to the substitute consent procedure in response to the Supreme Court judgment issued on 1st July 2020 in the

“Ballysax/ McQuaid” cases - three joined appeal cases relating to two quarries (*An Taisce v An Bord Pleanála*, *An Taisce v An Bord Pleanála*, and *Sweetman v An Bord Pleanála* [2020] IESC 39). This judgment, delivered by Mr. Justice McKechnie, found that certain provisions of the substitute consent system in the Planning and Development Act 2000 (as amended) were inconsistent with the provisions of Directive 2011/92/EU, as amended by Directive 2014/52/EU in terms of requiring exceptional circumstances and public participation.

Section 8 of the Planning and Development, and Residential Tenancies, Act 2020 amends Section 177K of the Planning and Development Act 2000 (as amended) under a new subsection (1A) whereby An Coimisiún Pleanála is precluded from granting substitute consent unless it is satisfied that exceptional circumstances exist that would justify the grant of such consent. Section 177(D)(2) of the Planning and Development Act 2000 (as amended) outlines the matters to be considered by An Coimisiún Pleanála in determining whether “exceptional circumstances” exist.

In April 2022, the Applicant submitted an application to An Coimisiún Pleanála (ACP Ref. LS19.313412) for leave to apply for substitute consent under Section 177E of the Planning and Development Act 2000 (as amended) for peat extraction and ancillary activities at Application Site. In accordance with the specific amendments proposed to the substitute consent process in the Planning and Development, Maritime and Valuation (Amendment) Act 2022, (which were commenced on the 16th of December 2023 by Ministerial Order S.I. 645,) any such application for leave to apply for substitute consent which had not been determined by An Coimisiún Pleanála before that commencement date shall be deemed to have been withdrawn by the Applicant. As such, the application for leave (ACP Ref. LS19.313412) which was submitted to An Coimisiún Pleanála was withdrawn in January 2024.

This rEIAR is accompanied by an application to An Coimisiún Pleanála for substitute consent, as prescribed under Part XA 177F of the Planning and Development Act 2000 (as amended):

“Section 177F.— (1) A F858 [remedial environmental impact assessment report] 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; n(ii) the period of time within which any proposed remedial measures shall be carried out by or on behalf of the applicant; (c) such information as may be prescribed under section 177N.”

The consolidated European Union Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the ‘EIA Directive’), has been transposed into Irish planning legislation through the amendment of the Planning and Development Act 2000 and the Planning and Development Regulations 2001. Directive 2011/92/EU was amended by Directive 2014/52/EU which has been transposed into Irish law under European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018), amending the Planning and Development Act, 2000 and the Planning and Development Regulations 2001.

This rEIAR complies with the EIA Directive as amended by Directive 2014/52/EU, the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations (as amended).

An Environmental Impact Assessment (EIA) of the Project will be undertaken by An Coimisiún Pleanála as part of their consideration of the application for planning permission for the Project.

Article 5 of the EIA Directive provides where an EIA is required, the developer shall prepare and submit a remedial environmental impact assessment report (rEIAR). The information to be provided by the developer shall include at least:

- a) a description of the project comprising information on the site, design, size and other relevant features of the project;
- b) a description of the likely significant effects of the project on the environment;
- c) a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;
- d) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;
- e) a non-technical summary of the information referred to in points (a) to (d); and
- f) any additional information specified in Annex IV relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected.

In addition, Annex IV of the EIA Directive provides further detail on the information to be included in an EIAR. These requirements are transposed under Article 94 and Schedule 6 of the Planning and Development Regulations 2001 (as amended), with which this EIAR complies. In addition, Part 19, Article 222A of the Planning and Development Regulations 2001 (as amended) sets out the information to be contained in an rEIAR. MKO was appointed as environmental consultant on the Project and commissioned to prepare this rEIAR in accordance with the requirements of the EIA Directive.

1.3

The Applicant

Bord na Móna Energy Ltd. a subsidiary of Bord na Móna plc. 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.

In July 2021, Bord na Móna (BNM) opened consultation with An Coimisiún Pleanála (Ref. PC19.310844) for a development consisting of between 13 and 17 no. wind turbines and associated works at Lemanaghan Bog, known as Lemanaghan Wind Farm (<https://www.lemanaghanwindfarm.ie/>). This application will be made directly to An Coimisiún Pleanála as ‘Strategic Infrastructure Development’ (SID) under the provisions of Section 37E of the Planning and Development Act 2000 (as amended). At the time of writing, this position has not been confirmed by An Coimisiún Pleanála in correspondence to the Applicant though has been discussed in pre-application consultations with An Coimisiún Pleanála under Section 37B of the Act (ABP-310844-21). The proposed Lemanaghan Wind Farm will be cumulatively assessed with the Project as appropriate and insofar as practicable in this rEIAR.

1.4

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 ancillary activities and related activities that were undertaken at the Application Site from 1988 onwards, including the following:

- i. Industrial scale peat extraction (milled peat) at the Application Site from 1988 to June 2020;*
- ii. Installation, use and maintenance of surface water drainage infrastructure (drains, silt ponds, pumps) at the Application Site to facilitate peat extraction activity from 1988 to present day;*
- iii. Provision of a welfare facility building and associated septic tank, 2 no. storage containers;*
- iv. Use and maintenance of pre-existing railway infrastructure to facilitate peat extraction activity from 1988 to present day;*
- v. Control Measures associated with the above, inclusive of the IPC Licence measures (Ref. P0500-01) which commenced from May 2000 onwards to the present day; and,*
- vi. All associated site development and ancillary works.*

These peat extraction and ancillary activities are referred to as the ‘Project’ as appropriate. A full description of the Project is included in **Chapter 4 Description of the Development**.

1.5

Background to the Application

Bord na Móna is a semi-state company which was established from the Turf Development Board Ltd. following the commencement of the Turf Development Act 1946, with the aim of developing national peat resources and thereby providing security of energy supply and economic benefit for Irish communities. Under Bord na Móna’s Second Development Programme, drainage works, buildings and railway networks were established at the Application Site from 1950, with the commencement of peat extraction activities in 1960. Aerial imagery from 1973 confirms that the Application Site was subject to peat extraction prior to 1988. In 1982 Bord na Móna was granted planning permission to erect a harvester repair bay and ancillary infrastructure at the Application Site (Planning Ref: 81375). The majority of the extracted material at the Application Site was supplied to Derrinlough Briquette Factory, the ESB Power Stations at Ferbane and Shannonbridge and some to Evergreen Horticultural Plant.

Industrial-scale peat extraction ceased at the Application Site in June 2020, and the Applicant formally announced in January 2021 that peat extraction across all its land holdings would permanently cease. With the cessation of peat extraction, the former peat production fields will naturally revegetate and

evidence for this is already apparent within the Application Site. However, full revegetation will likely take some time and measures to aid the site rehabilitation are outlined in the bog specific Draft Bord na Móna Cutaway Bog Decommissioning and Rehabilitation Plans (refer to Appendix 4-2).

The latest dates for the transposition of the EIA and Habitats Directives were 3rd July 1988 and 10th June 1994 respectively. These directives do not purport to have retrospective effect, i.e., neither the EIA Directive nor the Habitats Directive apply to works undertaken prior to 1988 and 1994 respectively. As such, substitute consent is being sought to regularise the planning status of the Application Site for the period 1988 to the present day. This application is being made strictly without prejudice to the fact that the Project benefitted from exempted development status for part of the period covered by this application.

1.5.1 Site Location

The Application Site comprises Lemanaghan Bog, which is part of the Boora Bog Group. The Application Site comprises an area of 1,111 hectares (ha) within which bog drainage works began in 1950 followed by the commencement of peat extraction from 1960. The Application Site is located approximately 3km to the northeast of Ferbane, 7.8km southwest of Clara, and 8.7km south of Moate. The Application Site location is shown on **Figure 1-1** and **Figure 1-2**. The Application Site extends across several townlands which are listed below in **Table 1-1**. The Application Site measures approximately 5.5km in length from north to south, and approximately 6.4km from east to west, at its widest point. Grid Reference co-ordinates for the approximate site centre are E216096, N228101. Under the Water Framework Directive (WFD; Directive 2000/60/EC), the site is located within the Upper Shannon (26G) and Lower Shannon (25A) catchments.

The Application Site is connected by rail link to the Bellair South Bog to the north and to the Blackwater Bog Group to the west. The R436 Regional Road passes along much of the southern boundary. Derrynagun and Curraghalassa bogs are both located south of the road R436. The N62 National Road skirts the extreme western tip of the site. The L7002 local road passes through the northern part of the site and cuts off the northernmost sector. The current main access points to the Application Site includes an existing entrance off the N62 National Road and along the R436 into the Lemanaghan Works adjacent to the south of the Application Site.

Table 1-1 Townlands within which the Application Site is located.

Bog Reference	County	Townlands
Lemanaghan	Offaly	Cooldorragh, Kilnagarnagh, Cappanalsosset, Tumbeagh, Killaghintoher, Castlearmstrong, Leabeg, Cornafurish and Corrabeg, Lemanaghan, Kilnagoolny, Straduff, Lisdermot, Derrica More, Rosfaraghan, Rashinagh, Cor Mor and Cor Beg, and Corbane
Total Spatial Footprint		1,111ha

1.5.2 Site Context

The landcover within the Application Site comprises a mix of bare cutaway peat, re-vegetated peat, degraded blanket bog, wetlands and scrub, low woodland, heath, and remnants of high bog. Today, the topography of the Application Site ranges between 60m above ordnance datum (mOD) at its highest point to 46mOD at its lowest point.

The Application Site has a total area of 1,111ha, with approximately 699ha therein was subject to peat extraction at the point of cessation in June 2020. The bog is currently drained by a series of northwest-southeast orientated drains spaced at approximately 15m intervals.

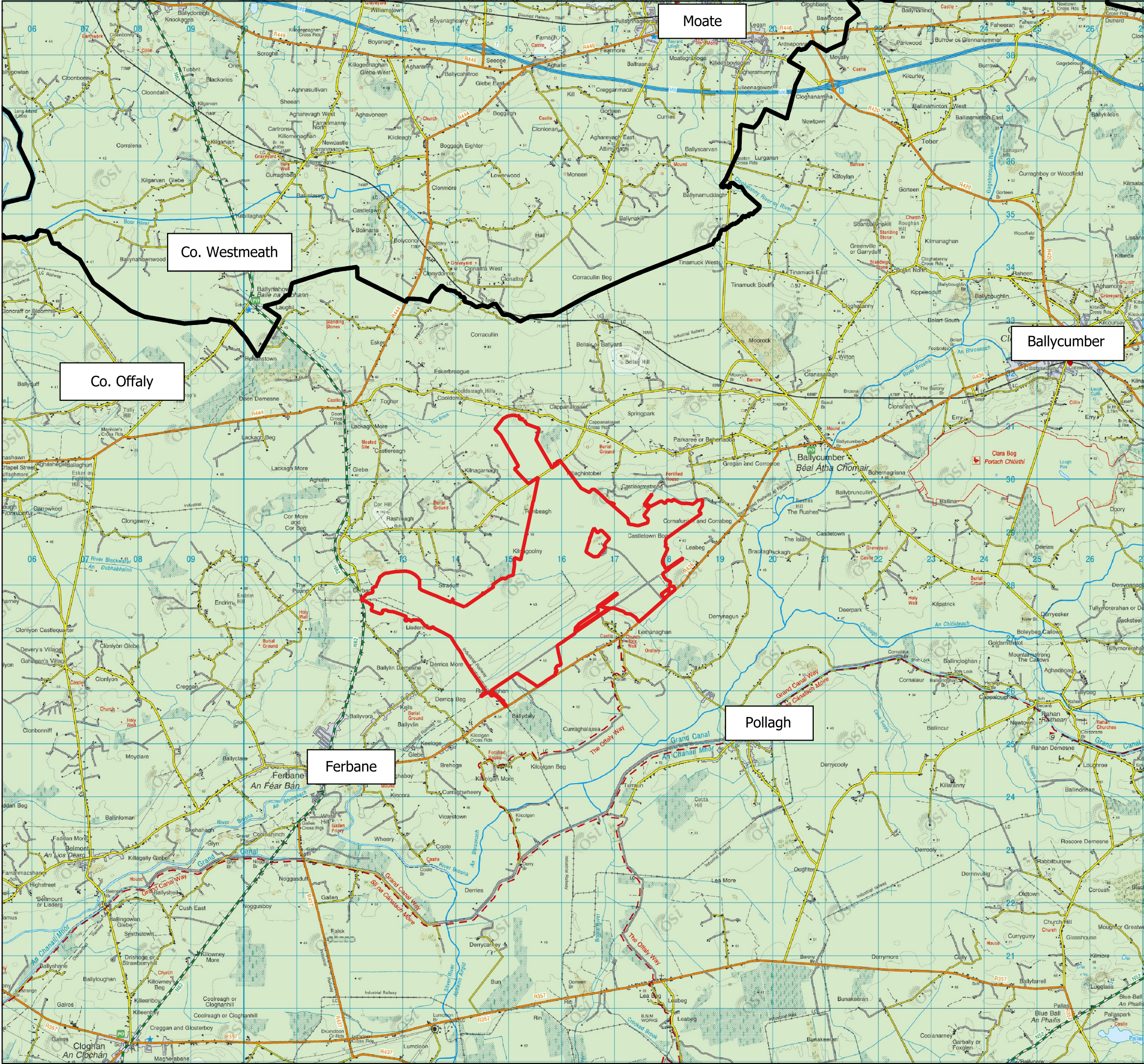
Onsite infrastructure still present and functional across the Application Site today includes:

- Surface water drainage system including silt ponds, pump sites, and drainage channels;
- De-mountable rail network including rail lines, at grade rail crossings and ancillary infrastructure;
- Electricity distribution infrastructure;
- Site access points; and,
- Guyed wind monitoring mast.

The Lemanaghan Works (hereafter ‘the Works’), which comprises a canteen, storage sheds, and maintenance buildings is located adjacent to the Application Site boundary.

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 village 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.

Peat extraction ceased at the Application Site in June 2020. Please see Figure 1-3 for peat extraction areas in 1988. As part of the decommissioning process, the process of transporting remaining peat stockpiles off the bogs commenced following the cessation of peat extraction in June 2020. The final stockpiles were transported off the bogs in 2024.



Map Legend

Application Site Boundary

County Boundaries

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Drawing Title

Site Location Context

Project Title

Extraction in Lemanaghan Bog, Co. Offaly

Drawn By

SD

Checked By

EC

Project No.

200804-e

Drawing No.

Figure 1-1

Scale

1:70,000

Date

2025-09-01

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Map Legend

Application Site Boundary

County Boundaries



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Drawing Title

Site Location Context (Aerial)

Project Title

Extraction in Lemanaghan Bog, Co. Offaly

Drawn By

SD

Checked By

EC

Project No.

200804-e

Drawing No.

Figure 1-2

Scale

1:70,000

Date

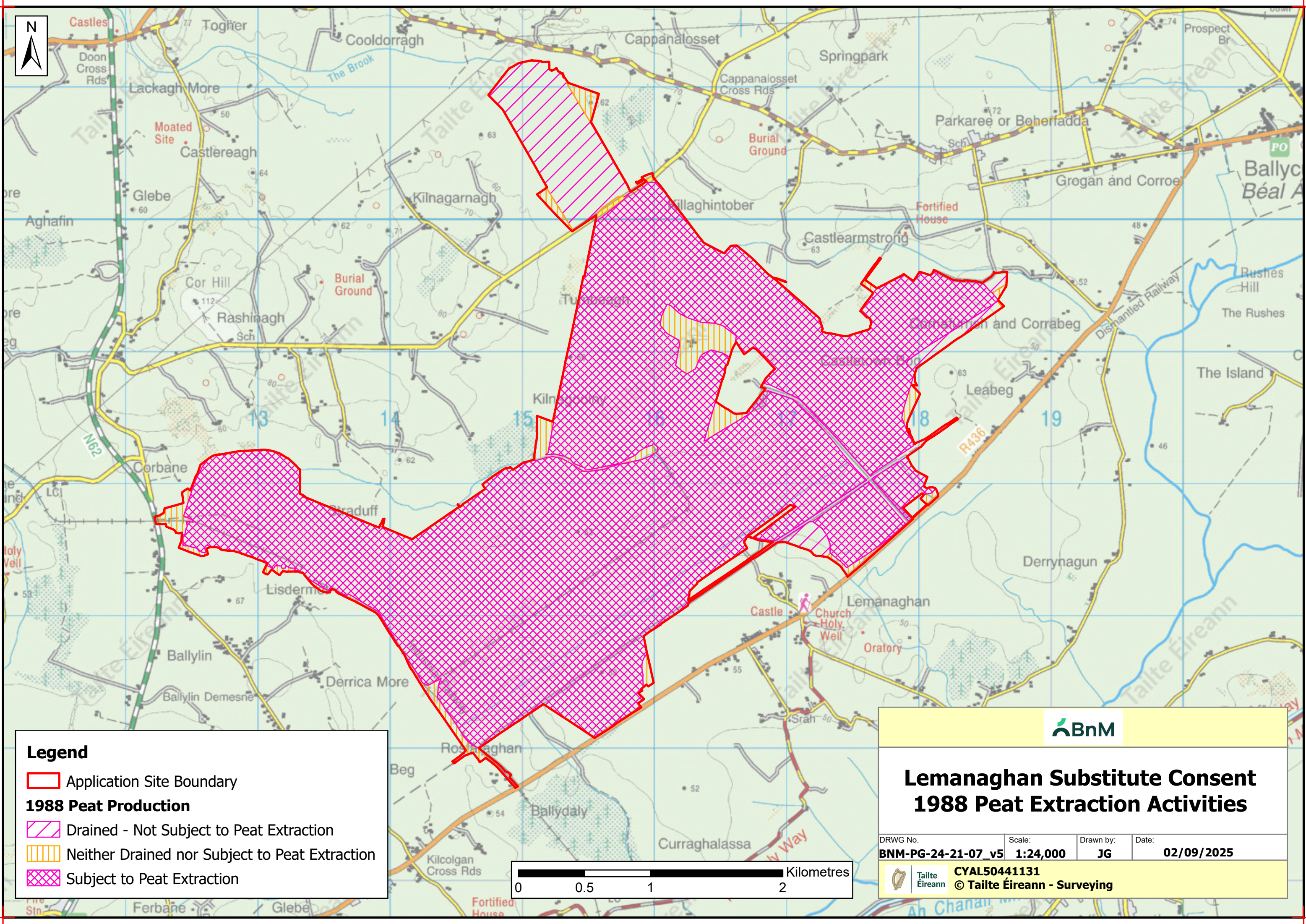
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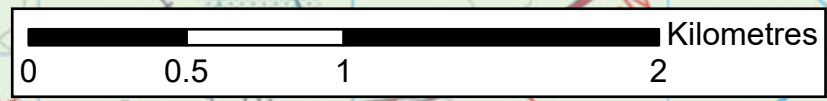
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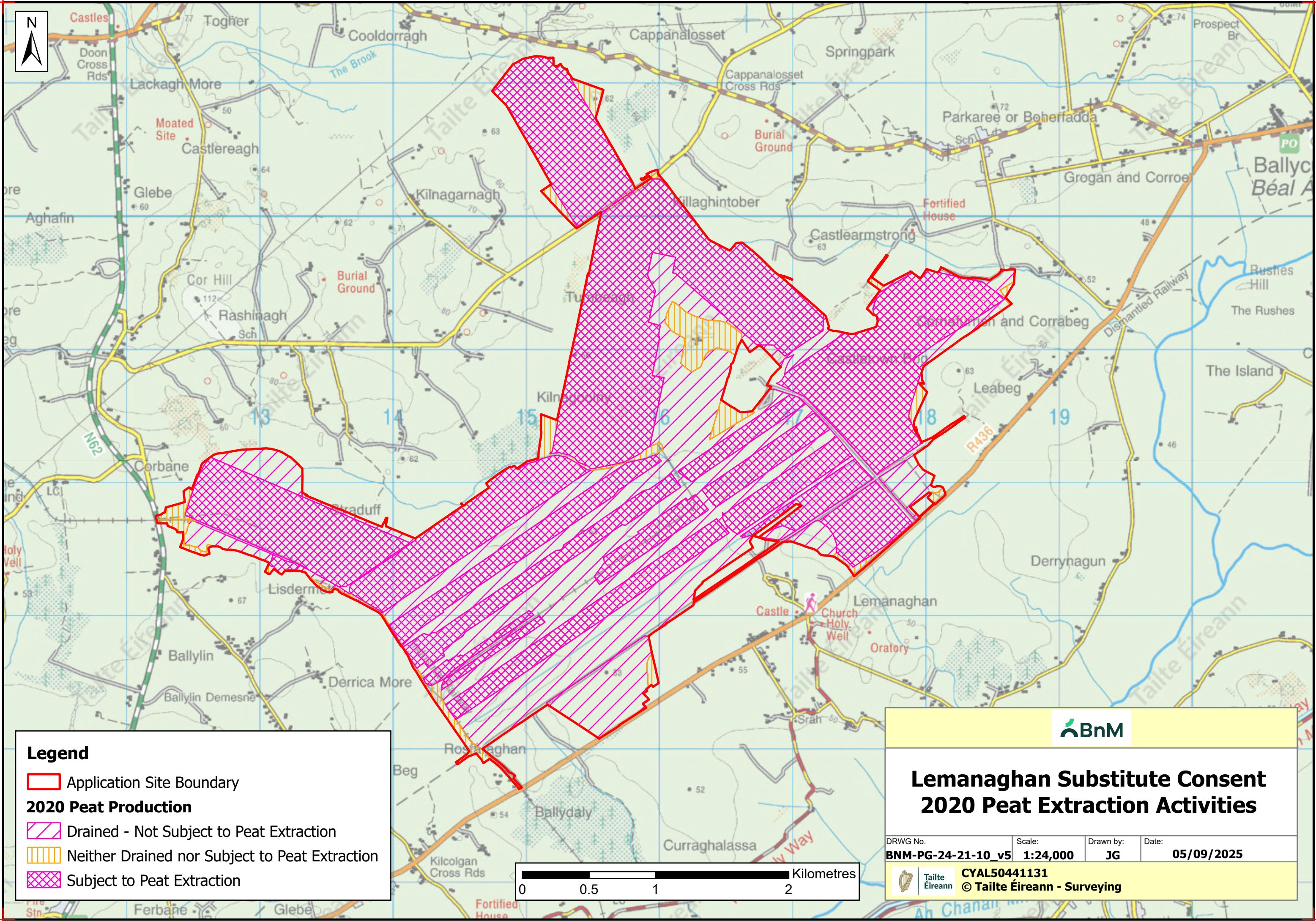
Legend

- Application Site Boundary
- 1988 Peat Production**
- Drained - Not Subject to Peat Extraction
- Neither Drained nor Subject to Peat Extraction
- Subject to Peat Extraction



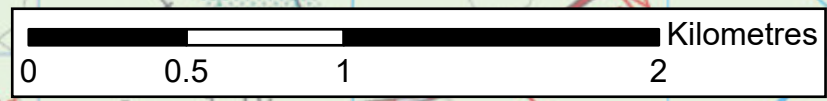
Lemanaghan Substitute Consent 1988 Peat Extraction Activities

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Legend

-  Application Site Boundary
- 2020 Peat Production**
-  Drained - Not Subject to Peat Extraction
-  Neither Drained nor Subject to Peat Extraction
-  Subject to Peat Extraction





Lemanaghan Substitute Consent 2020 Peat Extraction Activities

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1.6

Purpose and Scope of the rEIAR

The purpose of this 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 scope of the impact assessment is peat extraction and ancillary activities from July 1988 to the present day.

It is important to distinguish the remedial Environmental Impact Assessment (rEIA) to be carried out by the Commission, from this rEIAR which is accompanying the substitute consent application. The rEIA 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 2011 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 rEIAR submitted by the Applicant provides the relevant environmental information to enable the rEIA to be carried out by the competent authorities. The information to be contained in the rEIAR 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) described in Section 1.2 above.

1.7

Structure and Content of the rEIAR

1.7.1

General Structure

This rEIAR uses the grouped structure method to describe the existing environment, the potential impacts of the Project thereon and the proposed control and mitigation measures. Background information relating to the Project, scoping and consultation undertaken and a description of the Project are presented in separate sections. The grouped format sections describe the impacts of the Project in terms of population and human health, biodiversity, with specific attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EEC; land, soils and geology, water, air quality, climate, noise and vibration, landscape and visual, cultural heritage and material assets such as traffic and transportation, together with the interaction of the foregoing, schedule of mitigation and monitoring, and risk of major accidents and vulnerability to disasters.

The chapters of this rEIAR are included in Volume 1 of this rEIAR, and are as follows:

- 1. Introduction*
- 2. Background to the Development*
- 3. Consideration of Reasonable Alternatives*
- 4. Description of the Development*
- 5. Population and Human Health*
- 6. Biodiversity (including Ornithology)*
- 7. Land, Soils and Geology*
- 8. Hydrology and Hydrogeology*
- 9. Air Quality*
- 10. Climate*

11. Noise and Vibration
12. Landscape and Visual
13. Archaeology and Cultural Heritage
14. Material Assets (including Traffic and Transport)
15. Vulnerability to Major Accidents and Natural Disasters
16. Interactions of the Foregoing
17. Schedule of Mitigation and Monitoring Measures

The rEIAR also includes a Non-Technical Summary (NTS), which is a condensed and easily comprehensible version of the rEIAR document. The NTS is laid out in a similar format to the main rEIAR document and comprises a description of the Project (as part of the Development) followed by the existing environment, impacts, control and mitigation measures presented in the grouped format.

Appendices to the chapters listed above are included in Volume 3 of this rEIAR.

1.7.2 Description of Likely Significant Effects and Impacts

As stated in the 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (EPA, 2022), an assessment of the likely impacts of a project is a statutory requirement of the EIA process. The statutory criteria for the presentation of the characteristics of potential impacts requires that potential significant impacts are described with reference to the extent, magnitude, complexity, probability, duration, frequency, reversibility and trans-frontier nature (if applicable) of the impact.

The classification of impacts in this rEIAR follows the definitions provided in the Glossary of Impacts contained in the following guidance documents produced by the European Commission (EC) and the Environmental Protection Agency (EPA):

- *Guidelines on the Information to be contained in Environmental Impact Assessment Reports (EPA, 2022);*
- *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Local Government and Heritage, 2018); and,*
- *Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report (EC, 2017).*

Table 1-2 below, presents the glossary of impacts as published in the EPA guidance document. Standard definitions are provided in this glossary, which permit the evaluation and classification of the quality, significance, duration and type of impacts associated with a project on the receiving environment. The use of pre-existing standardised terms for the classification of impacts ensures that the rEIA employs a systematic approach, which can be replicated across all disciplines covered in the rEIAR. The consistent application of terminology throughout the rEIAR facilitates the assessment of the impacts on the receiving environment.

Each impact is described in terms of its quality, significance, duration and type, where possible. A 'Do-Nothing' impact is also predicted in respect of each environmental theme in the rEIAR. Residual impacts are also presented following any impact for which control and mitigation measures are prescribed. The remaining impact types are presented as required or applicable throughout the rEIAR. Any potential interactions between the various aspects of the environment assessed throughout this rEIAR are presented in Chapter 16: Interaction of the Foregoing.

Table 1-2 Impact Classification Terminology (EPA, 2022)

Impact Characteristic	Term	Description
Quality	Positive	A change which improves the quality of the environment
	Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	Negative	A change which reduces the quality of the environment
Significance	Imperceptible	An effect capable of measurement but without significant consequences
	Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
	Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
	Moderate	An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends
	Significant	An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
	Very significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment
	Profound	An effect which obliterates sensitive characteristics
Extent and Context	Extent	Describe the size of the area, number of sites and the proportion of a population affected by an effect
	Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions
Probability	Likely	Effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented
	Unlikely	Effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented

Impact Characteristic	Term	Description
Duration and Frequency	Momentary	Effects lasting from seconds to minutes
	Brief	Effects lasting less than a day
	Temporary	Effects lasting less than a year
	Short-term	Effects lasting one to seven years
	Medium-term	Effects lasting seven to fifteen years
	Long-term	Effects lasting fifteen to sixty years
	Permanent	Effect lasting over sixty years
	Reversible	Effects that can be undone, for example through remediation or restoration
	Frequency	Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)
Type	Indirect	Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway
	Cumulative	The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.
	‘Do Nothing’	The environment as it would be in the future should the subject project not be carried out
	Worst Case’	The effects arising from a project in the case where mitigation measures substantially fail
	Indeterminable	When the full consequences of a change in the environment cannot be described
	Irreversible	When the character, distinctiveness, diversity, or reproductive capacity of an environment is permanently lost
	Residual	Degree of environmental change that will occur after the proposed mitigation measures have taken effect
	Synergistic	Where the resultant effect is of greater significance than the sum of its constituents

1.8

Project Team

1.8.1

Project Team Responsibilities

The companies and staff listed in **Table 1-3** rEIAR Project Team were responsible for completion of the rEIAR. Further details regarding project team members are provided below.

The rEIAR project team comprises a multidisciplinary team of experts with extensive experience in environmental impact assessment in their relevant area of expertise. The qualifications and experience of the principal staff from each company involved in the preparation of this rEIAR are summarised in Section 1.8.2 below. Each chapter of this rEIAR has been prepared by a competent expert in the subject matter. Further details on project team expertise are provided in the Statement of Authority at the beginning of each impact assessment chapter.

Table 1-3 rEIAR Project Team

Consultants	Principal Staff Involved in Project	rEIAR Input
MKO Tuam Road, Galway.	Michael Watson Sean Creedon Ellen Costello Pat Roberts Dervla O' Dowd Catherine Johnson Susan Doran Edel Mulholland Ciarán Fitzgerald Ronan Dunne Pádraig Cregg John Hynes Rachel Walsh Jack Workman Dija Mazonaite Killian Devereux Aoife Joyce	Project Managers, Scoping and Consultation, Preparation of Natura Impact Statement and the following Chapters: > 1. Introduction > 2. Background to the Proposed Development > 3. Consideration of Reasonable Alternatives > 4. Description of the Development > 5. Population and Human Health > 6. Biodiversity > 12. Landscape and Visual > 14. Material Assets (including Traffic and Transport) > 15. Vulnerability to Major Accidents and Natural Disasters > 16. Interaction of the Foregoing > 17. Schedule of Mitigation and Monitoring Measures
Hydro Environmental Services 22 Lower Main Street, Dungarvan, Co. Waterford.	Michael Gill Conor McGettigan	Flood Risk Assessment, Drainage Assessment and Preparation of the following Chapters: > 7. Land, Soils and Geology > 8. Hydrology and Hydrogeology
AWN Consulting The Tecpro Building, Clonsgaugh Business &	Ciara Nolan Mike Simms Dermot Blunnie	Chapter 9: Air Quality Chapter 10: Climate Chapter 11: Noise and Vibration

Consultants	Principal Staff Involved in Project	rEIAR Input
Technology Park, Dublin 17.	Dr Edward Porter Dr. Aoife Kelly	
Tobar Archaeological Services Saleen Midleton Co. Cork.	Miriam Carroll	Preparation of Chapter 13: Archaeology and Cultural Heritage

Project Team Members

MKO

Michael Watson, MA; CEnv PGeo

Michael Watson is the Director of Environment in MKO. Michael has over 20 years' experience in the environmental sector. Following the completion of his Master's Degree in Environmental Resource Management, Geography, from National University of Ireland, Maynooth he worked for the Geological Survey of Ireland and then a prominent private environmental and hydrogeological consultancy prior to joining MKO in 2014. Michael's professional experience includes managing Environmental Impact Assessments, EPA License applications, hydrogeological assessments, environmental due diligence and general environmental assessment on behalf of clients in the wind farm, waste management, public sector, commercial and industrial sectors nationally. Michael's key strengths include project strategy advice for a wide range and scale of projects, project management and liaising with the relevant local authorities, Environmental Protection Agency (EPA) and statutory consultees as well as coordinating the project teams and sub-contractors. Michael is a key member of the MKO senior management team and as head of the Environment Team has responsibilities to mentor various grades of team members, foster a positive and promote continuous professional development for employees. Michael also has a Bachelor of Arts Degree in Geography and Economics from NUI Maynooth, is a Member of IEMA, a Chartered Environmentalist (CEnv) and Professional Geologist (PGeo).

Sean Creedon, BSc, MSc

Sean is an Associate Director in the Environment Team at MKO. He oversees a team of highly skilled environmental professionals working on EIAR for large and medium scale Renewable Energy infrastructure. Sean has directed and overseen multiple renewable energy projects across wind, solar, battery and hydrogen as well as a range of thermal and other energy related developments. He has worked on the planning and environmental impact elements within all stages of project delivery. He is a member of the MKO senior management team responsible for developing the business, mentoring team members, fostering a positive culture and promoting continuous employee professional development. Prior to joining MKO Sean fulfilled several project and program management roles within Bord na Mona. Sean has over 23 years' experience in program and project development, holds an MSc from NUI Galway and a Diploma in Project Management from Institute of Project Management Ireland.

Ellen Costello BSc, MSc

Ellen Costello is a Senior Environmental Scientist with MKO with over 5 years' experience in private consultancy. Ellen holds a BSc (Hons) in Earth Science, and a MSc (Hons) in Climate Change: Integrated Environmental and Social Science Aspects where she focused her studies on renewable energy development in Europe and its implications on environment and society. Ellen's key strengths and expertise are Environmental Protection and Management, Environmental Impact Statements, Project Management, and GIS Mapping and Modelling. Since joining MKO, Ellen has been involved in a range of renewable energy infrastructure projects. In her role as a project manager, Ellen works with and co-ordinates large multidisciplinary teams including members from MKO's Environmental, Planning, Ecological and Ornithological departments as well as sub-contractors from various fields in the preparation and production of EIARs.

Pat Roberts B.Sc. (Env.) CIEEM

Pat Roberts is a Senior Ecologist and director of the Ecology team with MKO with over 19 years post graduate experience of providing ecological services in relation to a wide range of developments at the planning, construction and monitoring stages. Pat holds B.Sc. (Hons) in Environmental Science. Pat has extensive experience of providing ecological consultancy on large scale industrial and civil engineering projects. He is highly experienced in the completion of ecological baseline surveys and impact

assessment at the planning stage. He has worked closely with construction personnel at the set-up stage of numerous construction sites to implement and monitor any prescribed best practice measures. He has designed numerous Environmental Operating Plans and prepared many environmental method statements in close conjunction with project teams and contractors. He has worked extensively on the identification, control and management of invasive species on numerous construction sites. Prior to taking up his position with MKO in June 2005, Pat worked in Ireland, USA and UK as a Tree Surgeon and as a nature conservation warden with the National Trust (UK) and the US National Park Service. Pat's key strengths include his depth of knowledge and experience of a wide range of ecological and biodiversity topics and also in his ability to understand the requirements of the client in a wide range of situations. He currently manages the ecological team within MKO and ensures that the outputs from that team are of a very high standard and meet the requirements of the clients and relevant legislation and guidelines. He is a full member of the Chartered Institute of Ecologists and Environmental

Dervla O'Dowd B.Sc

Dervla O'Dowd is Associate Director with responsibility for MKO's dedicated Ornithology Team with nineteen years of experience in environmental consultancy as a Senior Ecologist and Project Manager. Dervla graduated with a first-class honours B.Sc. in Environmental Science from NUI, Galway in 2005 and joined Keville O'Sullivan Associates in the same year. Dervla has gained extensive experience in project management and ecological assessment of the impacts of various infrastructural projects including wind energy projects, water supply schemes, road schemes and housing developments nationwide and has also been involved in the compilation of Environmental Impact Reports and acted as EIAR coordinator on many of these projects. Dervla has also extensive experience in the provision of ecological site supervision for infrastructural works within designated conservation areas, in particular within aquatic habitats, and has also been involved in the development of environmental/ecological educational resource materials. Currently, Dervla is responsible for the management of MKO's dedicated Ornithology Team coordinating MKO's portfolio of bird survey and assessment work required on major infrastructural projects, with emphasis on wind energy projects. Dervla's key strengths and areas of expertise are in project management, project strategy, business development and survey Coordination to ensure the efficient operation of the Ornithology team's field survey schedule. Dervla holds full membership of the Chartered Institute of Ecology and Environmental Management and current Safe Pass card.

Catherine Johnson LL.M. B.Sc., GradCIWEM

Catherine is an Environmental Scientist and Climate Practitioner with MKO with over 2 years' private consultancy experience and expertise in climate and sustainability matters. Catherine holds a BSc in Earth and Ocean Science and a LL.M. in Global Environment and Climate Change Law. Prior to joining MKO in 2022, Catherine worked as an Environmental Social Governance (ESG) analyst for Acasta in Edinburgh. Catherine has expertise regarding international climate law and policy, earth processes, ocean science, and sustainability/ESG. Catherine has been involved in a myriad of environmental service offerings at MKO including EIA Screenings and Reports, climate and sustainability related work and renewable energy infrastructure projects.

Susan Doran B.Sc.

Susan Doran is an Environmental Scientist with MKO with over 3 years' experience in consultancy and conservation. Susan holds B.Sc (Hons) in Ecology and Environmental Biology from University College Cork. Prior to her role as Environmental Scientist, Susan was an Ornithologist for the MKO Ornithology Team. Susan's key strengths and areas of expertise are in project and data management, team coordination, development and training. Since joining MKO Susan has been involved as an Ornithological Coordinator, focusing on large scale data management, mapping, viewshed analysis and bird surveying as well as being responsible for sub-contractor management and training of all members within the ornithology team on an ongoing basis. In her current role as environmental scientist, Susan has been involved with several large-scale onshore windfarms as assistant Project Manager through the EIA process. Her experience includes the production of fee proposals, constraints mapping, peat

probing, data and report review as well as the writing of environmental fieldwork RAMS, feasibility studies, scoping documents and EIAR chapters. Susan also holds a BTO ringing licence, and membership to the Botanical society of Britain and Ireland, British Ecological Society, British Trust for Ornithology, Chartered Institute for Ecology and Environmental Management.

Edel Mulholland B.Sc.

Edel Mulholland is a Graduate Environmental Scientist with MKO with over 1 years' experience in both private practice and local authorities. Edel holds BA (Hons) in Environmental Science from the University of Galway. Prior to taking up her position with MKO in September 2024, Edel worked as an Environmental Chemistry Analyst with CLS, Co. Galway, where she assisted with water quality analysis. Edel's key strengths and areas of expertise are in environmental policy, drafting EIAR chapters and QGIS mapping.

Ciaran Fitzgerald B.Sc

Ciarán Fitzgerald is an Environmental Scientist who has been working with MKO since June 2024. Ciarán holds a B.Sc. (Honours) in Marine Science from the National University of Ireland Galway and a First-Class Honours PG. Dip in Geographic Information Systems from University College Cork. Ciarán works as part of the Environmental Renewables team as well as a larger multidisciplinary team. Ciarán's role involves undertaking tasks such as report writing, EIAR chapter writing, and QGIS mapping. Prior to joining MKO, Ciarán spent time aboard the research vessel "Celtic Explorer," working as part of a team undertaking chemical water data, pelagic species abundance and sorting, bathymetric GIS mapping, data collection, and report writing. Ciarán's key strengths lie in GIS mapping and communication. Since joining the company, Ciarán has been involved in a range of projects, including onshore wind, offshore wind, and solar, contributing by reviewing EIAR chapters and assisting with project development. Ciarán holds a membership from the Institute of Sustainability and Environmental Professionals (ISEP).

Ronan Dunne B.Sc, M.Sc.

Ronan Dunne is a Project Planner with MKO having joined the company in June 2022. Ronan holds a BSc (Hons) in City Planning and Environmental Policy, and a MSc (Hons) in Urban and Regional Planning from University College Dublin where he focused his studies on wind energy development.

Since joining MKO, Ronan has been involved in a range of infrastructure projects, including onshore wind, solar, battery storage and grid infrastructure developments. In his role as a planner, Ronan works with multidisciplinary teams including members from MKO's Environmental, Ecological and Ornithological departments as well as sub-contractors from various fields in the develop/deliver reports to facilitate the planning process.

Padraig Cregg B.Sc, M.Sc.

Padraig Cregg is a Senior Ornithologist with MKO. with over 11 years of experience in both private practice and NGOs. Padraig holds a BSc (Hons) in Zoology and Masters in Evolutionary and Behavioural Ecology. Prior to taking up his position with McCarthy Keville O'Sullivan in December 2018, Padraig worked as a Senior Ornithologist and held previous posts with TOBIN Consulting Engineers, Energised Environments Ltd in Scotland, WSP Environment and Energy Ltd in Scotland and BirdWatch Ireland. Padraig has specialist knowledge in designing, executing and project managing ornithological assessments, primarily in the renewable industry. Padraig's key strengths and areas of expertise are in ornithology and ecology surveying and in writing Natura Impact Statements (NIS) and the biodiversity chapter of Environmental Impact Assessment Reports (EIAR) to accompany planning applications. Since joining MKO Padraig has been involved in designing, executing and project managing the ornithological assessment on over 20 proposed wind farm developments. He has played a key role in project managing these planning applications through the statutory planning system, with more projects in the pipeline. Within MKO Padraig plays a large role in the management and

confidence building of junior members of staff and works as part of a large multi-disciplinary team to produce EIAR and NIS Reports.

John Hynes B.Sc, M.Sc.

John Hynes is the Ecology Director at MKO, with over 12 years' professional experience in both the public and private sector. John oversees MKO's Ecology, Ornithology, Forestry, Bats, and GIS teams. John holds a B.Sc. in Environmental Science and a M.Sc. in Applied Ecology.

John's key strengths and areas of expertise are in Appropriate Assessment of plans and projects, Ecological Impact Assessment, Flora and Fauna survey methods and design, project management and project strategy. John is experienced as a coordinator or large multi-disciplinary teams on complex ecological projects. John has been involved as a lead Ecologist on a range of energy infrastructure, commercial, transport, housing, forestry, biodiversity net gain and nature restoration projects. John is a Full member of the Chartered Institute of Ecology and Environmental Management, a member of Galway County Council Climate and Biodiversity Special Policy Committee (SPC) and a contributor to the Wind Energy Ireland (WEI) Biodiversity and Sustainability Working Group.

Rachel Walsh B.Sc

Rachel is a Senior Ecologist with 4 years' experience in professional ecological consultancy and holds a BSc (Hons) in Environmental Science from National University of Ireland, Galway. Rachel's key strengths are in terrestrial flora and fauna ecology, including Irish Vegetation Classification surveys, habitat mapping, invasive species surveys, mammal surveys, Appropriate Assessment reporting and Ecological Impact Assessment. Since joining MKO, Rachel has worked widely on renewable energy infrastructure projects, wastewater infrastructure projects and residential projects and manages a team of ecologists within the company.

Jack Workman B.Sc M.Sc. CIWEM

Jack is the Landscape & Visual Project Director at MKO and a Technician Member of the British Landscape Institute. Jack is a Landscape and Visual Impact Assessment Specialist with an academic background in the field of Environmental Science and Geography. Jack's primary role at MKO is conducting Landscape and Visual Impact Assessment (LVIA) for Environmental Impact Assessment reports, as well as supporting the MKO graphics, CAD and drone surveying teams. Jack holds a BSc. in Psychology, and an MSc. in Coastal and Marine Environments (Physical Processes, Policy & Practice) where he was awarded the Prof. Máirín De Valéra distinction in science research award. Since joining MKO in February 2020, Jack has conducted and project managed all aspects of LVIA for a broad range of commercial infrastructure developments including wind and solar energy projects, grid infrastructure, extraction industry and Strategic Housing Developments. Jack holds a membership with the Chartered Institute of Water and Environmental Management and is also a member of the Landscape Research Group.

Dija Mazonaite B.Sc

Dija Mazonaite is an Environmental Scientist and LVIA Specialist at MKO. Dija has a BSc (Hons) in Geography & Geosystems and was recognised as a University Scholar at the University of Galway. Dija was also a finalist in Undergraduate of the Year for Innovative Sustainable Thinking. Dija's primary role at MKO is producing the LVIA chapter of EIA reports for large infrastructure developments. Since joining MKO, Dija has conducted and project managed all aspects of LVIA for a broad range of commercial infrastructure developments including wind and solar energy projects, grid infrastructure, extraction industry and Strategic Housing Developments. Dija's key strengths include proficiency in GIS tools such as ArcGIS and QGIS, conducting landscape and visual impact assessments and capturing image data through drone surveys and photomontages. Dija is an affiliate member with the Landscape Institute and is also a member with IEMA, with qualifications to fly drones in the A1/A3 subcategories.

Alan Roache B.Sc, M.Sc

Alan is an Environmental Scientist and LVIA Specialist with MKO. His primary role at MKO is producing the LVIA chapter of EIAR reports. Alan holds an MSc. in Environmental Leadership from University of Galway. Since joining MKO, Alan has worked widely on renewable energy infrastructure, commercial, recreational, and residential projects. Alan's key strengths include proficiency in GIS tools such as ArcGIS and QGIS, conducting landscape and visual impact assessments and capturing image data through drone surveys and photomontages.

Killian Devereux B.Sc

Killian is a CAD Technician at MKO with over 6 years of drafting experience in various sectors of the building industry. He holds BSc (Hons) in Architectural Technology from Galway Mayo Institute of Technology. Prior to taking up his position with MKO in October 2022, Killian worked as a Structural CAD/BIM Technician for Tobin Consulting Engineers and as an Architectural Technician for some smaller-scale Consultants. He was primarily involved in a variety of Commercial / Residential projects where he was responsible for the structural drawing packages but also has experience working in RC concrete Drawings, Architectural and Civil drawings, FSC's /DAC's and one-off housing planning applications. His key strengths and areas of expertise are in Auto CAD, Revit, Cads RC and Google Sketch up. Since Joining MKO Killian has been the lead CAD technician on multiple Renewable Energy Planning Applications

Aoife Joyce B.Sc M.Sc.

Aoife Joyce is an Ecologist with MKO Planning and Environmental Consultants with experience in research, consultancy and drilling contractors. Aoife is a graduate of Environmental Science (Hons.) at NUI Galway, complemented by a first-class honours MSc in Agribioscience. Prior to taking up her position with MKO in May 2019, Aoife worked as an Environmental Scientist with Irish Drilling Ltd. and held previous posts with Inland Fisheries Ireland and Treemetrics Ltd. She has a wide range of experience from bat roost identification, acoustic sampling, soil and water sampling, Waste Acceptability Criteria testing, electrofishing, mammal and habitat surveying to GIS, Environmental Impact Assessments (EIAs) and mapping techniques. Since joining MKO, Aoife has been involved in deploying bat detectors and weather stations nationwide, dawn and dusk bat detection surveys, sound analysis, mapping and report writing. Within MKO, she works as part of a multidisciplinary team to help in the production of ecological reports and assessments. Aoife is a member of Bat Conservation Ireland and Qualifying CIEEM.

Hydro Environmental Services

Michael Gill

Michael Gill is an Environmental Engineer with over 22 years' environmental consultancy experience in Ireland. Michael has completed numerous hydrological and hydrogeological impact assessments of largescale developments in Ireland. He has also managed EIA/EIS assessments for infrastructure projects and private residential and commercial developments. In addition, he has substantial experience in wastewater engineering and site suitability assessments, contaminated land investigation and assessment, wetland hydrology/hydrogeology, water resource assessments, surface water drainage design and SUDs design, and surface water/groundwater interactions.

Conor McGettigan

Conor McGettigan (BSc, MSc) holds an M.Sc. in Applied Environmental Science (2020) from University College Dublin, graduating with a First-Class Honours degree. Conor has also completed a B.Sc. in Geology (2016) from University College Dublin (First Class Honours). In recent times Conor has assisted in the preparation of the land, soils and geology chapters for several wind farm developments on peatlands.

AWN Consulting Ltd.

Mike Simms

Mike Simms BE MEngSc MIOA MIET, Senior Acoustic Consultant at AWN, who has worked in the field of acoustics for over 19 years and has been a consultant since 1998. He has extensive experience in all aspects of environmental surveying, noise modelling and impact assessment for various sectors including, energy, industrial, commercial and residential.

Dermot Blunnie

Dermot Blunnie (Senior Acoustic Consultant) holds a BEng. from the University of South Wales, a M.Sc. from the University of Derby and IOA Diploma in Acoustics and Noise Control from the Institute of Acoustics. He has over 12 years' experience as an acoustic consultant and is a member of the Institute of Acoustics. He has extensive knowledge and experience in relation to commissioning noise monitoring and impact assessment of wind farms as well as a detailed knowledge of acoustic standards and proprietary noise modelling software packages. He has commissioned noise surveys and completed noise impact assessments for numerous wind farm projects within Ireland.

Ciara Nolan

Ciara Nolan (Senior Air Quality Consultant) holds a BSc (Eng) in Energy Systems Engineering from University College Dublin and has also completed an MSc in Applied Environmental Science at UCD. She is a Member of the Institute of Air Quality Management (MIAQM) and the Institute of Environmental Science (MIEnvSc). Ciara has over 7 years of experience in the field of air quality consultancy. She has prepared the air quality and climate EIAR chapters for a range of developments including wind energy, industrial, pharmaceutical, data centre, residential and commercial.

Tobar Archaeological Services

Miriam Carroll is a partner of Tobar Archaeological Services which was established in 2003. Prior to that Miriam worked in the field of commercial archaeology for five years in University College Cork where she completed her primary and Masters degrees. Miriam has over 24 years of experience in the field of archaeology, with 19 of those as partner of Tobar Archaeological Services. She is a full member of the Institute of Archaeologists of Ireland (IAI) and is licensed by the National Monuments Service to carry out excavations in Ireland. Miriam undertook her primary degree in Archaeology (major) and English (minor) between 1993 and 1996. Her Masters degree was also undertaken in University College Cork. This was a 2 year course in Irish Archaeology. The subject of Miriam's thesis focused on 'Ballyalton Bowls' (prehistoric pottery) in the context of the Irish Neolithic. This Masters degree was undertaken between 1996 and 1998. Miriam then went on to work in commercial archaeology in the Archaeological Services Unit of University College Cork for 5 years after which both Annette Quinn and Miriam set up the business Tobar Archaeological Services in 2003. She is a full member of the Institute of Archaeologists of Ireland (IAI) and is licensed by the National Monuments Service to carry out excavations in Ireland. Miriam has overseen numerous commercial projects in Ireland including wind, solar and overhead line projects. Miriam was the project archaeologist for the Bandon Sewerage Scheme which lasted a number of years. This required a high-level of experience and organization as well as the resolution of parts of the 17th century town wall and other additional significant finds in a timely and efficient manner. Miriam also successfully managed a major excavation in Buttevant, Co. Cork for the Cork Education and Training board as well as being the project archaeologist for Fota Wildlife Park extension from 2014. This involved project management of a large team of archaeologists on a medieval settlement site. Miriam has also undertaken numerous EIARs and has presented evidence at numerous Oral Hearings for bodies such as Eirgrid.

Drainage works for peat extraction commenced at its earliest at the Application Site in 1950. The retrospective impact assessments have been carried out based on the reasonable availability of information relating to the peat extraction and ancillary activities. In addition to references within this rEIAR, the assessments have been limited by the following:

- *While every effort has been made to source historical baseline environmental data, this rEIAR has been limited by the availability, completeness, accuracy, age and accessibility of data.*

The Methodology section of each chapter describes the approach to the impact assessment within that chapter, and where there may be data gaps, this is clearly highlighted.

1.10

Viewing and purchasing the rEIAR

Copies of this rEIAR and accompanying rNIS will be available online, including the NTS, on the website of An Coimisiún Pleanála, under the relevant Planning Reference Number (to be assigned on lodgement of the application).

- An Coimisiún Pleanála: <http://www.pleanala.ie/>

This rEIAR and all associated documentation will also be available for viewing at the offices of both An Coimisiún Pleanála and Offaly County Council. The rEIAR may be inspected free of charge or purchased by any member of the public during normal office hours at the following address:

- An Coimisiún Pleanála,
64 Marlborough Street,
St. Rotunda,
Dublin 1,
D01 V902.
- Offaly County Council,
Áras an Chontae,
Charlewille Road,
Tullamore, Co. Offaly,
R35 F893.

The rEIAR and rNIS will also be available to view online via the Department of Planning, Housing and Local Government's EIA Portal, which will provide a link to the planning authority's website on which the application details are contained. This EIA Portal was recently set up by the Department as an electronic notification to the public of requests for development consent which are accompanied by an EIAR.

(<https://housinggov.ie/maps.arcgis.com/apps/webappviewer/index.html?id=d7d5a3d48f104ecbb206e7e5f84b71f1>)