



CHAPTER 12 CULTURAL HERITAGE

Ballinla Wind Farm

Ballinla Wind Farm Limited

July 2025

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12. Cultural Heritage

12.1 Introduction

This archaeological impact assessment (AIA) was undertaken with regard to a proposal to develop a seven-turbine windfarm and associated substation in the townland of Leitrim, Co. Offaly. A full description of the Proposed Development, development lands and all associated project elements is provided in Chapter 2 of this EIAR. This chapter assesses the archaeological and cultural heritage resource of the site and the potential impacts on these.

The Proposed Grid Connection includes an underground grid cable from the proposed onsite 110kV substation via a route on public road for 8km to Philipstown 110kV substation is proposed Figure 12-1. The Proposed Grid Connection and associated connection point are required for connecting the Proposed Development to the National Grid. For the purpose of this assessment, the Proposed Grid Connection is included in the project description within this EIAR and described in relation to the archaeological resource of the immediate vicinity and suggested mitigation under a separate heading and is illustrated in Figures 12-1 to 12-7.

A future separate planning permission will be sought for the Proposed Grid Connection.

12.1.1 Competency of Assessor

This assessment has been prepared by Maurice F Hurley DLitt, MA, FSA, MIAI. Maurice has 35 years' experience as a professional archaeologist. His career developed in tandem with the changing focus of Irish archaeology and his experience includes pioneering work on projects such as Director of the Cork-Dublin gas pipeline archaeology (published 1987). He was City Archaeologist for Waterford (1987-1991) and later Cork City where he undertook several major excavations, all of which are published. Maurice Hurley was the first Chairman of Institute of Archaeologist of Ireland Archaeologist. He served as a member of the Heritage Council of Ireland from 2000 to 2008, where he was Chair of the committees on archaeology and architecture. He served as a member of the Royal Irish Academy, National Committee for Archaeology (1996-1999).

Since 2005 Maurice Hurley runs his own archaeology consultancy practice. He specialises in the Archaeology/Cultural Heritage components of Environmental Impact Assessments and in urban archaeology, where he has particular expertise on the complex interface between development and archaeology in the planning process. In recent years much of his focus has been centred on renewable energy projects, initially windfarms and more recently solar energy developments.

12.2 Methodology

This study is produced to assess the archaeological and cultural heritage resource of the route and surrounding environs.

The study is informed by documentary and cartographic research and an examination of available aerial photographs and by an inspection of the site in August 2023 and October 2023.

12.3 Desk study

Consulted sources include:

- National Monuments Act, 1930 to 2014. (A bill aimed at modernising the legislation governing national monuments and heritage sites has passed all stages in the Oireachtas. The *Historic and Archaeological*

Heritage Bill 2023, once enacted, will replace the *National Monuments Act 1930*, and subsequent amending acts. In the meantime, the standing Acts provide for the protection of archaeological sites, monuments, artefacts and shipwrecks that are listed in the Record of Monuments and Places (RMP). This list is updated as and when previously unrecorded archaeological sites are discovered. County Offaly has sites dating from Mesolithic period (7,000 B.C) to more recent historical times (generally taken to be 1700AD but some may be of more recent date) represented in the archaeological record.

- The Planning and Development Acts, 2000 (as amended).
- Heritage Act, 1995 (as amended).
- Frameworks and Principles for the Protection of the Archaeological Heritage, 1999, (formerly) Department of Arts, Heritage, Gaeltacht, and Islands.
- Details of stray finds recorded from the Study Area as detailed on the NMI online database hosted on Heritage Maps were consulted should be noted that this online database is partial only and current to 2010, and additional finds may have been registered for the Study Area in the interim.
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 2000 and the Local Government (Planning and Development) Act 2000.
- Cartographic review including all editions of the Ordnance Survey maps and aerial photographs.
- *Offaly Council Development Plan 2021-2027*.
- The Record of Monument and Places (RMP). These files are based on the pre-existing Sites & Monument Record (SMR) and information from completed county archaeological inventories. As such it records known upstanding archaeological monuments, their location (in cases of destroyed monuments) and the position of possible sites identified as cropmarks on vertical aerial photographs.
- EPA (2022). Guidelines on the information to be contained in Environmental Impact Assessment Reports.

12.3.1 Legislation And Guidelines for the Protection of Heritage

The Minister of the Department of Housing, Heritage & Local Government has a responsibility to protect the archaeological heritage and to exercise powers of preservation under the National Monuments Acts, taking account of the European Convention for the Protection of the Archaeological Heritage. The protection of the archaeological heritage is provided for using the following four statutory designations:

- National monument in the ownership or guardianship of the Minister for Housing, Heritage & Local Government or a Local Authority.
- National monument subject to a Preservation Order (or temporary Preservation Order). Register of Historic Monuments (RHM).
- Record of Monuments and Places (RMP). National Monuments.
- National Monuments in State Care: Ownership and Guardianship.

12.3.1.1 National monument in the ownership or guardianship of the Minister for HHLG or a Local Authority

Section 16 of the National Monument Act, 1930 provides that where the Minister is the owner of a National Monument then the Minister shall admit the public to enter on and view such monument upon payment of such (if any) admission charge and subject to such conditions and limitations as the minister shall prescribe. Section 11

of the 1994 Act provides that the Minister may acquire by agreement or compulsorily any monument that is in his or her opinion a National Monument or any part of such monument. The provisions of Section 14 of the 1930 Act regarding prohibition of injury to National Monuments which apply to National Monuments subject to a Preservation Order apply similarly to National Monuments of which the Minister is guardian. Section 12(1) of the 1930 Act provides that the Minister shall maintain a National Monument of which he or she is the guardian. According to the National Policy on Town Defences (2008), within the meaning of the National Monuments Acts, all town defences are considered National Monuments by reason of the historical, architectural, and archaeological interest attaching to them. This status relates as much to their protection as to the nature of consent and management of works on, or close, to them.

12.3.1.2 National Monuments with a Preservation Order or Temporary Preservation Order

Where it appears to the Minister that a monument, considered to be a National Monument, is in danger or is actually being destroyed or falling into decay the minister may by preservation order or temporary preservation order, undertake the preservation of the monument. A temporary preservation order will remain in force for six months and then expire, however it is an indication of additional sites that are considered as being national monuments.

12.3.1.3 National Monument in Local Authority Ownership/Guardianship

Monuments which may be defined as National Monuments are also in the ownership or guardianship of Local Authorities which have similar responsibilities under the National Monuments Acts (1930-2004) to the DAHG. These monuments are not included in any specific dataset. Each Local Authority will make a determination whether the preservation of a monument in its ownership/guardianship, is a matter of national importance because of the archaeological, architectural, historical, traditional or artistic importance attaching to that monument. There are no definitive lists of these sites available. such determinations are generally made on a site-by-site basis as the need arises.

12.3.1.4 Record of Monuments and Places

Archaeological monuments are protected under the National Monuments Acts 1930- 2004. Section 12 (1) of the 1994 Act provides that the Minister shall establish and maintain a record of monuments and places where the Minister believes there are monuments, such record to be comprised of a list of monuments and relevant places and a map or maps showing each monument and relevant place in respect of each county in the State. This is referred to as the Record of Monuments and Places and monuments are entered into it are referred to as Recorded Monuments. Section 12(3) of the 1994 Act provides that where the owner or occupier (other than the Minister) of a monument or place included in the Record, or any other person proposes, to carry out, or to cause or permit the carrying out of, any work at or in relation to such monument or place, he or she shall give notice in writing to the Minister of the proposal to carry out work and shall not, except in the case of urgent necessity and with the consent of the Minister commence the work until two months after the giving of notice. This time will allow the National Monuments Service to consider the proposed works and how best to proceed to further the protection of the monument.

12.3.1.5 The Register of Historic Monuments

The Register of Historic Monuments was established under Section 5 of the National Monuments Act 1987. This list consists of monuments which are known to the Minister and which in the Minister's opinion should be so entered in the Register. Section 5(8) of the 1987 Act provides that where the owner or occupier (not being the Minister) of a historic monument or archaeological area entered in the Register, or any other person, proposes to carry out, or cause or permit the carrying out of, any work, at or in relation to such a monument or area then he or she shall give notice in writing of the proposal to the Minister and shall not, except in the case of urgent

necessity and with the consent of the Minister, commence the work until two months after the giving of the notice.

12.3.1.6 Protected Structures

A protected structure is defined in the Local Government (Planning and Development) Act 2000 as any structure or specified part of a structure, which is included in the planning authorities' Record of Protected Structures (RPS). Section 57 (1) of the 2000 Act states that "...the carrying out of works to a protected structure, or a proposed protected structure, shall be exempted development only if those works would not materially affect the character of (a) (b) the structure, or any element of the structure, which contributes to its special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest." The RPS is a schedule of protected buildings and items listed in every County Development Plan and Town Development Plan. RPSs are designated as part of the Development Plan process, either during a review of the county Development Plan or as a variation of the plan. Each owner and occupier of a protected structure is legally obliged to ensure that the structure is protected/conserved. The protection, unless otherwise stated in the RPS, includes the exterior and interior of the structure, the land lying within its curtilage (boundary), any other structures and their interiors within the curtilage, plus all fixtures and fittings which form part of the interior or exterior of any of these structures. By definition, a protected structure includes the land lying within the curtilage of the protected structure and other structures within that curtilage and their interiors. The notion of curtilage is not defined by legislation, but according to Architectural Heritage Protection Guidelines for Planning Authorities (2004) and for the purposes of this report it can be taken to be the parcel of land immediately associated with that structure and which is (or was) in use for the purpose of the structure. The attendant grounds of a structure are lands outside the curtilage of the structure but which are associated with the structure and are intrinsic to its function, setting and/or appreciation. The attendant grounds of a country house could include the entire demesne, or pleasure grounds, and any structures or features within it such as follies, plantations, lakes etc.

Moreover, policies for both the archaeological and architectural heritage are conveyed in a series of specific published guidelines. This chapter is prepared having regard to the following guidelines:

- Framework & Principles for the Protection of the Archaeological Heritage, (Department of Arts, Heritage, Gaeltacht & the Islands, 1999).
- Policy & Guidelines on Archaeological Excavation, (Department of Arts, Heritage, Gaeltacht & the Islands, 1999).
- Architectural Heritage Protection, Guidelines for Planning Authorities, (Department of the Environment, Heritage and Local Government, 2004).

12.3.2 Scope of Assessment

This study provides an overview of the cultural heritage features of the Proposed Grid Connection and used the sources referenced in the following sections.

12.3.2.1 Record of Monuments and Places (RMP)

This record was established under Section 12 (1) of the National Monuments (Amendment) Act 1994. It lists all monuments and places believed to be of archaeological importance in the County. The numbering system consists of two parts: the first part is the county code (OF for Offaly) followed by the Ordnance Survey map number (six inch to the mile scale). the second part is the number of a circle surrounding the site on the RMP map, e.g. OF033-09 refers to circle 09 on OS sheet 033 for County Offaly. The area within the circle is referred to as the Zone of Archaeological Potential (ZAP) or zone of notification for that site. Its diameter can vary depending on the size

and shape of the site but it averages out at approximately 180m. The RMP for Counties Offaly was published in 1995.

12.3.2.2 Sites and Monuments Record Database of the ASI

The purpose of the Archaeological Survey of Ireland (ASI) is to compile a baseline inventory of the known archaeological monuments in the State. It contains details of all monuments and places or sites known to the ASI which pre-date AD 1700, and a selection of monuments which post-date 1700. The large record archive and databases resulting from the survey are continually updated. This database, complete with maps, is available for consultation via the NMS website at www.archaeology.ie

12.3.2.3 The topographic files of the NMI

The topographical files for the townlands within the study area were searched. The topographic files hold information on finds of archaeological objects sorted by townland and are presented in the Heritage Maps (www.heritagemaps.ie). The online database presents only information to 2010, and additional finds may have been registered in the interim.

12.3.2.4 Offaly Development Plan 2021-2027

Development Plans outline the County Council's objectives with regard to the preservation of the archaeological, architectural and cultural heritage of the County. The plans also outline the Council's objectives regarding the protection of the archaeological heritage, including the protection of monuments listed in the Sites and Monuments Record and Record of Monuments and Places, by preservation in situ, or in exceptional cases, preservation by record.

BHO (Built Heritage Objective) -05 It is an objective of the Council to protect archaeological sites and monuments, and archaeological objects, which are listed in the Record of Monuments and Places, and to seek their preservation in situ (or at a minimum, preservation by record) through the planning process

BHP (Built Heritage Policy)-33 It is Council policy to support and promote the protection and appropriate management and sympathetic enhancement of the county's archaeological heritage within the Plan area, in particular by implementing the Planning and Development Act 2000 (as amended) and the National Monuments Act 1930 (as amended).

BHP-34 It is Council policy to seek to promote awareness of and access to archaeological sites in the county where appropriate. BHP-35 It is Council policy to consult with the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht (DCHG) in relation to archaeological sites within and/or adjoining a Proposed Development.

BHP-36 It is Council policy to facilitate the identification of important archaeological landscapes in the county. BHP-37 It is Council policy that any development that may, due to its size, location or nature, have implications for archaeological heritage (including both sites and areas of archaeological potential/significance) shall be subject to an archaeological assessment. When dealing with proposals for development that would impact upon archaeological sites and/or features, there will be presumption in favour of the 'preservation in situ' of archaeological remains and settings, in accordance with Government policy. Where permission for such proposals is granted, the Planning Authority will require the developer to have the site works supervised by a licenced archaeologist.

BHP-38 It is Council policy to ensure that archaeological excavation is carried out according to best practice as outlined by the National Monuments Service, Department of Culture, Heritage and the Gaeltacht, the National Museum of Ireland and the Institute of Archaeologists of Ireland and to protect previously unknown archaeological sites and features, where they are discovered during development works.

BHP-40 It is Council policy to require archaeological assessment, including underwater archaeological assessment where relevant, for such developments that due to their location, size or nature may have implications for archaeological heritage. Such developments include those that are located at or close to an archaeological monument or site, those that are extensive in terms of area (0.5 hectares or more) or length (1 kilometre or more) and developments that require an Environmental Impact Statement.

12.3.2.5 National Inventory of Architectural Heritage (NIAH)

The National Inventory of Architectural Heritage was set up under the Convention for the Protection of the Architectural Heritage of Europe or the Granada Convention of 1985. It was established on a statutory basis under Section 2 of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. The work of the NIAH involves identifying and recording the architectural heritage of Ireland, from 1700 to the present day, in a systematic and consistent manner. It is divided into two parts. The Building Survey and Historic Garden Survey (www.buildingsofireland.ie). The main function of both is to identify and evaluate the State's architectural heritage in a uniform and consistent manner, so as to aid to its protection and conservation.

Under Section 53 of the Planning and Development Act 2000, all structures considered of regional, national or international importance within the survey are recommended for inclusion in the Record of Protected Structures by the Minister for Arts Heritage and the Gaeltacht. If this is not adopted by the local authority, the reasons must be communicated to the Department. The Building and Historic Garden Survey for Counties Offaly are available online.

12.3.3 Statement on Limitations and Difficulties Encountered

No difficulties were encountered during the assessment process.

12.4 Baseline Environment

12.4.1 Mapping Overview

The mapping to accompany the text is presented as follows. **Figure 12.1** places the Proposed Development within its geographical location, **Figure 12.2** presents the site layout. **Figure 12.3** is a vertical aerial image on which the archaeological sites listed on the Sites and Moments Record (SMR) are indicated by red dots and structures listed in the National Inventory of Architectural Heritage (NIAH) are indicated by blue dots. **Figure 12.4** refers to the first edition Ordnance Survey six-inch scale map which is divided into three extracts (**Figures 12.4 – 12.6**), from north to south with the approximate locations of the proposed turbines shown as circles and the proposed substation indicated by a rectangle. The maps were recorded in the early to mid-nineteenth century, and is included here as an integral part of the study because of the detailed information depicted relating to land divisions and houses that once occupied the area. **Figure 12.7** refers to the second edition Ordnance Survey six-inch scale map which is again divided into three extracts (**Figures 12.7 – 12.9**), from north to south with the approximate locations of the proposed turbines and substation shown. The maps were recorded in the late-nineteenth century/early twentieth century and therefore record the changing cultural landscape over a c. hundred year period.

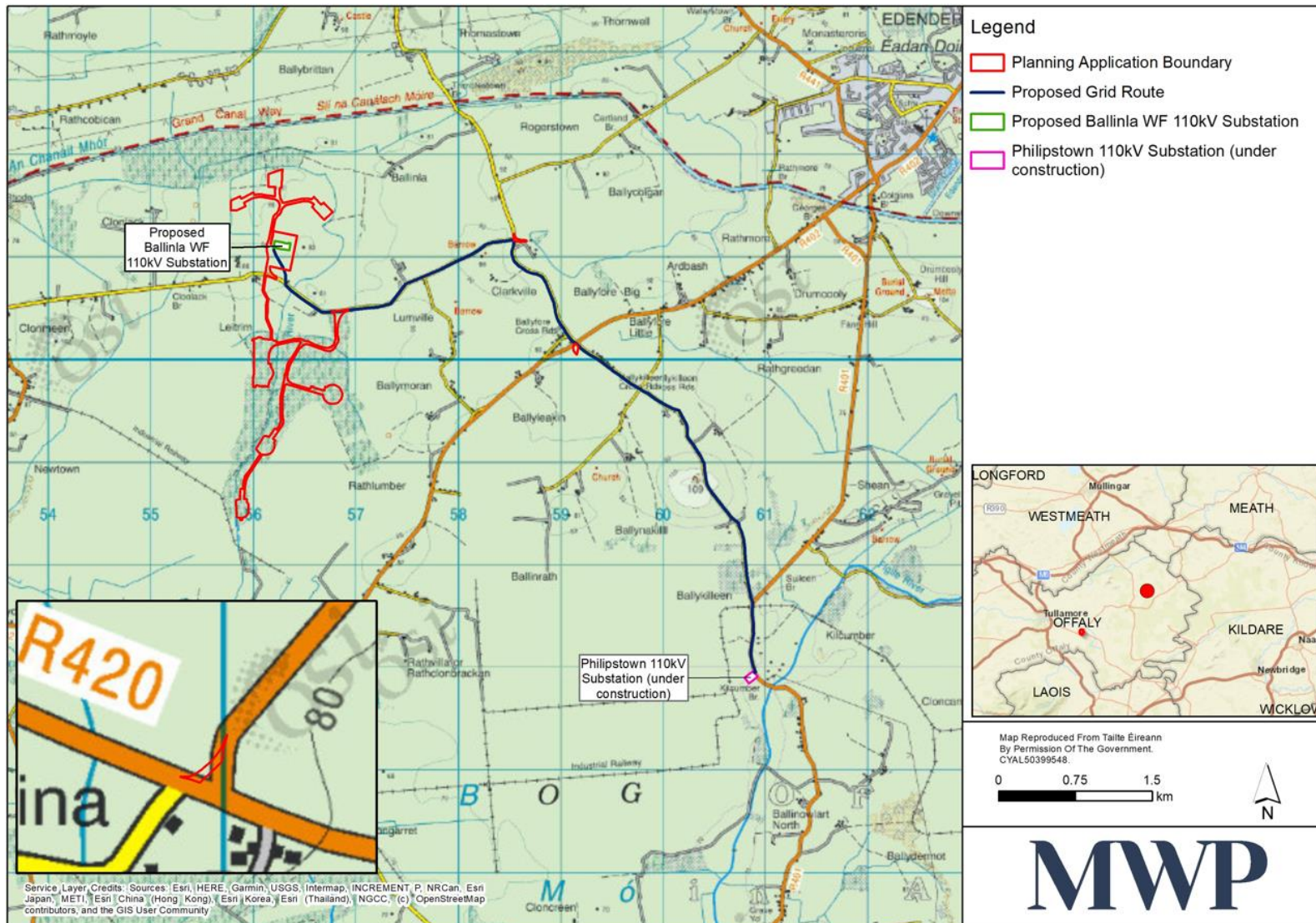


Figure 12-1: Proposed Development within its Geographical Location

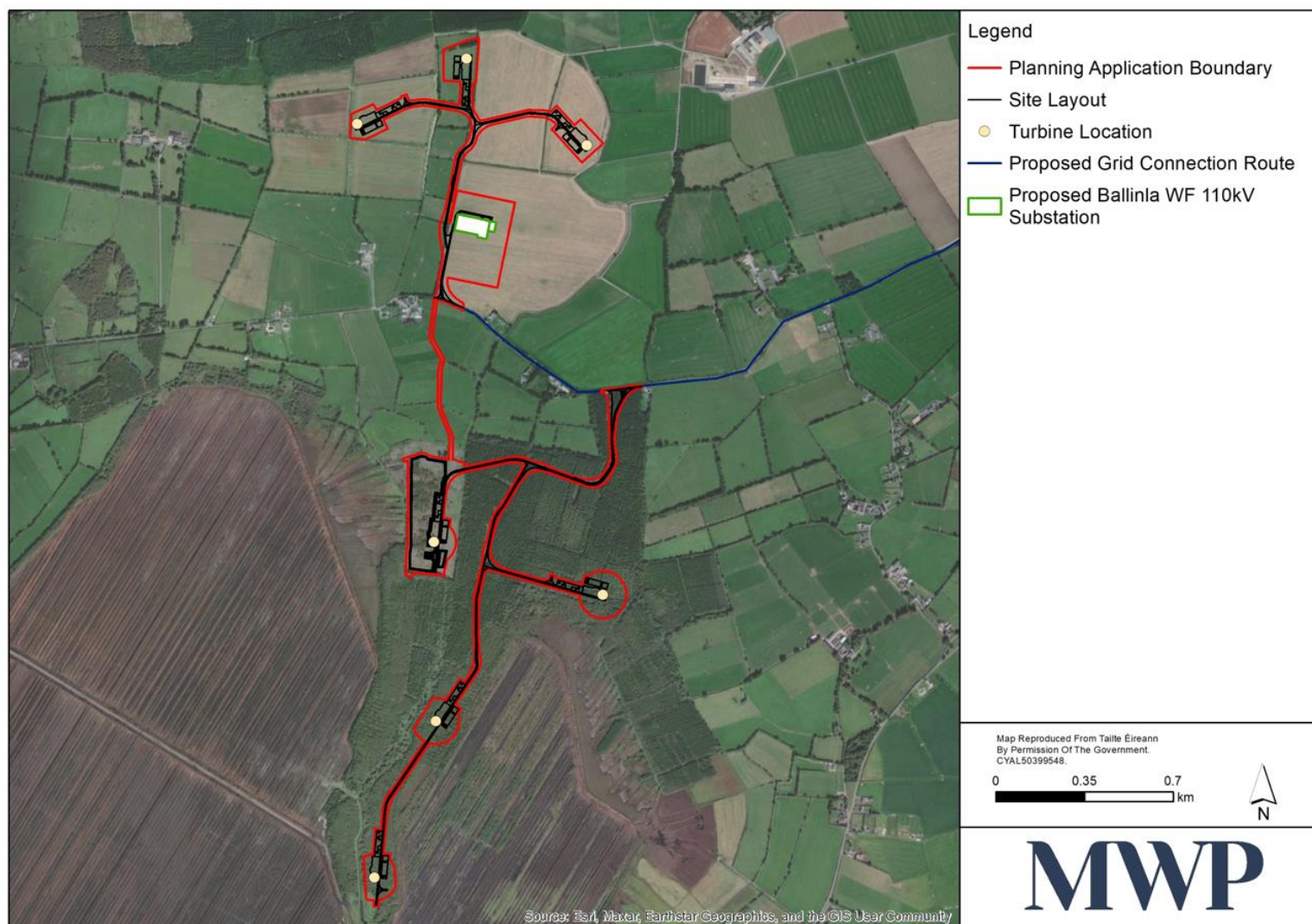


Figure 12-2 Proposed Wind Farm Site Layout

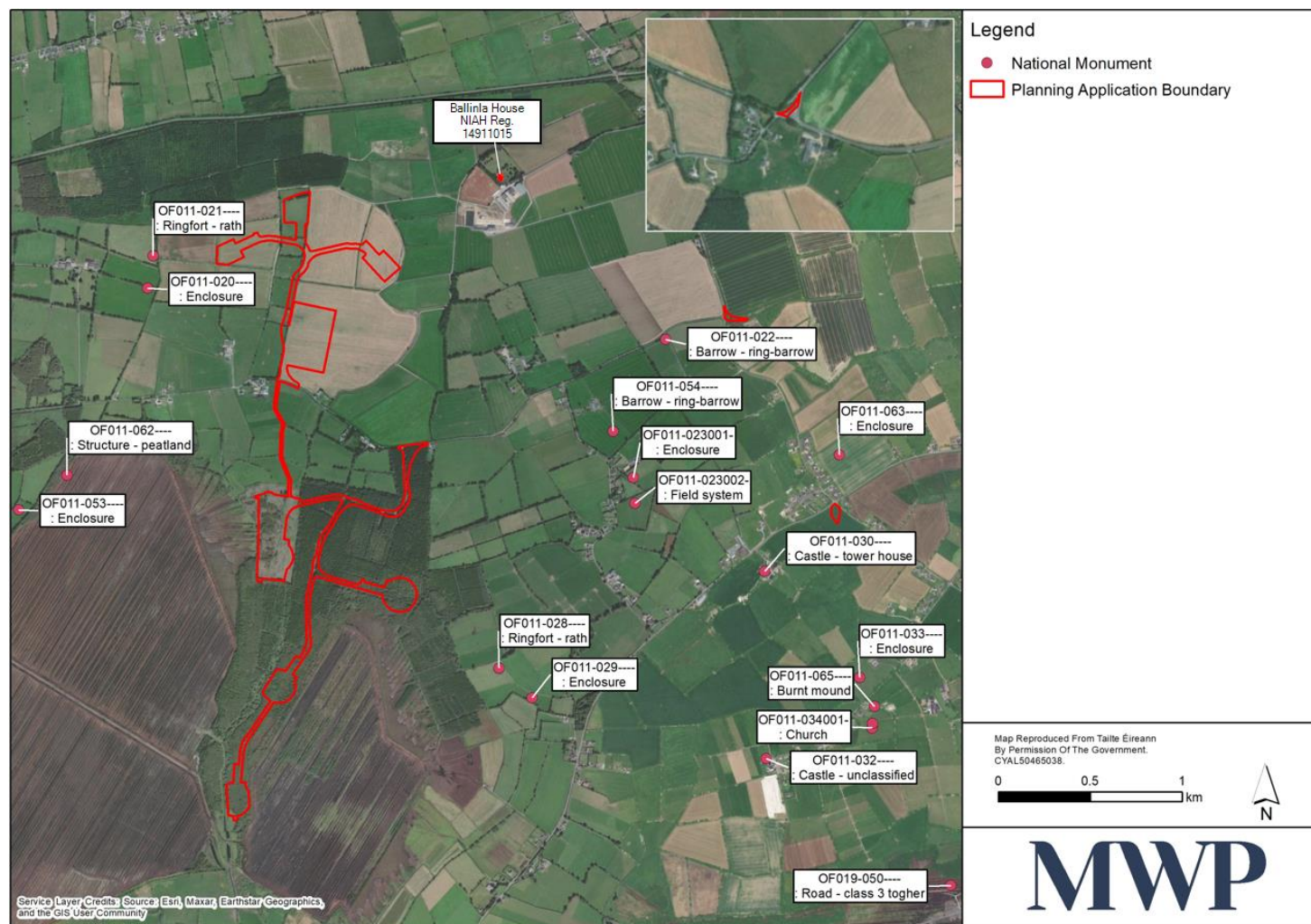


Figure 12-3: Recorded Monuments in the Vicinity of the Proposed Wind Farm ¹

¹ Archaeological Survey of Ireland (ASI)

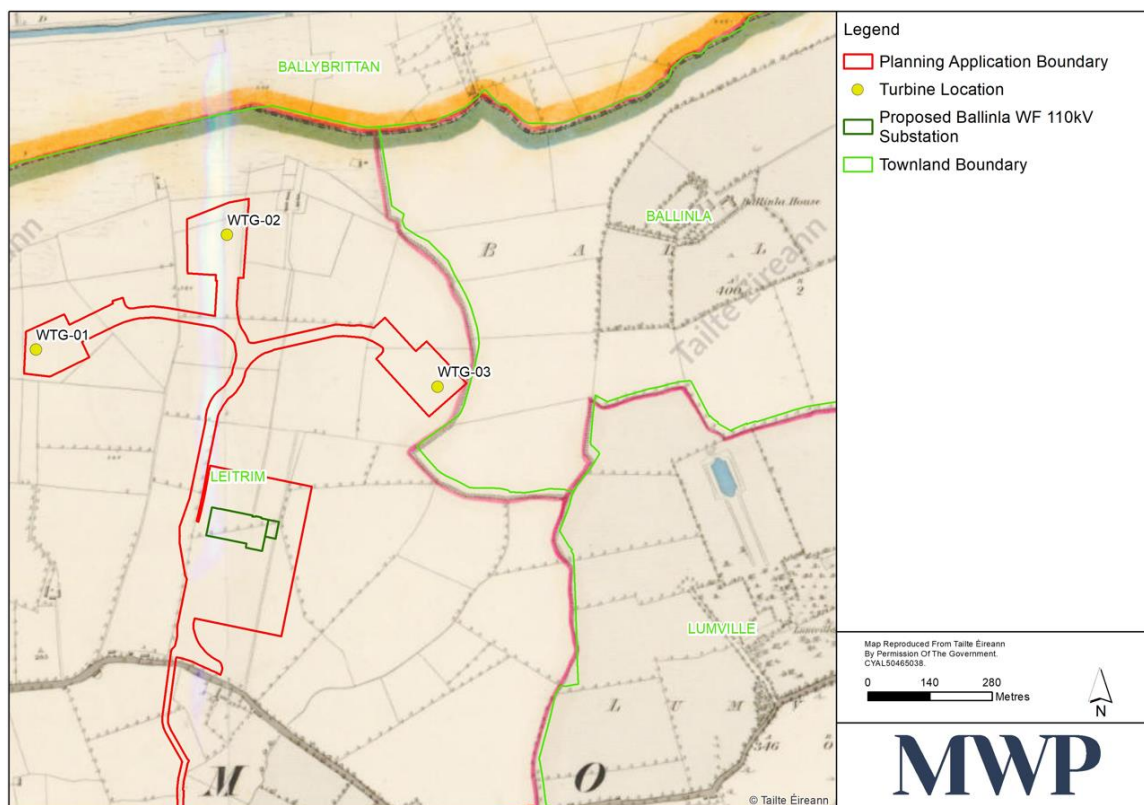


Figure 12-4: First edition Ordnance Survey Map (1829-41) – Northern Portion of Proposed Wind Farm (T1 to T3)

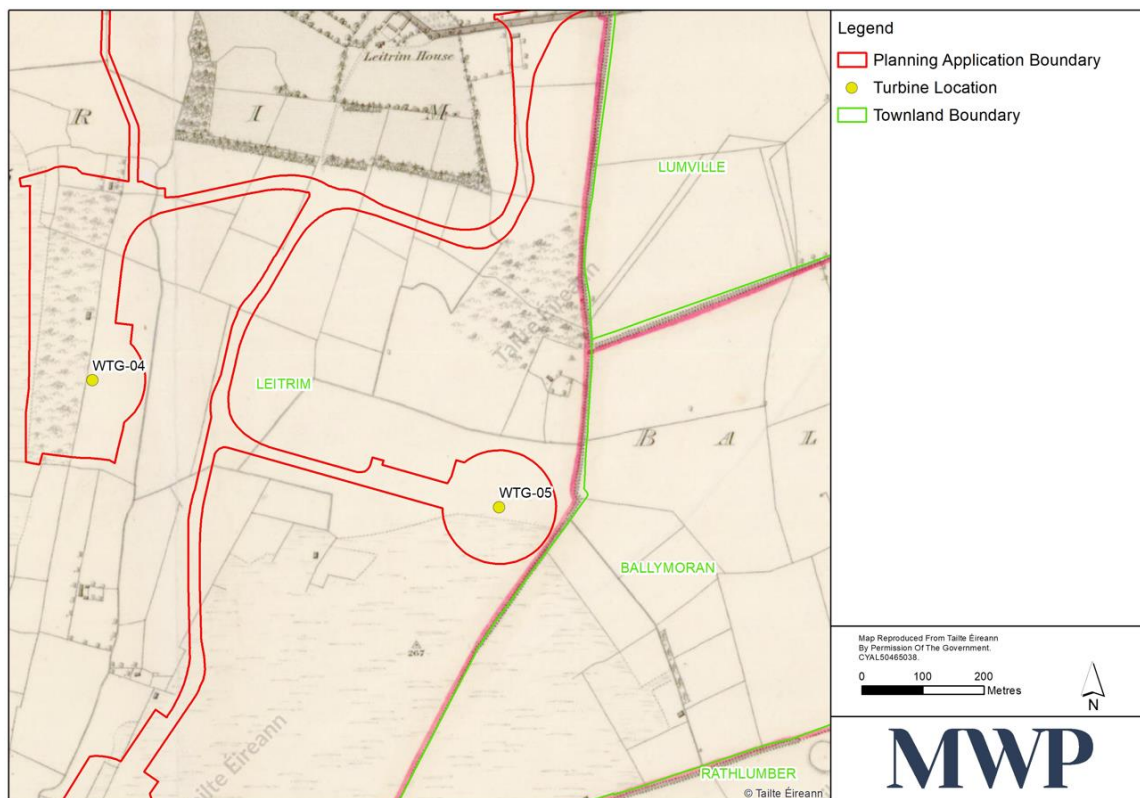


Figure 12-5: First edition Ordnance Survey Map (1829-41) - Central Portion of Proposed Wind Farm (T4 and T5)

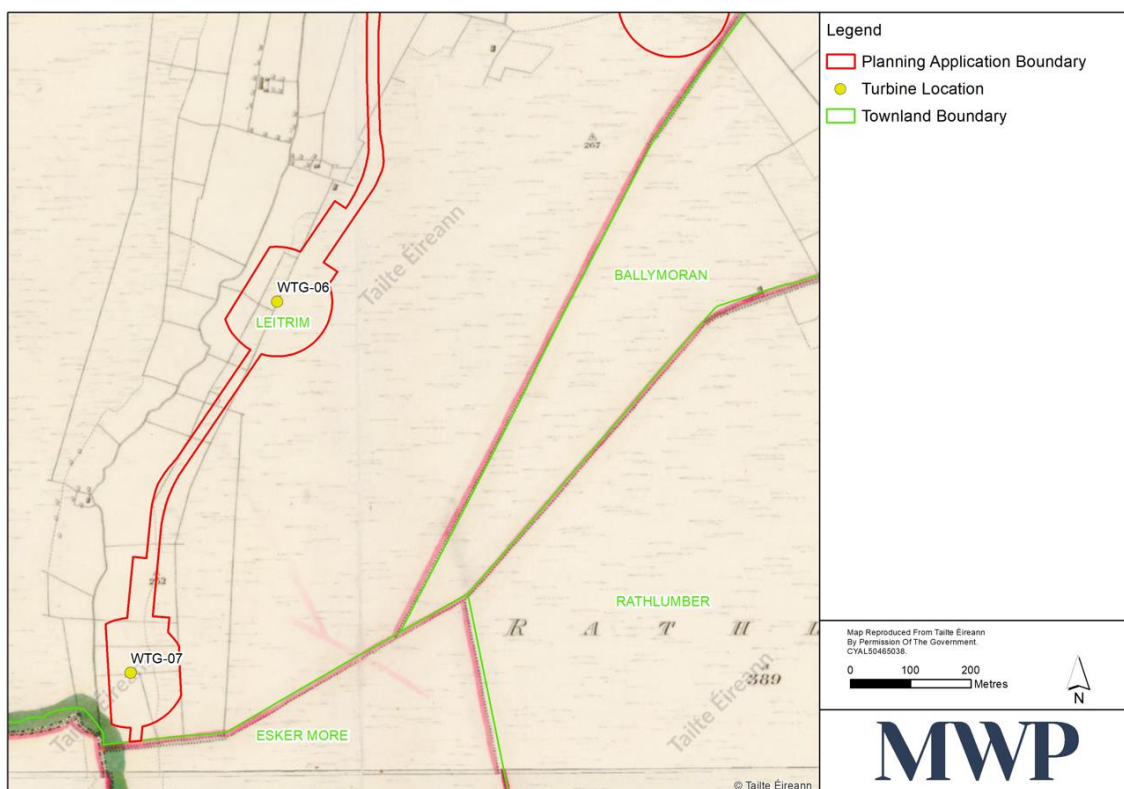


Figure 12-6: First edition Ordnance Survey Map (1829-41) – Southern Portion of Proposed Wind Farm (T6 and T7)

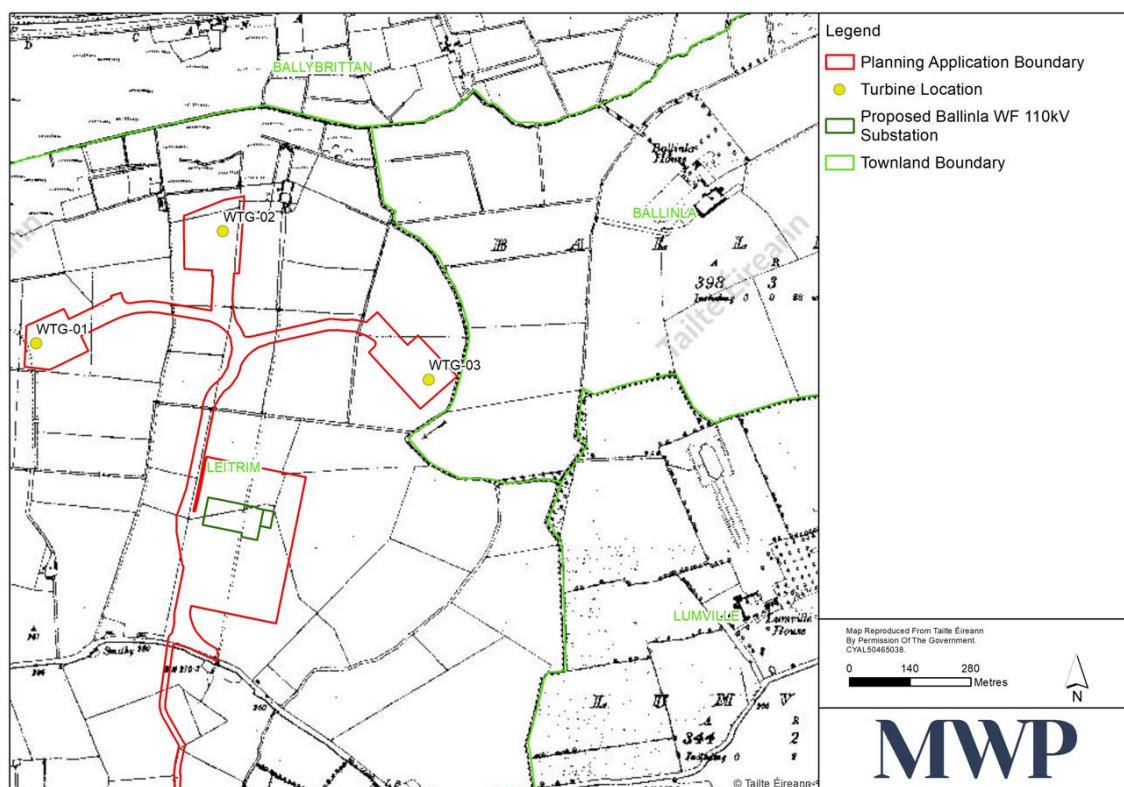


Figure 12-7: Second edition Ordnance Survey Map (1897-1913) - Northern Portion of Proposed Wind Farm (T1 to T3)

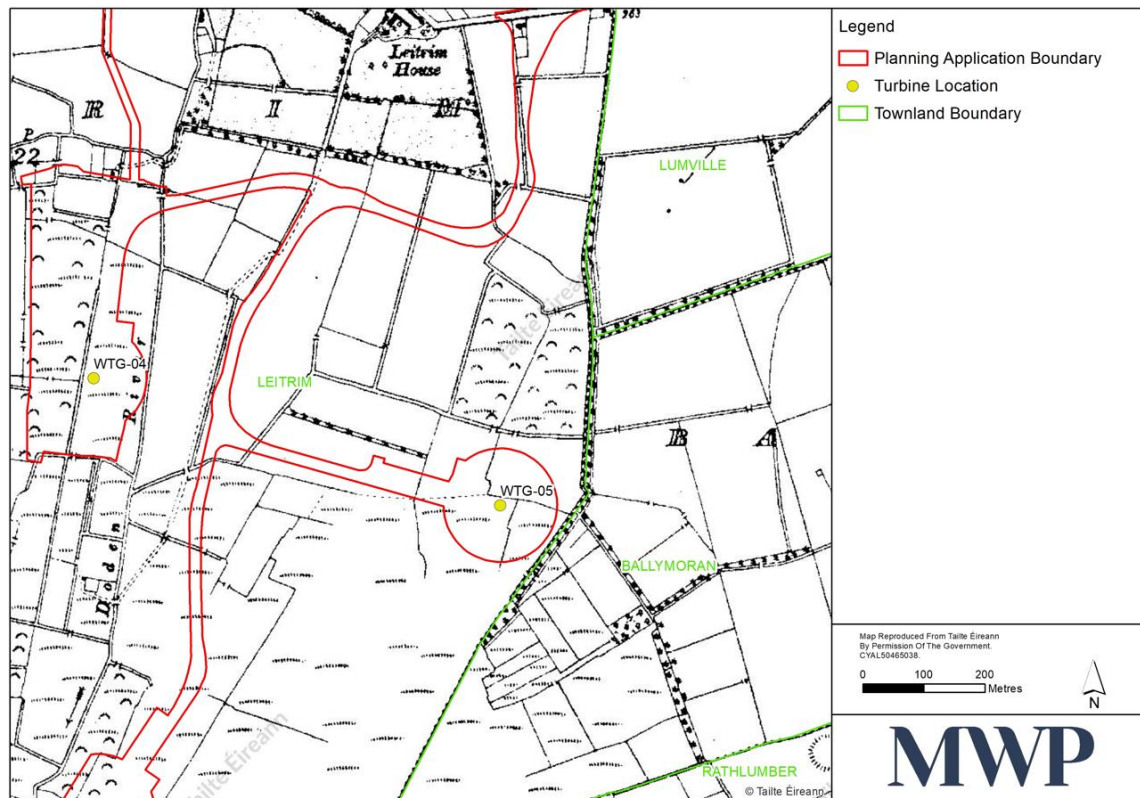


Figure 12-8: Second edition Ordnance Survey Map (1897-1913) - Central Portion of Proposed Wind Farm (T4 and T5)

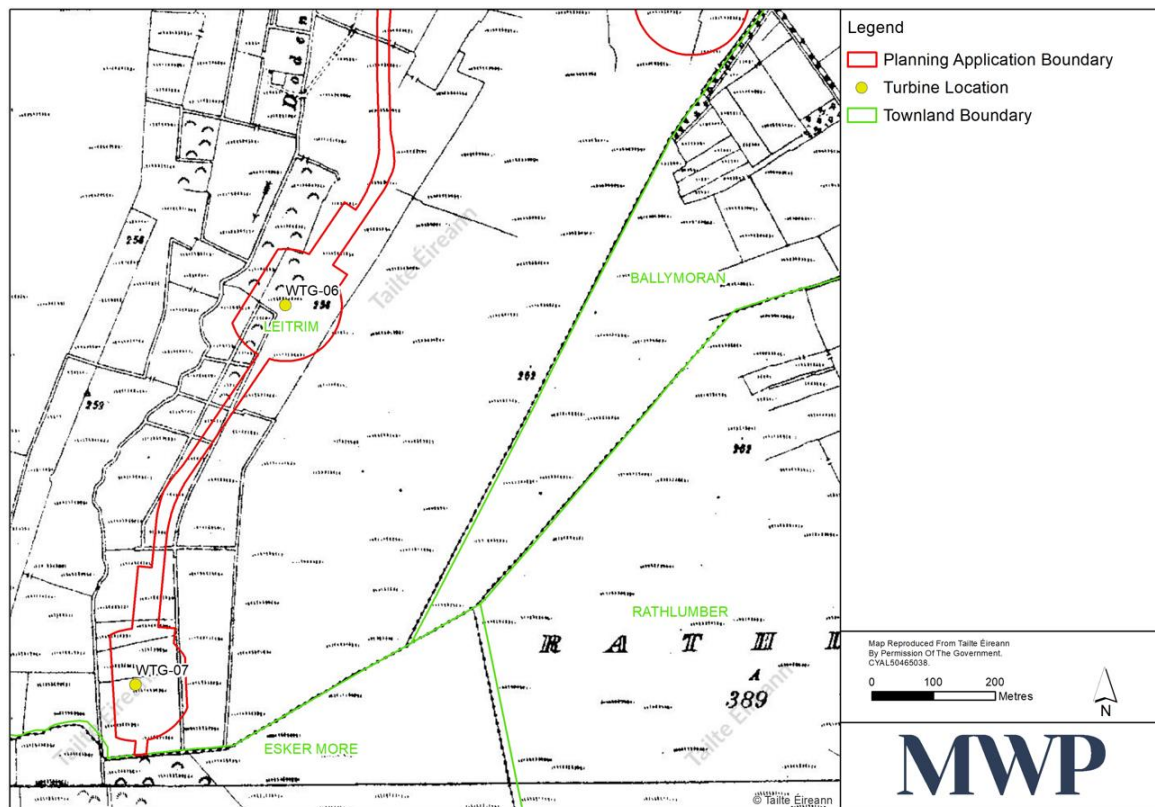


Figure 12-9: Southern Section edition Ordnance Survey Map (1897-1913) – Southern Portion of Proposed Wind Farm (T6 and T7)

The photographs (**Plates 12.1-12.19**) are presented to illustrate the terrain typical of each area. **Plates 12.1-12.9** focus on the specific site locations of Turbines 1 -3 and the substation, while **Plates 12.10-12.13** illustrate the significantly compromised forested area in Leitrim townland flanking the Doden River where Turbines 4 to 7 are proposed. **Plates 12.17-12.19** illustrate other cultural heritage features in the vicinity of the proposal.

12.4.2 Receiving Environment

The Proposed Wind Farm is within the townland of Leitrim in the municipal district of Edenderry, Co. Offaly. A local road (L5010) transects the middle of the Proposed Wind Farm, therefore, the site description refers to northern section and southern sections, each of which are described separately.

The Proposed Grid Connection will be a linear development within the townlands of Leitrim, Lumville, Ballinla, Clarkeville, Ballyfore Big, Ballyfore Little, Ballyeakin and Ballykilleen, in the local electoral area of Edenderry, Co. Offaly. The Proposed Grid Connection is 8km along the public roads from the proposed wind farm southeast to the existing Philipstown 110kV substation adjacent to the Edenderry Power Station

The Proposed TDR will include development in the townlands of Leitrim, Ballyfore Big, Ballyleakin and Ballina (Geashill By) Co. Offaly.

The townland of Leitrim is a large townland distinguished by a range of environments. The townland of Leitrim is flanked on the north by Ballybrittan, on the northeast by Ballinla, on the east by Lumville, on the southeast by Ballymoran with the extensive bogland of Esker More on the south and southwest. Clonmeen and Clonlack being on the western side. The topography is generally flat to barely undulating with farmyards and dispersed houses.

Within Leitrim townland the land falls into two distinct areas, both spatially separated and topographically very different.

The northern area of Leitrim townland (**Plates 12.1-12.9**) is characterised by broad flat fields in pasture where a rigorous modern agricultural regime maintains a high-quality grassland by a rigorous drainage system (**Plates 12.10-12.11**) and land improvements. The fields are largely rectangular, separated by clay banks flanked by deep drains or simply by modern drains and/or wire paddock fences. The older field fences have been in existence since at least the early nineteenth century, when the first edition Ordnance Survey map (**Figure 12.4A**) recorded a pattern of large rectangular tree-lined fields. While some of the soils in the area are naturally well drained mineral soils, some are reclaimed former marginal bogland and even today traces of dark peaty soil are a significant feature of the ground.



Plate 12-1: The Proposed Location of Turbine 1, with Access Road from the West



Plate 12-2: The Proposed Location of Turbine 1 and Indicative Access Route, Looking West



Plate 12-3: Location of Proposed Turbine 2, looking North



Plate 12-4: The Proposed Location Turbine 2 and Indicative Access Route, looking East/Northeast



Plate 12-5: Indicative Access Route (red line) from Turbines 1 and 2 to Turbine 3, looking North



Plate 12-6: The Proposed Location of Turbine 3 looking Northwest



Plate 12-7: Proposed Location of Turbine 3, looking Northeast



Plate 12-8: Proposed Substation looking South



Plate 12-9: Proposed Substation looking North



Plate 12-10: Ballinla Townland is characterised by Straight Field Fences, Drains and Hardcore Farm Roads



Plate 12-11: Older Deep Drain Following a Curving Course - Recorded on First & Second OS Maps and Maintained by Regular Draining Regime (see Figure 12.4)

The southern part of the Leitrim townland is largely bogland with a neck of forestry separating two extensive bogland areas. The forested areas lie to the east and west of the slow flowing channel of the Doden River which provides an element of drainage to the neck of land lying between the bogland. Boglands to the west are also in Clonmeen and Esker More and to the south and east in Esker More, Rathlumber and part of Ballymorán. The bogs have always dominated the landscape of the area but the strip of land flanking the Doden River was in agricultural use, albeit probably marginal land, judging from the small size of the houses/farms shown on the first edition Ordnance Survey Map (**Figure 12.4B** and **12.4C**). Within the neck of marginal land seven houses are depicted on the first edition Ordnance Survey Map, but by the late nineteenth century all but two of these houses had

disappeared from the landscape (**Figure 12.5B** and **12.5C**). The houses depicted on the maps are generally small single dispersed buildings, two having small rectangular enclosed yards and one a farmyard with two outbuildings.

By the turn of the nineteenth century, the area was significantly depopulated with the trend evidently continuing into the mid-twentieth century when the entire area was planted with coniferous forestry, much of which is now in the process of being harvested (**Plates 12.12-12.14**). In general, the forestry was preceded by drainage through the boggy ground before the trees were planted. The second edition Ordnance Survey map (**Figure 12.5C**) indicates a significant pre-forestry drainage system with access tracks bridging the drains. The forest drainage was rectilinear with a grid of smaller drains leading into larger drains (**Plates 12.15** and **12.16**).

The northern and southern sections of the Proposed Wind Farm will be connected by a collector cable (Figure 12.2 and Plates 12.17-12.20). The cable will cross the L5010 from the northern to southern sections and run through flat agricultural land (Plate 12.17-12.18) laid out in rectangular fields divided by low banks with hedgerows and trees. The land is mostly in pasture and where the soil surfaces are apparent the high peat content is indicative of reclaimed bogland (Plate 12.19). The historic maps (Plates 12.4A – 12.4C) indicate that the fields had been laid out by the mid-nineteenth century and therefore the reclamation of former bogland had taken place by at least the early nineteenth century. To the south where the collector cable route enters the southern section, the reclaimed land gives way to poorly drained bog which is densely overgrown with rushes and scrub in all of the areas where the bog has not been planted with coniferous forest. the latter being the dominant land use in the southern section.



Plate 12-12: Central Access Road to Turbines 4, 5, 6 and 7 Following Existing Forestry Haul Road



Plate 12-13: Partial Felling/Thinning Observed in October 2023



Plate 12-14: Felled Areas Difficult to Access due to Logs, Brash, Deep Drains and Dense Vegetation



Plate 12-15: Open Areas Between Forestry showing Peat Ground Cover



Plate 12-16: Drain Profiles Revealing Peat



**Plate 12-17: : Collector Cable Route South of the L5010 looking South. Land is Flat and Divided by Tree
Clothed Banks**



Plate 12-18: Collector Cable Route Southern Area Looking North. Land Becoming Boggy



Plate 12-19: Poorly Drained Areas of Peat Soil Characteristic of Reclaimed Lands in the Southern Areas



Plate 12-20: Proposed Grid Connection Route Southern Section - Land is Boggy and Developed with Forestry

12.4.3 Archaeology of the Area

Offaly has a significant archaeological heritage, with over 4,000 archaeological sites dating back to the Mesolithic period, 7,000 B.C as documented by the National Monuments Service.

Peatland areas are a characteristic feature of the Irish midlands. Many areas of former shallow peatland were cut and drained from the seventeenth century onwards and as such converted to agricultural land and the reclamation process was accelerated in the post-famine years of the 19th century when grants became available for large scale reclamation projects. The reclaimed areas of flat land are characterised by rectangular fields defined by straight streams or canals, often with a low bank on one side created from the up-cast. Such a system is apparent in the northern part of Leitrim townland and the adjoining townlands. The first edition OS map records the field layout already existed century (**Figure 12.4A**). Some of the field divisions had already been altered or removed the time of the second edition Ordnance survey map (**Figure 12.5A**)

Southern Co. Offaly is generally flat terrain with occasional glacial ridges (eskers) and hillocks. Peat bogs formerly occupied much of the low-lying ground (basin peats). The slow flowing meandering rivers were significant transport and communication arteries in ancient times. The rivers, especially those flanked by broad areas of bogland, were also significant barriers to overland transport and as such were frequent boundaries between provinces, counties, territories (baronies) and townlands.

Most of the former bogs in this area of Co. Offaly are either reclaimed for agricultural land (some of the northern part of Leitrim townland) or for forestry and this characterises the southern part of the site under review.

Occasionally pre-bog occupation can be identified in areas of former bog. Pre-bogland occupation may include lake-shoreline Mesolithic sites, lake settlements (crannogs, Bronze Age to Medieval), transport routes across bogs (toghers or bog roads) which may date from the Bronze Age up to post medieval times.

Mesolithic (7000BC) shoreline-settlements are known to occur on the margins of former lakes which were subsequently covered by peat, examples are known from Lough Boora, Co. Offaly (Ryan 1980, 1981, 1984). Generally, these settlements are located on the upper surface of the mineral soils underlying the bogs which commenced growing since c. 7000BC. The Mesolithic camp sites tend to contain flint artefacts, axe heads as well as burnt mammal fish and bird bones.

By Neolithic times (c. 5000BC), the raised bogs of the midlands had grown considerably and appear to have been unattractive to human occupation.

By the Bronze Age, possible pressure on the population appears to have resulted in the construction of crannogs or lake settlements (Hencken 1936) but most of the crannogs appear to have been constructed in lakes and marshes as defended homesteads within the Early Medieval period. as such they are mostly contemporary with ringforts. The subsequent draining of lakes, marshes, fens and peat land has resulted in crannogs appearing today as a simple mound in a lake or bog. Within bogs, evidence for crannogs is generally recognisable by the large concentrations of timbers, brushwood, wickerwork, straw and even bracken with possible occurrence of stone and other material used by the occupiers to build a raised platform enclosure and dwellings above the water level. Within reclaimed former bogs such sites often appear as similar to ringforts in the agricultural landscape.

Raised bogs were major obstacles to transport since Neolithic times (5,000BC) and ever since then trackways known as toghers have been constructed to facilitate transport, including both pedestrian and wheeled traffic. A variety of construction techniques have been employed in the construction of these toghers including oak planks resting on long runners (rails) or bunches of brushwood, layers of gravel were sometimes used especially in Co. Offaly. As the bogs continued to grow the many of the toghers were regularly built and replaced and therefore several levels may be represented in a bog.

As the bogs were largely intractable, rivers were often the only means of transport but the low-lying land on either side was generally unsuitable for prehistoric settlement as it was liable to flooding and this has resulted in an absence of archaeological monuments from such areas. Marginally higher land close to the banks of navigable rivers took on a significant role as strategic areas. Areas of bogland or marginal land in Counties Offaly do not seem have been the subject of significant focus for settlement in medieval times.

In medieval times the midlands of Ireland were largely controlled by Gaelic clans. mostly the O'Moores and O'Connors, who had regularly raided the outlying castles and the English- Pale around Dublin. In the mid sixteenth century the English Crown fostered a policy of confiscation of Gaelic lands and sought to settle these with English colonists. The first of these schemes was the Plantation of what was then named King's County (now Offaly) and Queen's County (now Laois), after the new Catholic monarchs Philip and Mary I respectively. The new county towns were named Philipstown (now Daingean) and Maryborough (now Portlaoise). This plantation sought the colonial settlement by way of extending English control in what was seen as hostile regions of Ireland.

The plantation was not a great success because of attacks by the dispossessed Irish making it difficult to attracting people to settle in the new plantation. The nature of the new settlement was thus largely concentrated around military fortifications. The O'Moores and O'Connors had retreated to the hills and bogs and fought a local insurgency against the settlement for many years. In 1578, the English finally defeated the O'Moore clan at Mullaghmast in Laois, having invited them there for peace talks. Rory Oge O'Moore, the leader of rebellion in the area, was hunted down and killed later that year.

In 1775 the idea was first mooted of linking Dublin to the River Shannon by canal. In 1770 a group of noblemen and merchants decided to form a company to undertake the construction of a canal aimed initially at providing

fresh water for Dublin City and a water-borne transport system to the countryside west of Dublin. The ultimate aim of the project was to link Dublin City to the River Shannon.

Work on the length of canal between Dublin and the River Liffey took place between 1773 & 1779. The canal from the Liffey to Dublin was opened to traffic in February 1779 (Delaney 1995, 21).

In 1783 work began on the Barrow Line, a branch of the Grand Canal leading south. By 1789, work was well advanced on the Monasterevan to Athy length of canal. The canal was opened to Daingean (then Philipstown) in 1797 and a year later to Tullamore. The canal opened up access for agricultural produce and passengers from the midlands to reach Dublin with unprecedented levels of speed, comfort and safety. With the advent of the canals Portarlinton and other midland thrived but ultimately the significance of the canals was eclipsed by the arrival of the railway lines in the mid-nineteenth century. Portarlinton was a significant railway junction.

The significant increase in population in Ireland in the later eighteenth/ early nineteenth century saw the establishment of small holdings in marginal lands such as mountain sides and the edges of bogs. It is likely that many of the small houses depicted on the first edition Ordnance Survey map **Figure 12.4B** and **12.4C**) in the neck of land between extensive areas of bog, in what appears to have been a slightly better drained area close to the banks of the Doden River, belong to that period of population pressure. The second edition Ordnance Survey map (**Figures 12.5B** and **12.5C**) presents evidence for the disappearance of most of the houses, no doubt relating significant depletion of the population in the Great Famine and following years of the nineteenth century. Continued population decline saw the repurposing of marginal land for forestry in the twentieth century.

12.4.4 Recorded Monuments in the vicinity of the Proposed Development

There are no known archaeological sites or monuments within the boundary of the Proposed Development. Several Recorded Monuments and Places (RMP) are located in the vicinity.

The nearest known monuments are listed in the **Table 12.1** below. The RMP number, monument classification, townland name and approximate distance from the site boundary are presented below.

Table 12.1 List of Recorded Monument in the Vicinity of Proposed Development

RWP no.	County	Townland	Classification	Depiction on First Ed Map	Depiction on Second Ed Map	ITM co	ITM co	Distance to Nearest Element
OF011-020----	OFFALY	CLONLACK	Enclosure	Null	Hachured	655347.8	731358.8	c.420m
OF011-021----	OFFALY	CLONLACK	Ringfort - rath	Null	Hachured	655380.8	731530.8	c.415m
OF011-022----	OFFALY	CLARKVILLE	Barrow - ring-barrow	Null	'Mote'	658165.6		c.1.5km
OF011-023001-	OFFALY	BALLYMORAN	Enclosure	Null	Not indicated	657987	730326.9	c.1.4km
OF011-023002-	OFFALY	BALLYMORAN	Field system	Null	Not indicated	658000.2	730188	c.1.4km
OF011-028----	OFFALY	RATHLUMBER	Ringfort - rath	Null	Hachured	657259.4	729288.4	c.680m

RWP no.	County	Townland	Classification	Depiction on First Ed Map	Depiction on Second Ed Map	ITM co	ITM co	Distance to Nearest Element
OF011029- ---	OFFALY	RATHLUMBER	Enclosure	Null	Not indicated	657438	729129.7	c.870m
OF011- 033----	OFFALY	BALLYNAKILL (Coolestown By.)	Enclosure	Null	Not indicated	659217.3	729235.5	c.2.5km
OF011- 053----	OFFALY	CLONMEEN	Enclosure	Null	Not indicated	654646.6	730148.3	c.1.5km
OF011- 054----	OFFALY	CLARKVILLE	Barrow - ring- barrow	Null	Not indicated	657881.2	730578.3	c.1.3km
OF011- 062----	OFFALY	LEITRIM	Structure - peatland	Not indicated	Not indicated	654911.2	730340.2	c.1.6km

Table 12.2 Information on Structures/Buildings Listed in the NIAH

Reg No.	Original Use	In Use As	Townland	County	Date From	Date To	Rating	Distance
14911015	Farmhouse	N/A	Ballinla	Offaly	1840	1845	Regional	c.740m
14911008	Bridge	Bridge	Rogerstown	Offaly	1775	1800	Regional	c.1.4.km
14911022	House	House	Ballymorán	Offaly	1780	1820	Regional	c. 900

Some of the most notable houses in the area includes Ballinla House. Ballinla House is listed in the NIAH (Reg. 14911015, see **Plate 12.17**) and described as a detached three-bay two-storey farmhouse, built 1842, on an L-shaped plan. Occupied, 1901. 1911. Disused, 2004'. The house remains in good order and lies at 740m from the nearest element of the proposal and a series of farm buildings, open agricultural land and a grove of trees separate the house from the Proposed Development.



Plate 12-21: Ballinla House (NIAH Reg. 14911015) Located 740m from the Nearest Turbine

Lumville House is not listed in the NIAH as it has long since been demolished and a modern dwelling and farm sheds have been developed on and around the house site. Little is known about the former house, however notable formal gardens (**Figure 12.4A**) were once a feature, in particular a large rectangular canal with apsidal ends suggest a designed garden of later seventeenth or early-eighteenth century character. The house and garden may have been built by Elnathan Lum, who came to Ireland during the reign of King Charles II. Lum prospered as a banker in Dublin and bought the estate of Lumville. His grandson Francis Lum of Lumville was created a baronet in 1775. After his death the estate passed to distant cousins and the title became extinct and it is likely therefore that the house declined in importance after that time. It is possible that some of the later eighteenth century reclamation and land improvements such as recorded on the first edition Ordnance Survey map (**Figure 12.4A**) related to the Lumville Estate.

Ballmoran House (NIAH ref 14911022) stands at a distance of 900m to the east of the Proposed Development. The house is described as *Detached three-bay two-storey house, built c.1800, with return to rear and extension to south-west..... Once home to the Odium Quaker family, renowned for their cereal products*. The house is given a 'Regional' rating in the NIAH and is separated from the nearest proposed turbines by extensive areas of standing forestry.

Other notable cultural heritage features of the wider area are the Grand Canal, with a well maintained course running to the north of the site (**Plate 12.19**) whereon of the numerous bridges spanning the canal, Trimblestown Bridge (**Plate 12.18**) is the closest to the Proposed Development site at a distance of 1.4km to the northeast. Trimblestown Bridge is listed in the NIAH (Reg: 14911008) where is given a 'regional' rating.



Plate 12-22: Trimblestown Bridge (Reg 14911008) Span the Grand Canal at a distance of c. 900m from the Proposed Development



Plate 12-23: The Grand Canal Flows to the Northeast of the Proposed Development

12.4.5 Stray Finds

Stray finds recorded from the Study Area as detailed on the NMI online database hosted on Heritage Maps (<http://www.heritagemaps.ie>) were consulted as part of the study. It should be noted that this online database is partial only and current to 2010, and additional finds may have been registered for the Study Area in the interim. The finds listed in the online NMI database in the vicinity of the site under review include a bronze axehead (1983:80) from Rathlumber townland and a find of bog butter (2000:55) from Clonmeen townland, the butter was tub-shaped and there was no surviving evidence of container, the precise locations within the bogs for each find is not known.

12.4.6 The Proposed Grid Connection

The Proposed Grid Connection will travel from the Proposed Ballinla Wind Farm 110kV substation along the access tracks for approximately 0.5km to the L5010. On the L5010 the UGC will then travel east for approximately 2km to the L5006. On the L5006 the UGC will progress south on the L5006 for approximately 5km before joining the R401 south for approximately 1km where it will link into the newly constructed Philipstown 110kV substation. The full length of the Proposed Grid Connection is approximately 8km. The Proposed Grid Connection crosses one watercourse e, i.e. the Leitrim Stream and eighteen land drains (**Figure 12-1**)

The grid cabling will remain a permanent part of the national grid and therefore decommissioning is not foreseen. In the event of decommissioning, it will involve removing above ground structures and equipment while leaving underground infrastructure in place.

There are two Recorded Monuments in the immediate vicinity of the roadside where the cable trench will be excavated, one monument (RMP OF011-054) is located close to the L5019 road and the second (RMP RMP011-03501) close to the L5006 road. RMP OF011-022, a Barrow - ring-barrow in the townland of Clarkville (**Figure 12-11 and Figure 12-12**) is described in the Archaeological Survey of Ireland database as being *On high ground with good extensive views and nearby ring-barrow (OF011-055) to the S. Low rounded mound (H 1.3m. top diam. 2.5m. base diam. 12m) with no evidence of an enclosing bank or fosse. The mound shows signs of modern disturbance to the S probably the result of grazing livestock.*

The second monument RMP011-03501, **Figure 12-14** is described *Large bi-vallate enclosure consisting of a central flat area (c. 36m E-W) raised well above the surrounding ground surface and delimited by two large fosses and an intervening bank. Some evidence for an outer bank. Entrance gap with ramp at E. Small earthen mound (OF011-035002-) outside line of inner fosse would appear to have been built by the Marquis of Downshire c. 1825 (O'Flanagan 1933, 34). The bank is very wide and flat-topped and was probably landscaped at the same time. On the E facing slope of Ballykilleen Hill with good extensive views. Large impressive multivallate ringfort which consists of a raised circular platform (diam 35m. ext. H 3m) enclosed by three substantial earthen banks with two intervening fosses with wide flat berm (Width 11m) between the first and second banks probably the result of 19th-century landscaping with low earthen mound (OF011-035002-) also of 19th-century construction (O'Flanagan 1933 Vol. 1, 34) on enclosing berm at W. The circular platform is enclosed by a deep fosse (int. D 3m. Width 2m) with enclosing outer bank (int. H 1m. Width 1.5m) which has been landscaped to produce an intervening berm which is not visible at N. The second bank (Width 2m. int. H 1m) with external fosse (Width 2m. D 2m) is not visible at E probably due to the natural slope of the hill. Outside this fosse there is a third bank (Width 0.9m. int. H 1m) with enclosing external fosse (Width 2m. int. D 1m) visible from SSE through W to N elsewhere it is destroyed. Impressive causewayed entrance (Width 3m) at E. The site has an overall maximum diameter of 122m.*

In the townland of Ballykilleen (**Figures 12-14 and 12-15**) a survey carried out at Cloncreen Bog on behalf of Duchas identified 141 archaeological sightings, representing 117 archaeological sites and artefacts. Most of the sites were concentrated in the north-eastern corner of the bog, below a large hilltop enclosure on Ballykilleen Hill. Most of

the finds were well-defined wooden structures, traceable for 15m or less, with a high proportion showing a clear orientation. Two of the sites form longer trackways, over 50m in surviving length, and these are among the earliest structures in the area.

A number of sites from the bog have been dated, to the Early Neolithic, c. 3500 BC, to the Late Bronze Age, c. 600 BC. The majority date to the Middle to Late Bronze Age. A number of the sites included hurdle panels, with one example secured with twisted wooden withes at the end of the panel. Four sites incorporated large timbers with series of notches cut along their lengths which may be rough outs for artefacts or reused structural elements. Previous finds from this bog included a barbed and tanged arrowhead with its wooden shaft still attached, an associated bone axe, a socketed bronze axe and around 60 Elizabethan silver coins.

A number of lithics, including four leaf-shaped arrowheads of flint and chert and a broken flint plano-convex knife, were recovered from disturbed contexts in the southern and western parts of the bog. A single small wooden structure in the vicinity of the finds in the south of the bog produced the earliest Neolithic radiocarbon date (McDermott. C Irish Archaeological Wetland Unit. Licence number: 02E0941).

The yellow line on **Figures 12.10 to 12.13**. indicated the route of the proposed cable trench which runs along the L5010 road for 2km where it will meet L5006 and turn south for c. 5km.



Figure 12-10: Proposed Grid Connection with Recorded Monuments

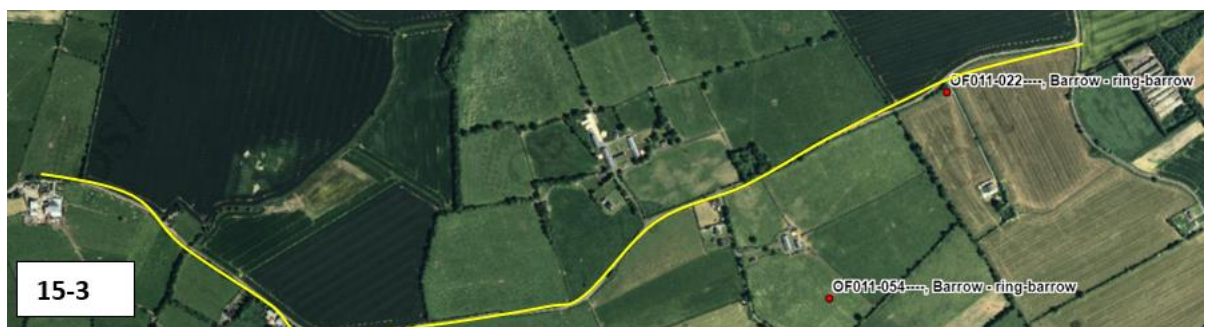


Figure 12-11: Proposed Grid Connection with Recorded Monuments



Figure 12-12: Proposed Grid Connection with Recorded Monuments

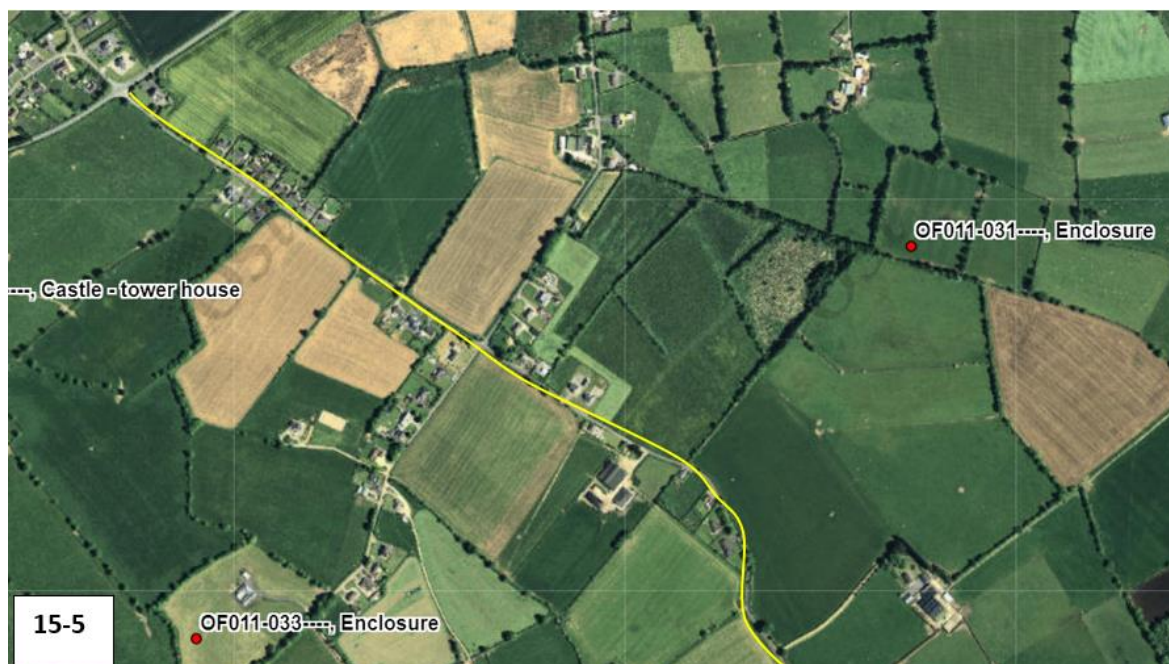


Figure 12-13: Proposed Grid Connection with Recorded Monuments

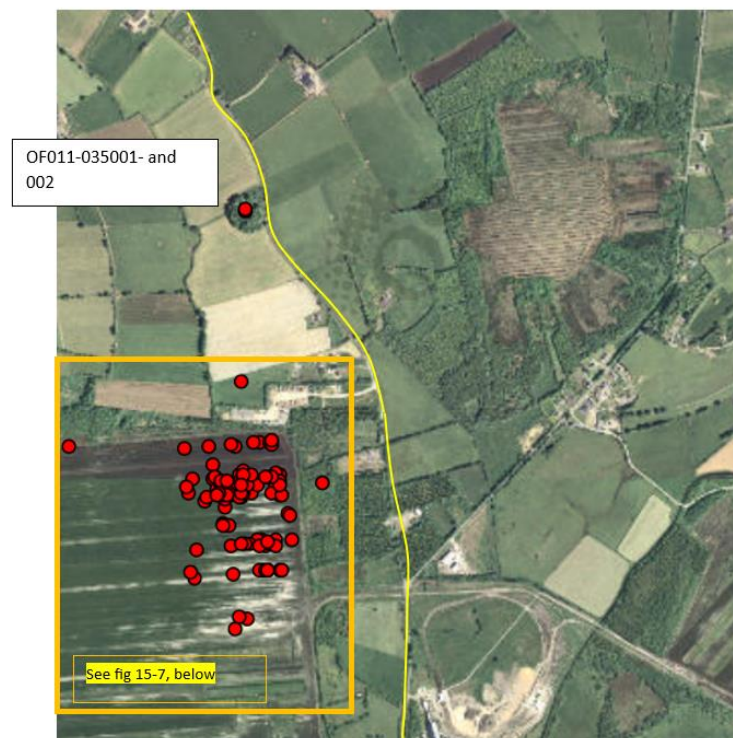


Figure 12-14: Proposed Grid Connection with Recorded Monuments

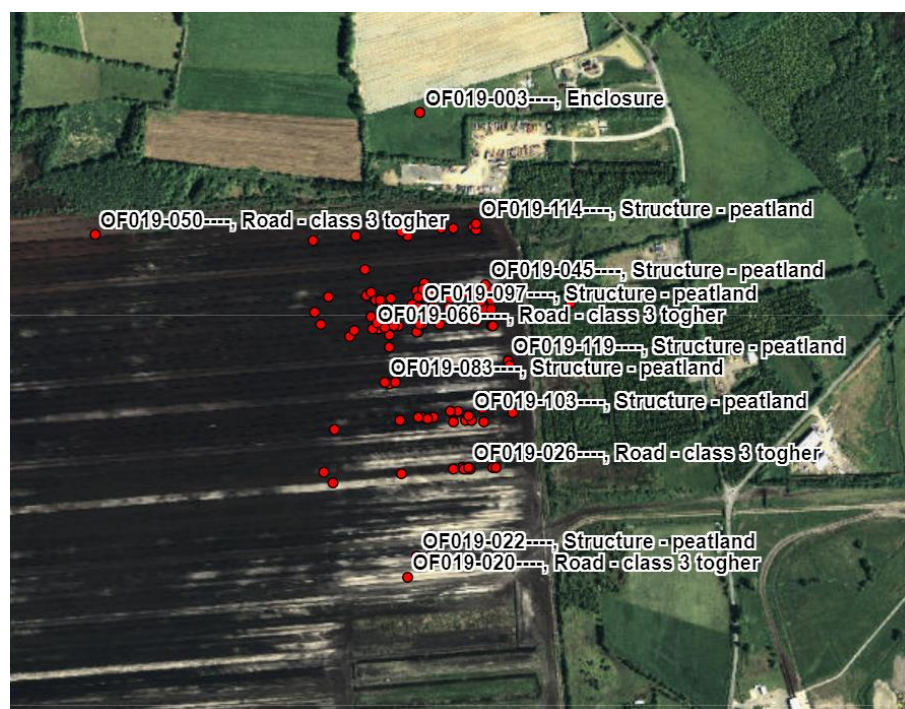


Figure 12-15: Detail of Monuments Discovered During Survey carried out at Cloncreen Bog on Behalf of Dúchas in Ballykilleen

12.4.7 Turbine Delivery Route

A Proposed TDR is being utilised to transport the turbines to the Proposed Wind Farm site (EIAR Vol. 3 Appendix 2-2). The Proposed TDR route includes two locations where works will take place that are covered in the above assessment for the Proposed Grid Connection. The Proposed TDR node works in the Ballyfore Big townland are within **Figure 12-7** while the Ballyleaken Proposed TDR node works are within **Figure 12-8**. A third Proposed TDR node works area at Ballina (Geashill By) includes an area that has already been developed as part of the Cushaling Wind Farm and the only works to take place are reinstatement works.

12.5 Assessment of Impacts and Effects

12.5.1 Construction Phase

Direct impacts tend to be mainly physical impacts resulting from the construction process and indirect impacts tend to be mainly visual. Direct impacts on the archaeological heritage are permanent as archaeology is a non-renewable resource.

There are no Recorded Monuments within or close to the Proposed Development.

Some monuments occur in the wider vicinity. Of the monuments in the vicinity, ringforts/enclosure are the most numerous and also the closest monument type to the site boundary. Of the ringforts, four fall within distance of 900m to the nearest element of the proposal. Two being at a little over 400m (RMP OF011-020 and OF011-021 at distances of 415m and 420m from Turbine 1) both monuments have surface expression. Two other ringforts are located in the Rathlumber townland, RMP OF011-029 has no surface expression and is known only from aerial photographs while RMP OF011-028 is described as a Circular enclosure (diam 47.5m) delimited by a small bank (H 0.5m) with shallow fosse (max. width 3.5m) with possible entrance gap (width 4m) at southeast. Small rectangular platform (6m x 5m) in northeast angle of site and another platform (7m x 12m) in the centre of the enclosure. The monuments stand at distance of 680m and 870m from nearest proposed Turbine (T5). Other monuments stand at much greater distance from all elements of the proposal (see **Table 12.1**).

Of the buildings listed in the National Inventory of Architectural Heritage, Ballinla House is the closest being at a distance of 600m to the closest proposed Turbine (T3). Ballinla House is listed in the NIAH (Reg. 14911015, see **Plate 12.17**) and described as a detached three-bay two-storey farmhouse, built 1842, on an L-shaped plan.Occupied, 1901. 1911. Disused, 2004'. Ballmoran House (NIAH ref 14911022) stands at a distance of 900m to the east of the Proposed Development at a distance of 900m to nearest proposed Turbine (T5) and is separated from the nearest proposed turbines by extensive areas of standing forestry.

There will be no direct impact on any upstanding known archaeological monuments nor on any standing building. The locations of the proposed turbines have been guided to avoid impacts on known archaeological monuments and buildings as well as areas of strong archaeological potential. A risk of potential impact that may have an effect on the archaeological resource of the site may arise at construction phase. The risk of inadvertent impact on hitherto unknown buried archaeological material is always a possibility, however appropriate mitigation measures to reduce any potential impacts is proposed (see Mitigation).

The Proposed Grid Connection will run along the verge margins or within the existing public roads. The proximity to known monuments alerts us to the potential that buried archaeological material may be encountered in the course of that work and this may be most appropriately mitigated by archaeological monitoring.

12.5.2 Operational Phase

Indirect Impacts tend to be mainly visual. Visual effects on archaeological monuments and historic buildings are mitigated primarily by distance from known features to the turbines. In all cases the turbines will be at distance of over 400m from known monuments and 600m or greater to the historic buildings. The low-lying topography of the Proposed Development site serves to further negate any visual impact, while existing tree-lined field fences, groves of trees and extensive areas of coniferous forest further reduce visual effect in the wider areas.

12.5.3 Decommissioning Phase

As appropriate measures to mitigate potential impact on the cultural heritage and archaeology will have been implemented in the course of the construction phase, no issues pertaining to cultural heritage and archaeology are likely to arise during the decommissioning phase.

12.5.4 Cumulative Impacts and Effects

There will be no cumulative impact arising from the Proposed Development.

Table 12.3: Summary of the Likely Effects on Archaeology and Cultural Heritage

Impact	Type of Effect	Quality of Effect	Significance	Spatial Extent	Duration
Construction Phase					
Known Archaeology	Unlikely	Neutral	Imperceptible	n/a	n/a
Unknown Archaeology	Direct	Negative	Indeterminable	Local/Regional	Permanent
Operational Phase					
Visual Impact	Unlikely	Neutral	Imperceptible	n/a	n/a
Decommissioning Phase					
	n/a	n/a	n/a	n/a	n/a

12.6 Mitigation and Monitoring Measures

12.6.1 Mitigation Measures

Pre-construction, a geophysical survey and test trenching should be carried out at the locations of each turbine and adjoining working area where soil removal is proposed as well as the location of the Proposed Substation and access road. A licence must be obtained for geophysical survey and archaeological test trenches from the NMS based on an agreed Method Statement well in advance of undertaking the necessary surveys. Much of the lands at the southern side of the Proposed Development may not be suitable for geophysical survey and the scope of archaeological testing may be limited by the terrain and existing forestry. In this case a provision for archaeological

monitoring at construction phase is suggested for all ground reduction works/topsoil stripping associated with the proposed windfarm.

It is recommended pre-construction and during construction that the appointed contractor will make provision for archaeological monitoring to be carried out under licence to the Department of Housing, Local Government and Heritage (DHLGH) and the NMI, and will ensure the full recognition of, and the proper excavation and recording of all archaeological soils features, finds and deposits which may be disturbed in the course of the works. All archaeological issues will be resolved to the satisfaction of the DHLGH and the NMI. The archaeologist should be provided with information on where and when the various elements and ground disturbance will take place.

12.6.2 Monitoring Measures (If relevant)

The risk of inadvertent impact on hitherto unknown buried archaeological material can be mitigated by archaeological monitoring of ground works associated with the project. It is recommended that a condition reflecting the suggested mitigation may form part of any grant of planning permission.

12.7 Residual Impacts and Effects

The predicted residual effects as a result of the Proposed Project are likely to be not significant-imperceptible once the recommended mitigation measures have been implemented.

12.8 Conclusion

There are no known or recorded monuments or find spots of archaeological importance on or near the Proposed Development, and no potential features of archaeological importance or historical significance were uncovered in the course of field walking or research.

There is a possibility for direct impact on unknown subsurface archaeology within the boundary limits of the Proposed Development during the construction phase. However, the risk of inadvertent impact on hitherto unknown buried archaeological material can be mitigated by a combination of geophysical survey, archaeological testing and monitoring at appropriate stages of the project.

The Proposed Grid Connection will run along the verge margins of existing public roads and although described in this EIAR will be subject to a future separate planning application. Nevertheless, the proximity to known monuments alerts us to the potential that buried archaeological material may be encountered in the course of that work and this may be most appropriately mitigated by archaeological monitoring.

12.9 References

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