

1.

INTRODUCTION

This remedial Environmental Impact Assessment Report (rEIAR) has been prepared by MKO on behalf of Bord na Móna Biomass Ltd a subsidiary of Bord na Móna plc. (hereafter ‘the Applicant’), as part of an application for the Substitute Consent for peat extraction and ancillary activities from July 1988 to the present day that have been carried out at Ballydermot within the Allen Bog Group (Ticknevin, Glashabaun North, Glashabaun South, Codd 1, Codd 2, Ballydermot North, Ballydermot South, Blackriver, Lullymore, Lullybeg, Barnaran, Killina, Derrybrennan and Lodge Bogs) located in Counties Kildare and Offaly (which are hereafter referred to as the ‘Application Site’, as shown in Figure 1-1 and Figure 1-2). 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:

- The activities employed at the Application Site from 1935 at the onset of preparation works up to July 1988;
- **A description of the baseline environment as of July 1988;**
- **A description of peat extraction and ancillary activities from July 1988 to the cessation of peat extraction in June of 2020;**
- **A description of the management of the Application Site since June 2020; and,**
- **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: Project Description of this rEIAR). This rEIAR and substitute consent application is made to An Coimisiún Pleanála (hereafter referred to as ‘the Coimisiún’ 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 October 2021, 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 (IPC) Licence (Ref. P0503-01; “IPC Licence” hereafter), from the Environmental Protection Agency (EPA) for the Allen 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 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 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 and 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 Sections 4.7 and 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 Sections 4.9 of Chapter 4.

1.2 Legislative Context

1.2.1 Remedial EIA 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 Appropriate Assessment (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 EIA 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 Coimisiún.

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 Coimisiún. 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 Coimisiún 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 Coimisiún in determining whether “exceptional circumstances” exist.

On the 16th of December 2019, the Applicant submitted an application to An Bord Pleanála (now known as An Coimisiún Pleanála) seeking leave to apply for substitute consent for peat extraction activities within the Allen Bog Group, which included part of the Application Site (Ref. LS19.306241). An Coimisiún Pleanála granted leave to apply for substitute consent on the 1st of May 2020. In allowing the Applicant to apply for substitute consent, An Coimisiún Pleanála was satisfied that, in light of the size and scale of the peat extraction carried out subsequent to 20th September 2012 within the Allen Bog Group and the proximity of the peatland sites to a number of European sites, an Environmental Impact Assessment (EIA) and an Appropriate Assessment (AA) were required in respect of the development concerned and exceptional circumstances exist to warrant an opportunity to regularise (without prejudice) the development. This decision of An Coimisiún Pleanála was subsequently quashed on 7th May 2021 as a result of the “Ballysax/McQuaid” ruling of the Supreme Court on 1st July 2020.

In the period between the granting of leave to apply for substitute consent by an Coimisiún Pleanála in 2020 and the quashing of that decision in May 2021, the Applicant lodged an application for substitute consent for the relevant peat extraction works at the Allen Bog Group (Ref. SU19. 307279) on the 2nd of June 2020. Subsequent to the aforementioned “Ballysax/McQuaid” ruling the Applicant formally announced in January 2021 that all industrial scale peat extraction on lands within its management would permanently cease and the application for substitute consent was withdrawn by the Applicant 14th January 2021.

On the 23rd of February 2022, the Applicant applied to the Coimisiún for leave to apply for substitute consent at Ballydermot Bog Group in counties Kildare and Offaly (ACP Ref. 312849). Given the enactment of the new legislation (S.I. 645 of 2023 - Planning And Development, Maritime And Valuation (Amendment) Act 2022 (Commencement Of Certain Provisions) (No. 2) Order 2023, which removed the requirement to seek leave to apply for substitute consent from the Commission, this application for leave to apply for Substitute Consent was deemed withdrawn on the 15th January 2024 in accordance with section 41 of the Planning and Development, Maritime and Valuation (Amendment) Act 2022.

This rEIAR is accompanied by an application to the Coimisiún 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; (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.”

1.2.2 EIA Legislative Context

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 rEIAR. The information to be provided by the developer shall include at least:

- *a description of the project comprising information on the site, design, size and other relevant features of the project;*
- *a description of the likely significant effects of the project on the environment;*
- *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;*
- *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;*
- *a non-technical summary of the information referred to in points (a) to (d); and,*
- *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 Biomass Ltd is an Irish, semi-state climate solutions company helping lead Ireland towards a climate neutral future. Bord na Móna (BnM) 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 BnM 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. BnM have ended peat harvesting and now focus on developing climate solutions in renewable energy, carbon storage, and biodiversity conservation. Ireland has committed to ambitious climate goals and BnM’s climate solutions are helping to achieve them. BnM’s vision is to help Ireland reach net zero greenhouse gas emissions by 2050.

To power a net zero future, BnM 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 BnM is working across wind, solar, biomass and biogas to help achieve this target and to provide energy security for future generations.

BnM 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 December 2019, BnM opened consultation with An Coimisiún Pleanála (Ref. LS19.306241) for a development consisting of 47 no. wind turbines and associated works at the Application Site, known as Ballydermot Wind Farm (<https://www.ballydermotwindfarm.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-310143-21). The proposed Ballydermot 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 that were undertaken at the Application Site from 1988 onwards, which consist of the following:

- 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;
- Industrial scale peat extraction (including milled peat, sod peat, sod moss and bin sod) at the Application Site from 1988 to June 2020;
- Vegetation clearance to facilitate peat extraction activity from 1988 to June 2020;

- Provision of 1 no. welfare facility, 1 no. handwashing facility, a toilet cubical building and an associated septic tank, 19 no. storage containers, 2 no. storage sheds, 8 no. vehicular bridges and 7 no. rail bridges
- Use and maintenance of pre-existing ancillary supporting infrastructure and services to facilitate peat extraction (e.g., railway infrastructure), from 1988 to present day;
- Control Measures associated with the above, inclusive of the IPC Licence measures (Ref. P0503-01) which commenced from 2000 onwards to the present day; and,
- All associated site development and ancillary works.

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

1.5

Background to the Application

BnM 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. Prior to the establishment of BnM in 1946, hand-cut drains were introduced to Lullymore, Lullybeg and the west of Killina bog in 1935 by the Peat Fuel Company Ltd, the owners of the land at that time. Milled peat began to be extracted from these bogs that same year using the Peco milled peat harvesting method (described in Chapter 4 Section 4.2.2). This method achieved little success at this time due to the bog needing a longer period of time to dry out prior to the commencement of peat extraction resulting in a series of machine sinkages on the bogs. The Peat Fuel Company Ltd built Lullymore Briquette Factory in the townland of Ticknevin which opened experimentally in the Summer of 1936. Between 1935 and 1950, milled peat was the only form of peat extracted from the Application Site, this was transported to the nearby Lullymore Briquette Factory from 1936 and later Edenderry Power Station from 2000 via the bog railway. The Turf Development Board took over Lullymore Briquette Factory from the Peat Fuel Company Ltd in 1940 to aid with the fuel shortage during the emergency.

In 1941 the Kildare Scheme was set up to supply Dublin with fuel from an area covering 250 square miles including the Application Site. Residential camps were set up and located at Killinthomas, Codd, Lullymore Lodge, Allenwood and Edenderry to provide labour for the scheme, each camp had the capacity to house 500 workers. Peat extraction continued to expand at the application site as part of the first development programme in 1947 which aimed to produce 1,000,000 tonnes of sod peat annually, improve the Lullymore Briquette Factory and establish the first generation of turf fired power stations. The briquettes from Lullymore Briquette factory were transported by canal until a bridge was erected over the canal in 1948 allowing for transportation by road.

Sod peat was extracted at the Application site from 1950 to 2000. Ballydermot North, Ballydermot South and Blackriver were the first bogs within the Application Site which were subject to sod peat extraction between 1950 and 1951. Glashabaun North and Glashabaun South bogs were next to be subject to sod peat extraction in 1951. Followed by Lodge bog in 1953, Barnaran Bog by 1959, Codd 1 by 1973 and a small area in the north of Codd 2 by 1988. Sod peat was extracted to supply Portarlinton Power Station via trucks from its opening in 1950 to its closure in 1988 and Allenwood Power Station via rail from its opening in 1952. Sod peat from the Application Site was also sent for domestic sale and to supply the public via the tiphead at Ballydermot Works.

In 1954 to 1957 Lullymore Briquette Factory was extended to allow for a greater capacity of briquettes and additional areas of bogs in the Application Site including the east of Killina, the south of Glashabaun South and the northwest of Barnaran were brought under development for milled peat extraction to supply the Briquette Factory. Due to further upgrades at Lullymore Briquette Factory in 1972 to 1973, additional milled peat production areas were required and as such, milled peat extraction commenced on Derrybrennan by 1969. Milled peat extraction commenced in the east of Ballydermot South in 1981.

The Ballydermot Works, which comprised of welfare facilities, storage sheds, offices, maintenance buildings, staff carparks, HGVs storage area, refuelling area, and a tiphead is located adjacent to the Application Site boundary to the southeast of Ballydermot South bog. It produced milled peat for the first time in 1986. The infrastructure and buildings at the Ballydermot Works were constructed between 1948 and 1949, prior to the enactment of the *Planning and Development Act (1963)* in October 1964, and therefore no planning permission was required for the buildings at the time of their construction. Furthermore, as stated in the act, all buildings which were constructed prior to October 1964 do not require planning permission and would not be subject to retrospective planning permission or substitute consent. Regular upgrades and renovations have been carried out to the infrastructure and buildings since their original construction however, these works would not have been subject to planning permission as there was no change to the structure of the building. As such, this application for substitute consent does not include the infrastructure and buildings at the Ballydermot Works. Ballydermot Works is described in full in Section 4.2.3 of Chapter 4.

Sod moss extraction commenced at the Application Site at the end of 1976 to supply Kilberry Factory with 40,000 tonnes of sod moss annually. Sod Moss was extracted from Ticknevin, Killina, Lodge, Lullybeg, Lullymore and Barnaran Bogs.

Initial drainage began between 1987 and 1988 in the northeast of Codd 2 for the production of bin sod. The first harvest of bin sod from the north of the bog was taken in 2000.

By the 1990s the majority of the bogs had been converted to milled peat or sod moss bogs. The closure of the sod peat fuelled Portarlinton Power Station in 1988 and Allenwood Power Station in 1994 made the reorganisation of the drainage at the Application Site necessary. The milled peat from the Application Site was then used to ensure a supply to Edenderry Power Station via rail which became operational in October 2000 and via HGV to Lanesboro Power Station, West Offaly Power Station, Derrinlough Briquette Factory, Littleton Briquette Factory and Lullymore Works. The sod moss and bin sod from the Application Site was transported by road to Kilberry Factory, Ballivor Factory, Cúil na Móna Factory, Kilberry Factory, Westland, Whitemoss, Dublin Port for sale in horticultural industries overseas and to other external customers. From the 2000s onwards, peat extraction gradually slowed down with a corresponding reduction in fuel handling/refuelling, machinery maintenance and stockpile development. Milled peat, sod moss and bin sod extraction continued at the Application Site until August 2019, at which point peat extraction ceased across the Application Site until June 2020 where extraction commenced again for bin sod and sod moss for 3 weeks before ceasing permanently.

1.6

Site Location

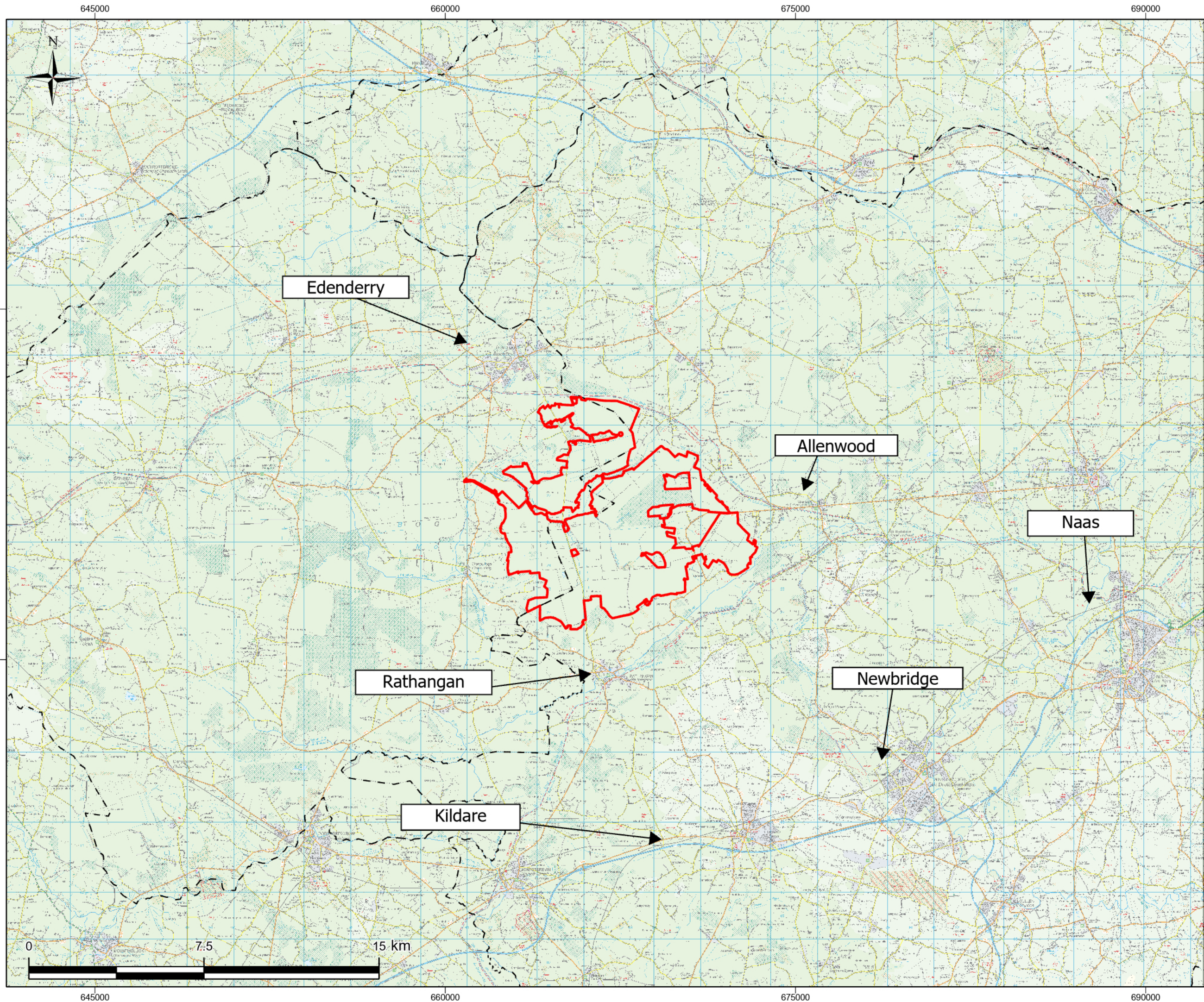
The Application Site is located 2.2km southeast of Edenderry, 3.3km west of Allenwood, 2.4km north of Rathangan and 1.7km east of Clonbullogue Village as shown in Figure 1-1 and Figure 1-2. The Application Site comprises 14 no. bogs located on the Offaly-Kildare County border. The bogs include: Ticknevin, Glashabaun North, Glashabaun South, Codd 1, Codd 2, Ballydermot North, Ballydermot South, Blackriver, Lullymore, Lullybeg, Barnaran, Killina, Derrybrennan and Lodge. The Application Site comprises a site area of 5,448 hectares (ha).

The Application Site is located in a low-lying landscape rural in character. The topography today ranges between 84 m above ordnance datum (AOD) at its highest point to approximately 68 m AOD at its lowest point. The site measures approximately 10 km in length from north to south, and approximately 10.7 km from east to west, at its widest point. The Grid Reference co-ordinates for the approximate centre of the Application Site are E 266159, N 225145. The boundaries of the individual bogs are mainly defined by hedgerows, watercourses and laneways. Under the Water Framework Directive (WFD; Directive 2000/60/EC), the Application Site is located primarily within the Figile_SC_010, Figile_SC_020, Figile_SC_030, Slate_SC_050 and Slate_SC_010 sub catchments with a small section of the site on the north boundary in Boyne_SC_010 sub catchment, and within the Barrow (Catchment ID 14). The Application Site is generally accessible via the local road network

branching from the R402 to the north, R403 to the east, the R401 to the west and the R414 to the south, with the latter cutting through the southeast of the site.

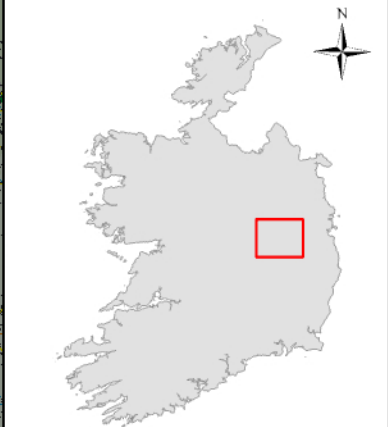
Table 1-1 Townlands in which the Application Site is located

Bog Reference	County	Townlands - Kildare	Townlands - Offaly
Ballydermot North	Kildare/Offaly	Killinthomas	Clonbrown, Cushaling, Ballydermot, Clonmel
Ballydermot South	Kildare/Offaly	Rathangan, Killinthomas, Cushaling, Ballysooghan North, Ballinure	Clonbrown, Coolygagan, Clonroosk Big, Clonroosk Little
Blackriver	Kildare	Cappanargid, Killinthomas, Cushaling, Killyguire, Lullybeg	N/A
Lullybeg	Kildare	Lullymore West, Lullybeg	N/A
Lullymore	Kildare	Lullymore West, Lullybeg	N/A
Lodge	Kildare	Killina Upper, Ballybrack, Killina Lower, Lullymore East, Allenwood South	N/A
Killina	Kildare	Lullymore West, Derrybrennan	N/A
Barnaran	Kildare	Cappanargid, Killyguire, Lullymore East, Barnaran, Lullybeg	N/A
Derrybrennan	Kildare	Ticknevin, Ballybrack, Kilpatrick, Derrybrennan	N/A
Glashabaun North	Kildare/Offaly	Ticknevin, Cushaling, Derries	Codd
Glashabaun South	Kildare/Offaly	Ticknevin, Cushaling, Lullymore West, Lullybeg, Derrybrennan	N/A
Ticknevin	Kildare/Offaly	Clonkeen	Derries, Cloncanon
Codd 1	Kildare/Offaly	Cushaling	Cloncant, Shean, Ballydermot
Codd 2	Offaly	N/A	Cushaling, Codd, Shean



- Map Legend
- Application Site Boundary
 - County Boundary

Spatial Reference
Name: IREN95 Irish Transverse Mercator
Datum: IREN95
Projection: Transverse Mercator

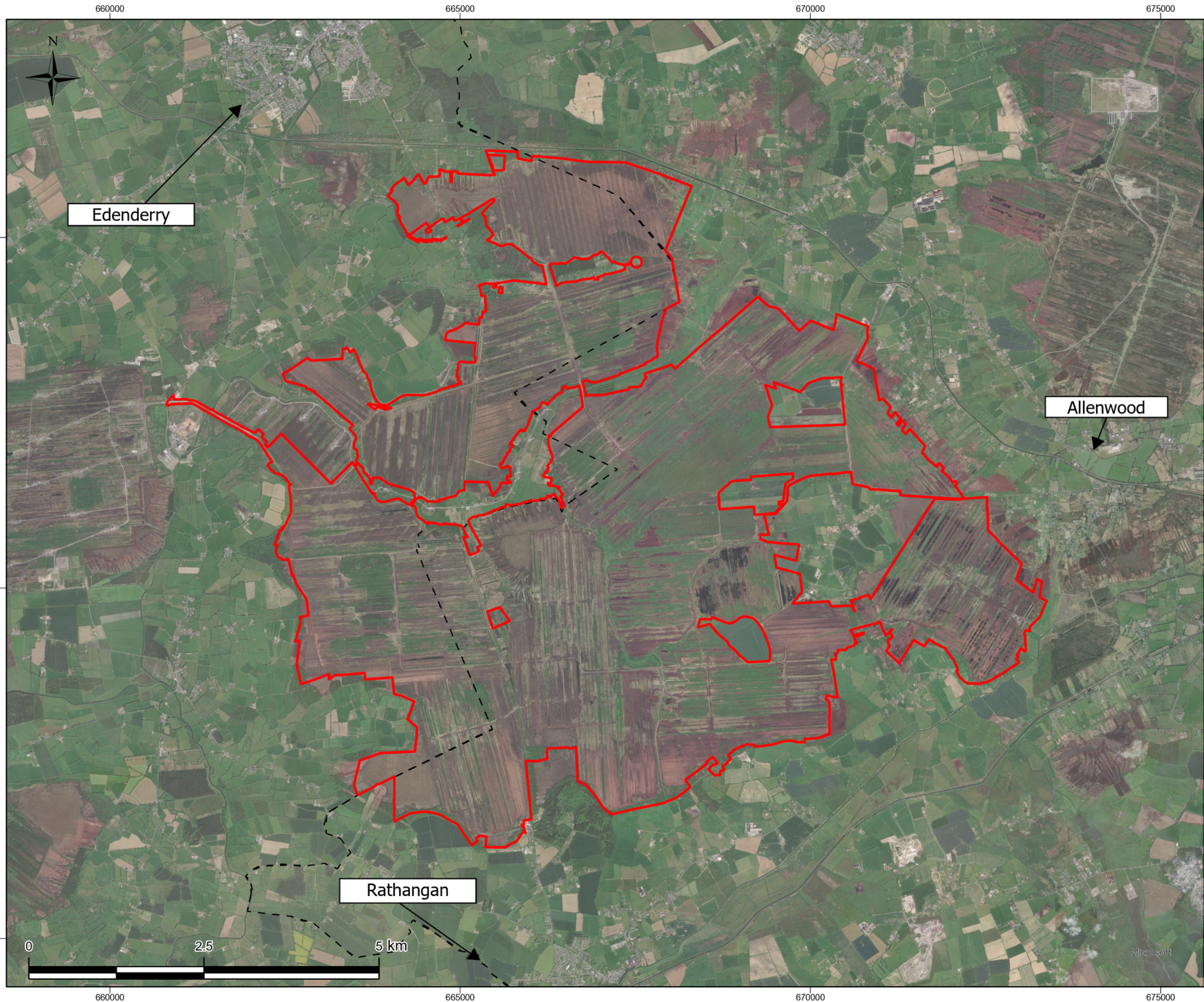


SITE LOCATION - NOT TO SCALE

Site Location		
Project Title Peat Extraction at Ballydermot, Co. Kildare and Co. Offaly		
Project No. 250709	Drawing No. 1-1	Scale 1:150,000
Drawn By SOR	Checked By KON	Date 23/07/2026



Email info@mkofireland.ie / Website www.mkofireland.ie



Map Legend

Application Site Boundary

County Boundary

Spatial Reference
Name: IRENET95 Irish Transverse Mercator
Datum: IRENET95
Projection: Transverse Mercator



SITE LOCATION - NOT TO SCALE

Drawing Title

Site Location Context (Aerial)

Project Title		
Peat Extraction at Ballydermot, Co. Kildare and Co. Offaly		
Project No.	Drawing No.	Scale
250709	1-2	1:50,000
Drawn By	Checked By	Date
SOR	KON	23/07/2026



Email: info@mkofireland.ie / Website: www.mkofireland.ie

1.7

Site Context

The lands within the Application Site represent approximately 33% of the Allen Bog Group which is comprised of 32 no. bog units and has a total area of approximately 18,235 ha. The Application Site occupies an area of approximately 5,448 ha, comprising primarily of cutaway bog.

The activities carried out by BnM at the Application Site are licensed by the EPA under IPC Licence P0503-01. The IPC Allen Bog Group is outlined in Figure 1-3.

There are a number of ancillary structures and features associated with the peat extraction activities and ancillary works that occurred at the Application Site, as described in detail in Chapter 4. These include:

- Workshops (Section 4.2.3.1);
- Works Offices (Section 4.2.3.2);
- Welfare Facilities including a septic tank (Section 4.2.3.3 and Section 4.2.4 respectively);
- Fuel Storage (Section 4.2.3.4);
- Machine Storage Sheds (Section 4.2.3.5);
- Storage Containers (Section 4.2.3.6);
- Local Holding Areas (Section 4.2.3.7);
- Tiphead (Section 4.2.3.8);
- Vehicular Bridges (4.2.3.9) and
- Railway infrastructure (Section 4.2.3.10).

Prior to the cessation of peat extraction, most of the peat from the Application Site for electricity generation and briquettes went via rail to supply Lullymore Briquette Factory, Allenwood Power Station, Portarlinton Power Station and Edenderry Power Station and via HGV to Lanesboro Power Station, West Offaly Power Station, Derrinlough Briquette Factory, Littleton Briquette Factory and Lullymore Works. Some peat was brought to Ballydermot Works for sale to the public and horticultural peat (sod moss and bin sod combined) was transported via road to Ballivor, Derrinlough, Cúil na Móna, Kilberry, Westland, Whitemoss and Dublin Port for sale in horticultural industries overseas (see Section 4.3.5 and 4.6.1 of Chapter 4 further detail).

There is onsite infrastructure still present and functional across the Application Site today, which includes the following:

- Surface water drainage system including silt ponds, pumps and drainage channels;
- Rail ancillary infrastructure;
- Electricity distribution infrastructure;
- Site access points;
- 19 no. storage containers;
- 1 no. welfare facilities and an associated septic tank; and,
- 2 no. storage sheds.

The landcover and uses surrounding the Application Site comprises a mixture of forestry, agricultural land, cutover and cutaway peatland, extractive industries, rehabilitation, wind energy, 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 1-4 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 by October 2021.



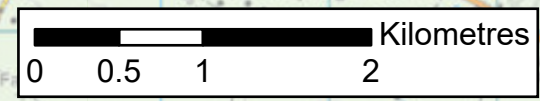
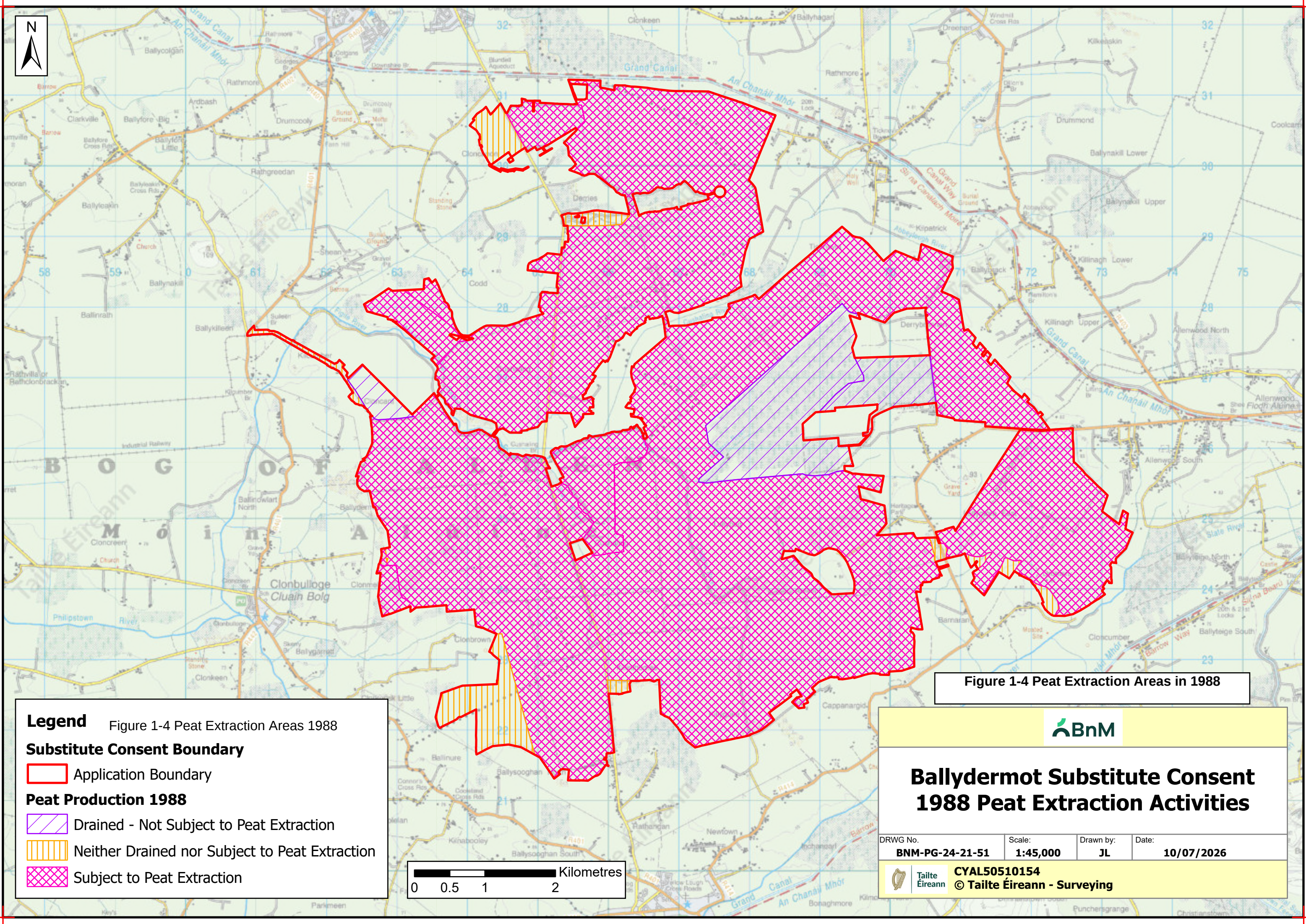


Figure 1-4 Peat Extraction Areas in 1988

Legend Figure 1-4 Peat Extraction Areas 1988

Substitute Consent Boundary

 Application Boundary

Peat Production 1988

 Drained - Not Subject to Peat Extraction

 Neither Drained nor Subject to Peat Extraction

 Subject to Peat Extraction



Ballydermot Substitute Consent 1988 Peat Extraction Activities

DRWG No. BNM-PG-24-21-51	Scale: 1:45,000	Drawn by: JL	Date: 10/07/2026
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 Tailte Éireann **CYAL50510154**
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DRWG No. BNM-PG-24-21-51	Scale: 1:45,000	Drawn by: JL	Date: 10/07/2026
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 Tailte Éireann **CYAL50510154**
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1.7.1 Lullymore Bog

Lullymore bog (175 ha) is located 1.4 km to the west of the Rathangan to Allenwood road (R414). It is located entirely within the Co. Kildare border. It adjoins Barnaran Bog to the south and Lullybeg to the west. A ridge of high ground, used for agriculture, protrudes into the southeast sector of the site. The Lullymore Heritage Park is located just on the eastern margin of the bog. Access to the bog site is available from the R414 and through the Lullymore Heritage & Discovery Park. The Lullybeg-14 stream runs alongside this track. The bog extends for c.2 km from north to south and for c.2.5 km from east to west.

The greater part of Lullymore is regenerating cutaway bog with extensive scrub cover (especially in eastern sector). Lullymore has been out of production since 1992. There is some well-developed wetland habitat in the north. A small area in the northwest of the bog is managed by Butterfly Conservation Ireland in order to enhance and maintain habitats for Marsh Fritillary Butterflies.

1.7.2 Glashabaun North Bog

Glashabaun North Bog (515 ha) is located south of Ticknevin Bog. It is separated from Glashabaun South by the Cushaling River corridor (FIGILE_020 (code: IE_SE_14F010100)). Codd 2 bog lies to the west and the Long Derries, Edenderry SAC (NPWS site code 000925) esker site is located in the north of the Application Site. The bog is located in both Co. Kildare and Co. Offaly. Access is available from the L1001 Edenderry to Rathangan. Approximately 2 km of BnM rail can be found running through the middle of the bog from North to South. The railway separates the bog into a western and eastern section. The bog extends for c.2.5 km from north to south and for c.2.5 km from east to west.

Glashabaun North is largely cutaway peat out of production since 2020. There are some areas of regenerating cutaway bog within the site, dominated by poor fen vegetation communities (Bog Cotton and Soft Rush). This site is mostly surrounded by further bog though agricultural land occurs to the northwest and further to the east.

1.7.3 Glashabaun South Bog

Glashabaun South Bog (601 ha) is located centrally within the Application Site between Derrybrennan and Blackriver Bogs. Glashabaun North is to the north, separated by the Cushaling River corridor. The majority of the bog is located in Co. Kildare with a small section in the west of the bog situated in Co. Offaly. Access is available from the existing L81371 Cushaling to Killyguire Road which runs along the southwest margin of the bog site or from an existing track which runs along the extreme northeast margin. The bog extends for c.2 km from north to south and for up to c.3 km from east to west.

Glashabaun South is mainly comprised of regenerating cutaway bog with mature cutaway habitats such as birch woodland and scrub. A conifer forestry was developed by An Foras Talúntais between 1988 and 1995 in the southeast of the bog in the 1990's this area changed management to Coillte. Peat extraction ceased on the bog by 2020.

1.7.4 Codd 1 Bog

Codd 1 Bog (247 ha) is located to the west of the L3001, Rathangan to Edenderry Road. It is separated from Codd 2 by the Cushaling River (FIGILE_030 (code: IE_SE_14F010200)) and adjoins Ballydermot North bog to the south. The majority of the bog is located inside the Offaly border with a small portion to the southeast located inside the Kildare border. Access is available from a drivable track off of the L3001 Rathangan to Edenderry Road which runs along the eastern boundary. The bog extends for c.1 km from north to south and c.2.5 km from east to west.

Codd 1 is almost entirely cutaway peat surrounded by marginal habitats. Peat extraction had ceased on the bog by 2020.

1.7.5 Codd 2 Bog

Codd 2 Bog (290 ha) is located to the west of the L1001, Edenderry to Rathangan Road. It is situated west of Glashabaun North bog and north of Codd 1 bog, separated by the Cushaling River (FIGILE_030 (code: IE_SE_14F010200)). The bog is entirely within Co. Offaly. The bog is split into a larger eastern and smaller northwestern section by an access track at the narrowest section of the bog. Access is available from the public road L1001 Edenderry to Rathangan Road along the eastern boundary and from an existing track which runs off of the L1001 close to the southern and western boundaries. The bog extends for c.1.5 km from north to south and c.2 km from east to west.

Codd 2 is almost entirely cutaway peat out of production since 2019. A small area of remnant bog occurs in the northwest sector. Apart from the narrow corridor of the Figle River to the south and some farmland to the north, Codd 2 Bog is surrounded by further bog.

1.7.6 Ballydermot North Bog

Ballydermot North Bog (456 ha) is located c.2 km to the northwest of Rathangan and c.2 km east of Clonbulloge. The bog is located within Counties Offaly and Kildare. It adjoins Codd 1 Bog to the north and Blackriver Bog is located to the east. Access is easily available from several locations leading from the L3001 Edenderry to Rathangan Road along the eastern boundary. Approximately 5.6 km of BnM rails run through the site connecting it to Edenderry Power Station, Ballydermot Works and the rest of the Application Site.

The bog extends for up to c.4 km from north to south and for up to c.3 km from east to west. Much of Ballydermot North Bog is cutaway peat which has been out of production since 2013 for milled peat and 2020 for sod moss but there are substantial areas of regenerating cutaway bog in the northwest of the bog.

1.7.7 Ballydermot South Bog

Ballydermot South Bog (425 ha) is located south of Ballydermot North Bog and west of Blackriver Bog, separated from the latter by the L3001 Edenderry to Rathangan Road. The bog is located within Counties Offaly and Kildare. The bog extends c.2.6 km north to south and c.2.5 km east to west. The BnM Ballydermot Works are located in the southeast of the bog. Approximately 3.14 km of BnM rail runs through the site connecting the bog to Ballydermot Works, located in the southwest of the bog. The bog can be accessed from the west of the L-3001 from the Ballydermot Works.

Much of Ballydermot South Bog is cutaway peat out of production since 2020 but there are substantial areas of regenerating cutaway bog in the north of this bog. The south-western section of the bog contains a large area of remnant raised bog (78ha) known as Clonroosk Bog. The southern boundary of the site is marked by a well-developed strip of bog woodland, which contains Scot's pine, rowan, hawthorn and wild cherry in addition to birch. The woodland is partly on remnant high bog.

1.7.8 Blackriver Bog

Blackriver bog (732 ha) is located c.2km to the north-northwest of Rathangan. It is sited entirely within the Co. Kildare border. It adjoins Barnaran and Lullymore Bogs to the east, Glashabaun South Bog to the northeast and Ballydermot North and South Bogs to the west. Access is available from several routes branching from the L3001 Edenderry to Rathangan local road along the western boundary of the

bog site or from an existing track, which travels along the entire eastern and northern margins. The bog extends for c.4 km from north to south and for c.2 km from east to west.

Most of Blackriver Bog is cutaway peat, out of peat production since 2020. There are areas of remnant high bog in the northwest of the bog. Areas of regenerating cutaway bog occur in the northern sector. Killinthomas Forest managed by Coillte is located to the south of the bog.

1.7.9 **Ticknevin Bog**

Ticknevin Bog (456 ha) is the most northern bog within the Application Site. It is located c.2 km southeast of Edenderry and just south of the Grand Canal pNHA. The county border of Offaly and Kildare cuts through this bog. It is separated from Glashabaun North Bog to the south by The Long Derries, Edenderry SAC [000925]. Access to the bog is possible via the L1001 Edenderry to Rathangan Road which runs northwest to southeast through the bog. Various BnM railway tracks can be found throughout the bog. The bog extends for c.4.4km from east to west and for c.1.4km from north to south.

Ticknevin is largely cutaway peat out of production since 2019, however, there is c.38 ha of remnant raised bog at the western end of the bog.

1.7.10 **Barnaran Bog**

Barnaran Bog (486 ha) is located to the west of the R414 Rathangan to Allenwood Road. It is sited entirely within the Co. Kildare border. It adjoins Blackriver Bog to the west, Lullymore Bog to the north and Lodge Bog to the east. The Lullymore Heritage Park is located just on the northeastern margin of the site. Access is easily available to the eastern part of the site from the R414 road or through the Lullymore Heritage Park. Access to the western part is available from a track which runs along the western margin. The bog extends for c.2 km from north to south and c.2 km from east to west.

Barnaran Bog comprises of a large area of cutaway peat which has been out of commercial production since 2020, cutaway habitats have been developing across the bog since this time.

1.7.11 **Lodge Bog**

Lodge Bog (407 ha) is located to the east of the R414 Rathangan to Allenwood road. It is sited entirely within the Co. Kildare border. It adjoins Barnaran Bog to the west and Killina Bog to the north. The IPCC Lodge Nature Reserve is located in the northwest of the bog. Access is easily available from the R414 road along the west and from the R414 to the north of the site. The bog is c.2 km from north to south and a similar distance from east to west.

Lodge bog almost entirely comprises of cutaway peat with areas of woodland and scrub to the northwest and southeast. Lodge ceased commercial production in 2020.

1.7.12 **Killina Bog**

Killina Bog (257 ha) is located north of the R414 Rathangan to Allenwood road. It is sited entirely within the Co. Kildare border. It adjoins Lodge (and the Lodge Nature Reserve) to the south and Glashabaun South Bog to the west. Access is available from the R414 road via a third-class road and then a track leading northward through the middle of the bog. The BnM farm was located to the north of the bog and Lullymore shrub nursery was located on the southern margin of the bog, both the farm and shrub nursery were sold in 1988. The bog is c.1.5 km from north to south and c.1km from east to west.

Killina Bog comprises of mostly regenerating cutaway bog and conifer forestry managed by Coillte in the west. Peat extraction ceased on the bog in 2020.

1.7.13 Lullybeg Bog

Lullybeg Bog (267 ha) is a central bog surrounding by Glashabaun South Bog to the north, Blackriver Bog to the west, Lullymore Bog to the east and Barnaran Bog to the south. It is sited entirely within the Co. Kildare border. It extends c.2.2 km north to south and c.1.6 km east to west. The bog is accessible via a fourth-class road from Lullymore into the bog.

Lullybeg Bog comprises mostly regenerating cutaway bog and conifer forest in the northeast. The regenerating bog is mostly dry, heath type vegetation and scrub. Peat extraction ceased on the bog in 2004.

1.7.14 Derrybrennan Bog

Derrybrennan Bog (132 ha) is located in the east of the Application Site entirely inside the Co. Kildare border. It adjoins Glashabaun South Bog to the west and Killina Bog to the east. Its eastern boundary extends as far as the Grand Canal pNHA. It extends c.1.5 km north to south and c.2.5 km east to west. Access is possible via a fourth-class road which runs from the canal into the bog.

The bog mainly comprises of regenerating cutaway bog. Peat extraction ceased on the bog in 2015.

1.8 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 Coimisiún, 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 EIA Directive (2011/92/EU as amended by 2014/52/EU), the direct and indirect effects of the Project 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, 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.

1.8.1

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 interactions 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*
- 3. Consideration of Reasonable Alternatives*
- 4. Project Description*
- 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 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.

1.8.2

Description of the 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

Impact Characteristic	Term	Description
	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
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)

Impact Characteristic	Term	Description
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

1.9

Project Team

1.9.1

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 1.9.2 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, H91 VW84	Brian Keville	Project Managers, Scoping and Consultation, Preparation of rNIS, and rEiAR Sections: 1. Introduction 2. Background 3. Consideration of Alternatives 4. Project Description 5. Population & Human Health 6. Biodiversity (incl. Ornithology) 12. Landscape & 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
	Michael Watson	
	Sean Creedon	
	Eoin McCarthy	
	Ellen Costello	
	Robert Kennedy	
	Karen O'Neill	
	Edel Mulholland	
	Sophie O'Rourke	
	Colm Ryan	
	Sean McCarthy	
	Ronan Dunne	
	Shikha Gajula	
	Kate O'Donnell	
	Sorcha Shanley	
	Padraig Cregg	
	Patrick Manley	
	Kathryn Sheridan	
	Aoife Joyce	
	Tim Murphy	
	Jack Workman	
	Dija Mazonaite	
	Daniel Mulpeter	
	Killian Devereux	
	Joseph O'Brien	

Consultants	Principal Staff Involved in Project	rEIAR Input
	Madeline Napier-Ruane	
Hydro Environmental Services 22 Lower Main Street, Dungarvan, Co. Waterford.	Michael Gill Conor McGettigan Nitesh Dalal Adam Keegan	Preparation of rEIAR Sections: 7. Land, Soils & Geology 8. Hydrology and Hydrogeology
AWN Consulting The Tecpro Building, Clonsgaugh Business & Technology Park, Dublin 17.	Mike Simms Ciara Nolan Alex Clark	Preparation of rEIAR Sections: 9. Air Quality 10. Climate Baseline Noise Survey, Preparation of rEIAR Section: 11. Noise and Vibration
Tobar Archaeological Services Saleen Midleton, Co. Cork.	Miriam Carroll	Preparation of rEIAR Section: 13. Archaeology, Architectural and Cultural Heritage
Alan Lipscombe Traffic and Transport Consultants Limited	Alan Lipscombe	Peer review of rEIAR Section: 14. Material Assets: Traffic and Transport

1.9.2 Project Team Members

1.9.2.1 MKO

Brian Keville B.Sc. (Env.)

Brian Keville has over 20 years' professional experience as an environmental consultant having graduated from the National University of Ireland, Galway with a first-class honours degree in Environmental Science. Brian was one of the founding directors of environmental consultancy, Keville

& O’Sullivan Associates Ltd., prior to the company merging in 2008 to form McCarthy Keville O’Sullivan Ltd. Brian’s professional experience has focused on project and environmental management, and environmental impact assessments. Brian has acted as project manager and lead-consultant on numerous environmental impact assessments, across various Irish counties and planning authority areas. These projects have included large infrastructural projects such as roads, ports and municipal services projects, through to commercial, mixed-use, industrial and renewable energy projects. The majority of this work has required liaison and co-ordination with government agencies and bodies, technical project teams, sub-consultants and clients.

Michael Watson BA. 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 Creedon is an Associate Director in the Environment Team at MKO. He leads 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 wind farm project delivery. Sean’s professional experience includes the development and management of a portfolio of wind farm developments to the consenting decision. He is a member of the MKO senior management team. 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.

Eoin McCarthy BSc

Eoin is a Project Director with McCarthy O’Sullivan Ltd. with over 15 years of environmental consultancy experience. Eoin holds B.Sc. (Hons) in Environmental Science from NUI, Galway. Eoin’s key strengths and areas of expertise are in project management, environmental impact assessment, wind energy site selection and feasibility assessment. Since joining MKO in 2011, Eoin has been involved as a Graduate, Assistant and Project Environmental Scientist on a significant range of energy infrastructure, tourism, waste permit, flood relief scheme and quarrying projects. He has overseen some of the largest SID wind energy in Ireland in that time. In his role as project manager, Eoin 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. Eoin is also involved in the development of project strategy for the projects that he manages. He has held the role of project manager on over 550MW worth of wind energy projects. Within MKO Eoin plays a large role in the management of and sharing of

knowledge with junior members of staff and works as part of a large multi-disciplinary team to produce EIA Reports.

Ellen Costello BSc. MSc.

Ellen Costello is a Senior Environmental Scientist with MKO with over five 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 large-scale infrastructure projects including that of housing, tourism and recreation, renewable energy infrastructure and substitute consent applications for peat extraction. In her role as a senior 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.

Robert Kennedy BSc. MSc.

Robert is a Project Environmental Scientist working as part of MKO's Renewables Team, having joined the company in June 2022. Robert holds a BSc in Environmental Biology and an MSc in Environmental Policy, both from University College Dublin. Robert's key strengths and areas of expertise are in project management, environmental impact assessment, renewable energy, report writing, and research. Since joining MKO, Robert has worked with and coordinated large multi-disciplinary teams involved in the production of EIA Reports for large-scale renewable energy developments. Robert's experience spans a broad range of wind energy developments, including applications for new onshore and offshore wind farms, lifetime extension and repowering projects, and substitute consent. Robert also played a key role in developing MKO's new service offering around Biodiversity Net Gain and other nature-positive mechanisms. Prior to taking up his position with MKO, Robert worked in various roles in Canada and Ireland, giving him a broad mix of skills and experience to apply to his current role with MKO. Robert also holds a membership with the Institute of Sustainability and Environmental Professionals (ISEP).

Karen O'Neill BA, MSc

Karen O'Neill is a Project Environmental Scientist with MKO with over five years' experience in private consultancy. Karen holds a BA (Joint Hons) in Geography and Archaeology, and a MSc (Hons) in Environmental Science where she focused her studies on environmental and planning policy. Karen's key strengths and expertise are Project Management, report writing and reviewing, Environmental Impact Assessment, and Landscape and Visual Impacts. Through previous roles, Karen has been involved in the delivery of planning applications for a range of renewable energy infrastructure projects, including onshore and offshore wind energy developments, and multifaceted projects comprising wind energy, solar energy, battery storage and associated electrical infrastructure.

Edel Mulholland BA

Edel Mulholland is an Environmental Scientist with MKO with over 1 year of 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.

Sophie O'Rourke BA, MSc

Sophie O'Rourke is a Graduate Environmental Scientist with MKO. Sophie holds a first-class honours master's degree in environmental science at Trinity College Dublin. As part of MKO's Renewables team, Sophie is involved with the production of EIARs for a variety of wind energy projects. Sophie's areas of expertise include environmental policy, high quality report writing, and geographic information systems.

Colm Ryan BA

Colm Ryan is the Planning Director of MKO, Planning & Environmental Consultants, with over 18 years of experience as a planner in both private practice and public sector combined. Prior to joining MKO, Colm worked as a planner with a UK and Ireland based Renewable Energy developer. Colm has also spent part of his career in local authority as a planner with Laois County Council. Colm has significant experience in a wide range of projects and extensive experience in large scale residential, renewables and marine based developments. Colm currently heads up the Planning Division in MKO with responsibility for Planning, Project Management, Health & Safety and Project Communications. Colm holds BA (Hons) in Geography & Irish and Masters in Civic Design Town & Regional Planning. Prior to taking up his position with MKO in May 2017, Colm worked as a Senior Planner with Lightsource Renewable Energy Ltd. and held previous posts with Partnerships for Renewables, South Kesteven District Council, Planning Aid, Frank O Gallachoir & Associates in Bray and Laois County Council. Colm is a chartered town planner with specialist knowledge in renewable energy, mixed use development and residential. Colm's key strengths and areas of expertise are in large scale renewable energy development particularly in the ground mounted solar, delivery of local community engagement processes on contentious planning applications, management of community and developers interest through the planning process and post or pre-planning due diligence. Since joining MKO as a Senior Planner Colm has been overseeing and managing a wide range of development projects such as large scale solar applications, site feasibility work for potential wind energy projects, large scale housing and mixed use schemes. Within MKO Colm plays a large role in the management of staff members including several aspects of business development. Colm has proven negotiation skills and stakeholder relationship building across numerous development projects in Ireland and the UK and is a corporate member of the Irish Planning Institute.

Sean McCarthy BSc.

Sean McCarthy is a Project Director in the Planning Team at MKO with over 10 years of experience in both private practice and local authorities. Sean holds a BSc. (Hons) in Property Studies from ATU and a Masters in Regional & Urban Planning for Heriot Watt University in Edinburgh. Prior to taking up his position with McCarthy Keville O'Sullivan in September 2015, Sean worked as a Planning Officer with the Western Isles Council in Scotland in the UK and prior to that worked as a Graduate Planner with Tipperary County Council. Sean is a chartered member of the Royal Town Planning Institute with extensive experience in renewable energy, residential, commercial, industrial, quarries and healthcare development projects.

Sean has been involved in complex and large-scale development projects from inception through to planning permission both as a project manager and working as part of wider design teams. Sean has extensive experience in working on EIAR projects. Within MKO, Sean 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 planning applications.

Ronan Dunne BSc, MSc

Ronan Dunne is a Project Planner with MKO with over 3 years of experience in private practice. 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 and offshore wind, solar, battery storage and grid infrastructure developments. Through his professional and academic experience, Ronan has gained experience in renewable energy planning, Environmental Impact Assessment, strategic and spatial planning, development management, planning appeals, condition compliance, and project management.

Shikha Gajula B.Arch

Shikha Gajula is a Graduate Planner with MKO. Shikha holds a Bachelor's degree in Architecture (B.Arch) and is pursuing a Master's in Planning and Development at the University of Galway. Prior to taking up her position with MKO, Shikha worked across multiple sectors. As a licensed architect, she contributed to design and documentation at Katterra Design Pvt Ltd, gaining experience in technical drawings, site analysis and barrier-free design. Since joining MKO, Shikha has been involved in a range of projects, including wind farm and grid infrastructure developments. Through her academic background and professional practice, Shikha has gained experience in renewable energy planning, Environmental Impact Assessment Reports, strategic and spatial planning and public participation processes.

Kate O'Donnell

Kate is a Senior Ecologist with MKO with over 6 years of experience in ecological consultancy. Kate holds a BSc (Hons) in Ecology and Environmental Biology from University College Cork and has also completed a Level 8 Special Purpose Award in Digital Mapping and GIS. Kate'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. Prior to taking up her position with MKO in February 2022, Kate worked as an Ecologist with RPS where she gained experience in Ecological Impact Assessment, Appropriate Assessment and multidisciplinary ecological surveys for a range of projects including IDA developments, flood relief schemes, road network improvements and greenway developments. She is trained in carrying out non-volant mammal surveys, freshwater pearl mussel surveys, bat surveys and in taking vegetation relevés of vascular plants. Kate has extensive experience in habitat identification and habitat mapping. Since joining MKO, Kate has been responsible for the management, co-ordination and undertaking of flora, fauna and habitat surveys in accordance with NRA Guidelines for projects including wind farm developments, Greenways and housing developments and for the preparation and review of Ecological Impact Assessments, Stage 1 and Stage 2 Appropriate Assessment reports and EIA inputs. Kate is the Lead Ecologist on several large-scale renewable energy and infrastructure projects and manages a team of Ecologists within MKO. She is an Associate member of the Chartered Institute of Ecology and Environmental Management.

Sorcha Shanley BA, MSc

Sorcha is a Project Ecologist at MKO and holds a BA (Hons) in Zoology and an M.Sc. in Marine Biology. Sorcha has over three years' experience working in ecological consultancy with experience in undertaking habitat and species surveys and working on Ecological Impact Assessment and Appropriate Assessment for a wide range of projects.

Padraig Cregg

Padraig is a Principal Ornithologist with MKO and has over 12 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.

Patrick Manley

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.

Kathryn Sheridan

Kathryn Sheridan is a Project Ornithologist with MKO with over 5 years of experience in ornithological field surveys. Kathryn holds a BA (Hons) Zoology, and a MSc (Hons) in Wildlife Conservation and Management where she focused her studies on breeding hen harrier. Prior to joining MKO in November 2020, Kathryn has worked as a research assistant with UCD, in private consultancy as a sub-consultant with Scott Cawley, and has also worked with BirdWatch Ireland and the NPWS Curlew Conservation Programme. Kathryn's key strengths and expertise are bird identification, GIS, data collation and report writing. In her role as a project ornithologist, Kathryn has worked on wind farm projects, residential developments, county council projects and conservation projects including the preparation of EIAR chapters and seasonal reports.

Aoife Joyce M.Sc. (Agribioscience), B.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.

Tim Murphy BSc.

Tim is a Project Bat Ecologist with MKO with over 2 years of experience in Ecology. Tim holds B.Sc. Environmental Biology. Tim joined MKO originally in 2020 and worked as an Ecologist for 1.5 years.

He has since rejoined MKO in January 2026. Tim has experience performing roost assessments, acoustic surveys, sonogram analyses, impact assessments and report writing. He also has experience carrying out dawn and dusk surveys to test for the presence of bats and their identification and carrying out multi-disciplinary field surveys for a range of habitats and species nationwide. Within MKO Tim has worked as part of a large multi-disciplinary team to produce multiple reports across several sectors.

Jack Workman MSc.

Jack is the Landscape & Visual Project Director at MKO and is a Technician Member with the British Landscape Institute. He 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. 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. Prior to taking up his position with MKO, Jack worked as a Geospatial Analyst and Research Assistant with NUIG and also held previous posts in the coastal engineering sector with Royal Haskoning DHV and Saltwater Technologies. 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. (Hons)

Dija Mazonaite is a Project 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.

Daniel Mulpeter BSc. MSc

Daniel Mulpeter is an Environmental Scientist and LVIA Specialist at MKO, with just under two years of experience in Landscape and Visual Impact Assessments (LVIA) across wind energy, solar energy, residential, and public infrastructure projects. His key strengths include proficiency in GIS tools such as QGIS, conducting landscape and visual impact assessments, and capturing data through drone surveys and photomontages. Daniel is an affiliate member of the Landscape Institute and holds drone qualifications in the A1/A3 subcategories. Daniel holds an MSc in Environmental Science from Trinity College Dublin, where he completed his thesis titled "Estimating Peat Depth using Gamma-ray Spectrometry and Photogrammetry." He also holds a BSc (Hons) in General Science, specialising in Applied Mathematics and Biology.

Killian Devereux BSc (Hons)

Killian is currently the Project CAD Technician at MKO he has over 9 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.

Joseph O'Brien BA

Joseph O'Brien is a CAD Technician with MKO with over 8 years of experience. Joseph holds a BA Honours Level 8 Modelmaking, Design and Digital Effect, Institute of Art Design and Technology (IADT), Dun Laoghaire & City & Guilds Level 3 2D &3D AutoCAD certificates. Prior to taking up his position with MKO in June 2016, Joseph worked as worked as a free-lance Modelmaker and CAD Technician. His previous experience included designing various models and props through CAD and then making them for various conventions such as Dublin Comic Con and Arcade Con. Joseph's key strengths and areas of expertise are skills such as mapping, aerial registration and detailed design drawings for projects. Since joining MKO Joseph has been role of producing planning application drawings through CAD for various projects such as renewable energy such as wind and solar.

Madeline Napier-Ruane

Madeline Napier-Ruane is a GIS Technician with MKO with over 6 years of experience working with GIS Applications. Madeline holds a MA in Landscape Archaeology and a BA in Anthropology with a minor in Comparative Religions. Prior to taking up her current position with MKO in September 2024, Madeline worked as a Data Administrator within the Ornithology team in MKO. Madeline's key strengths and area of expertise are in GIS software (QGIS and ESRI Suite), with strong talents for data management. Since joining MKO's GIS team, Madeline has been involved with many types of projects ranging from the renewable energy sectors to housing and social infrastructures. Within MKO, Madeline, works with numerous in-house teams providing GIS support and facilitating key GIS process updates.

1.9.2.2 Hydro Environmental Services

Nitesh Dalal

Nitesh Dalal (B.Tech, PG Dip., MSc) is an Environmental Scientist with over 7 years' experience in environmental consultancy and environmental management in India and over 1 year environmental consultancy experience in Ireland. Nitesh holds a M.Sc. in Environmental Science from University College Dublin (2024), a PG Diploma in Health, Safety and Environment from Annamalai University, India (2021) and B.Tech. in Environmental Engineering (2016) from Guru Gobind Singh Indraprastha University, India (2016).

Conor McGettigan

Conor McGettigan (BSc, MSc) is an Environmental Scientist with over 5 years' experience in the environmental sector in Ireland. Conor holds an M.Sc. in Applied Environmental Science (2020) and a B.Sc. in Geology (2016) from University College Dublin. Conor routinely prepares the land, soils and geology chapters of environmental impact assessment reports for developments on peatlands. Conor prepared the land, soils and geology chapter of the rEIAR completed for the substitute consent applications for the peat extraction activities at the Ballivor Bog Group, Lemanaghan Bog and Littleton Bog.

Adam Keegan

Adam Keegan PGeo (B.Sc., M.Sc.) is a hydrogeologist with 7 years environmental consultancy experience in Ireland. Adam has been involved in Environmental Impact Assessment Reports (EIARs) for numerous projects including wind farms, grid connections, quarries and small housing developments. Adam holds an MSc in Hydrogeology and Water Resource Management. Adam has worked on several wind farm EIAR projects, including Croagh WF, Lyrenacarriga WF (SID), Cleanrath WF, Carrownagowan WF (SID), and Fossy WF.

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, the Ballivor Bog Group, and also for a number of quarry sites.

1.9.2.3 AWN

Ciara Nolan

Ciara Nolan (Principal 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 Institution of Environmental Sciences (MIEnvSc). Ciara has over 9 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.

This chapter was reviewed by Dr. Jovanna Arndt, a Principal Environmental Consultant in the Air Quality & Climate section of AWN Consulting. She has been specialising in the area of air quality and climate over 9 years and has prepared air quality and climate assessments for inclusion within EIARs for residential developments, commercial and industrial developments, as well as renewable energy developments such. She also specialises in assessing air quality impacts using air dispersion modelling of transportation schemes such as, major Highways England Road schemes and major rail infrastructure in the form of High Speed 2 (HS2 in the UK). She has prepared air dispersion modelling assessments of emissions from data centres, energy centres and the chemical industry as part of EPA Industrial Emissions Licences. She has also provided Air Quality Action Plan (AQAP) and Air Quality Management Area (AQMA) support to several UK councils and assessed the air quality impacts of potential Clean Air Zones in the UK.

Mike Simms

Mike Simms (Principal Acoustic Consultant) holds a BE and MEngSc in Mechanical Engineering and is a member of the Institute of Acoustics (MIOA). Mike has worked in the field of acoustics for over 20 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.

Alex Clark

Alex Clark (Senior Acoustic Consultant) holds a BEng in Acoustical Engineering and is a member of the Institute of Acoustics (MIOA). Mike has worked in the field of acoustics for over 9 years. He has

extensive experience in all aspects of environmental surveying, noise modelling and impact assessment for various sectors including, industrial, commercial and residential.

1.9.2.4 Tobar Archaeology

Miriam Carroll BA, MSc.

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.

1.9.2.5 Alan Lipscombe Traffic and Transport Consultants

Alan Lipscombe

In January 2007 Alan Lipscombe set up an independent traffic and transportation consultancy providing advice for a range of clients in the private and public sectors. Prior to this Alan was a founding member of Colin Buchanan's Galway office having moved there as the senior transportation engineer for the Galway Land Use and Transportation Study. Since the completion of that study in 1999, Alan has worked throughout the West of Ireland on a range of projects including: major development schemes, the Galway City Outer Bypass, Limerick Planning Land-Use and Transportation Study, Limerick Southern Ring Road Phase II, cost benefit analyses (COBA) and various studies for the NUI Galway. Before moving to Galway in 1997, Alan was involved in a wide variety of traffic and transport studies for CBP throughout the UK, Malta and Indonesia. He has particular expertise in the assessment of development related traffic and transport modelling, including for numerous wind farm developments, and is an accomplished analyst who has experience of a wide variety of modelling packages and methods.

1.10

Difficulties Encountered

Drainage works for peat extraction commenced at its earliest at the Application Site in the early 1930s. The retrospective impact assessments have been carried out based on the reasonable availability of information relating to the peat extraction operations 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 within the timeframe of the substitute consent process, 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 data may be incomplete, this is clearly highlighted.

1.11

Viewing and purchasing the rEIAR

Copies of this rEIAR and accompanying rNIS will be available online, including the Non-Technical Summary (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: <https://www.pleanala.ie/>

This rEIAR and all associated documentation will also be available for viewing at the offices of both An Coimisiún Pleanála, Kildare County Council 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
- Kildare County Council,
Áras Chill Dara, Devoy Park,
Naas, Co Kildare
W91 X77F
- Offaly County Council,
Áras an Chontae,
Charleville Rd,
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 Portal², 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.

² EIA Portal accessible via:

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