

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 all peat extraction related activities from July 1988 to the present day that have been carried out within the Ballivor Bog Group (namely Ballivor, Carranstown, Bracklin, Lisclogher and Lisclogher West bogs, which are hereafter referred to as the ‘Application Site’), located in Counties Meath and Westmeath. 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 the Directives. 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:

- i. The activities employed at the Application Site from 1948 at the onset of preparation works up to July 1988.
- ii. **A description of the baseline environment as of July 1988.**
- iii. **A description of peat extraction and related activities at the Application Site from July 1988 to the cessation of peat extraction in June of 2020.**
- iv. **A description of the management of the Application Site since June 2020; and,**
- v. **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 rEIAR). This rEIAR and substitute consent application is made to An Bord Pleanála (hereafter referred to as ‘the Board’ or ‘ABP’ 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 2023, 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. P0501-01; “IPC Licence” hereafter), from the Environmental Protection Agency for the Derrygreenagh Bog Group, which encompasses the Ballivor Bog Group and thus 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 EPA 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 activities and all ancillary works 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 Section 4.7 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 Section 4.8 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 Section 4.9. 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 the Board.

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 the Board. 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 the Board 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 the Board in determining whether “exceptional circumstances” exist.

In October 2021, the Applicant submitted an application to the Board (ABP Ref. LS17.311646) for leave to apply for substitute consent under Section 177E of the Planning and Development Act 2000 (as amended) for peat extraction and related activities at the 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 the Board before that commencement date shall be deemed to have been withdrawn by the Applicant. As such, the application for leave (ABP Ref. LS17.311646) which was submitted to the Board was withdrawn in January 2024.

This rEIAR is accompanied by an application to the Board 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 the Board 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 plc. and its subsidiaries 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 April 2023, Bord na Móna Powergen Ltd., a subsidiary of Bord na Móna Plc., lodged a planning application to An Bord Pleanála (Ref. PA25M.316212) for a development consisting of 26 no. wind turbines and associated works at the Ballivor Bog Group, known as Ballivor Wind Farm (<https://www.ballivorwindfarmplanning.ie/>). This application was made directly to An Bord Pleanála as ‘Strategic Infrastructure Development’ (SID) under the provisions of Section 37E of the Planning and Development Act 2000 (as amended). This position was confirmed by An Bord Pleanála in correspondence to the Applicant dated 5th April 2022 following pre-application consultations with the Board under Section 37B of the Act (ABP-307471-20). The proposed wind farm will be cumulatively assessed with the rehabilitation plans for the Ballivor Bog Group 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 activities and all ancillary works that were undertaken at the Application Site from 1988 onwards, including the following:

- i. Installation of surface water drainage infrastructure at Ballivor Bog Group, specifically at Ballivor, Carranstown, Bracklin, Lisclogher, and Lisclogher West Bogs to facilitate peat extraction activity from 1988 to June 2020;*
- ii. Vegetation clearance to facilitate peat extraction activity from 1988 to June 2020;*
- iii. Industrial scale peat extraction (milled peat and sod peat/moss), specifically at Ballivor, Carranstown, Bracklin, and Lisclogher Bogs from 1988 to June 2020;*
- iv. Use and maintenance of pre-existing ancillary supporting infrastructure and services to facilitate peat extraction and associated activities (e.g., railway infrastructure, fixed fuel tanks, drainage (drains, silt ponds, pumps), machine passes etc.), from 1988 to present day;*
- v. Control Measures associated with the above, inclusive of the IPC Licence measures (Ref. P0501-01) which commenced from April 2000 onwards to the present day;*
- vi. All associated site development and ancillary works.*

These peat extraction activities and all ancillary works 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 1948, with the commencement of peat extraction activities in 1953 in the main Ballivor Bog area. Clearance and drainage work commenced in Bracklin Bog in 1950 and peat extraction commenced there in 1957. Clearance and drainage of Lisclogher Bog began in 1950, with peat extraction commencing in 1960. Annual reports indicate that peat extraction was already underway at Ballivor, Bracklin (main area) and Lisclogher by the 1960s.

The earliest aerial mapping available (1973) confirms that by this period, drains were already inserted at Ballivor, Bracklin and Lisclogher Bogs. Aerial imagery from 1988 indicates that Carranstown Bog and the western portion of Bracklin Bog were subject to peat extraction prior to 1988. Drainage works were completed at Lisclogher West Bog after 1988; however, no extraction of peat was undertaken in this bog. In 1983 Bord na Móna was granted planning permission to erect bulk loading facilities for moss peat at Ballivor Bog (Planning Ref: 323/83) and this facility opened in 1985. The majority of the extracted material at the Application Site was supplied to the horticultural sector.

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 be able to naturally revegetate and evidence for this is already noticed in Lisclogher Bog and large parts of Bracklin Bog. However, full revegetation will likely take some time and measures to aid the site rehabilitation are outlined in the bog specific 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 development benefitted from exempted development status for part of the period covered by this application.

1.5.1

Site Location

The Application Site comprises five bogs located at the Westmeath-Meath County border. The bogs include Ballivor, Carranstown, Bracklin, Lisclogher and Lisclogher-West Bogs and comprise an area of 2,421 hectares (ha) within which bog drainage works began in 1948 followed by the commencement of peat extraction from 1953 to 2020. The Application Site is located 2.5 km south-southeast of Delvin, 3.7km east of Raharney and 2.2km west of Ballivor Village. 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 9.27km in length from north to south, and approximately 7.0 kilometres from east to west, at its widest point. Grid Reference co-ordinates for the approximate site centre are E263560, N257213. Under the Water Framework Directive (WFD; Directive 2000/60/EC), the site is located within the Boyne_SC_040 and Boyne_SC_050 sub catchments and the Boyne (Catchment ID 07).

The current main access points to the Application Site include a northern and southern entrance off the R156 Regional Road into Carranstown Bog and Ballivor Bog, respectively. Access to the remaining bogs is possible through Carranstown Bog and via local roads off the N52, N51 and N4 such as the L4106, L4101.

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

Bog Reference	County	Townlands - Meath	Townlands - Westmeath	Spatial Footprint (ha)
Ballivor	Meath / Westmeath	Clondalee More, Derryconor, Clonycavan, Robinstown Killaconnigan	Grange More, Riverdale	638
Bracklin (including Hill of Downey)	Westmeath	N/A	Craddanstown, Bracklin, Killagh, Ballynaskeagh (Ballynaskeagh E.D.), Mucklin	772
Carranstown	Meath / Westmeath	Killaconnigan, Carranstown Little, Carranstown Great	Grange More	304

Bog Reference	County	Townlands - Meath	Townlands - Westmeath	Spatial Footprint (ha)
Lisclogher	Meath / Westmeath	Coolronan	Lisclogher Great, Cockstown, Clonleame, Bracklin Clonmorrill	479
Lisclogher West	Westmeath	N/A	Bracklin, Ballyhealy or Ballinure, Bolandstown, Martinstown (Ballyhealy E.D).	228
Total Spatial Footprint: 2,421 ha				

1.5.2 Site Context

The landcover within the Application Site comprises a mix of bare cutaway peat, re-vegetated peat, degraded blanket bog, scrub, low woodland and remnants of high bog. Today, the topography of the Application Site ranges between 86 m above ordnance datum (m OD) at its highest point to 69m OD at its lowest point.

Ballivor Bog has a total area of 638ha, with 82ha therein 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. The topography within this bog today ranges from approx. 70 – 79mOD. Bare peat dominates the northeast, east and southeast of the bog. A mix of heath, scrub and pioneer open cutaway habitats can be found in the west, south and in small pockets to the northeast. Pockets of woodland are also found to the southwest.

Carranstown Bog has a total area of 304ha, with 178ha therein subject to peat extraction at the point of cessation in June 2020. The bog predominantly consists of bare peat heath habitat along the western boundary and covering large portions of the east. Scrub, woodland and raised bog remnants can be found in the east also with a small area of fen to the northeast. The topography within this bog today ranges from approx. 68 – 75mOD.

Bracklin Bog has a total area of 772ha, incorporating the Hill of Down area, with 118ha therein subject to peat extraction at the point of cessation in June 2020. Peat extraction was concentrated in a small section in the west of the bog, referred to as Bracklin West. As such, this bog predominantly comprises bare peat habitat. The bog is drained by a series of northeast-southwest orientated drains. As the main part of Bracklin Bog went out of operation in the 1990s, it now comprises heath, scrub, areas of cutover bog, and pioneer open cutaway habitats and pockets of wetlands. The topography within this bog today ranges from approx. 71 – 86mOD.

Lisclogher Bog has a total area of 479ha. Peat extraction ceased across large areas of this bog in 2003 and regeneration is evident throughout. Third party extraction on limited areas continued until June 2020. Areas of remnant bog are located in the north and south of the bog. Pioneer open cutaway habitats dominate in the centre of the bog along with heath, scrub, wetland areas and woodland. The topography of this bog today ranges from approx. 69 – 76mOD. It is drained by a series of east-west orientated drains.

Lisclogher-West Bog has a total area of 228ha and while drainage was inserted, this was never subject to peat extraction. The existing high bog is relatively dry and is drained by a series of northwest-southeast orientated drains. The topography of this bog today ranges from approx. 77 – 82mOD. The bog comprises degraded raised bog, bog woodland and heathland mosaic, scrub and conifer plantation.

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

- Surface water drainage system including silt ponds and drainage channels;

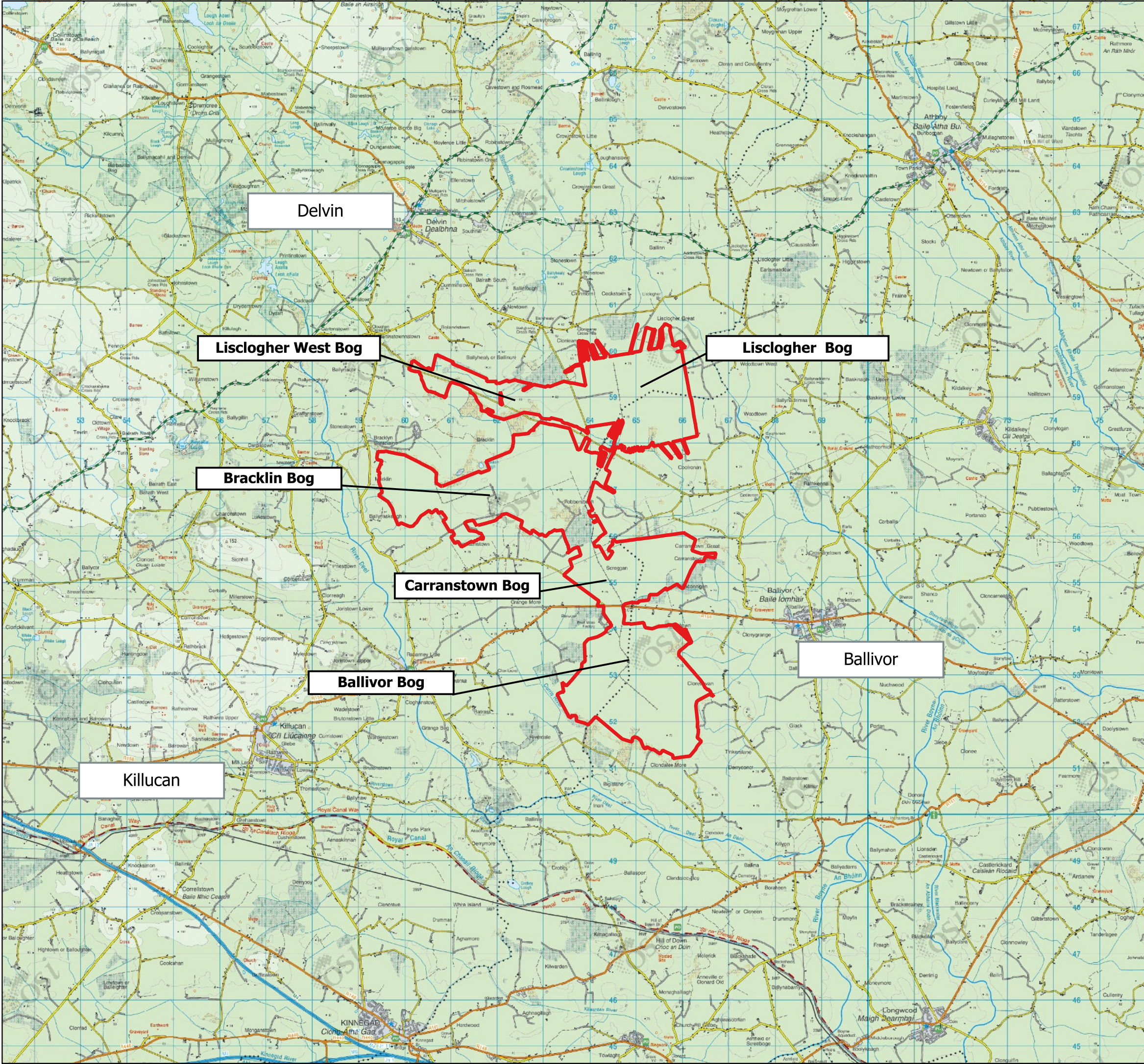
- De-mountable rail network including rail lines, at grade rail crossings and ancillary infrastructure;
- Electricity distribution infrastructure;
- Machine passes and site access points; and,
- Guyed wind monitoring mast.

The Ballivor Works (hereafter ‘the Works’), which comprises the former peat processing plant, storage facilities, canteen and welfare facilities, tippler, bulk loading facility and former workshop 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. The consented Bracklyn Wind Farm (ABP Ref. PA25M.311565) site is located adjacent to the northwestern boundary of the Application Site.

Peat extraction ceased at the Application Site in June 2020. Please see Figure 1-3 for peat production 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 stockpiles were transported to Kilberry Horticulture, Edenderry Power Station and Derrinlough Briquette Factory. The final stockpiles were transported off the bogs in 2023.

With the establishment of the Turf Development Act of 1981 (which amended and extended the rights of the Turf Development Act 1946-1980), Bord na Móna oversaw a private turf development scheme which provided grants to private bog developers. At the Application Site, third party sod peat extraction was limited to Lisclogher Bog from the 1990s until June 2020. Please see Figure 1-5 for third party peat extraction locations.



Map Legend

 Application Site Boundary



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Drawing Title

Site Location

Project Title

Ballivor Substitute Consent Application

Drawn By

NS

Checked By

EC

Project No.

191137f

Drawing No.

Figure 1-1

Scale

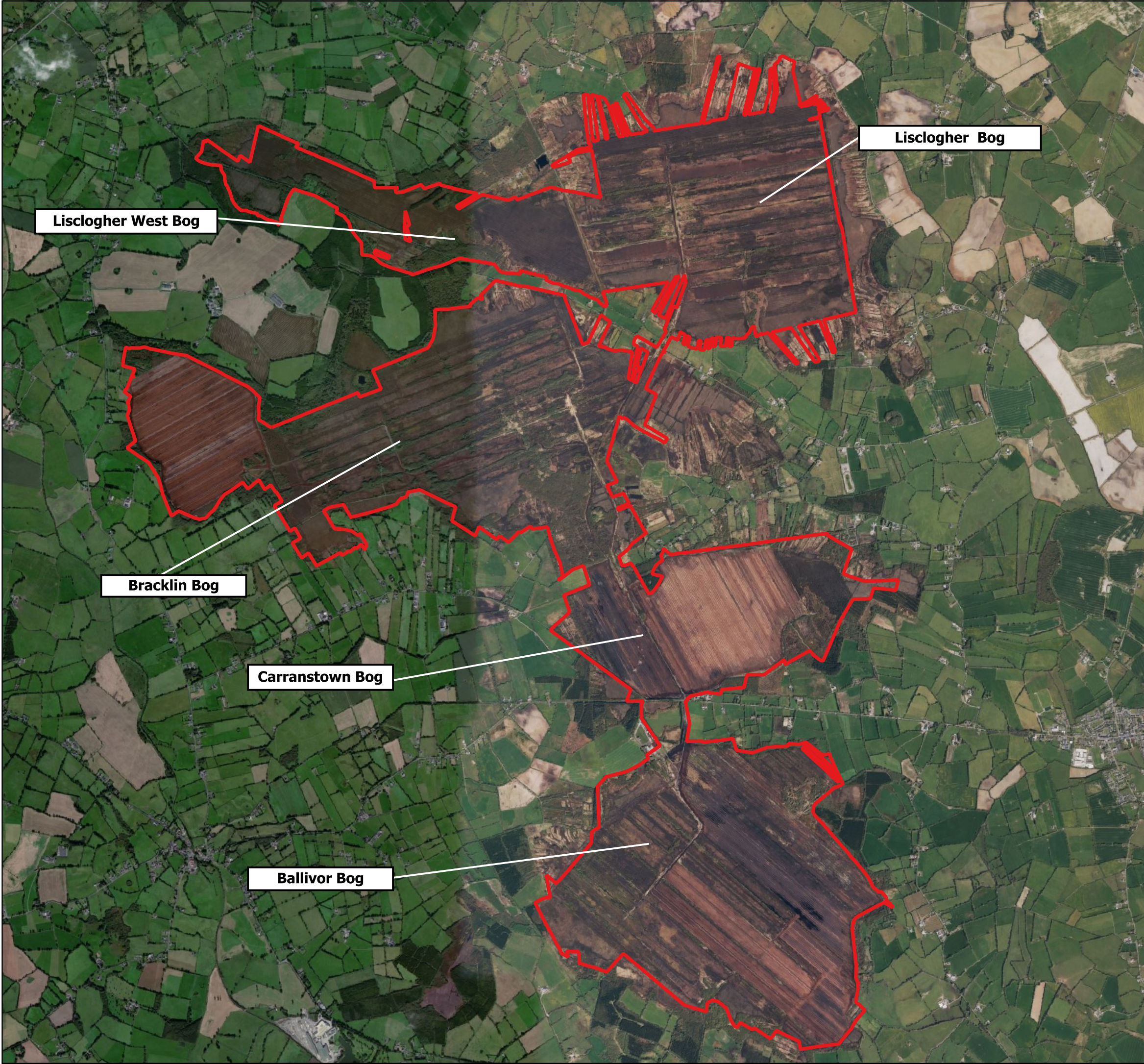
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Date


2024-06-26



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Map Legend

 Application Site Boundary

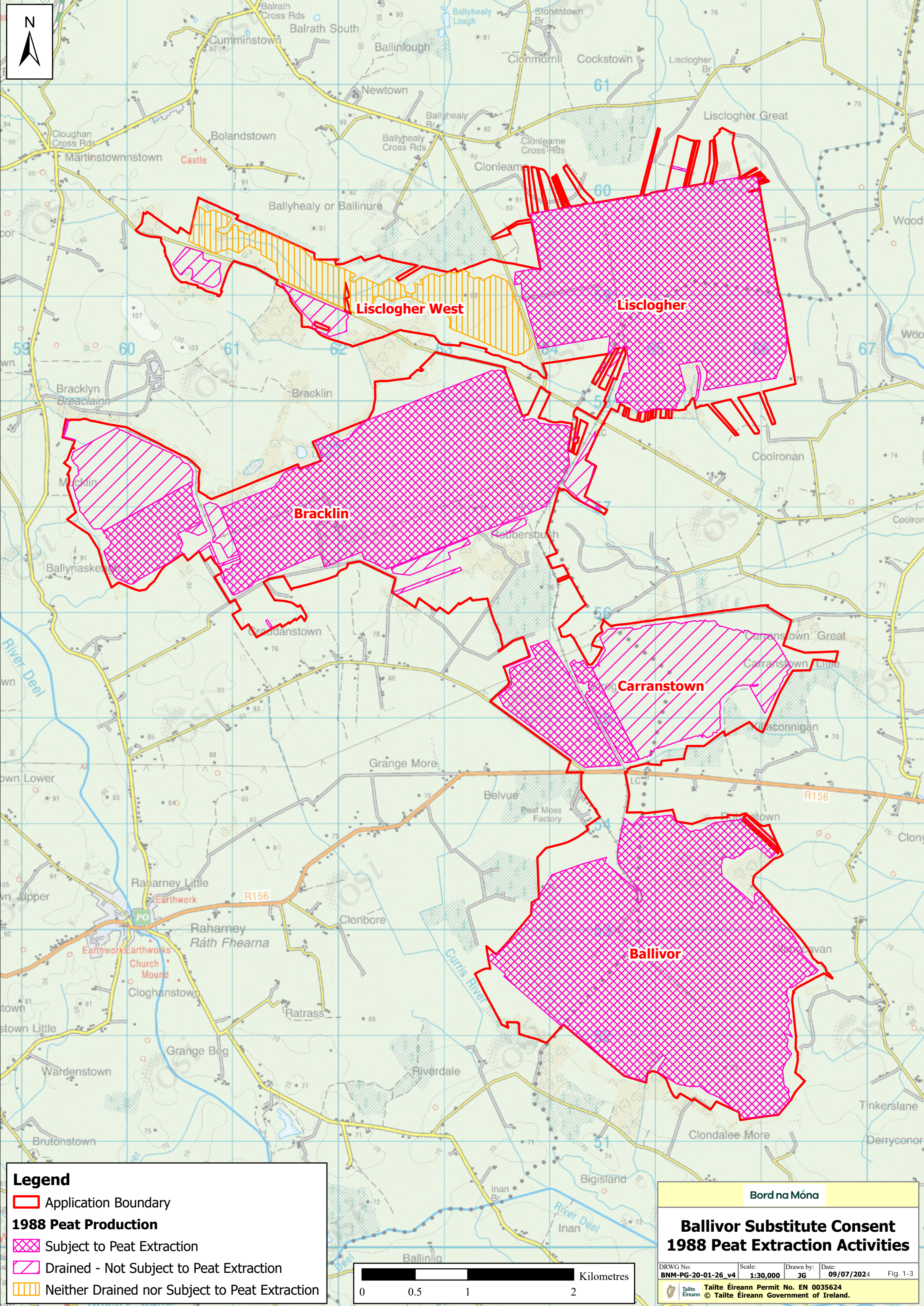


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Drawing Title		Site Location	
Project Title		Ballivor Substitute Consent Application	
Drawn By	NS	Checked By	EC
Project No.	191137f	Drawing No.	Figure 1-2
Scale	1:35,000	Date	2024-06-26



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Legend

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



Bord na Móna

**Ballivor Substitute Consent
1988 Peat Extraction Activities**


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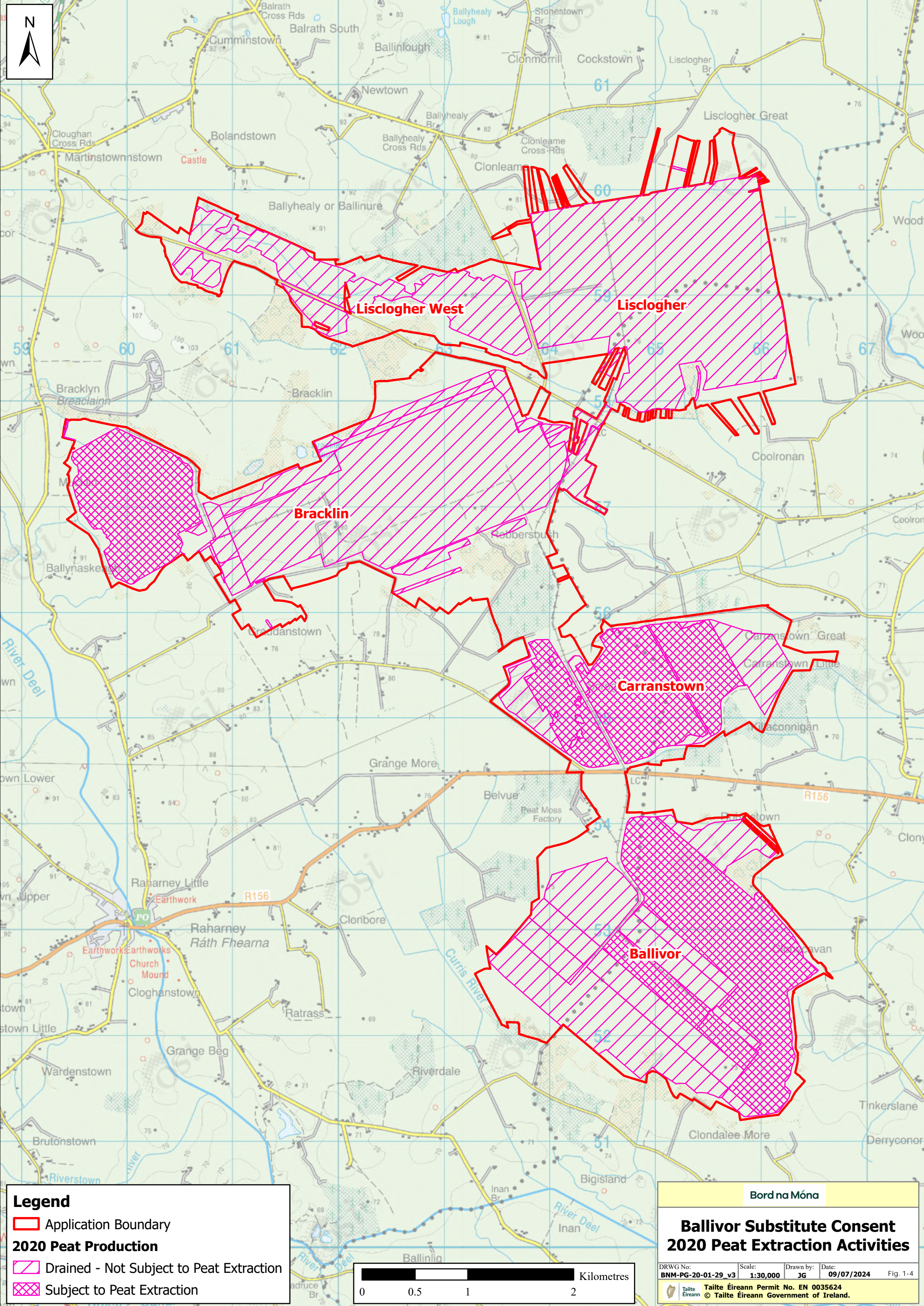
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Date:
09/07/2024




Fig. 1-3

 Táilte Éireann

Táilte Éireann Permit No. EN 0035624
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Legend

-  Application Boundary
- 2020 Peat Production**
-  Drained - Not Subject to Peat Extraction
-  Subject to Peat Extraction

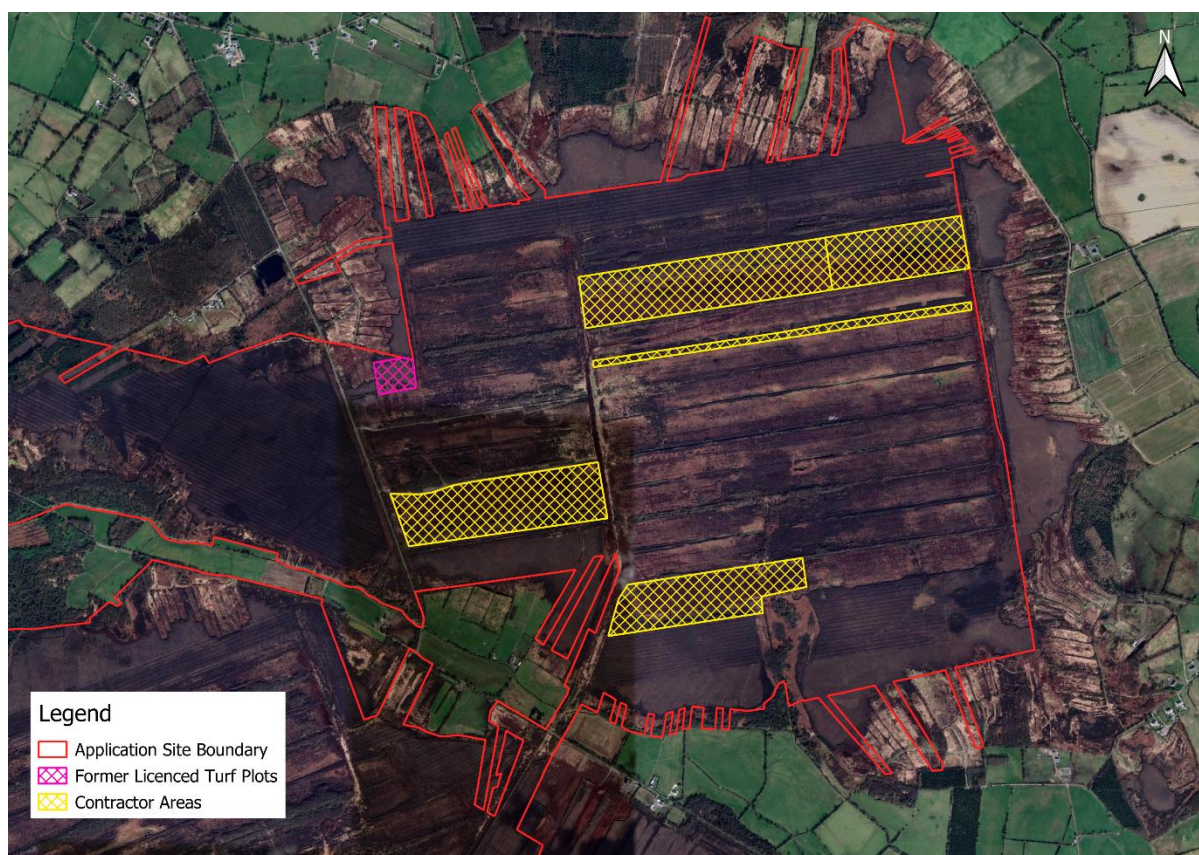


Bord na Móna

**Ballivor Substitute Consent
2020 Peat Extraction Activities**

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Figure 1-5 Lisclogher Third Party Peat Extraction Locations-



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 activities and all ancillary works at the Application Site. The scope of the impact assessment is peat extraction activities and all ancillary works from July 1988 to the present day.

It is important to distinguish the remedial Environmental Impact Assessment (rEIA) to be carried out by the Board, 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 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. Archaeological, Architectural 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 and mitigation measures presented in the grouped format.

Appendices to the chapters listed above are included in Volume 2 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 documents. 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 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 Karen Mulryan Grainne Griffin Natalia Stolarska John Willoughby Tommy Harlin Pdraig Cregg Pat Roberts John Hynes Sarah Mullen Pdraig Desmond Patrick Manley Ian Hynes Jack Workman Killian Devereux Aoife Joyce	Project Managers, Scoping and Consultation, Preparation of Natura Impact Statement and the following Chapters: > 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) > 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

Consultants	Principal Staff Involved in Project	rEIAR Input
AWN Consulting The Tecpro Building, Clonsgaugh Business & Technology Park, Dublin 17.	Ciara Nolan Mike Simms Dermot Blunnie	Preparation of : > 9. Air Quality > 10. Climate > 11. Noise and Vibration
Tobar Archaeological Services Saleen Midleton Co. Cork.	Miriam Carroll Annette Quinn	Preparation of > 13. Archaeological, Architectural and Cultural Heritage

1.8.2 Project Team Members

MKO

Michael Watson, MA; CEnv PGeo

Michael Watson is Environmental Director at MKO, overseeing a team which comprises over 50 highly skilled environmental professionals. 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 & 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 renewables, 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. 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 22 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 four years of 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.

Gráinne Griffin BSc, MSc

Gráinne is an Environmental Scientist with MKO with over 2 years' experience in the environmental consultancy sector, which included ecological roles as a marine mammal observer and an aerial survey

operator. Gráinne holds a BSc in Applied Freshwater & Marine Biology from ATU Galway and a MSc in Environmental Leadership from the University of Galway. Gráinne's key strengths and areas of expertise include managing and researching reports in areas of environmental conservation and policy, ecology, renewable energy, marine spatial planning, and climate action. Gráinne has experience in report writing, including Appropriate Assessments, Natura Impact Statements, feasibility studies and EIA screening reports. Gráinne also holds skills in environmental restoration project research and design. Since joining MKO Gráinne has been involved in coordinating environmental site work for a wide range of developments, assisting in stakeholder engagement, scoping exercises, organising and attending pre-application meetings with local authorities and An Bord Pleanála. Within MKO, Gráinne has been assisting managers in the coordination and production of EIARs for largescale SID wind energy developments. Gráinne also holds a membership with the Chartered Institute of Ecology and Environmental Management (CIEEM).

Natalia Stolarska BSc, MSc

Natalia Stolarska is a Graduate Environmental Scientist with MKO. Natalia holds a BSc in Earth and Ocean Science and an MSc in Environmental Leadership. Natalia's key strengths and areas of expertise are in drafting EIAR report chapters, environmental impact assessment screening reports, wind farm feasibility studies and QGIS mapping. Since joining MKO in September 2023, Natalia has been involved as a Graduate Environmental Scientist in a range of wind farm projects, assisting with field work, client briefing notes, constraints mapping and drafting EIAR chapters, with more projects in the pipeline.

Pat Roberts B.Sc. (Env.) CIEEM

Pat Roberts is Principal Ecologist with MKO with over 18 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 is currently responsible for staff development, training and ensuring that the outputs from the ecology 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 Managers (CIEEM).

Sarah Mullen B.Sc. M.Sc Ph.D.

Sarah is a Project Director (Ecology) with MKO with over 7 years' experience in ecological consultancy. Sarah holds a B.Sc. (Hons) in Botany, an M.Sc. in Biodiversity and Conservation and a Ph.D. in Botany. Prior to taking up her position with MKO in September 2018, Sarah worked as an Ecologist with Ryan Hanley Ltd. where she gained experience in multidisciplinary ecological surveys, ecological impact assessment and appropriate assessment. Since joining MKO Sarah has been responsible for the management, co-ordination and undertaking of flora, fauna and habitat surveys for a range of projects including large-scale energy infrastructure projects, residential and commercial developments, tourism projects and biodiversity monitoring and restoration projects. She has overseen the preparation of ecological reports to accompany planning applications including Ecological Impact

Assessments, Stage 1 and Stage 2 Appropriate Assessment reports, Invasive Species Management Plans and Biodiversity/Habitat Management Plans. She currently oversees the general Ecology team at MKO. Sarah's key strengths and areas of expertise are in terrestrial flora and fauna ecology, including vegetation surveys, habitat mapping, invasive species surveys, mammal surveys, Appropriate Assessment and Ecological Impact Assessment. She holds membership with the Chartered Institute of Ecology and Environmental Management.

Padraig Desmond B.Sc (Hons)

Pádraig is a Project Ecologist with MKO with 4 years post graduate ecological experience and over 3 years of which have been in ecological consultancy. Pádraig holds a BSc (Hons) in Ecology and Environmental Biology from University College Cork. Pádraig took up his position with MKO in December 2021, prior to which he worked as a Junior Ecologist with Envirico. Through these consultancy roles Pádraig has gained excellent experience in producing ecological reports such as Natura Impact Statements, Ecological Impact Assessments, Biodiversity chapters, Invasive Species Management Plans, and Constraints Reports for a wide range of projects including small private developments to housing developments and renewable energy projects such as solar and wind farms. Prior to the above roles, Pádraig worked as a field ecologist for the Department of Conservation in New Zealand, where he developed a strong field-based skill set.

Pádraig's key strengths and areas of expertise are in terrestrial ecology, including vegetation surveys, habitat identification, invasive species surveys, mammal surveys, Appropriate Assessment and Ecological Impact Assessment. Pádraig is also skilled in GIS.

Patrick Manley B.Sc

Patrick Manley is a Senior Ornithologist with MKO with over 7 years of experience in environmental consultancy. Patrick holds BSc (Hons) in Geology from University College Dublin. Since joining MKO, Patrick has worked on wind farm projects, solar farm projects, residential developments, data centres, county council projects and National Parks and Wildlife Service projects. He specialises in ornithological consulting, including Environmental Impact Assessments and has specialist knowledge in designing, executing and project managing ornithological assessments, primarily in the renewable industry. Prior to joining MKO in August 2016, Patrick gained experience through his involvement in several bird conservation projects, including protected curlew, seabirds and waders. Within MKO, Patrick 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 chapters.

John Willoughby BA (Hons) M.Sc (Hons)

John is a Project Planner in MKO with over 7 years' experience across planning consultancy and environmental management. John holds a BA (Hons) in Geography, Planning and Environmental Policy, and an MSc (Hons) in Environmental Policy, both from UCD, and recently completed an Advanced Diploma in Planning and Environmental Law at Kings Inns. Prior to taking up his position with MKO in 2022, John worked in planning consultancy since 2017, managing and assisting with the coordination of development projects throughout the statutory planning process, from feasibility stage to final grant and planning compliance, carrying out due diligence, feasibility assessments, development potential reports, appeals, submissions and bespoke planning advice on a wide range of development projects. John also has previous experience in environmental management in both the Pharmaceutical and Infrastructure sectors. Through both his professional and academic experience, John has gained skills in urban planning, Environmental Impact Assessment, regeneration, development management, project management, strategic planning and policy research. John is a corporate member of the IPI with specialist knowledge in national, regional and local planning policy and guidance, development management and strategic planning analysis for a wide range of projects across the residential, commercial, mixed-use, retail and renewable energy sectors. Within MKO, John works as part of a

larger multidisciplinary team to coordinate the development of planning applications for renewable energy infrastructure for submission to both Local Authorities and An Bord Pleanála.

Tommy Harlin B.Sc (Hons) M.Sc (Hons)

Tommy Harlin is a Planner with MKO having joined the company in March 2023. Tommy 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 renewable energy development. Tommy has experience working on a wide variety of projects ranging from small scale bespoke projects, commercial and industrial projects and large-scale renewable energy projects including onshore wind, solar, grid infrastructure, and energy storage projects. Tommy's main responsibilities to date include the preparation and lodgement of planning documentation and liaising with multidisciplinary project teams and contributing to the delivery of inputs for comprehensive planning applications. Tommy is also a graduate member of the Irish Planning Institute.

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.

Padraig Cregg B.Sc. (Zoo.), M.Sc. (Eco.)

Padraig is a Principal Ornithologist with MKO and has over eleven years of experience working in environmental consultancies. The natural world has been a lifelong passion for Padraig. He has pursued this passion from boyhood through his academic study and career with MKO. In his role, he acts as technical advisor for the ornithology team, helping to take projects through their entire lifecycle, from site selection through survey design, constraints studies, impact assessment and lodgement of the planning application. He is responsible for training the ornithology team and keeping his colleagues updated on all emerging guidance, legislation, policies, initiatives, industry best practices, emerging trends, and market opportunities.

John Hynes M.Sc. (Ecology), B.Sc.

John Hynes is the Ecology Director at MKO, with over 12 years' professional experience in 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.

Aoife Joyce B.Sc M.Sc.

Aoife Joyce is a Project Director (Ecology) with 5 years' professional experience in ecological assessments and has completed CIEEM and BCI courses in Bat Impacts and Mitigation, Bat Tree Roost Identification and Endoscope training, Bat ID, Trapping and Handling and Kaleidoscope Pro Analysis. She is a graduate of Environmental Science (Hons.) at University of Galway, complemented by a first-class honours MSc in Agribioscience. Prior to taking up her position with MKO in 2019, Aoife held previous posts with Inland Fisheries Ireland and Treemetrics Ltd. She has a wide range of experience from bat roost identification, acoustic sampling, sound analysis, electrofishing, mammal and habitat surveying to GIS, soil and water sampling, Waste Acceptability Criteria testing, Environmental Impact Assessments (EIAs) and mapping techniques. Since joining MKO, Aoife has been involved in managing bat survey requirements for a variety of renewables planning applications, as well as commercial, residential and infrastructure projects. This includes scope development, project coordination, roost assessments, remote bat detector deployment, dawn and dusk bat detection surveys, bat handling, sonogram analyses, mapping, impact assessment, mitigation design inputs and report writing. Within MKO, she oversees the bat team and works as part of a wider multidisciplinary team to help in the production of ecological reports and assessments. Aoife is a member of Bat Conservation Ireland and CIEEM and holds current Bat Roost Disturbance and bat photography licenses.

Killian Devereux BSc (Hons) in Architectural Technology

Killian is currently the Project CAD Technician at MKO. He has over 8 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 Engineering 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.

Hydro Environmental Services

Michael Gill

Michael Gill (BA, BAI, Dip Geol., MSc, MIEI) is an Environmental Engineer and Hydrogeologist with over 22 years' environmental consultancy experience in Ireland. Michael has completed numerous geological, hydrological and hydrogeological impact assessments of wind farms and renewable projects in Ireland. For example, Michael has worked on the EIARs for Oweninny WF, Cloncreen WF, and Yellow River WF, and over 120 other wind farm related projects across the country. Michael has also worked on rEIARs for Cleanrath WF, 41 no. Bord na Móna bogs, and also for a number of quarry sites. **Conor McGettigan**

Conor McGettigan

Conor McGettigan (BSc, MSc) is an Environmental Scientist, holding 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). Conor has completed numerous land, soils and geology chapters for several developments on peatlands. Conor has also completed geological and hydrological studies on sensitive peatlands sites, including Clonaslee Bog, the Liffey Head Project, and Keerglen WF and Kilsallagh WF. Awn Consulting Ltd.

AWN Consulting

Mike Simms

Mike Simms (Senior Acoustic Consultant) holds a BE and MEngSc in Mechanical Engineering and is a member of the Institute of Acoustics (MIOA) and of the Institution of Engineering and Technology (MIEI). Mike has worked in the field of acoustics for over 19 years. He has extensive experience in all aspects of environmental surveying, noise modelling and impact assessment for various sectors including, wind energy, industrial, commercial and residential.

Dermot Blunnie

Dermot Blunnie (Senior Acoustic Consultant) holds a BEng (Hons) in Sound Engineering, MSc in Applied Acoustics and has completed the Institute of Acoustics (IOA) Diploma in Acoustics and Noise Control. He has been working in the field of acoustics since 2008 and is a member of the Institute of Engineers Ireland (MIEI) and the Institute of Acoustics (MIOA). 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.

1.9

Difficulties Encountered

Drainage works for peat extraction commenced at its earliest at the Application Site in the late 1940s. The retrospective impact assessments have been carried out based on the reasonable availability of information relating to the peat extraction activities and all ancillary works and the environment. 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 Bord Pleanála, under the relevant Planning Reference Number (to be assigned on lodgement of the application).

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

This rEIAR and all associated documentation will also be available for viewing at the offices of both An Bord Pleanála, Meath County Council and Westmeath 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 Bord Pleanála,
64 Marlborough Street,
St. Rotunda,
Dublin 1,
D01 V902.
- Meath County Council,
Buvinda House,
Dublin Road,
Navan, Co. Meath,
C15 Y291.
- Westmeath County Council,
Áras An Chontae,
Mount St,
Mullingar,
Co. Westmeath,
N91 FH4N.

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>