

13. ARCHAEOLOGY AND CULTURAL HERITAGE

13.1 Introduction

This chapter of the rEIAR assesses the potential direct and indirect effects of the peat extraction and ancillary activities that took place by Bord na Móna Biomass Ltd. (BnM) (i.e. the Applicant) at the Application Site on the surrounding archaeological and cultural heritage landscape.

As reported in Chapter 4: Project Description, the assessments in this rEIAR address the environmental impacts of peat extraction and ancillary activities carried out by BnM on lands at the Application Site since July 1988. The Application Site is comprised of 5,448 hectares across 14 no. bogs located within Counties Offaly and Kildare.

The assessment is based on both a desktop review of the available cultural heritage and archaeological data and a comprehensive programme of field walking of the Application Site. An assessment of potential effects, including the Peat Extraction Phase, the Current Phase and the Remedial Phase of the Project is included. Cumulative effects are also addressed.

13.1.1 Statement of Authority

This chapter of the rEIAR has been prepared by Miriam Carroll of Tobar Archaeological Services Ltd. Miriam Carroll graduated from University College Cork in 1998 with a Masters degree in Methods and Techniques in Irish Archaeology. She is licensed by the Department of Housing, Local Government and Heritage (DHLGH) to carry out excavations and is a member of the Institute of Archaeologists of Ireland. Miriam has been working in the field of archaeology since 1994 and has undertaken numerous projects for both the private and public sectors including excavations, site assessments (EIAR) and surveys. Miriam Carroll is a director of Tobar Archaeological Services Ltd which has been in operation for over 20 years.

13.1.1.1 Limitations

- Peatland surveys at the Application Site commenced in 1997-8 therefore resulting in a lack of information on archaeological finds and features therein from 1988 to 1997-8.
- Limitations specifically relating to fieldwork are outlined in Section 13.2.3.1 below.

13.1.2 Location

The Application Site is located 2.2km southeast of Edenderry, 3.3km west of Allenwood, 2.4 km north of Rathangan and 1.7km east of Clonbullogue Village. The site comprises 14 no. bogs, forming part of the Allen Bog Group, located on the Offaly-Kildare County boundary. 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. 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.

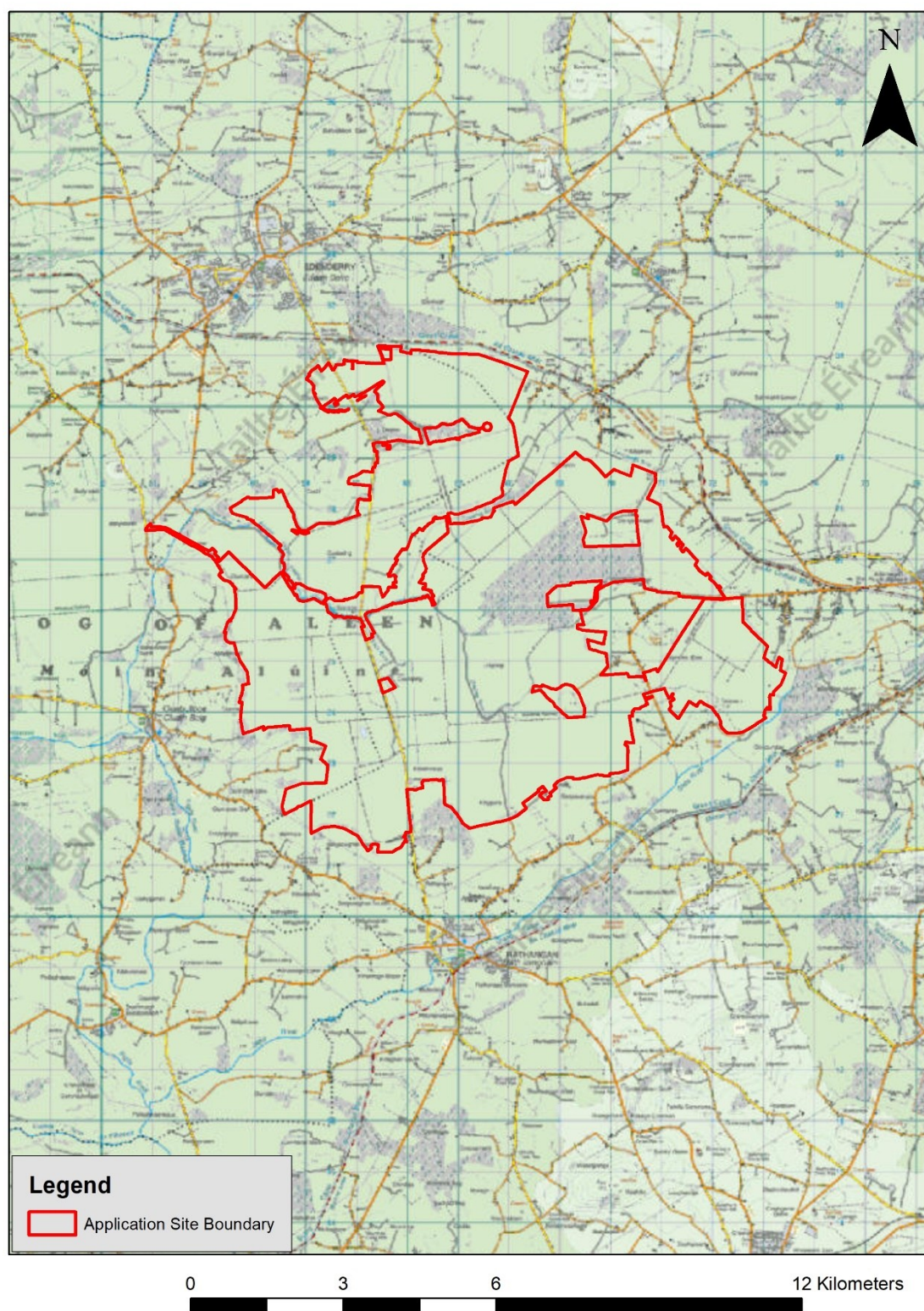


Figure 13-1: Site location map.

13.1.3 Legislation and Guidance

The chapter has been prepared in compliance with all relevant EIA legislation including Annex (IV) 4 of the EIA Directive 2011/92/EU as amended by Directive 2014/52/EU, which outlines the items that should be included in an EIAR. This is further described in Chapter 4, Section 4.1.3.

13.1.3.1 Current Legislation

13.1.3.1.1 Archaeological Heritage

Archaeological monuments are safeguarded through national and international policy, which is designed to secure the protection of the cultural heritage resource. This is undertaken in accordance with the provisions of the European Convention on the Protection of the Archaeological Heritage (Valletta Convention). This was ratified by Ireland in 1997.

Both the National Monuments Acts 1930 to 2004 and relevant provisions of the Cultural Institutions Act 1997 are the primary means of ensuring protection of archaeological monuments, the latter of which includes all man-made structures of whatever form or date. There are a number of provisions under the National Monuments Acts which ensure protection of the archaeological resource. These include the Register of Historic Monuments (1997 Act) which means that any interference to a monument is illegal under that Act. All registered monuments are included on the Record of Monuments and Places (RMP).

The Record of Monuments and Places (RMP) was established under Section 12 (1) of the National Monuments (Amendment) Act 1994 and consists of a list of known archaeological monuments and accompanying maps. The Record of Monuments and Places affords some protection to the monuments entered therein. Section 12 (3) of the 1994 Amendment Act states that any person proposing to carry out work at or in relation to a recorded monument must give notice in writing to the Minister (Environment, Heritage and Local Government) and shall not commence the work for a period of two months after having given the notice. All proposed works, therefore, within or around any archaeological monument are subject to statutory protection and legislation (National Monuments Acts 1930-2004).

The term ‘national monument’ as defined in Section 2 of the National Monuments Act 1930 means a monument *‘the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto’*. National monuments in State care include those which are in the ownership or guardianship of the Minister for Arts, Heritage and the Gaeltacht. Section 5 of the National Monuments Act (1930) allows owners of other national monuments to appoint the Minister for the Arts, Heritage and the Gaeltacht or the relevant local authority as guardian of such monuments, subject to their consent. This means in effect that while the property of such a monument remains vested in the owner, its maintenance and upkeep are the responsibility of the State. Some monuments are also protected by Preservation Orders and are also regarded as National Monuments. National Monuments also include (but not so as to limit, extend or otherwise influence the construction of the foregoing general definition) every monument in Saorstát Éireann to which the Ancient Monuments Protection Act, 1882, applied immediately before the passing of this Act, and the said expression shall be construed as including, in addition to the monument itself, the site of the monument and the means of access thereto and also such portion of land adjoining such site as may be required to fence, cover in, or otherwise preserve from injury the monument or to preserve the amenities thereof.

The Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 will replace the existing National Monuments Acts (1930-2014) when it is brought into force by Ministerial Order. The

majority of provisions of the Act have not yet come into force. One Commencement Order relating to Sections 1-6 and Section 7 insofar as relates to the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999 (other than section 5) came into effect on the 31st May 2024. These provisions relate to World Heritage Property in the State, inventories, the protection of certain records, the promotion of heritage, and the issuing of statutory guidance. Certain related and supporting provisions concerning implementation and enforcement are also commenced. The provisions now in force allow for the establishment and maintenance of inventories of relevant things of archaeological interest, architectural heritage, and wrecks of archaeological or historic interest. This bolsters the status of existing inventories recording sites of archaeological, historic and architectural interest, both on land and under the sea. It also ensures that legal protection is afforded to certain records or archaeological objects in the event that a person or company in possession of such records is no longer in a position to maintain them, which further strengthens existing practices.

13.1.3.1.2 **Built and Architectural Heritage**

Under the Heritage Act (1995) architectural heritage is defined to include *‘all structures, buildings, traditional and designed, and groups of buildings including street-scapes and urban vistas, which are of historical, archaeological, artistic, engineering, scientific, social or technical interest, together with their setting, attendant grounds, fixtures, fittings and contents...’*. A heritage building is also defined to include *‘any building, or part thereof, which is of significance because of its intrinsic architectural or artistic quality or its setting or because of its association with the commercial, cultural, economic, industrial, military, political, social or religious history of the place where it is situated or of the country or generally’*.

The Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999 established a national system for identifying and recording buildings and sites of architectural significance, while also strengthening the protection of historic monuments. The Act required the Minister to establish and maintain the National Inventory of Architectural Heritage (NIAH). The Act also recognises that architectural heritage includes individual buildings and structures, their settings, fixtures and fittings, groups of buildings, and significant sites.

The Council of Europe, in Article 2 of the 1985 Convention for the Protection of the Architectural Heritage of Europe (Granada Convention), states that *‘for the purpose of precise identification of the monuments, groups of structures and sites to be protected, each member State will undertake to maintain inventories of that architectural heritage’*. The Granada Convention emphasises the importance of inventories in underpinning conservation policies.

The National Inventory of Architectural Heritage was established in 1990 to fulfil Ireland’s obligations under the Granada Convention, through the maintenance of a central record, documenting and evaluating the architectural heritage of Ireland. Article 1 of the Granada Convention establishes the parameters of this work by defining ‘architectural heritage’ under three broad categories of Monument, Groups of Buildings, and Sites:

- Monument: all buildings and structures of conspicuous historical, archaeological, artistic, scientific, social or technical interest, including their fixtures and fittings;
- Group of buildings: homogeneous groups of urban or rural buildings conspicuous for their historical, archaeological, artistic, scientific, social or technical interest, which are sufficiently coherent to form topographically definable units;
- Sites: the combined works of man and nature, being areas which are partially built upon and sufficiently distinctive and homogenous to be topographically definable, and are of conspicuous historical, archaeological, artistic, scientific, social or technical interest.

The Council of Europe's definition of architectural heritage allows for the inclusion of structures, groups of structures and sites which are considered to be of significance in their own right, or which are of significance in their local context and environment. The NIAH considers architectural heritage to encompass a wide variety of structures and sites as diverse as post boxes, grand country houses, mill complexes and vernacular farmhouses.

The Planning and Development Act 2000 (as amended) provides for the protection of the architectural heritage. Guidelines under section 28 of the Act cover all aspects of the protection for architectural heritage under the planning code including protected structures.

13.1.3.2 National Policy

The Valletta Convention provides the basis for all national policy on the protection of the archaeological heritage in Ireland. In 1999, in the context of furthering the implementation of the Convention, two policy documents were published:

- Framework And Principles For The Protection Of The Archaeological Heritage
- Policy And Guidelines on Archaeological Excavation

Framework and Principles for the Protection of the Archaeological Heritage (1999) sets out key aspects of the principles for the protection of archaeology, in particular with reference to development and archaeology as follows:

- a presumption in favour of preservation in situ and avoidance of impacts by development on archaeological heritage
- the importance of the fullest possible level of pre-development archaeological assessment, in respect of both known sites and as yet unidentified ones (sub-surface archaeology)
- the need to preserve by record (excavation) if preservation in situ is not possible
- the need for archaeological monitoring to ensure that archaeological sites, whether known or as yet unidentified, are preserved either in situ or by record
- acknowledgement that the costs of archaeological work necessitated by development are a legitimate part of development costs, i.e. 'the developer pays'

Those key aspects of that policy document still form the basis of the requirement for archaeological impact assessments, preservation in situ (avoidance), excavation (preservation by record), and monitoring of construction stage ground works as frequently requested by Local Authorities or other planning bodies and the National Monuments Service (NMS).

13.1.3.2.1 Turf Development Act 1998

Section 56 of the Turf Development Act 1998 pertains to the protection of the environment and archaeological heritage. It mandates that both the Company (formed under the Act) and its subsidiaries ensure their activities are conducted in a manner that appropriately safeguards these aspects. This includes avoiding damage to the environment and preserving archaeological sites found within their operational areas.

13.1.3.3 Relevant Guidance

The aforementioned 1998 Act was in accord with the development of *Agreed Principles for the Protection of Wetlands Archaeology in Bord na Móna Bogs* (1998) between the Minister for Arts, Heritage and the Gaeltacht, the National Museum of Ireland and BnM. The Agreed Principles set out 10 standards within which archaeology in the BnM peatlands were managed. Five Archaeological Liaison Officers were spread across the BnM Bog Groups and received training on how to deal with and report finds. Since 1998, all archaeological surveys were funded by BnM. The surveys have been

accompanied by an annual programme of selective archaeological excavation and paleo-environmental analysis. By 2013, 64,000 of the c. 80,000-hectare land holdings of BnM had been subject to archaeological survey.

BnM's peat extraction and ancillary activities, and impact on archaeology is also governed under the 2012 Code of Practice agreed between the then Department of Arts, Heritage and the Gaeltacht, the National Museum of Ireland and Bord na Móna (Appendix 13-4). The Code includes a commitment by BnM to finance a balanced and cost-effective approach to archaeological investigation, excavation, post excavation and mitigation, and details the procedure to be followed if a suspected object is discovered. The Code of Practice has been implemented on all bogs operated by BnM and its contents are integrated into staff induction training. Prior to 2012, Agreed Principles for the Protection of Wetland Archaeology in BnM bogs were in place before they were updated and codified into the current Code of Practice. This chapter was also written in accordance with An Coimisiún Pleanála (2025), Guidance for Substitute Consent and Section 37L Applications (ACP 2025).

13.1.4 County Development Plans

Specific policies regarding built heritage including archaeology, industrial heritage and monastic sites detailed in the Offaly County Development Plan 2021-2027 and in the Kildare County Development Plan 2023-2029 can be found in Appendix 13-1. Section 2.3.3 in Chapter 2: Background of this rEIAR also provides a summary of historic County Development Plans for County Offaly and County Kildare dated from 1967 onwards.

13.1.5 Scoping & Consultation

The scope for this assessment has been informed by consultation with statutory consultees, bodies with environmental responsibility and other interested parties as outlined in Section 2.5 of Chapter 2 of the rEIAR. Scoping for the Project was originally undertaken in October 2020, however owing to the passage of time between the initial scoping request in October 2020 and the preparation of this rEIAR, subsequent scoping requests were issued in January 2026. Those consultees relevant to Cultural Heritage are listed in Table 13-1 below.

Table 13-1: Summary of scoping consultations

Consultee	Date Sent	Response
Department of Housing Local Government and Heritage	15 th January 2026 and 10 th February 2026	None to date
The Heritage Council	15 th January 2026 and 10 th February 2026	None to date
Kildare County Council Heritage Dept.	15 th January 2026 and 10 th February 2026	None to date
Offaly County Council Heritage Dept.	15 th January 2026 and 10 th February 2026	None to date
Office of Public Works (OPW)	15 th January 2026 and 10 th February 2026	None to date
Lullymore Heritage Park	15 th January 2026 and 10 th February 2026	None to date

Further detail on scoping is provided in Section 2.5 in Chapter 2 of the rEIAR.

13.1.6 Project Description

This chapter reports the findings of an assessment of any likely significant effects on Cultural Heritage which may have occurred or are occurring as a result of BnM's peat extraction and ancillary activities at Ballydermot within the Allen Bog Group (at 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, hereafter referred to as the 'Application Site' during the three Project phases since 1988. Chapter 4 provides a full description of the elements of the Project which are the baseline as of July 1988, the activities from July 1988 to the cessation of peat extraction in June of 2020, the management of the Application Site since June 2020, and the activities intended to be carried out into the future. As reported in Chapter 4, the assessments in this rEIAR address the environmental effects of peat extraction and ancillary activities occurring at the Application Site. The assessments in this chapter will determine any likely significant effects that occurred to Cultural Heritage (or are likely to occur) during three differing timeframes termed 'phases' (as described in Section 4.2.1 of Chapter 4):

- **Peat Extraction Phase:** The likely significant effects on cultural heritage which may have occurred as a result of peat extraction and ancillary activities at the Application Site from July 1988 to the cessation of peat extraction in June 2020 (July 1988 – June 2020);
- **Current Phase:** The likely significant effects on cultural heritage which may have occurred during the management of the Application Site since June 2020 (June 2020 to present); and,
- **Remedial Phase:** The likely significant effects on cultural heritage that are likely to occur as a result of the activities intended to be carried out at the Application Site into the future.

13.2 Methodology

The assessment of the archaeology, architecture and cultural heritage of the Application Site included Geographical Information Systems (GIS) mapping, desk-based research and field inspection. A desk-based study of the Application Site was initially undertaken in order to assess the Cultural Heritage potential of the area and to identify constraints or features of archaeological/cultural heritage significance within the Application Site.

13.2.1 Geographical Information Systems

GIS are a computer database which captures, stores, analyses, manages and presents data that is linked to location. GIS includes mapping software and its application with remote sensing, land surveying, aerial photography, mathematics, photogrammetry, geography and tools that can be implemented with GIS software. GIS was used to manage the datasets relevant to the archaeological and architectural heritage assessment and for the creation of all the maps in this section of the report. This involved the overlaying of the relevant archaeological and architectural datasets on georeferenced aerial photographs and road maps (ESRI), where available. The integration of this spatial information allows for the accurate measurement of distances of a development from archaeological and cultural heritage sites and the extraction of information on 'monument types' from the datasets. Areas of archaeological or architectural sensitivity may then be highlighted in order to mitigate the potential negative effects of a development on archaeological, architectural and cultural heritage.

13.2.2 Desktop Assessment

The below sources were consulted as part of the desktop assessment for the Application Site and are discussed in the following sections.

- The Record of Monuments and Places (RMP);
- The Sites and Monuments Record (SMR);
- National Monuments in State Care County Offaly;
- National Monuments in State Care County Kildare;
- The Topographical Files of the National Museum of Ireland;
- First edition Ordnance Survey maps (Tailte Éireann);
- Second edition Ordnance Survey maps (Tailte Éireann);
- Third edition Ordnance Survey Map (Tailte Éireann);
- Down Survey maps (www.downsurvey.tcd.ie);
- Aerial photographs (copyright of Tailte Éireann);
- Excavations Database;
- National Inventory of Architectural Heritage (NIAH);
- Record of Protected Structures (Offaly County Development Plan, Kildare County Development Plan);
- Previous archaeological surveys and assessments carried out on or near to the Application Site (various).

13.2.2.1 Record of Monuments & Places, Sites & Monuments Record and National Monuments

A primary cartographic source which also provided baseline data for the assessment was the Sites and Monuments Record (SMR) and Record of Monuments and Places (RMP) for County Offaly and County Kildare. All known recorded archaeological monuments are indicated on 6-inch Ordnance Survey (OS) maps and are listed in these records. The SMR/RMP is not a complete record of all monuments as newly discovered sites may not appear in the list or accompanying maps. In conjunction with the consultation of the SMR and RMP the electronic database of recorded monuments and SMRs which may be accessed on the Historic Environment Viewer (HEV) at <https://heritagedata.maps.arcgis.com/apps/webappviewer/> was also consulted.

A review of all National Monuments in State Care and those subject to Preservation Orders was undertaken as part of the assessment in order to ascertain any potential effects on their setting as a result of the peat extraction and ancillary activities.

13.2.2.2 Cartographic Sources and Aerial Photography

The available cartographic sources were consulted as part of the assessment, as was Tailte Éireann aerial photography, Google Earth imagery and MapGenie imagery. The following cartographic sources were consulted:

- Down Survey barony maps (1656-8) (<https://downsurvey.tchpc.tcd.ie/>, accessed June 2026)
- First (1829-41), second (1897-1913) and third (1830s -1930s) edition Ordnance Survey (OS) maps (Tailte Éireann)

13.2.2.3 Topographical Files - National Museum of Ireland

Details relating to finds of archaeological material and monuments in numerous townlands in the country are contained in the topographical files held in the National Museum of Ireland. In order to

establish if any new or previously unrecorded finds had been recovered from the Application Site, these files were consulted for every townland within same. The bogs database, also held in the National Museum of Ireland was also consulted for finds or items recovered from the Application Site.

13.2.2.4 Archaeological Inventory Series

Information on archaeological sites is contained in the published County Archaeological Inventory series prepared by the Department of Housing, Local Government and Heritage (DHLGH). The archaeological inventories present summarised information on sites listed in the SMR/RMP and include detail such as the size and location of particular monuments, as well as any associated folklore or local information pertaining to each site. The inventories, however, do not account for all sites or items of cultural heritage interest which are undiscovered at the time of their publication. Many sites have been discovered since the publication of the Inventory Series, which have now been added to the Sites and Monuments Record. The information contained within the Archaeological Inventory Series is the basis for the monument descriptions as provided on the HEV and was therefore accessed on the HEV.

13.2.2.5 Record of Protected Structures

The Record of Protected Structures (RPS) for County Offaly and County Kildare was consulted for the schedule of buildings and items of cultural, historical or archaeological interest. The Offaly County Development Plan 2021-2027 and Kildare County Development Plan 2023-2029 also outlines policies and objectives relating to the protection of the archaeological, historical and architectural heritage landscape of the county. The digital datasets for Protected Structures was added to the project GIS mapping used for the creation of figures in this chapter.

13.2.2.6 Excavations Database

The Excavations Database is an annual account of all excavations carried out under excavation license. The database is available online at <https://excavations.ie/> and includes summaries of excavations from 1985 to 2026. This database was consulted as part of the desktop research for this assessment to establish if any archaeological excavations had been carried out within or near to the Application Site.

13.2.2.7 National Inventory of Architectural Heritage (NIAH)

This source lists some of the architecturally significant buildings and items of cultural heritage and is compiled on a county-by-county basis by the Department of Housing, Local Government and Heritage. The NIAH database was consulted for all townlands within and adjacent to the Application Site. The NIAH surveys for Offaly and Kildare have been published and were downloaded on to the base mapping for the Application Site from ArcGIS online (in June 2026) The NIAH is a state initiative under the administration of the Department of Housing, Local Government and Heritage and established on a statutory basis under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999.

The purpose of the NIAH is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. NIAH surveys provide the basis for the recommendations of the Minister for Housing, Local Government and Heritage to the planning authorities for the inclusion of particular structures in their Record of Protected Structures (RPS). The published surveys are a source of information on the selected structures for relevant planning authorities. They are also a research and educational resource. It is hoped that the work of the NIAH will increase public awareness and appreciation of Ireland's architectural heritage.

13.2.2.8 Previous Surveys and Assessments

One Peatland Survey was previously carried out within the Application Site during the lifetime of peat extraction and ancillary activities by BnM. A summary of the available results of that survey is presented in Section 13.4.2 below and also in Appendix 13-3.

13.2.3 Field Inspection

A walkover survey of the Application Site was undertaken over a number of days in April, May, June and July 2022 and was carried out as part of the assessment for the proposed Ballydermot Wind Farm. The inspection was undertaken by Miriam Carroll and Annette Quinn of Tobar Archaeological Services Ltd. The inspection consisted of a walk-over examination of the bog. The survey comprised a visual inspection of areas in which proposed wind farm infrastructure is located, inspection of relevant field surfaces where not vegetated and drain faces where not obscured by water or vegetation. The purpose of the walk-over survey was to assess those areas proposed for infrastructure for the presence of potential archaeological finds, features or structures or items of local cultural heritage merit in order to inform the assessment of potential effects. A photographic record of the Application Site was made during the walk-over survey and is presented in part in Appendix 13-2.

Furthermore, 63 site investigation trial pits excavated within the Application Site were archaeologically monitored under excavation licence 21E0221 from the National Monuments Service over two phases in 2021 (Carroll, 2023). The site investigations were undertaken as part of the proposed Ballydermot Wind Farm planning application as detailed in Section 4.10.1 in Chapter 4. In most cases subsoil was exposed in each pit, however, where deep peat was encountered subsoil was not always exposed. Some trial pits contained tree roots and twigs, however, no evidence for worked timbers or potential archaeological wood was noted. No archaeological finds, features or deposits were uncovered in any trial pit excavated at the SI Locations.

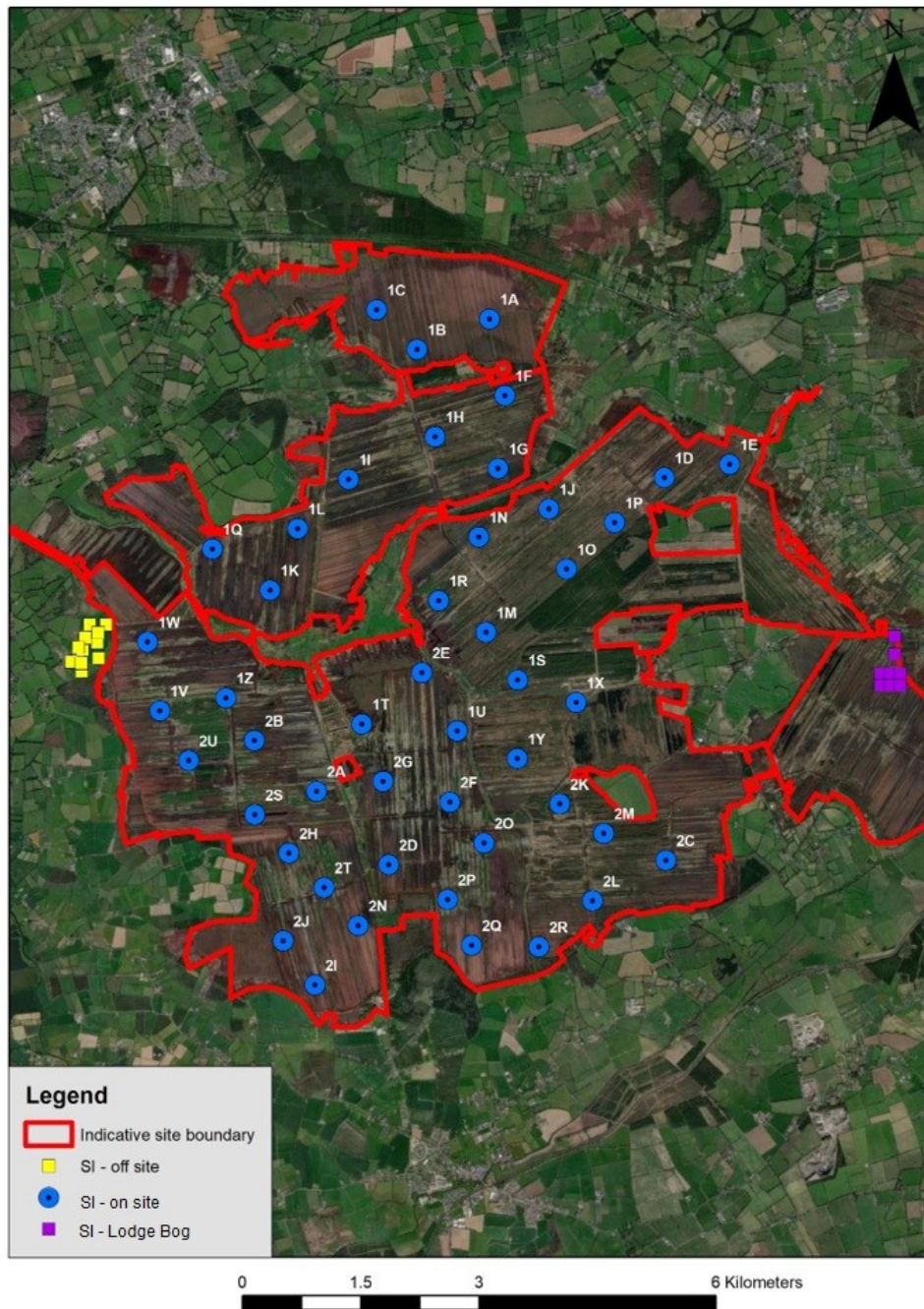


Figure 13-2: Location of Site Investigation trial pits excavated and subject to archaeological monitoring.

13.2.3.1 Limitations Associated with Fieldwork

Where dense vegetation or colonized field surfaces are present, this limits the ability to inspect the field surface for any potential archaeological features. The monitoring of the site investigation trial pits, as outlined above, provided an opportunity to assess many areas within the Application Site for the presence of any sub-surface features, however, no such features were identified. No potential archaeological features were recorded during the monitoring of site investigations.

A visual inspection of drain faces was carried out during the walk-over survey where possible, apart from those that were flooded, overgrown or those which had become infilled. The colonization of field

surfaces and drains presents a limitation to the detection of potential archaeological finds and structures on the field surfaces and in drain faces, however, where drain faces and field surfaces were clear of vegetation they were inspected for the presence of potential archaeological features. No potential archaeological features or finds were found during the walk-over survey.

13.2.4 Assessment of Likely Significant Effects

The likely effects on the existing archaeological, architectural and cultural heritage environment are assessed using the criteria as set out in the draft *Guidelines on the Information to be contained in Environmental Impact Assessment Reports* (EPA, 2022) and as outlined in Section 1.8.2 of Chapter 1: Introduction. The following terminology is used when describing the likely effects of the extraction industry from a Cultural Heritage perspective.

13.2.4.1 Types of Effect

Table 13-2: Types of effect.

Type of Effect	Description
Direct effects	May arise where an archaeological heritage feature or site is physically located within the footprint of the development whereby the removal of part, or all of the feature or site is thus required
Indirect effects	May arise as a result of subsurface works undertaken outside the footprint of the development, secondary environmental change such as a reduction in water levels and visual effects
Cumulative effects	May arise when the addition of many effects create a larger, more significant effect
Residual effects	The degree of environmental changes that will occur after the proposed mitigation measures have been implemented

13.2.4.2 Magnitude of Effects (Significance)

Table 13-3: Significance of effects.

Significance of Effect	Description
Profound	Applies where mitigation would be unlikely to remove adverse effects. Reserved for adverse, negative effects only. These effects arise where an archaeological site is completely and irreversibly destroyed
Very Significant	An effect which by its character, magnitude, duration or intensity significantly alters most of the sensitive aspect of the environment
Significant	An effect which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment. An effect like this would be where part of a site would be permanently impacted upon, leading to a loss of character, integrity and data about an archaeological site.
Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends. A moderate effect arises where a change to an archaeological site is proposed which though noticeable, is not such that the integrity of the site is compromised and which is reversible.
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.

Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Imperceptible	An effect on a Cultural Heritage asset capable of measurement but without noticeable consequences.

13.2.5 Methodology for the assessment of effects on visual setting (indirect effects)

A standardised approach is utilised for the assessment of effects on visual setting (indirect effects) according to types of monuments and cultural heritage assets which may have varying degrees of sensitivity. This assessment takes into consideration peat extraction and ancillary activities which would not have had an effect on the visual setting of monuments. Only direct effects were likely and therefore considered in the assessment. Since peat extraction activities (clearance of vegetation, drainage, peat extraction and ancillary activities) were confined to the surface of the peat and sub-surface, this activity type is not considered to be capable of having wider landscape negative effects on the setting of cultural heritage assets (i.e. indirect effects).

13.3 Establishing the 1988 Baseline

Section 4.4.1 in Chapter 4 provides a detailed description of the baseline environment as of July 1988. For purposes of clarity, a short summary description is also provided here.

By 1988, the land use at the Application Site was well established as industrial peat extraction. The Application Site was drained with milled; sod moss and sod peat extraction taking place across most of the Application Site in 1988. Railway infrastructure was also established throughout the Application Site by 1988. The main entrance points to the Application Site were at the Ballydermot Works entrance on the L-3001 road in the southwest of the Application Site, and from a local road (L-2506-3) which crosses the Grand Canal, passing the Lullymore Briquette Factory before cutting through Killina Bog in the northeast. Other access points include entrances off the L3001 Rathangan to Edenderry Road which cuts through the Application Site in a north to west direction and off the Allenwood to Rathangan Road (designated R414 in 1993) which cuts through the southeast of the Application Site. Ballydermot Works, which comprised welfare facilities, storage sheds, offices, maintenance buildings, staff carparks, HGVs storage area, a tiphead and a refuelling area is still in situ at present day. The following ancillary infrastructure was established at the Application Site by July 1988:

1. *Railway infrastructure;*
2. *Internal machine passes/tracks;*
3. *Silt ponds and drains;*
4. *Welfare facilities;*
5. *Local holding areas;*
6. *Tiphead; and*
7. *Pumping stations.*

Aerial imagery indicates that by July 1988, approximately 4,840ha of the Application Site was subject to peat extraction. Thus, the main landcover type at this time was cutover peat. The Application Site included 25 no. artificial silt ponds, 15 no. surface water emission points and 9 no. pumps which remain in situ today. Surface water outfall locations discharge to tributaries of the River Barrow. The topography of the Application Site is estimated to have been approximately 72-88mOD by 1988 (see Section 4.4 of Chapter 4 for further detail).

13.3.1 Ballydermot North Bog

Aerial imagery indicates that by July 1988, approximately 456.4ha of the Application Site was subject to milled peat extraction. Thus, the main landcover type at this time was cutover peat. Drainage was already installed, predominantly in an east-west orientation. Railway infrastructure was established in the bog at this time. There were no silt ponds, pumps or surface water emission points located on Ballydermot North by 1988. The bog was accessed from several locations leading from the L3001 Edenderry to Rathangan Road along the eastern boundary. The topography of the Application Site is estimated to have been approximately 72 – 86mOD by 1988.

13.3.2 Ballydermot South Bog

Aerial imagery from 1988 indicates that drainage was in place and extraction of milled peat was underway on approx. 326.8ha of Ballydermot South Bog. A total of 98.2ha were not drained nor subject to peat extraction in the west and southeast of the bog. Ballydermot South bog was linked via railway infrastructure to Ballydermot Works in the southeast, to Ballydermot North to the north-west and Blackriver to the east of the bog. There were no silt ponds, pumps or surface water emission points located on Ballydermot South by 1988. The main access point to Ballydermot South Bog was to the south of the Application Site via the west of the L3001 Edenderry to Rathangan Road from Ballydermot Works. The topography of this bog is estimated to have been approx. 73 - 80mOD by 1988.

13.3.3 Blackriver Bog

By July 1988, peat extraction was underway across the majority of Blackriver Bog, (approx. 726.3ha). Areas of drained bog not yet subject to peat extraction were located in the northwest of the bog (approx. 15.7ha). Drainage for milled peat was already installed, and railway infrastructure, which was laid throughout the 1950s and 1960s, connected Blackriver Bog to Glashabaun South Bog (to the north) and Barnaran Bog (to the east). There were no silt ponds, pumps or surface water emission points located on Ballydermot South by 1988. The main access point to Blackriver Bog was off the L3001 Edenderry to Rathangan Road at the western boundary of the bog. The topography of Blackriver Bog is estimated to have been approx. 72 - 81mOD by 1988.

13.3.4 Lullybeg Bog

By July 1988 Lullybeg Bog had been drained and sod moss extraction was underway across 154 ha of the bog. An area of 113 ha in the north of the bog had ceased peat extraction by this time. Railway infrastructure established on the eastern boundary of the bog, connecting Lullybeg Bog to Killina Bog to the northeast and Blackriver Bog to the south. Access to the Lullybeg Bog in 1988 was via the L81371 Killyguire local road, and this remains the main access point at present day. There were no silt ponds, pumps or surface water emission points located on Lullybeg by 1988. The topography of Lullybeg Bog is estimated to have been approx. 72 - 78mOD by 1988.

13.3.5 Lullymore Bog

Drainage infrastructure was fully established for sod moss in 175ha of Lullymore Bog by 1988, as deduced from available aerial imagery. There were no silt ponds, pumps or surface water emission points located on Lullymore Bog by 1988. Access to Lullymore Bog was and remains via a local road which runs from the R414 and through the Lullymore Heritage & Discovery Park which opened in 1993. The topography of the bog is estimated to have been approx. 73 - 84mOD by 1988.

13.3.6 Lodge Bog

Satellite imagery and annual reports indicate that by July 1988, approx. 383.1ha of Lodge Bog were undergoing sod moss peat extraction. Thus, the main landcover type at this time was cutover peat. A small area measuring approx. 23.9ha of remnant uncut raised bog was located in the southwest of the bog. Drainage was already installed, predominantly in a northeast-southwest orientation. Railway infrastructure was laid in the bog, connecting the bog to Barnaran Bog in the west and Allenwood Power Station in the northeast. There were no silt ponds, pumps or surface water emission points located on Lodge Bog by 1988. The main access point to Lodge Bog was off the Rathangan to Allenwood (R414) road. The topography of Lodge Bog is estimated to have been approx. 78 - 85mOD by 1988.

13.3.7 Killina Bog

Aerial imagery from 1988 indicates that drainage was fully established across Killina Bog. A total of 88.5ha were drained but not subject to peat extraction in 1988. Sod moss extraction was ongoing in 1988 across 168.5ha of Killina bog. The bog was linked via railway infrastructure to Lullymore Briquette Factory to the north and Allenwood Power Station to the southeast. There were 2 no. silt ponds on Killina Bog, both were installed between 1988 and 1995. There are 2 no. surface water emission points which were installed around 1988 and no pumps on the bog. The main access point to Killina Bog was to the north of the Rathangan to Allenwood (R414) road. The topography of this bog is estimated to have been approx. 78 - 88mOD by 1988.

13.3.8 Barnaran Bog

By July 1988, sod moss extraction was underway across all of Barnaran Bog, (approx. 486ha). Railway infrastructure connected Barnaran Bog to Blackriver Bog to the west and Lodge Bog to the east. There are 3 no. silt ponds located in Barnaran Bog; all of which were installed by 1988. There are 2 no. surface water emission points which were installed at the same time as the silt ponds. There are no pumps on Barnaran Bog. The main access to the eastern part of the Application Site was from the R414 road or through the Lullymore Heritage Park. The topography of Barnaran Bog is estimated to have been approx. 75 - 84mOD by 1988.

13.3.9 Derrybrennan Bog

By July 1988 Derrybrennan Bog had been drained and milled peat extraction was continuing across 132ha of the bog. Railway infrastructure was also in situ, connecting Derrybrennan Bog to Lullymore Briquette Factory to the east. Access to Derrybrennan Bog in 1988 was via a fourth-class road which runs northeast from the grand canal into the bog, and this remains the main access point at present day. There are 2 no. silt ponds, 2 no. surface water emission points and no pumps located on Derrybrennan Bog. Both of the silt ponds were installed between 1988 and 1995. The topography of Derrybrennan Bog is estimated to have been approx. 75 - 86mOD by 1988.

13.3.10 Glashabaun North Bog

Satellite imagery and annual reports indicate that by July 1988, the majority of Glashabaun North was subject to milled peat extraction, approx. 499ha. Thus, the main landcover type at this time was cutover peat. A small area measuring approx. 165.2ha of remnant uncut raised bog was located predominantly in the north at the edges of the bog. Drainage was already installed, predominantly in a west-east orientation. Railway infrastructure was laid in the bog connecting Glashabaun North to Glashabaun Works in the northwest and Glashabaun South in the south. There were 2 no. silt ponds located in

Glashabaun North Bog, 2 no. of which was installed by 1988. The installation date of the pumps is not clear, but BnM records indicate the pumps were installed by 1988. There were no surface water emission points located on the bog. Access was available from the L1001 Edenderry to Rathangan or from the Glashabaun Works entrance to the north. The topography of Glashabaun North Bog is estimated to have been approx. 72 - 83mOD by 1988.

13.3.11 **Glashabaun South Bog**

Aerial imagery from 1988 indicates that drainage was in place and extraction of milled peat was underway on approx. 419 ha in the northern portion of Glashabaun South Bog. A total of 192.5ha were drained but not subject to peat extraction. Glashabaun South bog was linked via railway infrastructure to Glashabaun North Bog in the north, Killina Bog to the east and Blackriver Bog to the west. There were 6 no. silt ponds and 6 no. surface water emission points installed between 1988 and 1995 on Glashabaun South Bog. No pumps were installed on Glashabaun South Bog by 1988. The main access point to the bog was from the existing L81371 Cushaling to Killyguire Road which runs along the southwest margin of the Application Site or from an existing track which runs along the extreme northeast margin. The topography of this bog is estimated to have been approx. 73 - 81mOD by July 1988.

13.3.12 **Ticknevin Bog**

By 1988 sod moss extraction was underway across 417.8ha of Ticknevin bog. Approximately 38.2ha was neither drained nor subject to peat extraction. Access to the bog was possible via the L1001 Edenderry to Rathangan Road which runs northwest to southeast through the bog. There were 2 no. ponds, installed between 1988 and 1995. There are 2 no. pumps on Ticknevin Bog, the installation date of the pumps is not clear, but BnM records indicate the pumps were installed by 1988. There were no surface water emission points located on the bog by 1988. The topography of this bog is estimated to have been approx. 77 - 81mOD by 1988.

13.3.13 **Codd 1 Bog**

Drainage infrastructure was established for milled peat extraction in 217ha of Codd 1 Bog by 1988, and 32.9ha of the bog was drained but not yet subject to peat extraction. There were 5 no. pumps, 4 no. silt ponds and 3 no. surface water emission points installed by 1988. Access to the bog remains available from a track off of the L3001 Rathangan to Edenderry Road which runs along the eastern boundary. The topography of the bog is estimated to have been approx. 72 - 79mOD by July 1988.

13.3.14 **Codd 2 Bog**

Drainage infrastructure was established for milled peat extraction in 290ha of Codd 2 Bog by 1988, as deduced from available aerial imagery. There were 4 no. silt ponds installed by 1988 and there are no pumps located on Codd 2. Access is available from the public road L1001 along the eastern boundary and from an existing track which runs off of the L1001 close to the southern and western boundaries. The topography of the bog is estimated to have been approx. 72 - 80mOD by July 1988.

13.3.15 **Current Environment**

Milled peat extraction continued at the Application Site from 1988 until June 2020 when peat extraction ceased. Improvements and modernisation of machinery occurred between 1988 and June 2020 which increased the efficiency and speed of operations over this time period. Maps provided in Chapter 4 detail the areas under peat extraction from 1995 until 2020 and illustrate which portions of the

Application Site were still undergoing peat extraction at those times. A review of the available aerial satellite imagery and annual reports of the Application Site from 1988 to 2020 also illustrate the on-going peat extraction during that period. In 1995 the majority of the Application Site was still under active peat extraction. Recolonisation of areas of the bog in which peat extraction had ceased are apparent on the aerial photography from 2004 onwards. By 2004 portions of Ballydermot Bog, Glashabaun South Bog and Lullybeg Bog were no longer undergoing peat extraction and were planted with forestry. By June 2020 peat extraction had ceased. A photographic record of the Application Site is presented in Appendix 13-2.

13.4 Archaeological Heritage of the Application Site

Archaeological Heritage includes UNESCO World Heritage Sites (WHS), National Monuments, sites which are subject to a Preservation Order, sites listed in the RMP/SMR and newly discovered archaeological sites, as well as previous finds within the bog (recorded in the Bogs Database and Topographical files of the National Museum of Ireland) and sub-surface archaeology.

No UNESCO World Heritage sites or National Monuments in State Care (ownership or guardianship)/subject to a Preservation Order are located within the Application Site. It is considered that any such monuments located in the wider landscape setting surrounding the Application site were not affected by the peat extraction and ancillary activities at the Application Site under assessment in this report, as, given the localised nature of the activities within the Application Site, the peat extraction and ancillary activities would not have been capable of affecting sites which are located numerous kilometres from the working bogs. Such Cultural Heritage assets are therefore scoped out of the assessment.

13.4.1 Recorded Monuments within the Application Site boundary

The dataset for the National Monuments Service SMR was downloaded from ArcGIS online in June 2026 and added to the base mapping for this assessment. This Archaeological Survey of Ireland (ASI) dataset is published from the database of the SMR. This dataset also can be viewed and interrogated through the online Historic Environment Viewer. GIS software (ArcMap) was then utilised to calculate the number of recorded monuments located within the Application Site boundary.

A total of ten (10) recorded monuments are located within the Application Site boundary and are presented in Table 13-4 and shown on Figure 13-3, Figure 13-4, Figure 13-5, Figure 13-6 and Figure 13-7. The monuments are shown with their associated Zones of Notification (ZoN) where relevant; it should be noted, however, that some monuments do not have an associated ZoN. The ZoN comprises an area of land within which it is expected that a recorded monument will be located.

Three of the monuments (KD012-002001-, KD012-003001-, and KD012-004001-) were partially excavated by Etienne Rynne in 1964-5 after the discovery of the toghers was reported by BnM. At least two of these monuments (KD012-015— and KD012-016—) were identified as a result of a peatland surveys carried out within the Application Site by the Irish Archaeological Wetland Unit (IAWU) in 1997-8, while the remaining monuments were recorded during the subsequent 2004 Peatland Survey undertaken by ADS Ltd., as part of the Archaeological Survey of Ireland Peatland Survey (Whitaker, 2004). During that survey a total of 83 sightings of archaeological material were made, the majority of which (55) comprised occurrences of single worked brushwood or roundwoods. It was thought at the time of the survey, and confirmed by subsequent dating, that many of the sightings were modern in origin. See Section 13.4.2 below for detail on the survey and the findings of same.

A variety of monument types are located within the Application Site but are typical of those found in a peatland environment which largely comprise roads (trackways or toghers of either stone or wood), structures – peatland and a platform. The monument types and number of same within the Application Site are discussed below.

13.4.1.1 Roads - Class 1 toghers

Five roads comprising Class 1 toghers (KD012-002001-, KD012-004001-, KD012-014—, KD012-014002- and KD012-014001-) are located within the Application Site. Class 1 toghers comprise a peatland trackway/causeway constructed of wood and intended to traverse a bog which have a known orientation. In most instances they comprise substantial timber planks and have good structural definition. They may have several phases of construction indicative of long-term use and reuse. They may date from the Neolithic (c. 4000-2400 BC) to the medieval period (5th-16th centuries AD).

Two of the class 1 toghers located within the Application Site (KD012-002001- and KD012-004001-) are located towards the north-east side of same in Derrybrennan and Killina Bogs. They comprise two of three trackways that converge on Derrybrennan townland, a small island of high ground in the bog to the north of Lullymore. The third trackway (KD012-003001-) converging on Derrybrennan is a gravel/stone trackway (see Section 13.4.1.2 below). The trackways were investigated by Rynne in 1964-5 on behalf of the National Museum of Ireland (NMI) after their discovery was reported by BnM.

The remaining Class 1 toghers are located further to the south in Barnaran Bog. The dot which indicates the centre point location of monument KD012-014001- is located just outside the Application Site boundary, however, the monument description and its association with the other class 1 toghers (KD012-014— and KD012-014002-) would suggest that at least some of this monument is located within the Application Site.

The monuments are described on the HEV as follows:

KD012-002001- : Road - class 1 togher : DERRYBRENNAN, TICKNEVIN

Description: One of three toghers (see also KD012-003001- and KD012-004001-) converging on Derrybrennan townland, a small 'island' of high ground in the expanse of bog to the N of Lullymore, which were investigated by Rynne (1964-5, 35-7) on behalf of the NMI after their discovery was reported by Bord na Móna. The togher ran between higher ground in Ticknevin townland to the N and Derrybrennan townland to the S (est. L c. 1500m). Rynne traced its S limits, followed its course N for about half its length, archaeologically excavated a portion of the monument (L 9m; Wth 1m), and made some 'minor cuttings at one or two points'. The togher was found at a depth of c. 1.2-1.5m below the estimated original level of the bog's surface, which had been almost cut away. It was orientated on an approximately NNW-SSE axis and consisted of two continuous lines of parallel pairs of oak planks (av. L. c. 4.5m; Wth c. 0.4m) which were laid longitudinally on the peat and were supported at each end on transverse, oak roundwood sleepers. The planks had rectangular mortices at each end through which long (av. L. c. 0.6m), axe-sharpened, oak pegs were driven to anchor them in place. In other places, one wide plank was used instead of two narrower ones. It was subsequently radiocarbon-dated to 1200±20 BP (GrN-14728) (Brindley and Lanting 1998, 47). Compiled by: Gearóid Conroy. Date of upload: 10 June 2011.

KD012-004001- : Road - class 1 togher : LULLYMORE WEST, DERRYBRENNAN

Description: One of three toghers (see also KD012-002001- and KD012-003001-) converging on Derrybrennan townland, a small 'island' of high ground in the expanse of bog to the N of Lullymore, which were investigated by Rynne on behalf of the NMI after their discovery was reported by Bord na Móna. It ran (est. L c. 1500m) between higher ground at Derrybrennan townland to the N and Lullymore West townland to the S, another 'island' in the bog, where it appears to be aligned with a

laneway leading towards an early monastic site (KD012-006—). Rynne investigated both ends of the road but gave no details in the published account (1964-5, 38-9). According to local reports, where the togher had been cut by turf-cutting machines, transversely laid planks (est. L c. 2.4m) had occasionally been found, particularly in areas of soft peat. The site has been radiocarbon dated to AD 775-892 (1200±20BP; GrN-14728). (Brindley & Lanting 1998, 47). Compiled by: Gearóid Conroy. Date of upload: 10 June 2011.

KD012-014— : Road - class 1 togher : LULLYBEG, LULLYMORE EAST

Description: Three closely associated toghers (KD012-014—, KD012-014001- and KD012-014002-) running parallel to one another were surveyed:

KD012-014—: A substantial gravel and wood togher (L 550m; av. Wth. 4.5m; D 0.10-0.9m) orientated NNE-SSW crosses Lullymore East bog between the dry land islands of Lullymore, to the NE, and Lullybeg, to the SW. The monument is visible in 22 Bord na Mona drain faces and can be traced for most of its length as a raised, vegetation line on the bog's surface. It is composed of a layer of gravel beneath which are large transverse timbers lying on top of smaller longitudinal timbers and beneath these timbers is a layer of possibly re-deposited peat. The monument is dated AD380-660.

The remains of a second togher (KD012-014001-) was found running parallel, immediately to the E, as well as traces of a third togher (KD012-014002-), running parallel to the E again. Compiled by: Gearóid Conroy. Date of upload: 10 June 2011.

KD012-014001- : Road - class 1 togher : LULLYMORE EAST

Description: Three closely associated toghers (KD012-014—, KD012-014001- and KD012-014002-) running parallel to one another were surveyed: **KD012-014001-:** This monument was traced intermittently, in four locations (L 430m; Wth. 0.06-2.76m; D 0.06-0.10m) running parallel with, and less than 10m to the E of, another togher (KD012-014—). It was composed of transverse timbers lying on top of longitudinal timbers, and was damaged probably because it lay so close to the bog surface. The monument is dated AD900-1160. As well as a second togher (KD012-014—) immediately to the W, traces of a third togher (KD012-014002-) were found running parallel to the E again. Compiled by: Gearóid Conroy Date of upload: 10 June 2011.

KD012-014002- : Road - class 1 togher : LULLYMORE EAST

Description: Three closely associated toghers (KD012-014—, KD012-014001- and KD012-014002-) running parallel to one another were surveyed: **KD012-014002-:** This monument was sighted at two locations running parallel with and immediately E of another togher (KD012-014001-). It was composed of a damaged and fragmentary, longitudinal oak plank and two narrow, squared roundwoods. The monument was not dated. The remains of a second togher (KD012-014001-) were found running parallel, immediately to the W, as well as traces of a third togher (KD012-014—), running parallel to the W again. Compiled by: Gearóid Conroy. Date of upload: 10 June 2011.

13.4.1.2 Road – Gravel/stone trackways

Three gravel or stone trackways (KD012-003001-, KD012-015— and KD012-016—) are located within the Application Site (Figure 13-4, Figure 13-5 and Figure 13-6). These monuments consist of a roadway in a peatland context constructed wholly or substantially of gravel (including sand and clay), cobbles or stone slabs, or a combination of these. They predominately date to the medieval (5th-16th centuries AD) and later periods. As mentioned above, one of the gravel/stone trackways (KD012-003001-) is located towards the north-east side of the site and also converges on Derrybrennan townland. KD012-015— is located further to the south in Barnaran Bog, while the third gravel/stone trackway (KD012-016—) is located to the north in Killina Bog. The trackway (KD012-003001-) converging on Derrybrennan townland was one of three trackways investigated by Rynne in 1964-5 on behalf of the NMI after their

discovery was reported by BnM. The monument descriptions for the remaining two gravel/stone trackways does not make note of when these monuments were first detected, however, they are not recorded as being found during the 2004 Peatland Survey (Whitaker, 2004).

The monuments are described on the HEV as follows:

KD012-003001- : Road - gravel/stone trackway - peatland : DERRYBRENNAN,BALLYBRACK (Kilpatrick ED)

Description: One of three toghers (see also KD012-002001- and KD012-004001-) converging on Derrybrennan townland, a small 'island' of high ground in the expanse of bog to the N of Lullymore, which were investigated by Rynne (1964-5, 35, 38-40) on behalf of the NMI after their discovery was reported by Bord na Móna. It ran between higher ground in Ballybrack townland to the N and Derrybrennan townland to the S (est. L c. 1400m), and was known locally as 'The Dane's Road'. Rynne could only examine a short portion of the roadway and found that it was constructed of gravel and marl (With 3m; T 0.2-0.25m) laid down at depth of 0.5m below the surface of the uncut but shrunken bog surface. On the surface of the bog the line of the buried road was indicated running NE-SW by 'the more luxuriant growth of heath above it'. Compiled by: Gearóid Conroy. Date of upload: 10 June 2011.

KD012-015— : Road - gravel/stone trackway - peatland : LULLYMORE EAST

Description: The site (L 490m; With 3.5m; D 0.4m) lies approximately 0.1-0.3m below the field surface and is composed of a thick layer of gravel and pebbles (max. T 0.4m). No wood was apparent. Compiled by: Gearóid Conroy. Date of upload: 10 June 2011.

13.4.1.3 Structures - Peatland

One monument of this type is located within the Application Site (KD012-018—) and is situated in Lodge Bog towards the south-east side of the site. It was detected during the 2004 Peatland Survey carried out by ADS Ltd. These monuments comprise wood found in peat, which has been deliberately deposited or processed and can vary from single pieces to deposits without a clear form or orientation, but which are indicative of an archaeological structure. They may be of any date from the Neolithic (c. 4000-2400 BC) to the medieval period (5th-16th centuries AD).

It is described on the HEV as follows:

KD012-018— : Structure - peatland : DRUMSRU (Kilmeage North ED)

Description: A single piece worked brushwood of willow/poplar (L 0.61m; diam. 0.31m) was exposed on the bog surface. It bore a single chisel point and was dated AD1430-1650. Compiled by: Gearóid Conroy. Date of upload: 10 June 2011.

13.4.1.4 Platform – Peatland

One platform (KD012-019—) is located within the Application Site and is situated in Lodge Bog to the north-west of KD012-018—. It was also detected during the 2004 Peatland Survey. These monuments comprise a non-linear artificially raised area, usually of wood, with or without a clear shape found in a peatland context. Although platforms can vary in size, the length rarely exceeds the width. They may date to any period from prehistory to the early medieval period (5th-12th centuries AD).

The monument is described on the HEV as follows:

KD012-019— : Platform - peatland : DRUMSRU (Kilmeage North ED)

Description: Three roundwoods were exposed in a drain face, all with bark intact (min. With 2.46m; D 0.10m) and comprised one piece orientated NE-SW which was supported at each end by the other two pieces which were orientated NW-SE. Compiled by: Gearóid Conroy. Date of upload: 10 June 2011.

Table 13-4: Recorded monuments located within the Application Site Boundary.

SMR NO.	ITM E	ITM N	CLASS	TOWNLAND
KD012-002001-	669905	728698	Road - class 1 togher	DERRYBRENNAN,TICKNEVIN
KD012-003001-	670726	728221	Road - gravel/stone trackway - peatland	DERRYBRENNAN,BALLYBRACK (Kilpatrick ED)
KD012-004001-	670085	727258	Road - class 1 togher	LULLYMORE WEST,DERRYBRENNAN
KD012-014-—	669601	724602	Road - class 1 togher	LULLYBEG,LULLYMORE EAST
KD012-014001-	669818	724783	Road - class 1 togher	LULLYMORE EAST
KD012-014002-	669512	724520	Road - class 1 togher	LULLYMORE EAST
KD012-015-—	670690	724604	Road - gravel/stone trackway - peatland	LULLYMORE EAST
KD012-016-—	670900	726428	Road - gravel/stone trackway - peatland	LULLYMORE WEST
KD012-018-—	672119	724322	Structure - peatland	DRUMSRU (Kilmeage North ED)
KD012-019-—	671539	724561	Platform - peatland	DRUMSRU (Kilmeage North ED)



Figure 13-3: Overview of recorded monuments located within the Application Site Boundary.



Figure 13-4: Detail of recorded monuments located within the Application Site Boundary.



Figure 13-5: Recorded monuments located towards the NE side of the Application Site and their associated Zones of Notification.



Figure 13-6: Recorded monuments further to the south in Barnaran Bog.

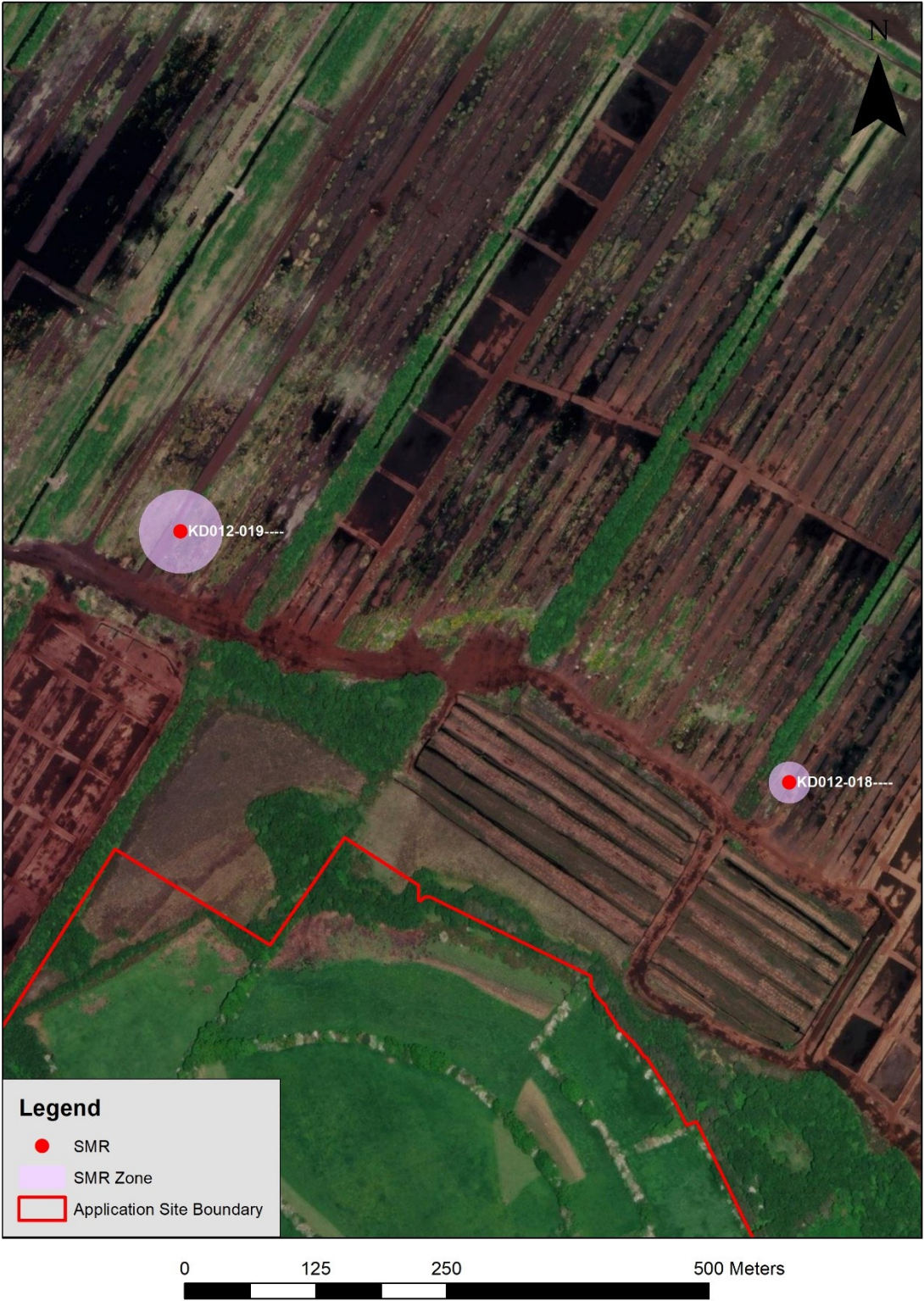


Figure 13-7: Recorded monuments further to the east in Lodge Bog and associated Zones of Notification.

13.4.2 Archaeological Investigations

The Application Site comprises 14. No. bogs located on the Offaly-Kildare County boundary. The bogs include: Ticknevin, Glashabaun North, Glashabaun South, Codd 1, Codd 2, Ballydermot North, Ballydermot South, Blackriver, Lullymore, Lullybeg, Barnaran, Killina, Derrybrennan and Lodge which form part of the Allen Group of Bogs. A number of archaeological surveys and excavations were previously carried out within those townlands during the lifetime of peat extraction and ancillary activities within same by the Applicant. A summary of the available results of such surveys and/or any reassessment surveys is discussed below and is also presented in Appendix 13-3.

13.4.2.1 Previous Archaeological Surveys

13.4.2.1.1 Archaeological Survey of Ireland Peatland Survey 1997-1998

The Allen Group of Bogs within which the Application Site is located were surveyed by the Irish Archaeological Wetland Unit (IAWU) in 1993-4 /1997-8 as part of the Archaeological Survey of Ireland Peatland Survey (unlicensed). The reports on the surveys undertaken within the Application site in 1997-8 were obtained from the Archive Unit of the National Monuments Service (15th July 2026) and provide a summary description of three toghers (KD-LYE 0001, KD-LYE 0002 and KD-LYT 0002) surveyed by the IAWU.

KD-LYE 0001

This comprises a togher located in Lullymore East townland. It is described as being of stone and timber construction and extended across the bog in a NE/SW direction for a length of over 600m from Lullymore Island to Lully Beg island (O'Carroll & Whitaker, 1998). It corresponds to recorded monument KD012-014— (See Section 13.4.1 above). At the time of the survey in 1998 the togher was in varying states of preservation but was 'slowly being destroyed through active milling'. The survey report notes that it was known of locally and was referred to as a 'Danes Road'.

Subsequent excavation of a portion of this togher was carried out as mitigation in 2007 (See Section 13.4.2.2 below).

KD-LYE 0002

This comprises a gravel togher which was briefly surveyed in 1998 on the same day as KD-LYE 0001. It was noted as being located in a raised bog used for private peat cutting and was reputed to extend from the ecclesiastical site on Lullymore Island to the townland of Drumsru. An unconfirmed report of the finding of a bronze spearhead adjacent to the togher is also referred to in the survey report. the togher is described as being visible in the drain faces 0.1m-0.3m below the field surface and measuring 2m-3.5m in width. It corresponds the recorded monument KD012-015— (See Section 13.4.1 above).

KD-LYT 0002

This togher was surveyed in 1997 and is described as being located very close to the northern side of the bog island at Lullymore townland. The survey notes that it was located on the surface of a BnM bog which was undergoing active milling and was in a 'disturbed state'. It was constructed of sandstone flags and a single split oak timber was found in association with the flags. It corresponds to recorded monument KD012-016— (See Section 13.4.1 above).

13.4.2.1.2 Peatland Survey 2004

A peatland survey of the bogs within the Application Site was subsequently carried out in 2004 by ADS Ltd (Whitaker, 2004) as part of the Archaeological Survey of Ireland Peatland Survey (Licence No. 04E0997, 04E0998, 04E0999, 04E1000, 04E1001, 04E1002, 04E1003, 04E1004, 04E1005, 04E1006, 04E1007, 04E1008, 04E1009 and 04E1010). During that survey 83 sightings of archaeological material were made the majority of which (55) comprised occurrences of single worked brushwood or roundwoods. A summary of the findings made during that survey is as follows:

‘A total of 83 sites were recorded during the course of the field survey. The majority (55) of these sites were occurrences of single worked brushwood or roundwoods. It was thought at the time that many of there were modern in origin. The reason for this assumption was two-fold. Many of the pieces were very well preserved and from talking to BnM about disturbances evident in the peat from earlier methods of peat production in the area... it appeared likely that they could have been relatively modern. In some case BnM noted that they themselves had used small trackway like constructions to facilitate the removal of machinery from the bog that had become stuck. An example of this are sites KD-BRN007 and 008 in Barnaran Bog which were dated to within the past fifty years.

Twenty route dating samples were sent for analysis to Beta Analytic, Florida. Of these, fifteen were dated to within the last fifty years.....Three sites were dated to the Early Christian Period. A disturbed plank trackway in Barnaran Bog (KD-BRN003), the gravel road from Lullymore East Bog (KD-LYE001a-u) and the remains of a possible plank trackway alongside the gravel road also from Lullymore East Bog (KD-LYE002). Four sites were dated to the Late Medieval Period from Ballydermot North Bog (OF-BTN0044 & 69), Barnaran Bog (KD-BRN005) and Lodge Bog (KD-LGE002).’

The survey report conclusion notes the relatively low number of archaeological sites recorded during the 2004 and cite the used of sod peat (Bagger) production as one possible reason. It also notes the following in terms of the size of the bog and low number of archaeological sitings therein:

‘Another reason for the low incidence of archaeological sites may also be due to the sheer size of the bog areas involved. Previous surveys have demonstrated that archaeological sites tend to concentrate in narrow stretches of bog that are bordered with areas of more fertile dryland (IAWU, various). Sites are also known to concentrate in relatively narrow stretches of bog, close to dryland areas containing monuments...overlooking the bogs. The main group of bogs located around Lullymore island and westwards towards Clonbulloge...are all one expanse of raised bog with few potential crossing points.’

13.4.2.2 Archaeological Excavation

Following the 2004 Peatland Survey (Whitaker, 2004) one excavation of a gravel/stone trackway at Lullymore East townland in Barnaran Bog was carried out (Licence No. 07E0630) (Corcoran, 2008). The trackway is located within the Application Site and corresponds to recorded monument KD012-014— : Road - class 1 togher. The excavation report was obtained from the National Monuments Service Archive Unit (14th July 2026). A summary of the excavation, which comprised one cutting, as provided in the report is presented below and a summary is also provided on the Excavations Database (<https://excavations.ie/report/2007/Kildare/0017802/>) (See Section 13.4.2.2.1 below).

The togher was identified during the 2004 Peatland Survey, being recorded in drain faces at 22 locations at depths of between 0.1m and 0.9m below the surface of the bog. A single cutting was excavated over the trackway (located at siting KD-LYE 001m) at a drain edge where c. 0.1m of peat was present over the togher. While the purpose of the investigation was to excavate gravel trackway KD-LYE 001, a second trackway KD-LYE 002 was also exposed in the cutting.

The main trackway (KD-LYE 001) was constructed of gravel and wood, the latter being very poorly preserved and comprising transversely laid roundwoods. The gravel element of the trackway comprised small to medium sized stones and pebbles and varied in thickness from 0.2m-0.4m, being thinner at the edges. The togher measured a maximum of 4m in width.

During the 2004 survey the trackway was dated to cal. AD380-660. The excavation report notes that the togher spans the narrow stretch of bog between Lullybeg and Lullymore island and suggests that the presence of the trackway relates to the ecclesiastical site (KD012-006—) located on Lullymore island.

13.4.2.2.1 **Excavations Database**

A number of entries were returned from the Excavations Database (<https://excavations.ie/reports/>) for excavations carried out at or adjacent to the Application Site. The entries returned are from a townland search of the database and while the majority pertain to excavations or surveys carried out within the Application Site some may be located outside same. The majority of the entries refer to the survey carried out in 2004 in the many bogs within the Application Site. As mentioned above, 2007:827 refers to the excavation carried out in 2007 following the 2004 survey. The excavation summaries are presented in Appendix 13-3¹.

13.4.2.2.2 **Archaeological Monitoring of Site Investigations**

Archaeological monitoring of the excavation of geotechnical site investigation trial pits excavated as part of site investigations for the proposed Ballydermot Wind Farm within the Application Site was carried out by Tobar Archaeological Services under licence from the National Monuments Service. The monitoring was undertaken in two phases and supervised by Tobar Archaeological Services in 2021 (Licence No. 21E0221). The initial phase of work comprised the excavation of SI trial pits at a potential substation location, while the second main phase of work comprised the excavation of trial pits at each of the 47 proposed turbine locations, in addition to 11 pits at potential borrow pit locations in a greenfield area to the west of the proposed wind farm site. Phase 1 of the investigations was carried out in May 2021, while Phase 2 took place in November 2021 over a period of two weeks. The excavation of all trial pits was archaeologically monitored, and no potential archaeological finds, features or deposits were uncovered (Carroll, 2023). Refer to Figure 13-2 for all trial pit locations.

13.4.3 **Potential Subsurface Archaeology**

The archaeological heritage of the Application Site is evidenced by the recorded monuments therein and the large number of archaeological objects recovered from the bogs within and surrounding the Application Site over its lifetime as an industrial peat extraction site (see Section 13.4.4 below). It is noted, however, that the number of recorded monuments within the Application Site is low. This was also noted in the 2004 Peatland Survey carried out in the many bogs therein. The primary reason suggested for the low occurrence of archaeological sites was attributed to the vast expanse of the bog and the lack of adjacent dryland.

¹ The text presented in Appendix 13-3 is reproduced as it appears on the Excavations Database (www.excavations.ie). Bog names may differ from those used in this rELAR due to historical or localised naming conventions for the bogs within the Application Site.

The survey report states the following in relation to same ‘*Previous surveys have demonstrated that archaeological sites tend to concentrate in narrow stretches of bog that are bordered with areas of more fertile dryland (LAWU, various).*’

Notwithstanding this, bogs are renowned for their archaeological potential and the preservation of organic structures and objects. Peatlands provide anaerobic conditions which allows the preservation of organic materials such as wood, leather and human remains and has led to the survival and discovery of many such items in Irelands bogs. Furthermore, the presence of a large number of stray finds from the area also suggests that there is still potential for the presence of additional archaeological finds, features and structures within the peat, particularly where deep peat remains in situ.

Effects and control/ mitigation measures are addressed in Section 13.5.

13.4.4 Topographical Files – National Museum of Ireland

The Topographical Files of the National Museum of Ireland were consulted by Tobar Archaeological Services in 2021. The finds from the townlands within the Application Site are presented below according to townland.

Table 13-5: NMI Topographical files information for townlands within the Application Site.

Townland	County	Description
ALLENWOOD SOUTH	Kildare	1987:71 Cast Copper Alloy cauldron, Findplace: bog. 1987:72 Leather Shoe sole, Findplace Bog 1.25m deep
BALLYBRACK	Kildare	1937:2421 Stone axehead, Findplace unknown. 1937:2438 Stone rubber, Findplace unknown. 1937:2439 Stone rubber, Findplace unknown. 1937:2440 Stone Burnisher, Findplace unknown. 1937:2441 Stone Rubber, Findplace unknown. 1937:2442 Chert blade, Findplace unknown. 1937:2443 Hone stone, Findplace unknown. 1937:2444 Hone stone, Findplace unknown.
BALLYKILLEEN	Offaly	1933:2757 Tracked stone 1933:2758 Stone tool 1933:2759 Hammerstone 1998:68 Bone pin 1998:69 Iron Object 2002E941:12 Wood stake 2002E941:13 Wood object 2002E941:14 Horn fragment 2002E941:15 Horn fragment

Townland	County	Description
		2002E941:16 Horn fragment 2002E941:17 Horn fragment 2002E941:4 Wood object 2002E941:5 Wood object 2002E941:8 Wood rope
BALLYSOOGHAN NORTH	Kildare	1989:14 Leather Shoe, Findplace: bog
CLONBROWN	Offaly	1945:79 Leather shoe, Findplace: Bog at Clonbrown
DERRIES	Kildare	1000:564 Stone tool, Findplace: The Derries. 1000:565 Quartz pebble, Findplace: The Derries. 1989:17 Wood tool, Findplace: The Derries.
KILCUMBER	Offaly	1947:832 Leather Sheath, Findplace Bog at Kilcumber 2013:435: Stone Sheela-na-gig, Findplace Figile river at Kilcumber bridge 2013:436 Architectural fragment - ogee-headed twin- light window moulding, Findplace Figile river at Kilcumber bridge
KILLINAGH UPPER	Kildare	1972:355:3 Iron horseshoe, Findplace bog.
KILLINTHOMAS	Kildare	1989:15 Stone axehead
LULLYMORE EAST	Kildare	1989:16 Stone Quern, findplace Lodge bog 1009C2:11 Bronze coin, findplace ecclesiastical enclosure 2009C2:12 Bronze sheeting
RATHANGAN	Kildare	1877:58 Bronze dirk 1884:337 Stone axehead 2001:1 stone axehead
SHEAN	Offaly	1989:50 leather shoe, findplace bog.
TICKNEVIN	Kildare	1937:2423 Stone axehead 1987:140 leather shoe, Findplace bog. 2010C2:703 stone axehead 2017:102 wood vessel 2017:95 wood vessel

Townland	County	Description
		2017:96 wood vessel 2017:97 wool ball 2017:98 wool ball X4060 amber bead, Findplace: bog in Punchestown

13.4.5 Townlands and Administrative Boundaries

Townlands and administrative boundaries may indicate the presence of archaeological features within a development site. Administrative counties are subdivisions of pre-established counties which were formed for administrative purposes in the 19th and 20th centuries. Baronies are administrative units larger than civil parishes and originally established as the primary subdivision of counties by the British administration in Ireland. Irish baronies which were formed at the time of the Norman conquest were usually named either after Irish territories, or from places which had been of importance in pre-Norman times. Irish baronies came into existence at different periods. The division of Ireland into counties and baronies was a process which continued down to the reign of James I. The original baronies in Ireland were the domains of the Norman barons; in the final stage of development, they were divisions of counties created merely for greater convenience of administration. The word barony is of feudal origin, and was applied to a tenure of a baron, that is, of one who held his land by military service, either directly from the king, or from a superior feudal lord who exercised royal privileges. The origin of the Irish barony (a division of land corresponding to the English hundred) is to be found in the grants of lands which were made to the barons of Leinster and the barons of Meath (Liam Price, 'Ráith Oinn', Éigse VII, lch. 186-7). Civil parishes are administrative units larger than townlands and based on medieval ecclesiastical parishes. Civil parishes, modern Catholic parishes and Church of Ireland parishes may differ in extent and in nomenclature. Counties are administrative units larger than baronies and originally established by the British administration in Ireland between the twelfth and the seventeenth centuries. Some of these were subsequently subdivided into smaller administrative county units.

Townlands are the smallest land units which were determined and established in the Irish administrative system in the first half of the nineteenth century. Many of the townlands were in existence prior to that. Townland names are a valuable source of information, not only on the topography, land ownership and land use within the landscape, but also on its history, archaeological monuments and folklore. Logainm.ie was utilised to ascertain the origin of the townland names.

The townlands within the Application Site and their meanings, where provided, are listed in Table 13-6. Townland meanings are from the Placenames Database of Ireland (<https://www.logainm.ie/>). Many of the placenames refer to topographical features or land use/cover such as woods, hills, meadows or marshes.

Table 13-6: Townlands within the Application Site and their meanings. (Source: <https://www.logainm.ie/>).

Townland Name	Irish	Meaning
BALLYDERMOT	Baile Mhic Dhiarmada	Dermot's town
TICKNEVIN	Tigh Mhic Neamhain	Knave's house
KILPATRICK	Cill Phádraig	Patrick's church

Townland Name	Irish	Meaning
CLONROOSK BIG	Cluain Rúisc Mór	Big meadow, pasture
BALLINURE	Bealach Átha an Iúir	town of the yew
CLONMEL	Cluain Meala	meadow of honey
BALLYSOOGHAN NORTH	Baile Uí Shubhacháin Thuaidh	O'Sooghan's (now Jolly's) town
CLONBROWN	Cluain Brón	Meadow of –
CAPPANARGID	Ceapach an Airgid	slot /plot of the silver
KILLYGUIRE	Coill Mhig Uidhir	the dog's wood
BARNARAN	Bearna Raithin	gap of (the) bracken
CLONCANON	Cluain Canann	meadow of the whitefaced cow
SHEAN	An Sián	a fairy mount or mound
LULLYMORE EAST	An Loilíoch Mhór Thoir	Great milch cow
CUSHALING	Cois Loinge	along the river/ pond
LULLYBEG	An Loilíoch Bheag	a milch cow
KILLINAGH UPPER	Coill an Fheá Uachtarach	-
COOLYGAGAN	Cúil an Ghéagáin	Mageoghegan's corner
LULLYMORE WEST	An Loilíoch Mhór Thiar	Great milch cow
DRUMSRU	Droim Sruith	ridge of the stream
ALLENWOOD SOUTH	Fíodh Alúine Theas	-
KILLINAGH LOWER	Coill an Fheá Íochtarach	wood of the ford
BALLYBRACK	An Baile Breac	speckled town
CLONKEEN	Cluain Caoin	beautiful meadow
CLONROOSK LITTLE	Cluain Rúisc Beag	lawn of the morass
DERRYBRENNAN	Doire Bhraonáin	O'Brennan's oak wood
CUSHALING	Cois Loinge	along the river or pond
RATHANGAN	Ráth Iomgháin	Fort of –
KILLINTHOMAS	Coillín Tomás	Thomas's little wood
KILCUMBER	Coill Chomair	wood of (the) confluence

Townland Name	Irish	Meaning
DERRIES	Na Doirí	the (oak-)wood of the badger
BALLYKILLEEN	Baile an Chillín	Town or townland of the little church
CODD	Cod	Shares or allotments
CLONCANT	Cluain Ciontach	meadow of the controversy (sic)

Numerous townland boundaries are located within the Application Site. In some instances townland boundaries may take the form of an upstanding boundary such as an earth and stone bank or a naturally occurring division in the landscape such as a river or stream. From a review of the available historic mapping it is clear that at least some of the townland boundaries within the Application Site comprised upstanding boundaries as they are indicated as such on the first, second and third edition OS maps. These boundaries where they extend through areas which underwent peat extraction and ancillary works are not visible on aerial imagery and would have been removed as a result of those works.

13.4.6 Cartographic Evidence and Items of Local Cultural Heritage Merit

13.4.6.1 Down Survey Barony Maps

The Down Survey maps of Ireland are available to view at www.downsurvey.tcd.ie and were consulted as part of this assessment (<https://downsurvey.tchpc.tcd.ie/>, accessed 12th June 2026). Following Cromwell's invasion of Ireland in the mid-17th century, the country had been devastated, the population decimated, the economic infrastructure destroyed. The English had effectively created a blank slate in Ireland onto which they now sought to project a new plantation society. Following this a Civil Survey was taken from 1654-6 in order to value the lands in Leinster, Munster, Ulster and Connaught. The Civil Survey is a collation of landowner records, standardised to townland level and was considered by many of the new owners to be inaccurate. The Down Survey, so called because a chain was laid down and a scale made, was therefore taken from 1656-8 under the direction of William Petty. The resulting maps, made at a scale of 40 perches to one inch (the modern equivalent of 1:50,000), were the first systematic mapping of a large area on such a scale attempted anywhere. The primary purpose of these maps was to record the boundaries of each townland and to calculate their areas with great precision. The maps are also rich in other detail showing churches, roads, rivers, castles, houses and fortifications.

The Application Site is located in the baronies of Coolestown, Co. Offaly and the baronies of Carbury and Offaly East, Co. Kildare. No features of note are depicted on the Down Survey maps in those baronies in the area of the Application Site.

13.4.6.2 1st and 2nd Edition OS maps

The Ordnance Survey came to Ireland in 1824 in order to carry-out a precise admeasurement of the country's 60,000 or so townlands as a preliminary to the larger task of reforming Ireland's local taxation system. The townland boundaries were demarcated by a Boundary Commission, and the Ordnance Survey had the task of measuring them. In addition to boundaries the maps are truly topographical in content. Drawn at the large scale of six inches-to-one-mile (1:10,560) it was important to mark all buildings, roads, streams, placenames, etc., that were required for valuation purposes. Ultimately the maps were used as a basis for the rateable valuation of land and buildings in what became known as Griffith's Valuation. Working from north to south, the survey began in Antrim and Derry in 1829 and was completed in Kerry in 1842. It was published as thirty-two county maps between 1832 and 1846, the number of sheets per county varied from 153 for County Cork to 28 for Dublin, each of the 1,994 sheets in the series depicting an area of 21,000 by 32,000 feet on the ground. Each county was projected on a different central meridian and so the maps of adjacent counties do not fit neatly together at the edges. Map content stops at the county lines.

The First Edition

The early Ordnance Survey maps are an unrivalled source for the period immediately before the Great Irish Famine (1847-50) when the population was at the highest level ever recorded. The maps depict an open landscape in the majority of the Application Site (Figure 13-8 and Figure 13-9). Some areas of field division and enclosure with associated small settlements are also depicted. Once such settlement at Lullybeg townland is shown on all three editions of the OS map and is named 'Shanavoola'. Field survey carried out for the proposed Ballydermot Wind Farm did not detect any upstanding remains of the structures indicated at this location, however, much of this area was densely overgrown and largely inaccessible.

No evidence for any surviving remains of such small structures depicted elsewhere within the Application Site were noted during the walk-over survey.

The Second Edition

The second edition OS map depicts the Application Site in a similar manner to the first edition map, with large areas of open land (Figure 13-10, Figure 13-11, Figure 13-12, Figure 13-13, Figure 13-14, Figure 13-15, Figure 13-16 and Figure 13-17). The subdivision/enclosure of some areas close to the bog edges and associated small structures/settlements are also shown and the settlement 'Shanavoola' is still indicated and named (Figure 13-18).

The Third Edition

The third edition OS map depicts the Application Site in a similar manner to the previous OS editions.

Bog Commission Maps

The Bog Commission Maps comprise a collection of 56 maps of the bogs of Ireland created to accompany a series of parliamentary reports into improvements and drainage. From the 17th century there was pressure to develop bogs, seen as wastelands, for agriculture. In 1808, Sir Arthur Wellesley, the future Duke of Wellington, advocated the setting up of a commission to enquire into the possible utilisation of Irish bogs. The five members of the Commission were quickly appointed and began operations on the 19th September 1809 (<https://www.bordnamonalivinghistory.ie/> accessed 12th June 2026). The four reports set out, in detail, how 1,013,358 acres of bog could be drained, manured and

brought into production as agricultural land. The reports were gradually published from 1810 to 1814 and each report contains detailed maps which set out the proposed lines of drainage and the highest and lowest point of each bog. Richard Griffiths Bog Commission maps of 1810 were consulted as part of this assessment (<https://virtualtreasury.ie/>, accessed 12th June 2026) (Figure 13-19).

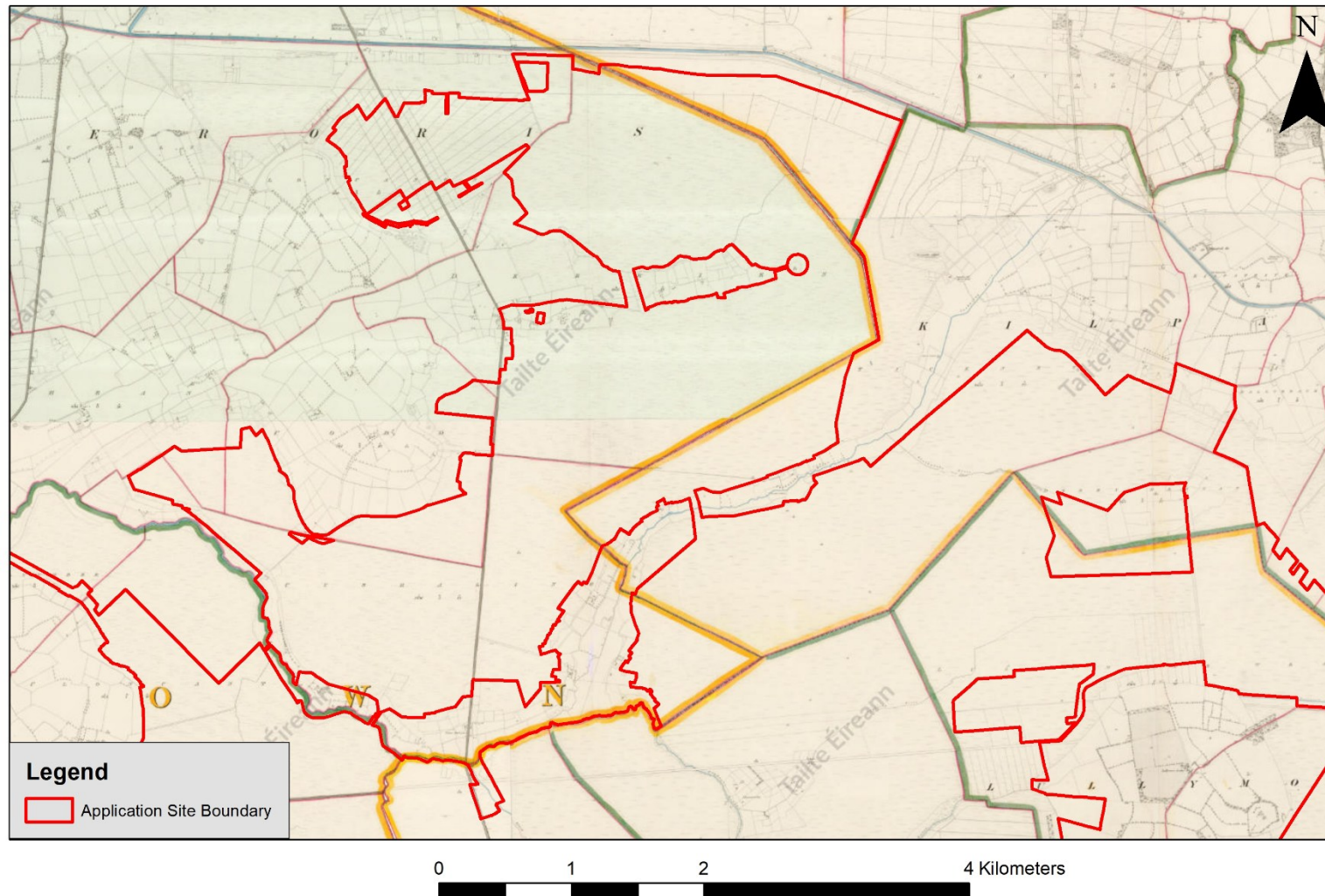


Figure 13-8: Northern portion of Application Site on first edition (1829-41) 6-inch OS background.

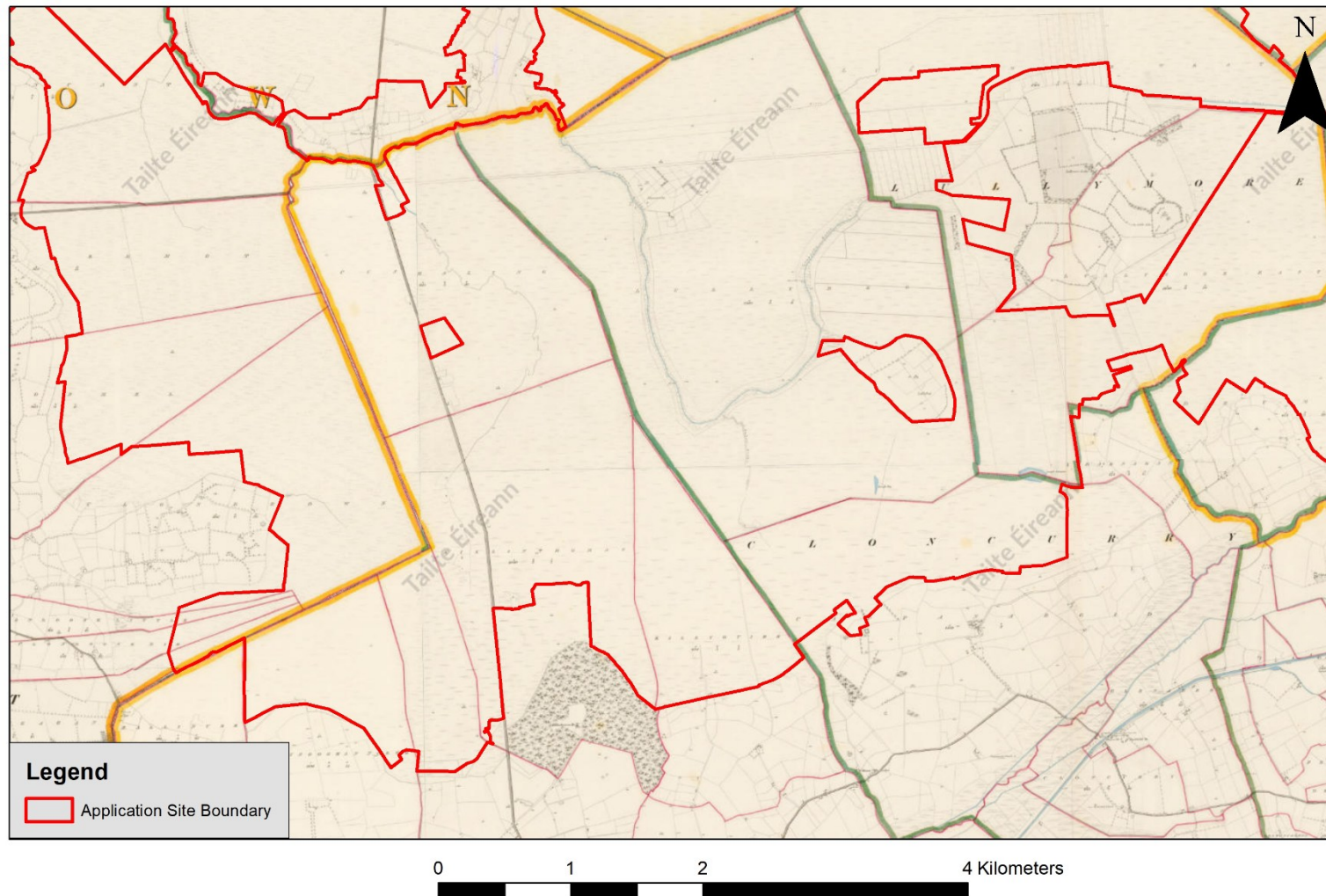


Figure 13-9: Southern portion of Application Site on first edition OS background.

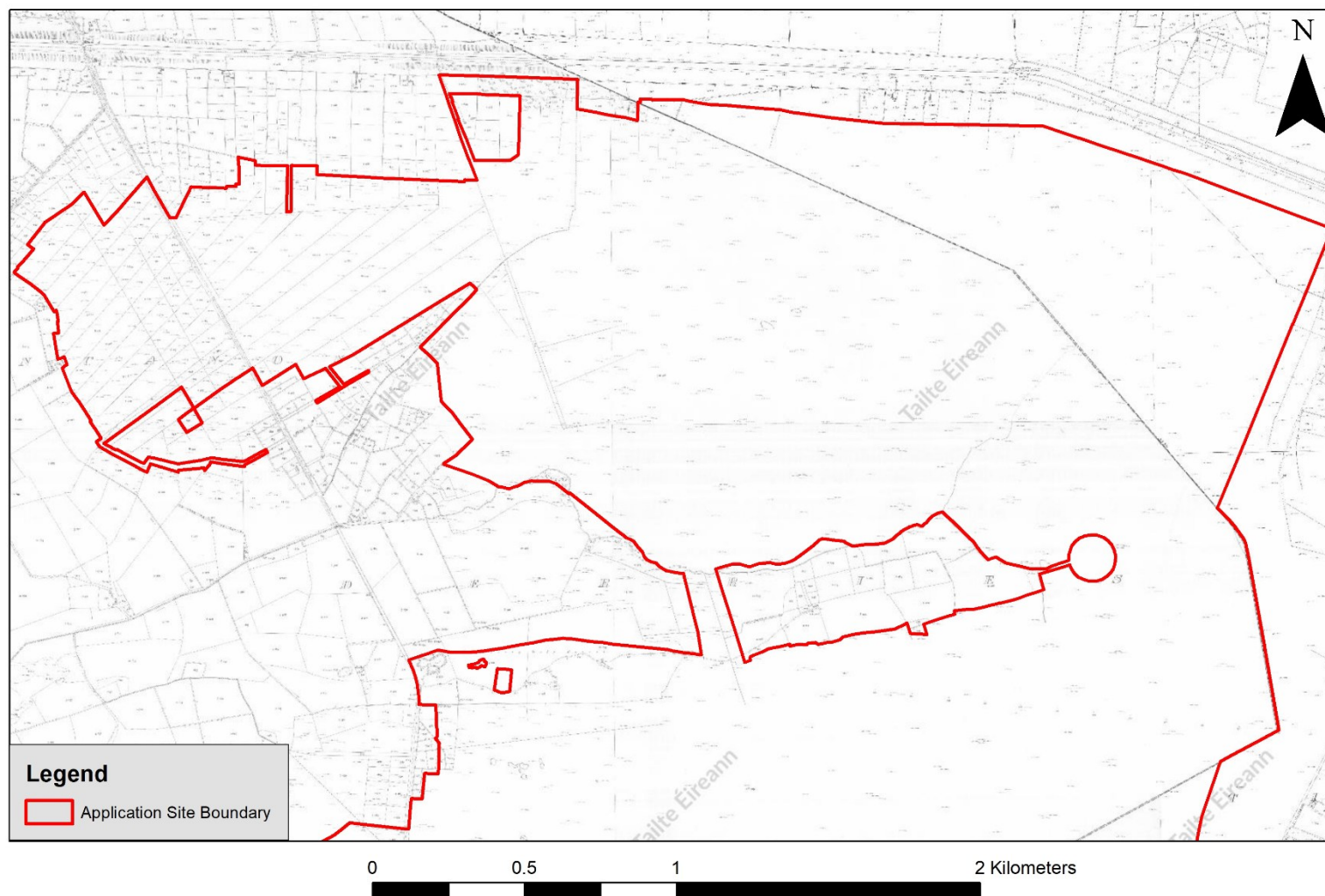


Figure 13-10: Northern portion of Application Site on second edition OS background.

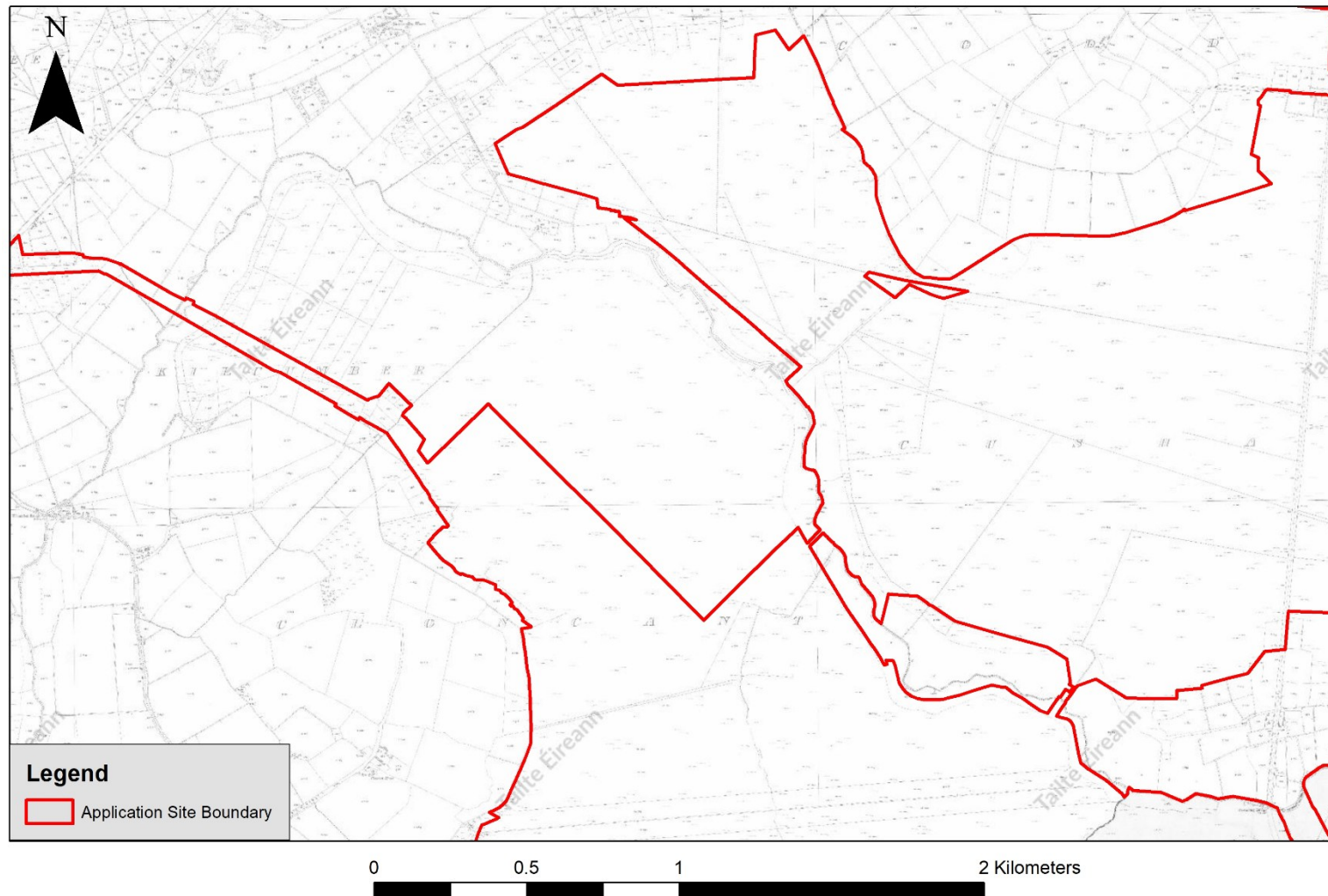


Figure 13-11: NW portion of Application Site on second edition OS background.

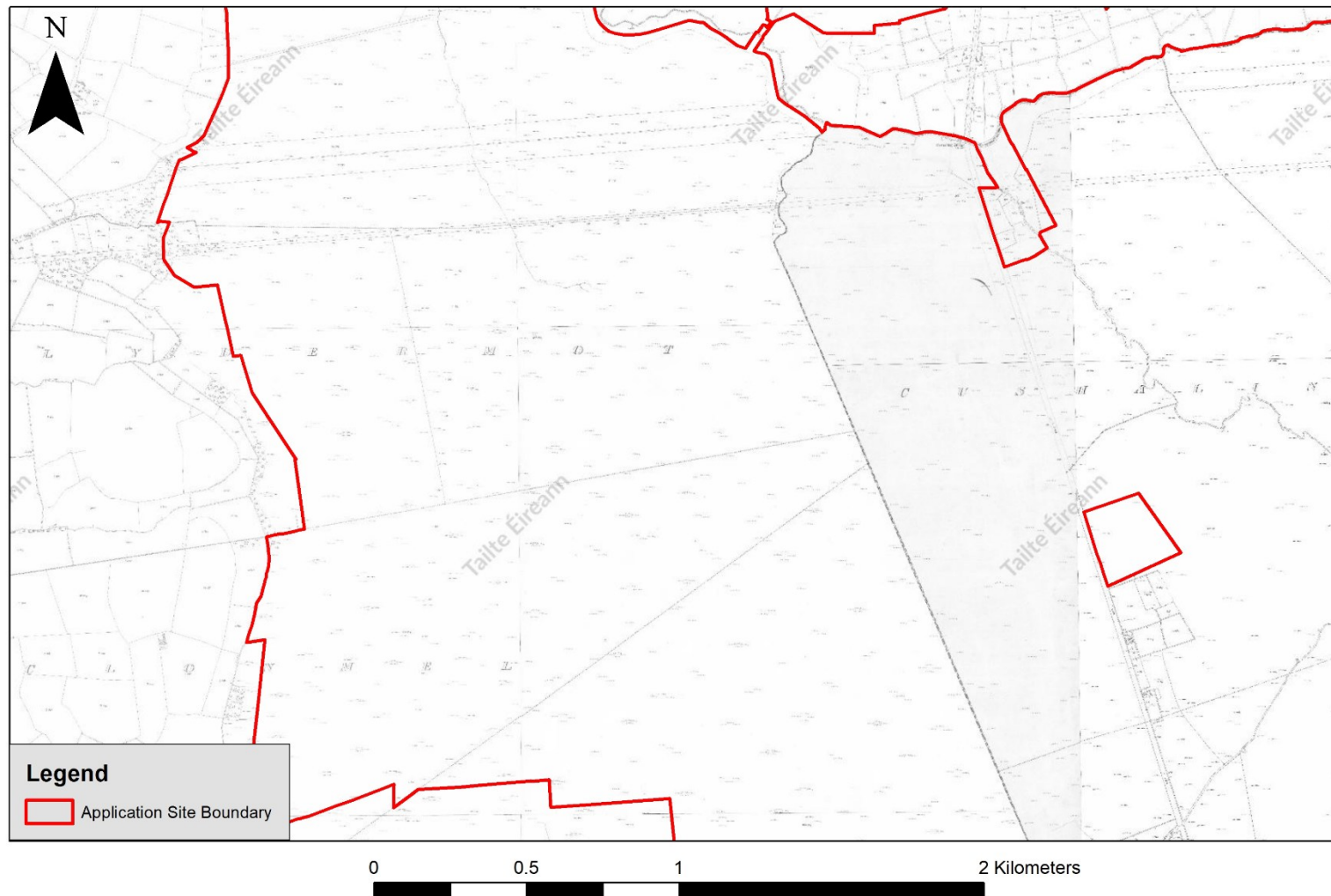


Figure 13-12: Central west portion of Application Site on second edition OS background.

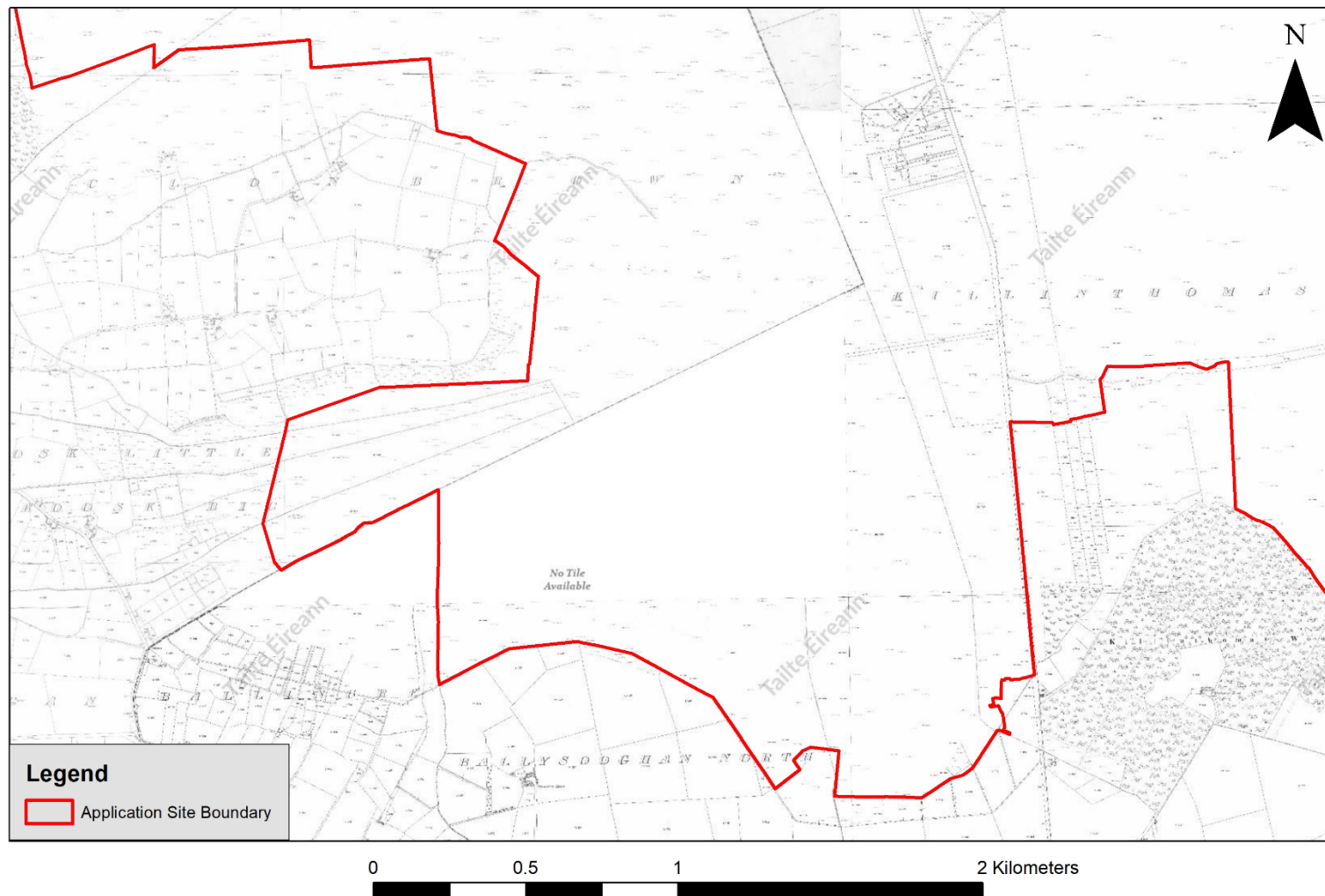


Figure 13-13: SW portion of Application Site on second edition OS background.

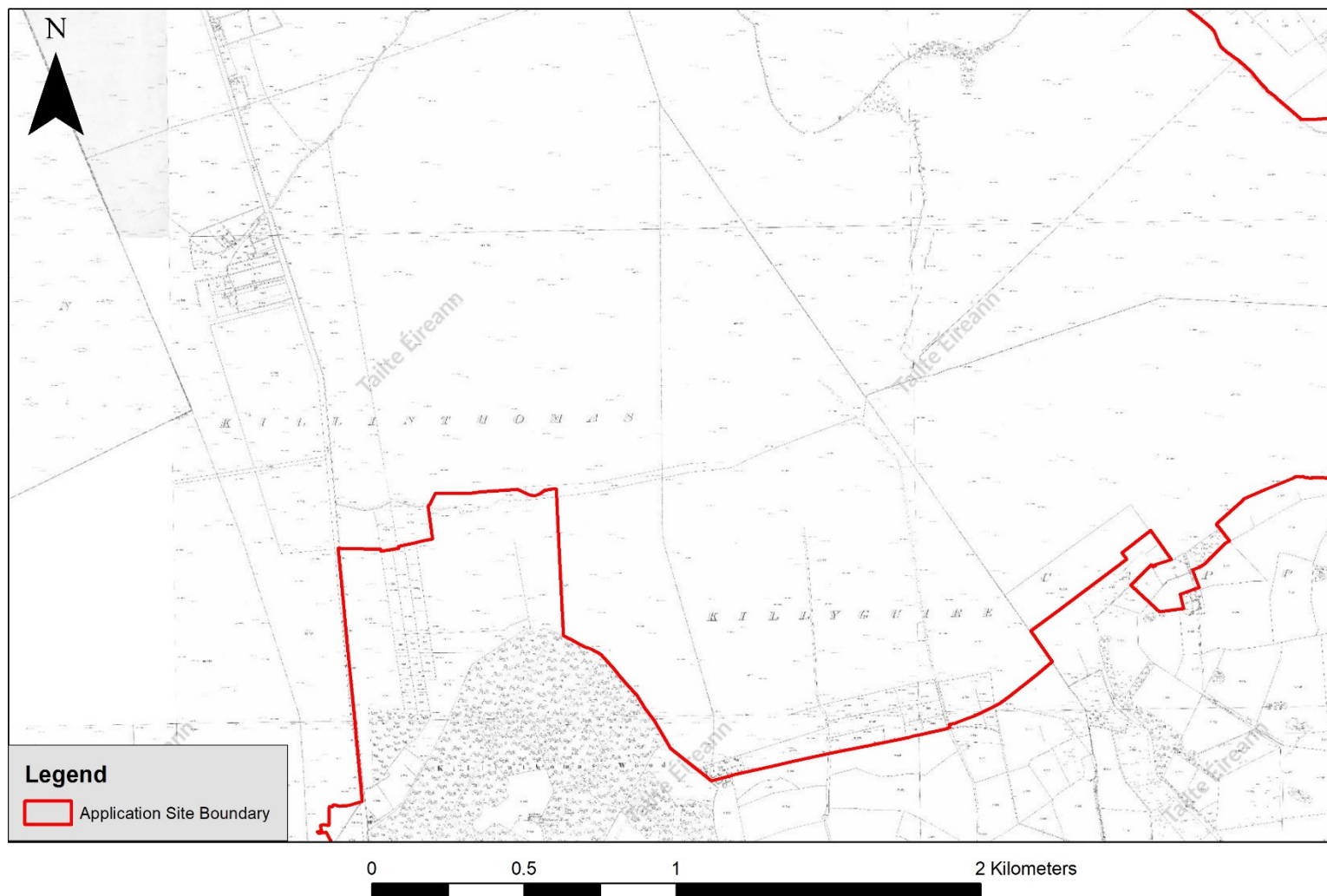


Figure 13-14: Southern portion of Application Site on second edition OS background.

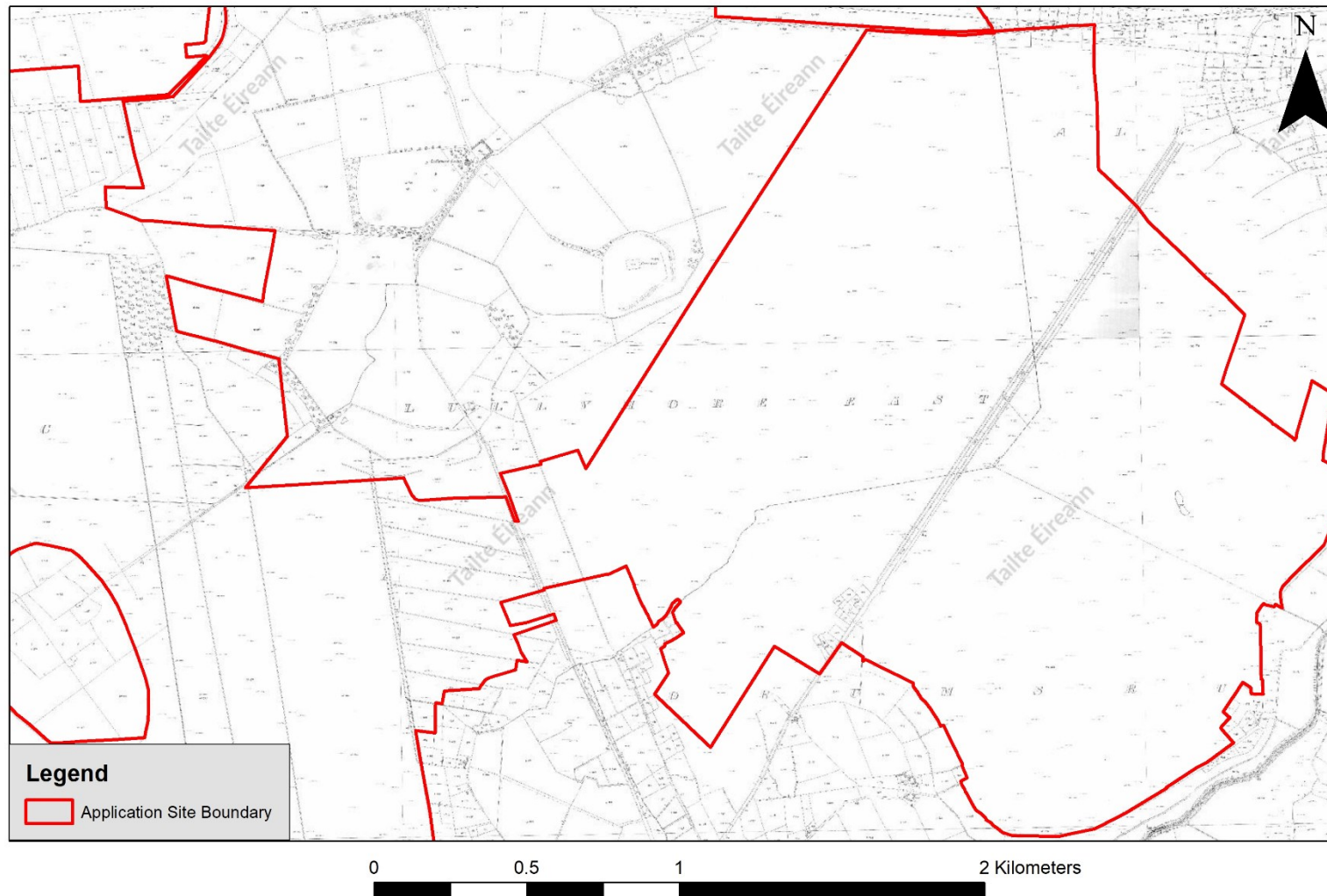


Figure 13-15: SE portion of Application Site on second edition OS background.

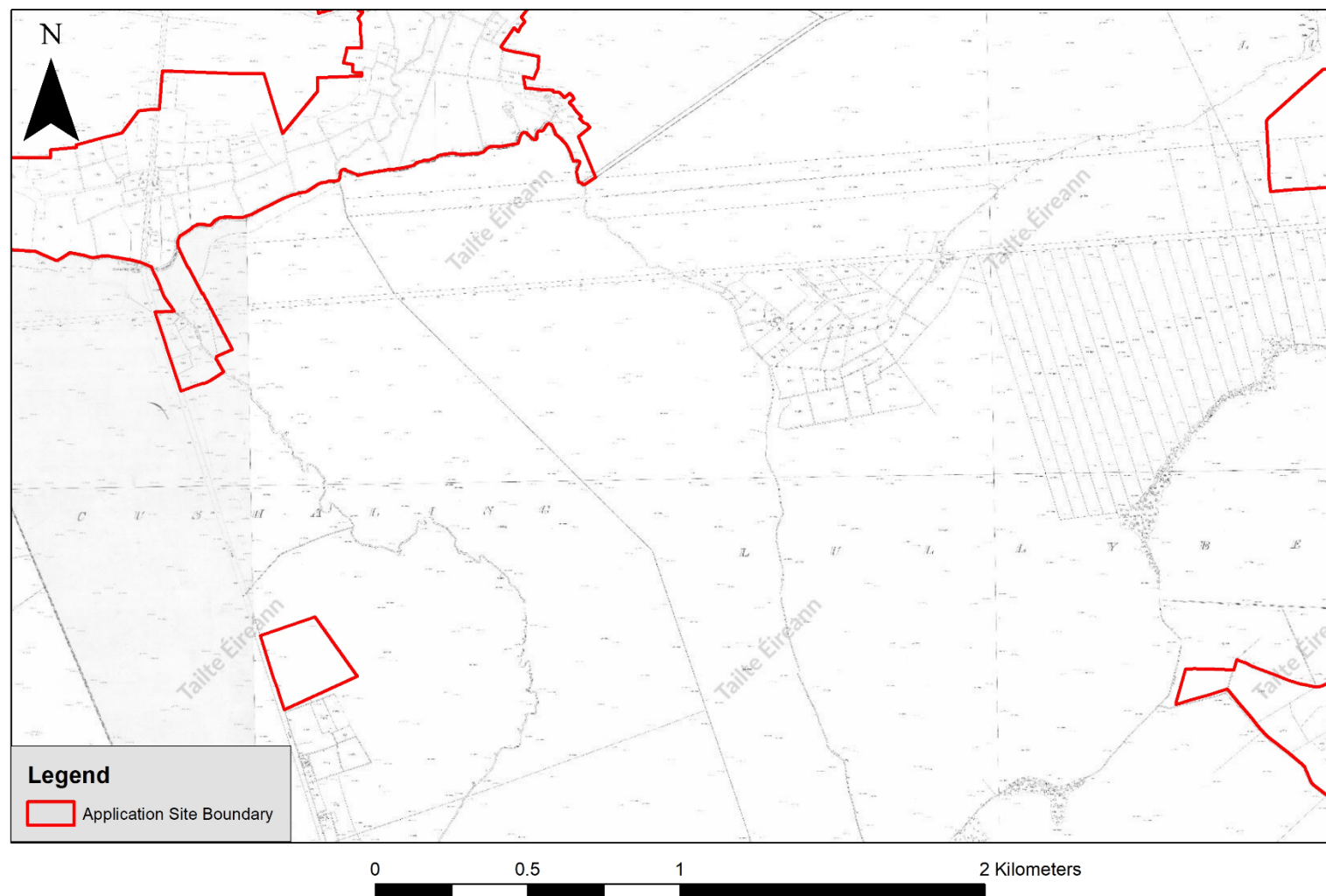


Figure 13-16: Central portion of Application Site on second edition OS background.

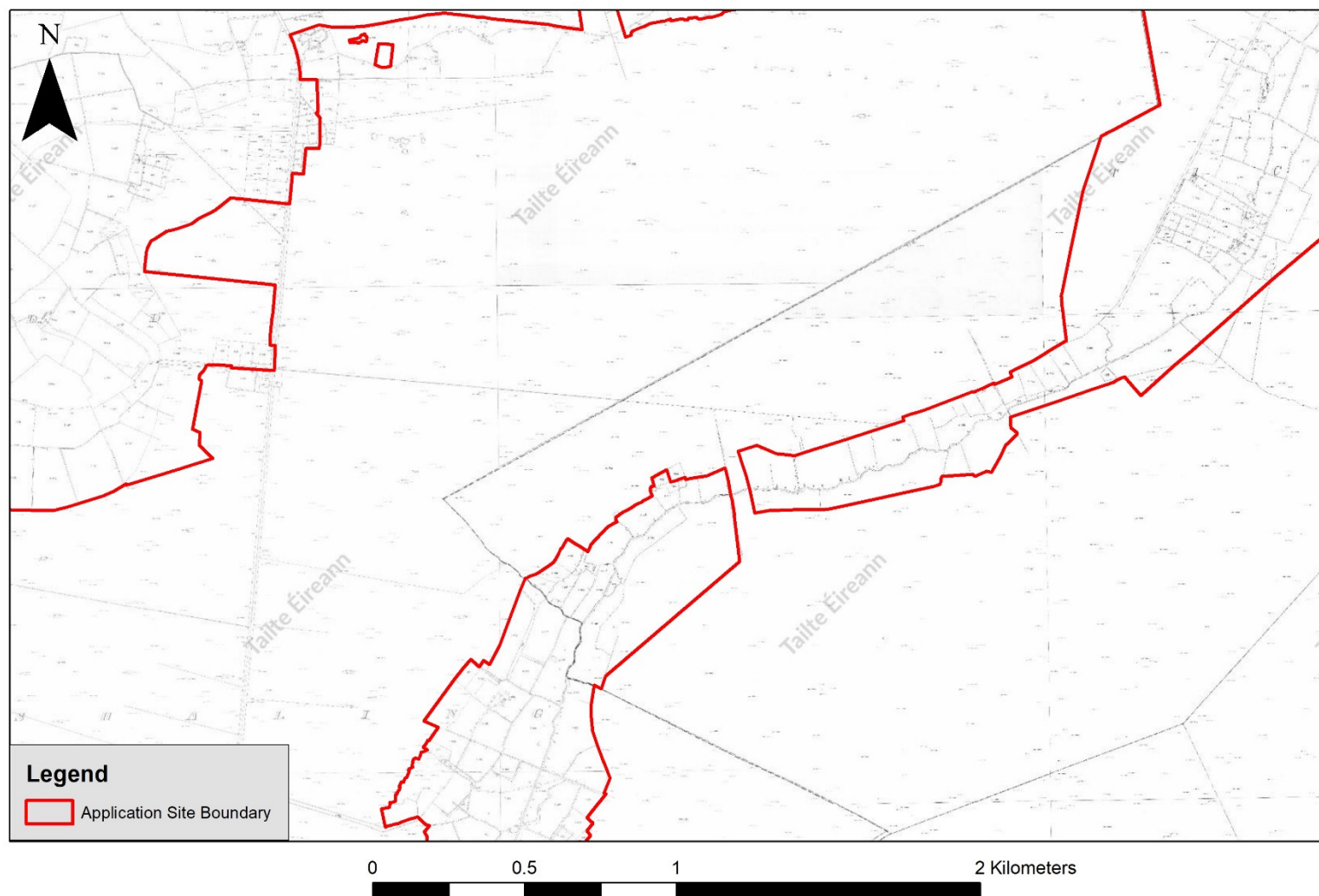


Figure 13-17: Portion of Application Site north of centre on second edition OS background.





13.4.7 Architectural Heritage

13.4.7.1 Protected Structures & the National Inventory of Architectural Heritage

No Protected Structures, structures or items listed in the NIAH or historic gardens are located within the Application Site.

13.5 Likely Significant Effects and Associated Control/Mitigation Measures

13.5.1 “Do Nothing” Scenario

As outlined in the EPA Guidelines (May 2022), the description of ‘Do-Nothing Effects’ relates to the environment as it would be in the future should the project not be carried out. Peat extraction was underway at the Application Site prior to the required date for the transposition of the EIA Directive in 1988. If peat extraction and related activities had ceased from 1988 onwards, then consequently there would have been no further peat extraction from the site and therefore no impact on Cultural Heritage.

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

For those lands which as of 1988 had been subject to the installation of drainage in preparation for peat extraction but not peat extraction itself, it is assumed in the ‘do-nothing’ scenario that drainage would have remained in situ. Maintenance works to keep established drainage channels clear would have ceased as of 1988 in the ‘do-nothing’ scenario. It is likely that these areas would have been subject to natural recolonisation of the bog surface. Minor third party turbary activities likely would have occurred along the intact bog edges as was common practise at sites such as the Application Site.

However, consideration must be given to the following:

- The legislative mandate given to BnM in the form of the Turf Development Act 1946, as amended) to acquire and develop peatlands; and,
- The uncertainty with respect to the planning status of the activity did not arise until 2020 and was not evident in 1988.

Therefore, this ‘Do-Nothing’ scenario was not the chosen option. Peat extraction and ancillary works have occurred at the Application Site from July 1988 onwards. A decision to cease peat extraction at the Application Site was taken in 2020 and the Application Site needs to be considered in the context of regularising (without prejudice) the planning status of the lands to facilitate future development (subject to planning consent as required). The Application Site has and will continue to revegetate, and there will be a change from areas of cutover peatland to revegetated, as described in Section 4.8 of Chapter 4. These are described in the individual chapters of the rEiAR.

In the event that Substitute Consent is not granted in effect, the “Do Nothing” scenario represents the current situation as at the date of the application for Substitute Consent. As part of BnM’s statutory obligations under IPC licence (Ref. P0503-01) requirements, a Cutaway Bog Decommissioning and Rehabilitation Plan will continue to be implemented for the Application Site separate to, and

independent of, the Substitute Consent application. The implementation of this plan is included in the impact assessment below.

13.5.2 Peat Extraction Phase: 1988-June 2020

13.5.2.1 Effect of Peat Extraction Phase – Indirect Effects on visual setting

Indirect effects, in terms of archaeology, architectural and cultural heritage are considered to be those effects which happen away from ‘the site’. This includes effects on visual setting of any cultural heritage asset in the wider landscape. Sub-surface works such as drainage of peat and excavation of peat is not considered to cause a negative effect on the setting of monuments or other Cultural Heritage assets which are located away from the Application Site. Peat extraction and ancillary activities within the Application Site are not visually intrusive in the wider landscape and therefore are not capable of affecting the setting of such sites which are located numerous kilometres from the working bogs. No indirect visual effects which would have occurred during past peat extraction and ancillary activities are therefore identified.

13.5.2.2 Effect of Peat Extraction Phase– Direct Effects

Direct effect refers to a ‘physical impact’ on a monument or site. In the past and up to the present day BnM has a statutory duty under the Turf Development Act 1998 (Section 56) to afford appropriate protection for the environment and archaeological heritage in order to prevent direct effects on same.

From the 1980s onwards, Ireland witnessed changing trends in the numbers of artefacts accessioned from peatlands, reflecting adaptations in work practices in the industrial exploitation of Ireland’s peatlands and legislative changes, which offered greater protection to monuments and artefacts alike. In the period prior to 1988 (1945-1985) awareness of the archaeological potential of peatlands increased through museum fieldwork pioneered by Ellen Prendergast, Etienne Rynne, A. T. Lucas and Michael Ryan’s Lough Boora excavation co-funded by BnM.

The 1980s saw a dramatic expansion in peat processing which led to National Monuments Service’s licensing of excavations within bogs initially conducted by UCD’s Irish Archaeological Wetland Unit (IAWU) and subsequently by archaeological contractors funded by BnM.

Since 1991 an annual programme of archaeological survey, initially funded by the National Monuments Service, has been conducted in BnM Bogs, with the results being forwarded for inclusion in the Sites and Monuments Record.

Since 1998, BnM has a statutory duty under the Turf Development Act 1998 (‘1998 Act’) (Section 56) to afford appropriate protection for the environment and the archaeological heritage (Section 56.- *The Company and each subsidiary shall ensure that its activities are so conducted as to afford appropriate protection for the environment and the archaeological heritage*).

The 1998 Act was in accord with the development of *Agreed Principles for the Protection of Wetlands Archaeology in Bord na Móna Bogs* (1998) between the Minister for Arts, Heritage and the Gaeltacht, the National Museum of Ireland and BnM. The Agreed Principles set out 10 standards within which archaeology in the BnM peatlands were managed (See Section 13.1.3.3 above).

BnM’s peat extraction and ancillary activities and impact on archaeology is also governed under the 2012 Code of Practice agreed between the then Department of Arts, Heritage and the Gaeltacht, the National Museum of Ireland and Bord na Móna (Appendix 13-4). The code includes a commitment by

BnM to finance a balanced and cost-effective approach to archaeological investigation, excavation, post excavation and mitigation, and details the procedure to be followed if a suspected object is discovered. The Code of Practice has been implemented on all bogs operated by BnM and its contents are integrated into staff induction training. Prior to 2012, Agreed Principles for the Protection of Wetland Archaeology in BnM's bogs were in place before they were updated and codified into the current Code of Practice.

13.5.2.3 Effect of Peat Extraction Phase on RMP/SMRs

A total of ten (10) recorded monuments are located within the Application Site boundary. Three of the monuments (KD012-002001-, KD012-003001-, and KD012-004001-) were partially excavated by Etienne Rynne in 1964-5 after the discovery of the toghers was reported by BnM. At least two of these monuments (KD012-015— and KD012-016—) were identified as a result of a peatland surveys carried out within the Application Site by the Irish Archaeological Wetland Unit (IAWU) in 1997-8, while the remaining monuments were recorded during the subsequent 2004 Peatland Survey (ADS Ltd).

The majority of the recorded monuments within the Application Site comprise Class 1 toghers and gravel/stone trackways, which account for eight of the ten monuments therein. Four of the toghers were subject to limited archaeological excavation which were undertaken in 1964-5 and much later in 2007. The description of the toghers, as provided in the Archaeological Survey of Ireland (ASI) monument files, suggests that at least some of these monuments had been partially disturbed by peat extraction and ancillary activities at the time they were surveyed. The remaining monuments, which comprise a Structure – peatland (KD012-018—) and a Platform - peatland (KD012-019—), were surveyed in 2004 and at that time were located either on the peat surface or close to same. Given that these sites were initially identified in 1964-5, 1997-8 and in 2004 and the continued peat extraction and ancillary activities within the Application Site up to 2020, it is likely that the Peat Extraction Phase had a direct, significant negative and permanent effect on at least some of these monuments. In this regard a direct, significant, negative and permanent effect to such structures as a result of the Peat Extraction Phase is identified.

Control Measures

Pre-1997

As part of peat processing training, all bog employees were required to read and adhere to the recommendations set out in 'Ancient Objects in Irish Bogs and Farmlands: A Guide for Finders' Department of Education 1942. (Appendix 13-5) which included:

1. *All bog workers must stop all works and report to the Bog Manager if archaeological finds are encountered.*
2. *If materials thought to be of archaeological interest are encountered, the Bog Manager must report the findings to the Garda Síochána within 7 days who will then contact the Commissioner of Public Works.*

1997 onwards

The Archaeological Survey of Ireland Peatland Survey undertaken by the Irish Archaeological Wetland Unit (IAWU) in 1997-8 and subsequently by ADS Ltd in 2004 led to the discovery of features, structures or sites within the Application Site as evidenced by seven of the ten recorded monuments located within the Application Site boundary. This control measure allowed for the identification, recording and investigation of features within the Application Site and ultimately led to their inclusion in the SMR. Limited excavation of one site was also carried out as part of this work in 2007.

2012 onwards

The 2012 Code of Practice (Appendix 13-4) also saw the introduction of agreed principles between the National Monuments Service, the National Museum and BnM. The control measures from 2012 onwards were as follows:

1. *The Minister for Arts, Heritage and the Gaeltacht has a responsibility to protect the archaeological heritage and to exercise powers of preservation, under the National Monuments Acts 1930-2004, taking account of the European Convention on the Protection of the Archaeological Heritage (Valletta).*
2. *The Minister's statutory responsibilities include the maintenance of the Record of Monuments and Places, with the aim of providing protection to all known archaeological monuments including those uncovered in Bord na Móna bogs.*
3. *The Director of the National Museum of Ireland has a responsibility to enforce state ownership of all archaeological objects and to safeguard the treatment of all archaeological objects before their accession into the State's repository, under National Monuments Acts 1930-2004 and the National Cultural Institutions Act 1997, taking account of the European Convention on the Protection of the Archaeological Heritage (Valletta)*
4. *Bord na Móna plc is a company with a statutory mandate, under the Turf Development Acts 1946-1998, to develop the national peat resource.*
5. *The development of peatlands has considerable archaeological implications which must be addressed given that the archaeological heritage is a non-renewable resource.*
6. *Bord na Móna has a statutory duty under the Turf Development Act 1998 (section 56) to afford appropriate protection for the environment and the archaeological heritage.*
7. *Bord na Móna will finance a balanced and cost-effective approach to archaeological investigation, excavation, post excavation and mitigation on the basis of the developer pays principle and in keeping with the Minister's stated policy in this regard.*
8. *Bord na Móna will engage a Project Archaeologist to develop archaeological strategy and to oversee the smooth running of the archaeological response to peat extraction in Bord na Móna bogs.*
9. *The adoption of a partnership approach between the Minister, the Director and Bord na Móna in pursuit of the delivery of Government policy taking account of the implications for archaeology. To this end the Archaeology Management Liaison Committee has been set up consisting of representatives of the Department of Arts, Heritage and the Gaeltacht, the National Museum of Ireland and Bord na Móna, including the Project Archaeologist and Consultant Archaeologists working on Bord na Móna peatlands. The Committee will meet regularly to agree overall strategies in relation to the mitigation of peat extraction.*
10. *Appropriate strategies will be developed by the Archaeology Management Liaison Committee to minimise direct impacts on archaeology taking account of Bord na Móna's contractual obligations, annual production plans, design and safety implications, environmental and other impacts and costs.*
11. *All parties agree that mitigatory planning at the earliest opportunity minimises the impact on the archaeological heritage.*
12. *Bord na Móna will strive, as far as is reasonably possible, within its statutory remit, to avoid negative impacts on archaeological monuments. In cases where it is not possible to avoid impacting on monuments Bord na Móna, the Minister and the Director will cooperate to ensure, as far as possible, that appropriate archaeological mitigation is carried out in advance of peat extraction.*

13. *Prospecting for archaeological monuments, archaeological objects and other such remains, other than in circumstances approved by the Minister, in consultation with the Director, is limited to the confines of the area under peat extraction.*
14. *All parties are committed to dealing with the archaeological implications of peat extraction in a balanced and cost-effective manner consistent with*
 - a) *Observing Bord na Móna's requirement to extract peat on an extensive scale*
 - b) *Annual production targets in relevant bogs*
 - c) *A level of excavation, post-excavation and recording of archaeological monuments and archaeological objects, impacted upon by peat extraction, that is acceptable to the Minister, having consulted with the Director, and preservation in-situ of monuments in those particular circumstances where required by the Minister and which would be reasonable in practice.*
15. *Each party reserves the right to review decisions.*
16. *All parties agree that the Archaeology Management Liaison Committee will monitor the operation of this Code of Practice and carry out a formal review within three years of its adoption and at agreed intervals thereafter*

13.5.2.4 **Effect of Peat Extraction Phase on Archaeological Objects**

A number of stray finds are recorded from within the Application Site (see Section 13.4.4 above). The dates on the finds demonstrate how they were recorded over a number of decades from 1933 to 2002. It is probable that many were reported by BnM workers during the course of the Peat Extraction Phase, with others recorded during the Peatland Surveys and excavation carried out within the Application Site. In this regard the finds were retrieved from the site in accordance with the relevant approved methodology for the survey or excavation activity being carried out, or in accordance with the 2012 Code of Practice, and prior to that in accordance with Ancient Objects in Irish Bogs and Farmlands: A Guide for Finders' Department of Education 1942. The finds were ultimately deposited with the National Museum of Ireland in line with best practice. This may be regarded as a positive effect as it has contributed to the corpus of archaeological finds from peatland environments and to knowledge regarding objects from the Application Site. It is possible, however, that archaeological objects present within the Application Site may or have been damaged/destroyed by the Peat Extraction Phase in particular from 1988 until 1997-8 prior to the implementation of the Peatland Surveys. In this regard the Peat Extraction Phase from 1988 to 1997-8 may have had a direct, significant, negative and permanent effect on such archaeological objects, if present. The Significant effect to archaeological objects is mitigated by the recovery and recording of objects during the Peatland Surveys and the reporting of finds under the 2012 Code of Practice and 'Guide for Finders' therefore the overall significance of effects are regarded as direct, Moderate to Significant, negative and permanent.

Control Measures

Control measures are the same as those identified above in Section 13.5.2.3.

13.5.2.5 **Effect of Peat Extraction Phase on unrecorded potential sub-surface sites**

Bog landscape features were often utilised throughout all periods of history, and the anaerobic conditions preserve organic matter, such as wood and leather, which does not often survive in more usual terrestrial archaeological conditions. Objects can be preserved in peatlands because of the acidity

of peat and the anaerobic environment which exists within peatland deposits. This is particularly the case between 1988 and 1997-8 prior to the peatland surveys taking place. The Peatland Surveys carried out within the Application Site, would have allowed the identification of any finds, features or deposits on either the peat fields, or along drain sections which would have led to mitigatory investigations and excavations in selected areas within the Application Site. The Archaeological Survey of Ireland Peatland Survey undertaken by the Irish Archaeological Wetland Unit (IAWU) in 1997-8 led to the discovery of at least two gravel/stone trackways, while the subsequent 2004 Peatland Survey by ADS Ltd added five monuments to the record. This may be regarded as a positive effect as it has contributed to the corpus of archaeological sites from peatland environments and to knowledge regarding sites located within the Application Site.

It is also possible, however, that significant negative effects could have taken place to sub-surface finds and features, in particular, prior to 1997-8 where remains existed within the Application Site. Prior to 1997-8 the potential effect to sub-surface archaeology is likely to have been direct, Significant, negative and permanent. This negative effect would have been mitigated by Peatland Surveys from 1997-8 onwards as well as the introduction of the 2012 Code of Practice. It is likely that potential effects on sub-surface finds and features from 1997-8 to 2020 were direct, Moderate to Significant, negative and permanent.

The Significant effect to unrecorded potential sub-surface site is mitigated by the recording of sites, objects and monuments during the 1997-8 and 2004 peatland surveys and the general low numbers of monuments recorded within the Application Site during those surveys. The overall significance of effects therefore are regarded as direct, Moderate to Significant, negative and permanent.

Control Measures

Control measures are the same as those identified above in Section 13.5.2.3.

13.5.2.6 Effect of Peat Extraction Phase on the Record of Protected Structures and NIAH

No Protected Structures, NIAH structures or historic gardens are located within the Application Site boundary. Effects to such structures or items as a result of the Peat Extraction Phase are therefore not identified.

13.5.2.7 Impact of Peat Extraction Phase on Local Cultural Heritage

The small settlements indicated within the Application Site on the historic OS maps, including that named as Shanavoola, appear to be largely located in areas in which peat extraction and ancillary activities took place. Field survey did not identify any surviving visible remains of such settlements; however, vegetative overgrowth may be obscuring some surviving elements. For those historic settlements located in areas of the Application Site where peat extraction and ancillary activities took place a direct, Significant, negative and permanent effect to such settlements is identified. The significance of the effect is mitigated, however, by the low sensitivity attributed to such settlements and their lack of statutory designation or protection. In this regard the overall effect is considered to be direct, Moderate, negative and permanent.

Control Measures

Control measures are the same as those identified above in Section 13.5.2.3.

13.5.3 Current Phase: June 2020 to present day

Current activities at the Application Site include decommissioning, rehabilitation and environmental monitoring as part of the EPA licence (Ref. P0503-01) The. See Chapter 4, Section 4.8 for details. BnM ceased peat extraction across all bogs including at the Application Site in June 2020. It is a requirement of ‘Condition 10 Cutaway Bog Rehabilitation’ of the IPC Licence that:

‘10.1 following termination of use or involvement of all or part of the site in the licenced activity, the licensee shall:

10.1.1 Decommission, render safe or remove for disposal/recovery, any soil, subsoils, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.

In compliance with Condition 10.1 of the IPC Licence, it is a requirement to decommission the Application Site by removing/disposing/recovering buildings, equipment, waste etc. from the Application Site. In terms of archaeology, architecture and cultural heritage, since peat extraction and groundworks are substantially complete, it is considered unlikely that direct effects would occur during the Current Phase. Where ground works are required to remove sub-surface items such as pumps or tanks those works are governed by the 2012 Code of Practice and the agreed principles and control measures therein. If such ground works are required a potential effect to sub-surface archaeology, if present, is identified and may be direct, Slight-Moderate, negative, permanent.

An archaeological impact assessment of the decommissioning and rehabilitation plans at Lodge bog was carried out by Charles Mount (2022). The assessment recommended a 20m buffer zone to be established around recorded monument KD012-019— Platform. The implementation of the mitigation measures in that assessment ensure no direct effects to the recorded archaeological resource therein.

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

Potential Pre-Mitigation Effects

No effects from 2020 to the present day are considered to have occurred since peat extraction and ancillary activities have ceased. In this regard a Neutral effect is identified.

Control measures

No control measures are deemed necessary since peat extraction and ancillary activities have ceased.

13.5.3.2 Cumulative & In Combination Effects

BnM ceased peat extraction across all bogs including at the Application Site in June 2020. It is a requirement of ‘Condition 10 Cutaway Bog Rehabilitation’ of the IPC Licence that:

‘10.1 following termination of use or involvement of all or part of the site in the licenced activity, the licensee shall:

10.1.1 Decommission, render safe or remove for disposal/recovery, any soil, subsoils, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.

In terms of archaeology, architecture and cultural heritage, since peat extraction has ceased, it is considered that no direct effects would occur during the Current Phase. In this regard therefore, current activities will not result in any cumulative effects, either direct or indirect and a Neutral effect is identified.

13.5.4 Remedial Phase

13.5.4.1 Effect of Remedial Phase

The Cutaway Bog Decommissioning and Rehabilitation Plans for the Application Site are described in detail in Chapter 4 Section 4.9.1 and are included in Appendix 4-2 of this rEiAR. The rehabilitation programme falls under the IPC licence in the same way as past peat extraction and ancillary activities, and in this regard any effects as a result of drain blocking or tracking over peat as part of the rehabilitation programme fall under the current Code of Practice (2012) between BnM and the now Department of Housing, Local Government and Heritage. BnM have produced a draft Cutaway Bog Decommissioning and Rehabilitation and Plans for the Application Site, and it is the intention of the Applicant to rehabilitate the bogs in a phased approach under IPC licence. The IPC licence is presented in Appendix 4-1 with detail on the rehabilitation programme provided in Appendix 4-2.

Mitigation measures to be implemented as part of the Cutaway Bog Decommissioning and Rehabilitation programme are under the remit of the aforementioned bodies. The Code of Practice is presented in Appendix 13-4 of the rEiAR and will mitigate against the potential for significant effects to the Cultural Heritage resource of the Application Site during the Remedial Phase.

Potential Pre Mitigation Effects

Remedial activities such as drain blocking or tracking over peat fields may have a negative effect on any sub-surface archaeological finds or features that may be present on or beneath the surface of the peat. In the absence of mitigation measures this may result in a direct, significant, negative and permanent effect.

Mitigation Measures

Since rehabilitation activities associated with BnM fall under the 2012 Archaeological Code of Practice, any potential effects may be dealt with in the same way as past peat extraction and ancillary activities, through the implementation of mitigation measures detailed in the 2012 Code of Practice.

13.5.4.2 Cumulative & In Combination Effects

In terms of direct cumulative effects, remedial works within the Application Site which require any ground works or drain blocking activities could potentially result in cumulative effects when considering other projects, including the proposed Ballydermot Wind Farm construction phase. Any increase to groundworks/excavation works within the peat could result in direct cumulative effects to any potential sub-surface archaeological finds or features.

There are a number of mitigating factors, however, which include the implementation of the current 2012 Code of Practice and the Draft Cutaway Bog Decommissioning and Rehabilitation Plan (the latter falls under the IPC licence). BnM have produced a draft Cutaway Bog Decommissioning and

Rehabilitation Plan for the Application Site, and it is the intention of the Applicant to rehabilitate the bogs in a phased approach under IPC licence. The IPC licence is presented in Appendix 4-1 with detail on the rehabilitation programme provided in Appendix 4-2.

The Code of Practice is presented in Appendix 13-4 of the rEIAR and will mitigate against the potential for significant effects during the Remedial Phase and thus reducing potential cumulative and in-combination effects.

13.6 Residual Effect

13.6.1 Peat Extraction Phase: 1988-June 2020

The residual effect of the Peat Extraction Phase on archaeological finds and features within the Application Site, including recorded monuments, is regarded as a direct, moderate, negative, permanent effect.

Overall, it is possible that significant negative effects could have taken place to sub-surface archaeological finds and features, in particular, prior to 1997-8 when the Peatland Surveys commenced. This negative effect was mitigated, however, by the Peatland Surveys carried out within the Application Site and any associated excavations which were carried out as part of the mitigation phase of that work. Subsequently, the introduction of the 2012 Code of Practice served as a mitigatory factor in the discovery of archaeological finds and features as well as their recording and excavation where required. In this regard it is considered that that residual effects on sub-surface finds and features from 1997-8 to 2020 were a direct slight - moderate negative permanent effect, while residual effects between 1988 and 1997-8 may have been direct moderate – significant, negative, permanent effects.

13.6.2 Current Phase June 2020 to present day

In terms of archaeology, architecture and cultural heritage, since peat extraction has ceased, it is considered that no direct effects would occur during the Current Phase. No direct effects as a result of removal of stockpiled peat, EPA monitoring activities, etc are identified. Where ground works are required to remove sub-surface items such as pumps or tanks those works are governed by the 2012 Code of Practice and the agreed principles and control measures therein. If such ground works are required a potential effect to sub-surface archaeology, if present, is identified and may be direct, Slight-Moderate, negative, permanent. Since peat extraction and ancillary activities associated with BnM fall under the 2012 Archaeological Code of Practice, any potential effects may be dealt with in the same way as past peat extraction and ancillary activities. In this regard the potential residual effect on sub-surface archaeology, if present, may be Slight-Moderate.

13.6.3 Remedial Phase

Remedial activities such as drain blocking or tracking over peat fields may have a negative effect on any sub-surface archaeological finds or features that may be present on or beneath the surface of the peat. This may result in a permanent, negative and significant effect. Since peat extraction and ancillary activities associated with BnM fall under the 2012 Archaeological Code of Practice, any potential effects may be dealt with in the same way as past peat extraction and ancillary activities. In this regard the potential residual effect on sub-surface archaeology, if present, may be Slight-Moderate, Negative, Permanent.

13.7 Significance of Effects

13.7.1 Peat Extraction Phase: 1988-2020

The overall effect of the Peat Extraction Phase on archaeological finds and features within the Application Site, including recorded monuments, is regarded as a direct moderate negative permanent effect.

Past extraction and ancillary activities, in particular from 1988 to 1997-8 including drains, milling, and extraction could have resulted in a significant, permanent, negative effect to sub-surface archaeological finds and features present within the peat. This potential effect is considered to be a direct Moderate-Significant negative permanent effect from 1988 to 1997-8 and a direct Slight-Moderate negative permanent effect from 1997-8 to 2020 due to commissioned Peatland Surveys and mitigation excavations which allowed for the identification and recording of archaeological features, and the recovery of archaeological artefacts, if present.

13.7.2 Current Phase: June 2020 to present day

The overall significance of effects on subsurface archaeological finds and features, if present, as a result of the Current Phase is considered to be Slight-Moderate.

13.7.3 Remedial Phase

The overall significance of effects on subsurface archaeological finds and features, if present, as a result of the Remedial Phase is considered to be Slight-Moderate.

13.7.4 Summary

Table 13-7 details a summary of all identified cultural heritage effects for the Application Site across the Peat Extraction Phase, the Current Phase and the Remedial Phase.

Table 13-7 Assessment Classification Summary

Topic	Pre-Mitigation Effect (EPA, 2022 Classification)	Mitigation Section Reference	Residual Effect (EPA, 2022 Classification)	EIA Significance Threshold
Peat Extraction Phase				
RMP/SMR, Archaeological Objects, Sub-surface Archaeology	Direct, significant, negative and permanent	Section 13.5.2.3	Direct slight - moderate negative permanent effect between 1997-8 to 2020; Direct moderate – significant, negative, permanent between 1988 and 1997-8	not significant significant
RPS and NIAH Structures	Neutral	Section 13.5.2.6	Neutral	not significant
Local Cultural Heritage	Direct, Moderate, negative and permanent	Section 13.5.2.7	Direct, moderate, negative and permanent	not significant

Topic	Pre-Mitigation Effect (EPA, 2022 Classification)	Mitigation Section Reference	Residual Effect (EPA, 2022 Classification)	EIA Significance Threshold
Current Phase				
RMP/SMR, Archaeological Objects, Sub-surface Archaeology, RPS, NIAH and Local Cultural Heritage	Direct, Slight-Moderate, negative, permanent	Section 13.5.3	Direct, Slight-Moderate, negative, permanent	not significant
Remedial Phase				
RMP/SMR, Archaeological Objects, Sub-surface Archaeology	Direct, significant, negative and permanent	Section 13.5.4.1	Direct, Slight-Moderate, Negative, Permanent	not significant

13.8

Cumulative and In Combination Effects

Cumulative effect is defined as ‘the addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects’ (EPA 2022). Cumulative effects encompass the combined effects of multiple developments or activities on a range of receptors. In this case, the receptors are the archaeological monuments and architectural/cultural heritage sites in the Application Site. Direct effects to sub-surface archaeological features/sites can occur as a result of peat removal and groundworks during the Peat Extraction Phase (1988-2020), as part of the Current Phase (June 2020 – present day) and Remedial Phase, as well as the potential future development of Ballydermot Wind Farm. When all of these activities are combined, they have the potential to have cumulative effects.

The cultural heritage impact assessment undertaken above in this chapter outlines those significant effects that have occurred within the Application Site as a result of the peat extraction and ancillary activities.

Due to peat extraction and ancillary activities within the Application Site boundary in particular, prior to 1997-8 when archaeological investigations and surveys had not been undertaken, there is potential for significant cumulative effects with other local developments (located outside the Application Site, including forestry, agricultural development, etc) on the archaeological environment to have occurred. Peat extraction and ancillary activities could have had cumulative (direct) effects with other off-site projects. Similarly, when considering the Peat Extraction Phase 1988-June 2020 with peat extraction and ancillary activities on the Application Site from 1950-1988, cumulative effects are also possible. Given the nature of the peat extraction and ancillary activities during both the 1988-2020 period and the 1950-1988 period, those effects are largely concerned with sub-surface archaeological finds, features and deposits. As outlined in Chapter 4, the primary and greatest land-use change associated with peat extraction and ancillary activities on the Application Site occurred during the initial drainage and vegetation removal of the bogs in advance of peat extraction. This effect would have predominantly occurred at the Application Site in advance of 1988. It is likely that the pre 1988 drainage, shrinkage, compression and the extraction of peat could have had permanent and profound negative cultural heritage effects should sub-surface finds and features exist in areas which were subject to peat extraction and ancillary activities. This is particularly the case between 1988 and 1997-8 when fewer archaeological investigations and surveys had taken place. When considered cumulatively with activities which took

place between 1950 and 1988, there is potential for increased cumulative direct negative effects to sub-surface archaeology if present within the Application Site.

It is intended to utilise the Application Site for both peatland remediation (rehabilitation), wind energy infrastructure and to facilitate environmental stabilisation of the Application Site and the optimisation of climate action benefits.

Bord na Móna Powergen Ltd. are proposing a wind energy development consisting of 47 no. turbines, of which 20 no. turbines will have a maximum blade tip height of 200 metres (m) above the top of the foundation, and 27 no. turbines will have a maximum blade tip height of 220 metres (m) above the top of the foundation, at the Application Site. A separate EIAR and accompanying NIS are being undertaken for the proposed Ballydermot Wind Farm development. At the time of writing, the planning application for this development has not yet been submitted to An Coimisiún Pleanála therefore a decision had not yet been made by An Coimisiún Pleanála with regard to the application.

It is the intention of the Applicant to integrate the peatland rehabilitation measures with the proposed future Ballydermot wind farm. The key objectives of environmental stabilisation and re-wetting of the cutaway areas will occur between and surrounding the proposed windfarm infrastructure. The implementation of the Cutaway Bog Decommissioning and Rehabilitation Plan in conjunction with the construction, operation and decommissioning of the Ballydermot Wind Farm as well as proposed, permitted and operational plans and projects listed in Chapter 2 of its EIAR is considered. Overall, there are no significant negative cumulative effects when considering past peat extraction and ancillary activities during the Peat Extraction Phase and the proposed Ballydermot Wind Farm in combination with the proposed Cutaway Bog and Decommissioning and Rehabilitation Plans for the Remedial Phase.

Lodge Bog has undergone rehabilitation as part of the Peatland Climate Action Scheme (PCAS) which began in 2022 and was largely completed in 2023. In total 365.7 ha of Lodge Bog underwent decommissioning and rehabilitation. Table 4-10 of Chapter 4 sets out the areas for rehabilitation measures at the Application Site in addition to the 365.7 ha of Lodge Bog that have been rehabilitated to date under PCAS. With regard to air quality, given the scale and nature of the works undertaken to facilitate PCAS during the Current Phase of the Project, as described in Chapter 4. It is considered that there was no potential for impacts to arise cumulatively or in-combination with the Project.

In addition to the above, a planning application was submitted to An Coimisiún Pleanála (ACP) in December 2025 for an Uisce Éireann Water Supply Project for the Eastern and Midlands Region (ACP Ref. PA92.323980)². The Applicant is in consultation with Uisce Éireann regarding the water supply project. The pipeline for this project is proposed to traverse the Application Site, through Codd 2, Glashabaun South and Derrybrennan. Based on the estimated timeline for the construction of the water supply project, it is expected that the short-term rehabilitation actions at the Application Site (see Draft BnM Cutaway Bog Decommissioning and Rehabilitation Plans (Appendix 4-2)) will be completed. The remaining long-term rehabilitation works will comprise monitoring, aftercare and maintenance to validate the efficacy of the rehabilitation measures in achieving environmental stabilisation, as described in rEIAR Chapter 4, Section 4.9. In terms of cultural heritage, effects on cultural heritage assets within the Application Site during these long-term Remedial Phase works will be imperceptible, thus are not

² <https://www.water.ie/projects/national-projects/water-supply-project-east-1>

expected to interfere with the construction phase of the Water Supply Project, therefore the cumulative or in combination effects on cultural heritage are assessed as the same.

13.9

Conclusion

This archaeological, architectural, and cultural heritage chapter was prepared by Tobar Archaeological Services Ltd. It presents the results of an archaeological, architectural and cultural heritage impact assessment for a remedial EIAR at the Application Site.

Peat Extraction Phase

Recorded Monuments, Archaeological Objects and Sub-surface Archaeology

A total of 10 recorded monuments are located within the Application Site boundary. Three of the monuments were partially excavated in 1964-5 after the discovery of the toghers was reported by BnM. At least two of the 10 monuments were identified as a result of a peatland surveys carried out within the Application Site by the Irish Archaeological Wetland Unit (IAWU) in 1997-8, while the remaining monuments were recorded during the subsequent 2004 Peatland Survey (ADS Ltd). A direct, negative and permanent effect to many of the monuments as a result of the Peat Extraction Phase is identified. A number of stray finds are recorded from within the Application Site over a number of decades from 1933 to 2002. The finds were retrieved from the site in accordance with the relevant approved methodology for the survey or excavation activity being carried out, or in accordance with the 2012 Code of Practice and prior to that in accordance with Ancient Objects in Irish Bogs and Farmlands: A Guide for Finders' Department of Education 1942. The finds were ultimately deposited with the National Museum of Ireland in line with best practice. The overall significance of effects to archaeological objects as a result of the Peat Extraction Phase is regarded as direct, Moderate to Significant, negative and permanent.

The Peat Extraction Phase has the potential to have had a direct, significant, negative and permanent effect on unrecorded sub-surface sites. This is particularly the case between 1988 and 1997-8 prior to the Archaeological Survey of Ireland peatland surveys. Prior to 1997-8 it is possible that the Peat Extraction Phase had a direct, significant, negative and permanent effect on unrecorded sub-surface archaeological sites. This negative effect was mitigated, however, by the Peatland Surveys 1997-8 and 2004, and any associated excavations which were carried out as part of the mitigation phase of that work. Subsequently, the introduction of the 2012 Code of Practice served as a mitigatory factor in the discovery of archaeological finds and features as well as their recording and excavation where required. In this regard it is considered that that residual effects on archaeological finds and features from 1997-8 to 2020 were direct negative Slight to Moderate and permanent while residual effects between 1988 and 1993 may have been direct negative Moderate to Significant and permanent.

Built Heritage (Protected Structures and NIAH)

No Protected Structures, NIAH structures or historic gardens are located within the Application Site boundary. Effects to such structures or items as a result of the Peat Extraction Phase are therefore not identified.

Local Cultural Heritage

A number of small settlements are indicated on the historic OS maps within the Application Site. For those historic settlements located in areas of the Application Site where peat extraction and ancillary activities took place a direct, Significant, negative and permanent effect to such settlements is identified. The significance of the effect is mitigated, however, by the low sensitivity attributed to such settlements

and their lack of statutory designation or protection. In this regard the overall effect is considered to be direct, Moderate, negative and permanent.

Current Phase

Current activities at the Application Site include the transportation of previously extracted peat off the bogs and decommissioning, rehabilitation and environmental monitoring as part of the EPA licence. In terms of archaeology, architecture and cultural heritage, since peat extraction ceased in June 2020, direct effects are considered unlikely. Where ground works are required to remove sub-surface items such as pumps or tanks, those works are governed by the 2012 Code of Practice and the agreed principles and control measures therein. If such ground works are required a potential effect to sub-surface archaeology, if present, is identified and may be direct, Slight-Moderate, negative, permanent.

Potential indirect effects (visual impacts) of the Current Phase are scoped out as the current phase of activities are not considered to have a wider landscape negative effect on the Cultural Heritage Environment. Archaeological monuments and features of architectural heritage merit which are located away from the Application Site are not capable of having their settings affected by localised/transient works within the Application Site. No effects from 2020 to the present day are considered to have occurred since peat extraction has ceased. No mitigation measures are deemed necessary since peat extraction has ceased.

Remedial Phase

The Applicant has produced a Draft Cutaway Bog Decommissioning and Rehabilitation Plan for the Application Site, and it is the intention of the Applicant to rehabilitate the bog under IPC licence. Remedial activities such as drain blocking or tracking over peat fields may have a negative effect on any sub-surface archaeological finds or features that may be present on or beneath the surface of the peat. This may result in a direct, permanent, negative and significant effect. BnM's impact on archaeology is governed under the 2012 Code of Practice agreed between the now Department of Housing, Local Government and Heritage, the National Museum of Ireland and BnM. Since rehabilitation activities associated with BnM fall under the 2012 Archaeological Code of Practice, any potential effects may be dealt with in the same way as past peat extraction and ancillary activities. The Code of Practice (presented in Appendix 13-4 of the rEIAR) will mitigate against the potential for significant effects during this phase, and in this regard the overall significance of effects will be direct, permanent, negative slight – moderate.