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## Derrybrien Wind Farm Project

Gort Wind Farms Ltd.

## Remedial Environmental Impact Assessment Report Chapter 15- Cultural Heritage

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Engineering and Major Projects, One Dublin Airport Central, Dublin Airport, Cloghran, Co. Dublin,  
K67 XF72, Ireland.

**Phone** +353 (0)1 703 8000

**www.esb.ie**

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## 15 Cultural Heritage

### 15.1 Introduction

#### 15.1.1 Chapter Scope

This chapter assesses impacts on the known and potential cultural heritage resource during the construction, operation and future decommissioning of the Derrybrien wind farm project, including the grid connection, peat slide and remedial works. UNESCO define the term 'Cultural Heritage' as encompassing several aspects of tangible assets, including archaeological monuments, artefacts and architectural heritage structures, as well as intangible assets such as folklore, oral tradition and language.

The recorded and potential cultural heritage resource within a study area encompassing the wind farm site, including the peat slide and areas of remedial works, and the lands extending for 3km from its boundary, was reviewed. The size of this study area around the wind farm was chosen in order to compile a comprehensive cultural heritage baseline and context for its location and to determine whether any monuments with potential visual sensitivities, such as megalithic tombs or stone circles, are located within this area. A study area extending for 100m from either side of the Derrybrien-Agannygal 110kV Overhead line and Agannygal substation was reviewed to determine if the construction of pole set, mast and substation structures had resulted in direct or indirect impacts on the locations and settings of any nearby cultural heritage assets.

#### 15.1.2 Statement of Authority

This chapter was prepared by John Cronin and Tony Cummins of John Cronin and Associates. Mr Cronin holds qualifications in archaeology (B.A. (University College Cork (UCC), 1991), regional and urban planning (MRUP (University College Dublin (UCD) 1993) and post-graduate qualifications in urban and building conservation (MUBC (UCD), 1999). Mr Cummins holds primary and post-graduate degrees in archaeology (B.A. (UCC), 1992) and M.A. (UCC), 1994). Both individuals have each amassed twenty-five years industry experience in the compilation of archaeological, architectural and cultural heritage impact assessments.

#### 15.1.3 Methodology

This section commences with an outline of the criteria used to assess impacts on the known and potential elements of the cultural heritage resource within the study area and then outlines the methodology used to establish the baseline information on this resource.

### 15.1.3.1 EIA Council Directive 2014/52/EU

The methodology used for this assessment is based on EPA (2015) *Advice Notes for Preparing Environmental Impact Statements Draft September 2015* and EPA (2017) *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports Draft August 2017*, in accordance with Environmental Impact Assessment (EIA) requirements of codified EU Directive 2011/92/EU as amended by EU Directive 2014/52/EU, per current Planning Legislation, concerning EIA assessment: *Planning and Development Act, 2000 (as amended) (Part X)* and in *Part 10 of the Planning and Development Regulations, 2001 (as amended)*.

The following summation of the criteria applied to determine the nature of effects is provided in order to clearly and concisely outline the methodology specifically applied to the cultural heritage resource. Assessment was achieved by a consideration of the duration, quality, type, value and magnitude of effect(s) on the cultural heritage resource:

#### Duration of Effect

The duration of effects is assessed based on the following criteria:

- Momentary (seconds to minutes)
- Brief < 1 day
- Temporary <1 year
- Short-term 1-7 years
- Medium Term 7-15 years
- Long Term 15-60 years
- Permanent > 60 years
- Reversible: Effects that can be undone, for example through remediation or restoration

#### Quality of Effect

The quality of an effect on the cultural heritage resource can be positive, neutral or negative.

- *Positive* – a change which improves the quality of the cultural heritage environment (e.g. increasing amenity value of a site in terms of managed access, signage, presentation etc. or high-quality conservation/restoration and re-use of an otherwise vulnerable derelict structure).
- *Neutral* – no change or effects that are imperceptible, within the normal bounds of variation for the cultural heritage environment.
- *Negative* – a change which reduces the quality of the cultural heritage resource (e.g. visual intrusion on the setting of an asset, physical intrusion on features/setting of a site etc.)

#### Type of Effect

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The type of effect on the cultural heritage resource can be direct, indirect or no predicted effect.

- *Direct* – where a cultural heritage site is physically located within the footprint of the development, which will result in its complete or partial removal.
- *Indirect* – where a cultural heritage site, or its setting, is located in close proximity to the footprint of the development.
- *No predicted effect* – where the development will not adversely or positively affect a cultural heritage site.

Significance of the Effect

This is based on an assessment largely of the Magnitude of the Impact (graded from High to Negligible, based on a consideration of character, duration, probability and consequences) and the Value (graded from High to Negligible, based on a consideration of significance/sensitivity) of the heritage asset.

The Magnitude of Impact is based on the degree of change, incorporating any mitigation measures, which can be negative or positive, and is ranked without regard to the value of the asset according to the following scale: High; Medium; Low and Negligible.

The evaluation of the Value of a cultural heritage asset is largely based on its significance criteria, which is not to be considered definitive but rather an indicator that contributes to a wider judgment based on the individual circumstances of each asset. Generally, the more criteria that are evident for a given asset, the higher in scale its respective Value is adjudged. Criteria considered in addition to any legal designations include the condition/preservation; documentary/historical significance; group value; rarity; visibility in the landscape; fragility/vulnerability and amenity value.

The Value of all known or potential assets that may be affected by a development are ranked according to the following scale: High; Medium; Low and Negligible. The criteria outlined in Table 15-1 has been informed by the International Council on Monuments and Sites *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties* (ICOMOS 2011, 14-17).



**Table 15-1 Guidance criteria used for assessing the Value of Cultural Heritage Assets (after ICOMOS 2011) <sup>1</sup>**

<b>Value</b>	<b>Asset Type</b>
<b>Very High</b>	<p>World Heritage Sites (including Tentative List properties)</p> <p>Assets of acknowledged international importance, including buildings</p> <p>Assets that can contribute significantly to acknowledged international research objectives</p>
<b>High</b>	<p>Designated <i>National Monuments</i> (archaeological)</p> <p>Assets of significant quality and importance, including designated RMP sites</p> <p>Assets that can contribute significantly to acknowledged national research objectives</p> <p>Protected Structures/National Grade NIAH Buildings</p> <p>Conservation Areas containing significant buildings of national importance, including group value</p> <p>Archaeological Landscapes with significant inter-group value</p>
<b>Medium</b>	<p>Assets of good quality and importance, including designated RMP sites</p> <p>Assets that can contribute significantly to acknowledged regional research objectives</p> <p>Regional Grade NIAH Buildings</p> <p>Other undesignated buildings that can be shown to have exceptional qualities in their fabric or historical associations</p> <p>Undesignated structures of potential national importance (archaeological, potential 'new sites')</p> <p>Conservation Areas containing buildings that contribute significantly to a region's historic character</p> <p>Historic townscapes or built-up areas with important historic integrity in their buildings, or built settings (e.g. including street furniture and other structures)</p>

<sup>1</sup> This table is intended to be used as guidance for assessment of values which is to be combined with a consideration of the condition/preservation; documentary/historical significance; group value; rarity; visibility in the landscape; fragility/vulnerability and amenity value of individual Cultural Heritage assets on a case-by-case basis

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Value	Asset Type
<b>Low</b>	<p>Designated and undesignated assets of local importance, including buildings</p> <p>Assets compromised by poor preservation and/or poor survival of contextual associations</p> <p>Assets of limited value, but with potential to contribute to local research objectives</p> <p>Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings (e.g. including street furniture and other structures)</p>
<b>Negligible</b>	<p>Assets with very little or no surviving archaeological interest</p> <p>Buildings of no architectural or historical note; buildings of an intrusive character</p>

The Significance of Effect can be described as Profound, Very Significant, Significant, Moderate, Slight, Not Significant or Imperceptible.

**Table 15-2 Significance of Effects (per EPA 2017)**

Significance	Description
<b>Imperceptible</b>	An effect capable of measurement but without significant consequences
<b>Not Significant</b>	An effect which causes noticeable changes in the character of the environment but without significant consequences
<b>Slight</b>	An effect which causes noticeable changes in the character of the environment but without affecting its sensitivities
<b>Moderate</b>	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends
<b>Significant</b>	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
<b>Very Significant</b>	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment
<b>Profound</b>	An effect which obliterates sensitive characteristics

**Table 15-3 Assessment of Significance of Effects Matrix (after EPA 2017)**

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<b>Magnitude of Impact</b>	<b>High</b>	Not Significant/ Slight	Moderate/ Significant	Significant/ Very Significant	Very Significant/ Profound
	<b>Medium</b>	Not Significant	Slight	Moderate/ Significant	Significant/ Very significant
	<b>Low</b>	Not Significant/ Imperceptible	Slight/ Not Significant	Slight	Moderate
	<b>Negligible</b>	Imperceptible	Not Significant/ Imperceptible	Not Significant/ Slight	Slight
		<b>Negligible</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
		<b><i>Value/Sensitivity of the Asset</i></b>			

#### 15.1.3.2 Desktop Study

The desktop study sought to identify all recorded archaeological, architectural and other cultural heritage sites within the study area and also endeavoured to identify any hitherto unrecorded features or areas of cultural heritage significance. The collated information has provided an insight into the historical development of the study area over time and assisted in an evaluation of the potential presence of unrecorded cultural heritage sites.

The *Sites and Monuments Record* (SMR) and the *Record of Monuments and Places* (RMP) for County Galway, both published by the Archaeological Survey of Ireland (ASI), were the principal sources consulted for identifying known archaeological sites. The Record of Protected Structures (RPS) and the National Inventory of Architectural Heritage (NIAH) were consulted to assess the designated architectural heritage resource.

The following presents an overview of the sources consulted as part of the desktop study and a bibliography is provided in Section 15.7:

- *County Galway Development Plan (2015-2021)*: this publication lists the buildings and structures included in the RPS and it also presents the Council's policies and objectives designed for the protection of the archaeological and architectural heritage resources within the County, including the designation of Architectural Conservation Areas (ACA).

- *Historic Environment Viewer*: this online resource ([www.archaeology.ie](http://www.archaeology.ie)) is maintained by the Department of Culture, Heritage and the Gaeltacht and presents available summary descriptions of the recorded archaeological sites within the country. The available descriptions of sites within the study area are presented in **Appendix 15-1**
- *Previous Archaeological Assessments*: available archaeological assessments undertaken within the study area were consulted, including those prepared for various planning submissions associated with the wind farm development as well as available archaeological reports compiled during the construction phases. No report on the archaeological monitoring of the first construction phase of the wind farm during 2003 was available. The archaeologist (Christopher Read) who undertook that work was consulted during the compilation of this assessment.
- *UNESCO World Heritage Sites and Tentative List*: UNESCO seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity. There are two designated World Heritage sites in Ireland and a number of other significant sites are included in a Tentative List that was put forward by Ireland for consideration in 2010.
- *National Inventory of Architectural Heritage (NIAH)*: Relevant current datasets were accessed via [www.buildingsofireland.ie](http://www.buildingsofireland.ie) in October 2019.
- *Database of Irish Excavation Reports*: This database contains summary accounts of all licensed archaeological excavations carried out in Ireland (North and South) from 1970 to 2019. The database entries for investigations carried out within townlands in the study area are provided in within the chapter. Current data was accessed via [www.excavations.ie](http://www.excavations.ie) October 2019.
- *National Museum of Ireland (NMI) Topographical Files*: these files are archived in the National Museum of Ireland (NMI), Kildare Street, Dublin and record the discovery locations and other recorded information on Irish archaeological objects, including those within the museum's collections.
- *National Monuments Service (NMS) Archives*: the Archives Unit of the NMS is based in the Customs House, Dublin and contains records of the archaeological reports submitted to their offices. The reading room was closed to researchers during the preparation of this assessment, but the

Archives Unit kindly reviewed their files and forwarded a digital copy of the one report they hold relating to the Derrybrien wind farm.

- *Historical publications and cartographic sources:* various published and unpublished sources and historical maps were consulted. The historical maps and other figures are presented within the chapter and lists of consulted publications and online resources are provided in **Section 15.7**.
- *Aerial Imagery:* available online aerial images of the study area were reviewed in order to determine if any traces of unrecorded, sub-surface archaeological sites were evident.
- *Placenames Database of Ireland:* this current online database ([www.logainm.ie](http://www.logainm.ie)) provides a comprehensive management system for data, archival records and place names research conducted by the State. The database was reviewed in October 2019.
- *Irish National Folklore Collection:* transcribed material from the National Folklore Collection archive has been digitised and published on [www.duchas.ie](http://www.duchas.ie), which also publishes relevant images the Photographic Collection. The foundational collection - the *Irish Folklore Commission Collection 1935-1970* - was inscribed into the UNESCO *Memory of the World Register* (2017) in recognition of its 'world significance' and 'outstanding universal value to culture'. The online collection was reviewed in October 2019.

#### 15.1.3.3 Site Inspections

The study area was inspected in August 2018 and October 2019 and was assessed in terms of historic landscape, land use, vegetation cover, presence and potential for undetected archaeological and architectural heritage sites/features. No difficulties were encountered during the inspections, and all areas were accessible. The results of the site inspections are detailed in **Section 15.2.6** and extracts from the photographic record are presented in **Appendix 15-2**.

#### 15.1.4 Difficulties Encountered

The report on the results of archaeological monitoring of ground works during the first phase of construction of the wind farm could not be sourced but the archaeologist (Christopher Read) who undertook that work has provided written confirmation that nothing of archaeological significance was revealed in any area of the site. No other difficulties were encountered during the compilation of this chapter. .

## 15.2 Baseline Environment

### 15.2.1 Legal and Planning Framework

The management and protection of cultural heritage in Ireland is achieved through a framework of national laws and policies which are in accordance with the provisions of the Valetta Treaty (1995) (formally the *European Convention for the Protection of the Archaeological Heritage*, 1992) ratified by Ireland in 1997; the *European Convention for the Protection of Architectural Heritage* (Granada Convention, 1985), ratified by Ireland in 1997; and the *UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage*, 2003, ratified by Ireland in 2015.

The EIA Directives (from 1985 to 2014) set out the requirement for an EIA in European law. This assessment has been prepared in accordance EIA requirements of codified Council Directive 2011/92/EU as amended by EIA Council Directive 2014/52/EU, per current Planning Legislation, concerning EIA assessment: *Planning and Development Act, 2000 (as amended) (Part X)* and in *Part 10 of the Planning and Development Regulations, 2001 (as amended)*.

Ireland has transposed EU Directive 2014/52/EU by way of the *European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018* which came into operation on 1 September 2018. The Regulations provide for the transposition of the 2014 EIA Directive and give further effect to the 2011 EIA Directive by way of extensive amendments to existing planning law.

The national legal statutes and guidelines relevant to this assessment include:

- National Monuments Act (1930) (and amendments in 1954, 1987, 1994 and 2004);
- Heritage Act (1995);
- National Cultural Institutions Act (1997);
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act (1999);
- Planning and Development Act (2000);
- *Architectural Heritage Protection: Guidelines for Planning Authorities* (Department of Arts, Heritage, and the Gaeltacht, 2011); and
- *Framework and Principles for the Protection of the Archaeological Heritage* (Department of Arts, Heritage, Gaeltacht and the Islands, 1999)

#### 15.2.1.1 Archaeological Heritage

The following section presents a summary of the legal and policy frameworks designed to protect the Irish archaeological resource and further information is

available in the *Framework and Principles for the Protection of the Archaeological Heritage*<sup>2</sup> published by the Department of Arts, Heritage, Gaeltacht and the Islands (1999). The administration of national policy in relation to archaeological heritage management is the responsibility of the National Monuments Service (NMS) which is currently based in the Department of Culture, Heritage and the Gaeltacht. The National Monuments Act of 1930, and its Amendments, are the primary means of ensuring the satisfactory protection of the archaeological resource. They include a number of provisions that are applied to secure the protection of archaeological monuments. These include the designations of nationally significant sites as National Monuments, the Register of Historic Monuments, the Record of Monuments and Places, the Sites and Monuments Record, and the placing of Preservation Orders and Temporary Preservation Orders on endangered sites.

Section 2 of the National Monuments Act, 1930 defines a National Monument as ‘a monument or the remains of a monument the preservation of which is a matter of national importance’. The State may acquire or assume guardianship of examples through agreement with landowners or under compulsory orders. The prior written consent of the Minister is required for any works at, or in proximity to, a National Monument in the ownership or guardianship of the State, the Minister or a local authority, or those which are subject to a Preservation Order. There are no National Monuments or archaeological sites with Preservation Orders located within the study area.

The National Monuments (Amendment) Act, 1994 made provision for the establishment of the Record of Monuments and Places (RMP) which comprises the known archaeological sites within the State. The RMP, which is based on the earlier Register of Historic Monuments (RHM) and Sites and Monuments Record (SMR), provides county-based lists of all recorded archaeological sites with accompanying maps. All RMP sites receive statutory protection under the National Monuments Act 1994 and the NMS must be given two months’ notice in advance of any work proposed at their locations. There is one recorded, levelled archaeological site located within the wind farm site and there are eleven examples within the surrounding study area. These recorded archaeological sites are listed in **Table 15.4** and their published ASI descriptions are provided in **Appendix 15-1**.

The *Galway County Council Development Plan 2015-2021* presents a number of policies and objectives in relation to the protection of the archaeological resource, including the protection of sites listed in the RMP (Objective ARC 1), undertaking reviews of proposed developments that takes the archaeological heritage into

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<sup>2</sup> <https://www.archaeology.ie/sites/default/files/media/publications/framework-and-principles-for-protection-of-archaeological-heritage.pdf>



account (Objective ARC 2) and to protect and preserve archaeological sites identified subsequent to the publication of the RMP (Objective ARC 3).

#### 15.2.1.2 Architectural Heritage

The following section presents a summary of the legal and policy frameworks designed to protect the Irish architectural heritage resource and further information is available in the *Architectural Heritage Protection: Guidelines for Planning Authorities*, published by the Department of Arts, Heritage, and the Gaeltacht (2011). Protection of architectural heritage is provided for through a range of legal instruments that include the *Heritage Act (1995)*, the *Architectural Heritage (National Inventory) & National Monuments (Misc. Provisions) Act (1999)*, and the *Planning and Development Act (2000)*. The Heritage Act (1995) defines architectural heritage as including:

*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.*

The National Inventory of Architectural Heritage (NIAH) was established under the *Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999*, to record architectural heritage structures within the State. While inclusion in the NIAH does not provide statutory protection to a structure it is intended to advise local authorities on compilation of their Record of Protected Structures. The NIAH also includes a Designed Landscapes and Historic Gardens Survey which comprises a non-statutory, desk-based survey of such features. There are no NIAH-listed structures located within the wind farm, peat slide area, remedial works, grid connection route and substation or within their close environs. There are three structures within the study area listed in the NIAH: St Patrick's Church, its gate/railings and a cottage structure within Derrybrien village (ref.s 30412401, 30412402 and 30412403). These structures are located approx. 2km to the southwest of the peat slide and remedial works, 2.3km south of the wind farm and 2.2km west of the overhead line **Figure 15.1**.

The conservation principles of care and protection of architectural heritage and the facilitation of the listing of significant buildings of architectural heritage merit are set out in *Part IV of the Planning and Development Act (2000)*. This requires planning authorities to maintain a Record of Protected Structures (RPS) of structures with special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, to be included in their Development Plans. Any changes that materially affect the character of a protected structure require planning permission. A protected structure also includes the land and other structures within its curtilage. While the notion of curtilage is not defined by legislation, the *Architectural Heritage*



*Protection Guidelines for Local Authorities* (Dept. Arts, Heritage and the Gaeltacht 2011), describes it as the parcel of land immediately associated with a structure and which is (or was) in use for the purposes of the structure. There are no protected structures located within the wind farm, peat slide area, remedial works, grid connection route and substation or within their close environs. There are two protected structures located within the study area: St Patrick's Church and its gate/railings within Derrybrien village which are both listed in the RPS published in the *County Galway Development Plan 2015-2021* (PS 452/3594). These structures are located approx. 2km to the southwest of the peat slide and remedial works, 2.3km south of the wind farm and 2.2km west of the overhead line.

In addition, planning authorities must provide for the preservation of places, groups of structures and townscapes of architectural heritage significance within their administrative areas through the designation of Architectural Conservation Areas (ACAs). There are no ACAs located within the study area.

The *Galway County Development Plan 2015-2021* outlines a number of policies and objectives in relation to the protection of the architectural heritage resource within the county. These include the Council's policies to implement the legislative, statutory and policy provisions relevant to the conservation of these resources (Objective AH 1), to protect structures listed in the RPS (Objective AH 2) and recognises the importance of vernacular architecture (Objective AH 6).

## 15.2.2 General Context

The wind farm site is located approximately 11km south of Loughrea and 12.7km north north east of Gort in south County Galway. It is situated on a ridgeline between the summits of Cashlaundrumlahan and Sonnagh Old within the Slieve Aughty Mountains and commands extensive views over the surrounding landscape. Much of the immediate environs of the existing wind farm infrastructure is occupied by a commercial forestry plantation dating to the 1960s-70s and the areas of unplanted ground comprise vacant peatland. The geology of the area is Devonian sandstone (Old Red Sandstone) with occasional outcropping of shales and limestones and the dominant soils are blanket peats over a sandstone till. The location of the peat slide and remedial works are on the lower slopes to the south of the wind farm and the overhead grid connection route extends through the forestry plantation on the lower southern slopes and then continues southwards through a generally level, boggy landscape to the location of Agannygal substation. Further details on the physical environment of the wind farm and off-site work locations are presented in the field survey section of this chapter (**Section 15.2.6**).

### 15.2.3 Archaeological and Historical Context

The following section presents summary details of the main periods within the Irish archaeological record with references to the recorded archaeological sites located within the study area. Datasets have been interrogated and retrieved from State Body organisations and are considered accurate and current per publicly available information (Historic Environment Viewer: Dept. Culture, Heritage & Gaeltacht [www.archaeology.ie](http://www.archaeology.ie) and the Excavation Database: [www.excavations.ie](http://www.excavations.ie)). The dating framework used for each period of the archaeological record is based on the *Guidelines for Authors of Reports on Archaeological Excavations* published by the National Monuments Service<sup>3</sup>.

The locations of World Heritage Sites (Ireland) and the Tentative List of World Heritage Sites submitted by the Irish State to UNESCO were reviewed and none are located within the environs of the study area.

There are eleven recorded archaeological sites located within the 3km study area around the wind farm. These are listed below (**Table 15.4**) and their published ASI descriptions are presented in **Appendix 15-1**. There are no Preservation Orders on any of these sites and none have been designated as National Monuments. The nearest National Monument to the wind farm site is Isert Kelly Castle (Nat. Mon. ref. 272) which is located approximately 9.7km to the northwest. There are no recorded archaeological sites with visual alignment attributes, such as megalithic tombs and stone circles, located within the study area.

The recorded archaeological sites located within the study area comprise the recorded location of a levelled cashel (GA124-001----) within the wind farm property, a children's burial ground (GA115-007----), an enclosure (GA124-004----), a monumental structure (GA124-006----), two boundary mounds (GA124-009---- and GA124-010----), a church site (GA124-013----) and a burial ground (GA124-005----) with an associated bullaun stone (GA124-005001-). Two other recorded sites within the study area have been reclassified as 'redundant records' by the ASI having been found upon inspection to be non-archaeological in origin (see **Table 15.4** and **Appendix 15-1**). There is a notable paucity of recorded archaeological sites within the upland areas of Slieve Aughty when compared with the surrounding lowlands in all directions. This pattern may reflect the poorer agricultural potential of this upland area combined with the development of peats that may obscure unrecorded, buried archaeological sites.

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<sup>3</sup> <https://www.archaeology.ie/sites/default/files/media/publications/excavation-reports-guidelines-for-authors.pdf>

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The recorded location of the cashel site (GA124-001----) is adjacent to an access road in the northwest quadrant of the wind farm. As noted below, there are no surface remains of this site and the ASI records that it may have been destroyed by the forestry plantation that occupied this area prior to the wind farm development. This site was not included in the RMP for Co. Galway published in 1997 and is not indicated as an archaeological site on the SMR map dated to the same year. The site is also not included in the archaeological assessment reports associated with the wind farm development in the late 1990s and the 2000s. The current online description of the site was uploaded to the National Monument Service's online Historic Environment Viewer in 2015 indicating that it was added to the SMR following construction of the wind farm. There are no other recorded archaeological sites located within 400m of the wind farm.

There are no recorded archaeological sites located within the study area extending for 100m from either side of the grid connection route and Agannygal substation. The nearest recorded archaeological monument to these elements of the project is an enclosure (GA124-004----) located approx. 1.2km to the west of the overhead line.

There are no recorded archaeological sites located within 1km of the footprint of the peat slide, barrages and other remediation measures. The nearest example is a burial ground (GA124-005----) which is located approx. 1.9km to the southwest of Barrage 4 and 2.1km south of the peat slide.

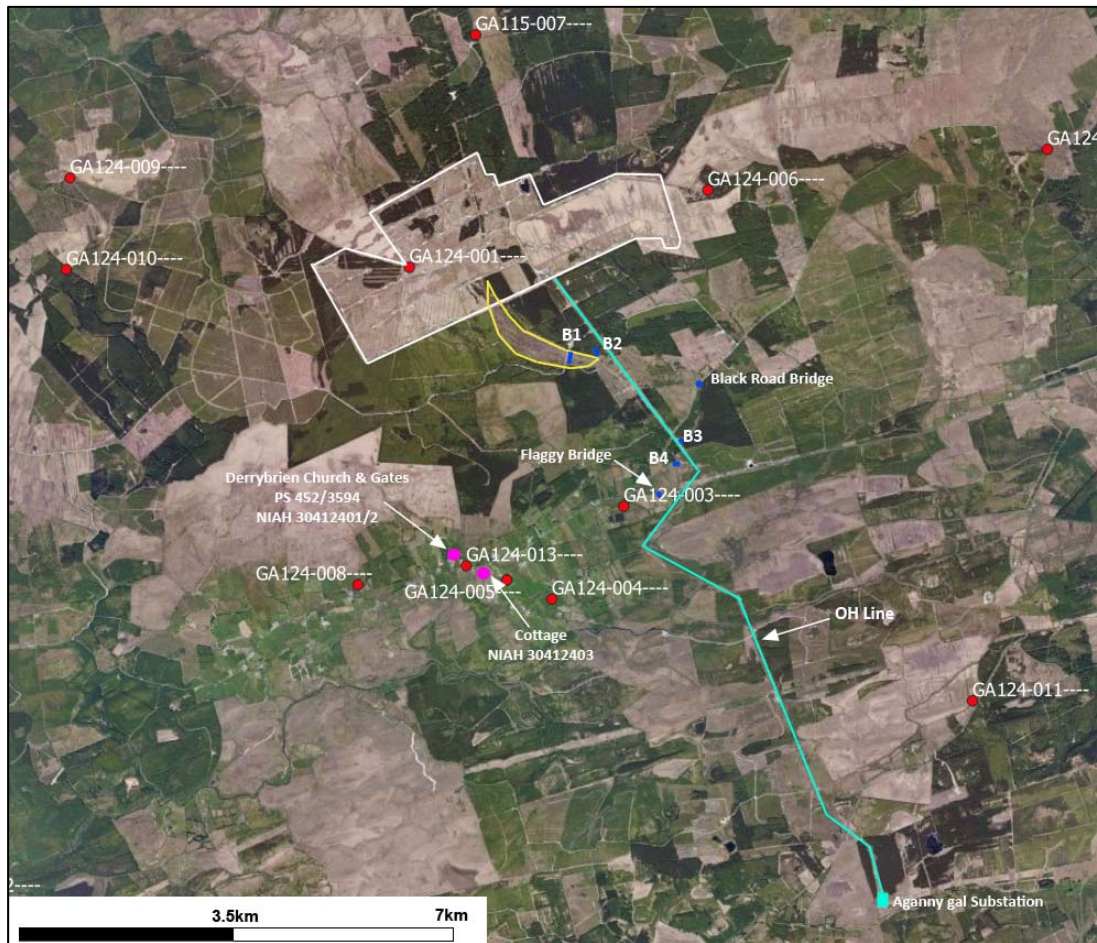
**Table 15-4 Recorded archaeological sites within the study area**

Monument Ref.	Class	Townland	ITM E	ITM N	Distance from wind farm
GA115-007-- --	Children's burial ground	BOHABOY	559265	707027	1.2km to north
GA124-001-- --	Cashel	KILBEG (Loughrea By.), BOLEYNEENDORRISH, DERRYBRIEN WEST, TOORMACNEVIN	558604	704783	Within boundary
GA124-003-- --	Redundant record	DERRYBRIEN EAST	560664	702452	2.29km to south
GA124-004-- --	Enclosure	DERRYBRIEN EAST	559959	701558	2.78km to south
GA124-005-- --	Burial ground	DERRYBRIEN EAST	559523	701748	2.5km to south

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Monument Ref.	Class	Townland	ITM E	ITM N	Distance from wind farm
GA124-005001-	Bullaun stone	DERRYBRIEN EAST	559523	701748	2.5km to south
GA124-006--	Monumental structure	DERRYBRIEN NORTH	561505	705505	0.4km to east
GA124-008--	Redundant record	DERRYBRIEN WEST	558078	701714	2.26km to south
GA124-009--	Boundary mound	BOLEYNEENDORRISH, GORTADRAGAUN	555320	705676	2.65km to west
GA124-010--	Boundary mound	GORTADRAGAUN, KNOCKOURA	555276	704791	2.5km to west
GA124-013--	Church	DERRYBRIEN WEST	559131	701888	2.3km to south

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**Figure 15-1 Location of recorded archaeological and architectural heritage sites within study area (barrage locations prefixed with 'B', peat slide shown in yellow and overhead line/substation in blue)**

#### 15.2.3.1 Prehistoric periods

Until recent years the earliest recorded evidence for human settlement in Ireland dated to the Mesolithic period (7000–4000 BC) although recently discovered evidence of a butchery marks on c.12,500 year old bear bone recovered from a cave site in Co. Clare suggests that humans were present on the island during the earlier Palaeolithic period. While the Mesolithic period hunter-gatherers did not construct any settlements or monuments that leave any above ground traces, their presence in an area can often be identified by scatters of worked flints in ploughed fields, shoreline shell middens and traces of temporary occupation sites occasionally uncovered during ground works. The archaeological record indicates that these nomadic groups tended to favour coastal, lake and river shorelines which provided a transport resource as well as a source for elements of their varied diet. The Neolithic period (4000-2400 BC) in Ireland began with the arrival and establishment of agriculture as the principal form of economic subsistence, which resulted in more permanent settlements within farmlands created within areas of cleared forestry. As a consequence of the more settled nature of agrarian life, new site-types, such as



substantial rectangular timber houses and various types of megalithic tombs, as well as new artefacts, including pottery, begin to appear in the archaeological record during this period.

Metalworking arrived in Ireland with the advent of the Bronze Age period (c. 2400–500 BC) and saw the introduction of a new artefactual assemblage, including metal and ceramic objects, to the island. This period was also associated with the construction of new monument types such as standing stones, stone rows, stone circles and burnt mounds/fulachta fia. The development of new burial practices during this period also saw the construction of funerary monuments such as cairns, barrows, boulder burials and cists. The arrival of iron-working technology in Ireland saw the advent of the Iron Age (600 BC – 400 AD). This period has traditionally been associated with a Celtic ‘invasion’ but recent archaeological evidence points instead to a gradual acculturation of the Irish Bronze Age communities following centuries of contacts with Celtic-type cultures in Europe. Relatively little was known about Iron Age settlement and ritual practices in Ireland until recent decades when the corpus of evidence has been greatly increased by the discovery of sub-surface sites dating to this period during archaeological investigations in advance of development projects.

While there are no positively identified prehistoric sites located within the study area it does contain two boundary mounds (GA124-009---- & GA124-010----) which may conceivably date from any period from prehistory onward. The topographical files of the National Museum of Ireland (NMI) record the discovery of a number of potential prehistoric artefacts, including the notable six stranded amber necklace recovered from the Derrybrien area (NMI ref. 1954:11:1-448), within townlands in the study area which attest to human activity in the area during prehistory. The Historic Environment Viewer mapping indicates the find location of the necklace within a now forested area located c.400m to the east of the wind farm but the potential exists that this is an indicative location.

**Table 15-5 NMI topographical files for prehistoric artefacts discovered within townlands in the study area**

NMI Ref.	Townland	Details
1954:11:1-448	Derrybrien North	During turf-cutting on his bog in June 1954, Mr. Joseph McHugo of Derrybrien discovered a large number of amber beads and a gold clasp which he considered to be ancient because of their position at the bottom of the bog which had not been cut. (Td. Derrybrien North, par, Killeenadeema, bar. Loughrea, Co. Galway, OS 6", 124, 23.5cm. N 39.5 cm W) The find was made in an upland bog covering the slope of a hill in the Slieve

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NMI Ref.	Townland	Details
		Aughty mountain region near the 600-foot contour, the highest point registered in the vicinity being 1,207 feet. At the find spot the depth of the part was 30 to 35 cm, overlying bedrock with some loose gravel stones in between. The gold fragment and all the beads were collected and acquired by the National Museum
1968:0017-18	Derrybrien South	Two polished stone axe heads. The first example was a flat triangular stone measuring 13cm long by 7.84cm in maximum width at the cutting edge, 3cm at the butt and 2.1cm at the centre. A fragment of the butt of a second example was also recovered and measured 7.3cm long, 4.3cm wide and 1.6cm thick.
1965:81	Doonally	A bronze leaf sword with a dark green patina which is described in the file as being in fair condition although missing the tang and butt. The blade measured 41cm long with a maximum width of 2.7cm and had a pointed, oval section. The possible location of a rivet hole was indicated by an indentation on one side. This object was sourced from the Grierson Museum in Dumfries, Scotland with a recorded provenance in Doonally townland.

#### 15.2.3.2 Early medieval period

This period began with the introduction of Christianity in Ireland and continued up to the arrival of the Anglo-Normans during the 12<sup>th</sup> century (c. 400–1169 AD). The establishment of the Irish church was to have profound implications for political, social and economic life and is attested to in the archaeological record by the presence of church sites, associated places for burial and holy wells. The early medieval church sites were morphologically similar to ringforts but are often differentiated by the presence of features such as church buildings, graves, stone crosses and shrines. This period saw the emergence of the first phases of urbanisation around the large monasteries and the Hiberno-Norse ports. However, the dominant settlement pattern of the period continued to be rural-based in sites such as ringforts, which comprise roughly circular enclosures delimited by roughly circular earthen banks formed of material thrown up from a concentric external ditch, and stone-built equivalents known as cashels which are concentrated in western counties. These monuments comprise one of the most numerous site-types in the Irish landscape and their early medieval names – *rath/lios/dun* - still form some of the most common place-name elements in the country. Archaeological excavations indicate that the majority comprised enclosed farmsteads with internal timber buildings and were surrounded by associated field systems, stockades, barns, mills and drying-kilns. The study area is located within the Slieve Aughty region which according to tradition was named after Eachtra of the Tuath De Danann who was

granted lands in the area by Fergus of Connacht as a wedding gift. The region around Gort was associated with Guaire Aidne Mac Colmáin, a 6<sup>th</sup>-century king of Connacht, and then with the 7<sup>th</sup>-century kingdom of the Uí Fiacrach Aidhne.

The study area contains the recorded location of a levelled cashel site (GA124-001----) which is located within the wind farm boundary. The ASI description of this site, which was uploaded to the Historic Environment Viewer<sup>4</sup> in 2015, records that there were no surface traces of this monument visible when the area was inspected and that it may have been levelled during the creation of the forestry plantation. The recorded location of this site is named 'Cashlaundrumlahan' on the OS maps, which may refer to the summit of the hill of the same name which is at the labelled location and no trace of an enclosure is depicted on these cartographic sources. The ASI description also records that, according to local information, a 'double wall' once existed here but it was destroyed when the area was forested and that, while no visible surface trace survives, a curving trackway in this area may respect the circuit of the monument. As previously noted, this site was not included in the RMP for Co. Galway published in 1997 and is not indicated as an archaeological site on the SMR mapping dated to the same year. The site is also not included in the lists of archaeological monuments within the environs of the development presented in the archaeological assessment reports prepared as part of the planning applications for the wind farm in the late 1990s and the 2000s. The curving trackway referred to in the ASI description was created during the construction phase of the wind farm and it appears that this location was added to the SMR following the construction phase. The archaeological monitoring of ground works during the construction phases of the wind farm did not reveal any archaeological features at its recorded location, which comprised a borrow pit, and there are also no references to the location in the Excavation Database.

The study area around the wind farm contains an enclosure site (GA124-004----), which may potentially form the remains of an unclassified ringfort or cashel, and this is located in the lowlands to the south of the wind farm. The study area also contains a church site (GA124-013----) located approx. 2km to the south of the wind farm which is now occupied by the 19<sup>th</sup>-century St Patrick's Church. The presence of a bullaun stone (GA124-005001-) within a graveyard (GA124-005----) located approx. 400m to the southeast of the church is indicative of the presence of earlier ecclesiastical activity within the area.

#### 15.2.3.3 Late medieval, Post Medieval and Early Modern Periods

The arrival and conquest of large parts of Ireland by the Anglo-Normans in the late 12<sup>th</sup> century broadly marks the advent of the Irish high medieval period which continued to c.1400 and was followed by the late medieval period which extended to

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<sup>4</sup> <https://webgis.archaeology.ie/historicenvironment/>



c.1550. These periods saw the continuing expansion of Irish urbanisation as many of the Viking port towns developed into international trading centres but the main. By the 15<sup>th</sup> century the native Irish chieftains and lords began to construct tower houses as fortified residences within their landholdings and many towns and villages began to develop as local trading centres. The study area is located 12.7km north north east of Gort town, which was the principle residence of Sir Roger O'Shaughnessy, Lord of Kineal Aedh, during the 16<sup>th</sup> century. There are no recorded archaeological sites definitively dated to these periods located within the study area.

The centuries following 1550 are referred to as the post-medieval period, which is generally considered to continue into the middle of the 19<sup>th</sup> century and the period thereafter is described as early modern. The 16<sup>th</sup> and 17<sup>th</sup> centuries were a turbulent time in Irish history with periods of war-shed between the 1560s-1603 and then during the Cromwellian Wars 1649–53 which resulted in the extensive dispossession of forfeited Gaelic lands. The Down Survey was compiled during the 17<sup>th</sup> century as part of the Cromwellian Plantation and records that in 1641 the majority of the lands in what was then referred to as the '*Derybrine Mountain*' area were classified as unprofitable. An agricultural boom in the late 18<sup>th</sup> and early 19<sup>th</sup> centuries saw a rise in prices for both tillage and dairy produce which resulted in landlords investing in extensive land improvement works within their holdings to increase land productivity. This included extensive enclosure of open lands into bounded field systems many of which survive to the present-day. The settlement pattern throughout much of the Irish rural landscape was greatly affected by de-population during the famine period in the middle of the 19<sup>th</sup> century.

The post-medieval period saw the development of high and low status stone houses throughout the Irish countryside and rural settlement clusters at this time typically consisted of single-storey thatched cottages with associated farm buildings while two-storey farmhouses became more common during the 19<sup>th</sup> century. Remote uplands areas, including landscapes similar to that occupied by the wind farm, may also contain the remains of post-medieval features such as booley huts and small fields or stockade enclosures associated with seasonal agricultural practices that may not always be depicted on historical maps. It is likely that the extensive 20<sup>th</sup> century forestry plantation within the study area would have removed traces of any such features on the Derrybrien hillsides. The Tithe Applotment Books of 1825 list thirteen families in the Derrybrien area indicating that the general area was sparsely populated at that time. Further details on the context of the study area during the post-medieval and early modern periods are presented in the review of historical cartographic sources (**Section 15.2.3.4**).

The study area contains a monumental feature known locally as the 'Earl's Chair' (GA124-006----) which the ASI records was an early 19<sup>th</sup>-century folly feature associated with the Earl of Clanrickarde. Its recorded location is within an area of

commercial forestry approx. 225m to the north of the access road to the wind farm and 400m to the east of the wind farm itself. The ASI description of this site notes that it was largely destroyed by the creation of the forest plantation. It has also been recorded that the remains of the feature now survive as a cluster of flat slabs with only one set upright and its location marked the convergence of five separate landholdings (Fitzpatrick 2004). Local tradition records that the feature was used by the Earl as a vantage point for surveying his lands in the area and that a popular fiddle tune entitled 'The Earls Chair' was composed by a local musician, Packie Moloney, as he rested on the rock (Fuller 2014). A children's burial ground (GA115-007----) of potential post-medieval date is located in Bohaboy townland at a distance of approx. 1km to the north of the wind farm. While these types of burial ground are often associated with the 19<sup>th</sup>-century Famine period this example is present on the 1st edition 6-inch map, which labels it as *Knockalaghta Graveyard*, demonstrating that it pre-dated the 1840s famine and may potentially indicate the presence of an earlier ecclesiastical site at this location.

The following descriptions of the Derrybrien area and the Parish of Killeenadeema were published in *A Topographical Dictionary of Ireland* (Lewis 1837):

*DERRYBRIEN, an extra-parochial place, in the barony of LOUGHREA, county of GALWAY, and province of CONNAUGHT, about 9 miles (S.) of Loughrea ; containing 907 inhabitants. It consists of a range of mountains of the same name, extending from Gort to Woodford, and partly separating the southern part of the county from Clare : there is a good road over them from Woodford to Gort. Here is a R. C. chapel, dependent on that of Killeenadeema.*

*KILLEENADEEMA, or KILNADEEMA, a parish, in the barony of LOUGHREA, county of GALWAY, and province of CONNAUGHT, 3 miles (S. by W.) from Loughrea ; containing 3554 inhabitants, This parish comprises a considerable portion of the Derrybrien mountains, and contains 1854 statute acres apportioned under the tithe act. It is a vicarage, in the diocese of Clonfert, with the greater portion of the rectory united, together forming part of the union of Loughrea ; the remainder of the rectory is appropriate to the deanery of Clonfert ; .... In the R. C. divisions it is the head of a union or district, comprising also the parish of Kiltesskill, and containing chapels at Kildeema, Derrybrien, and Ayle, About 210 children are educated in three public schools, to each of which the Earl of Clancarty contributes £(?)5 annually, and about 120 are taught in two private schools.*

#### 15.2.3.4 Cartographic Sources

The detail on historic cartographic sources can demonstrate the nature of past settlements and land use patterns within a study area in recent centuries and may also highlight the impact of modern developments. This information can aid in the identification of the location and extent of unrecorded or partially levelled features of archaeological or architectural heritage interest. The cartographic sources examined for the study areas comprised the available 17<sup>th</sup> century Down Survey mapping (**Figure 15.2**), the 1<sup>st</sup> edition 6-inch OS map (surveyed and published in the 1830s-40s) (**Figure 15.3**) and the Cassini edition 6-inch map (surveyed in 1930s-40s) (**Figure 15.4**). The area containing the wind farm is not covered by the 25-inch OS map series (surveyed 1888-1913) although a section of the lands containing the overhead line is depicted and was reviewed part of the assessment.

The study area is located in the Barony of Loughreagh and, while the 17<sup>th</sup>-century Down Survey map of this territory does not survive, it is shown as a vacant upland area on the larger scale mapping compiled as part of the survey (**Figure 15.2**). There were no features of archaeological or architectural heritage significance identified within the wind farm or its close environs during the inspection of the available historic OS maps. The 1<sup>st</sup> edition 6-inch map depicts the wind farm site and its environs as vacant upland heath with enclosed field systems located in the surrounding lowlands. The approximate recorded location of the cashel site (GA124-001----) in the northeast corner of the wind farm is indicated as '*Cashlaundrumlahan*', but no enclosure indicating the presence of an archaeological site at this location is illustrated and it is possible that the label may indicate the adjacent marked summit of the hill bearing the same name. The historic OS maps of the locations of the peat slide, remedial works, overhead line and Agannygal substation were also reviewed and no potential unrecorded archaeological or architectural heritage features were noted on the footprints of these areas or within their close environs. The consulted Cassini edition OS map of the 1930s-40s indicates that the wind farm site remained as vacant heathland during the first half of the 20<sup>th</sup> century although some field enclosures are shown extending up the hillslopes and encroach into the north end of the site.

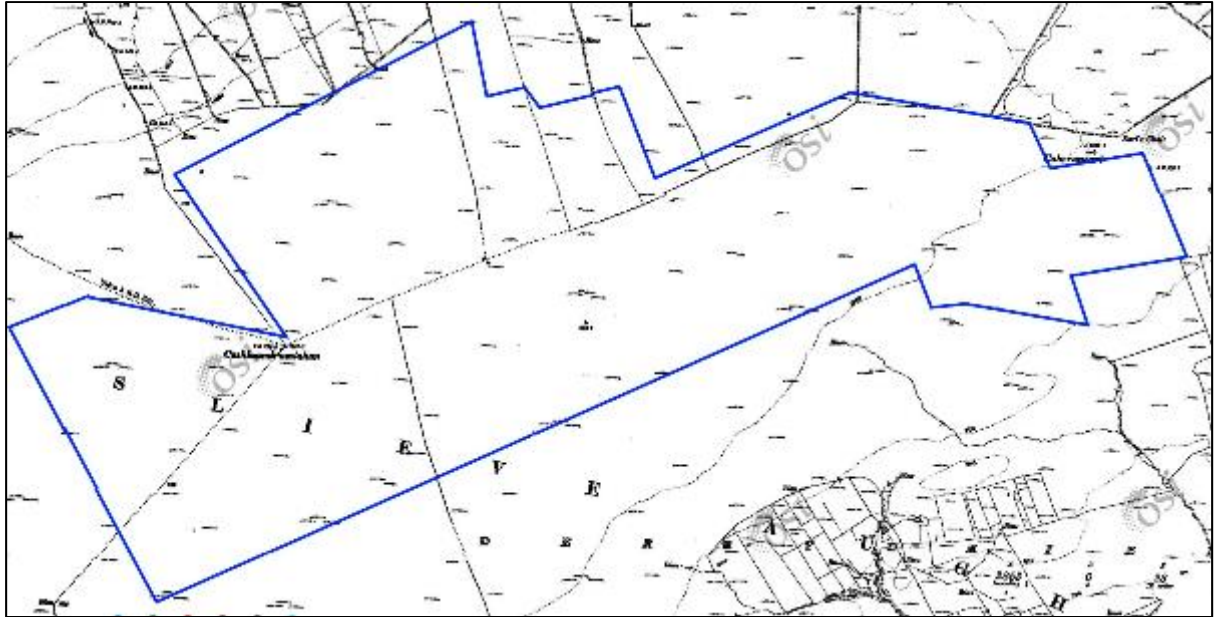


**Figure 15-2 Extract from 17th-century Down Survey mapping with general area of study area shaded red (Source: Trinity College Dublin [www.downsurvey.tcd.ie](http://www.downsurvey.tcd.ie))**



**Figure 15-3 Extract from 1st edition 6-inch OS map (1830s-40) with general location of wind farm outlined (OSI Licence ref. 0003319)**





**Figure 15-4 Extract from Cassini edition 6-inch OS map (1930s-40) with general location of wind farm outlined (OSI Licence ref. 0003319)**

#### 15.2.3.5 Aerial Imagery

Various online aerial images of the study area, including those published by OSI, Google and Bing, were consulted as part of the assessment. These provide a series of overviews of the study area from the 1990s onwards which encompass the periods before and after the construction of the wind farm. The detail on the images taken prior to the construction of the wind farm indicate that much of the landholding had previously been impacted by the commercial forestry plantation and the forest tracks within the environs of the levelled cashel (GA124-001----) are present on these images.

Figure 15-5.1 Extracts from OSI aerial images showing the general wind farm location prior to construction

Figure 15-5.2 Extracts from OSI aerial images showing the general wind farm location after construction. The locations of the peat slide (white arrow) and north end of the grid connection route (yellow arrow) are indicated on the 2005 image (OSI Licence ref. 0003319

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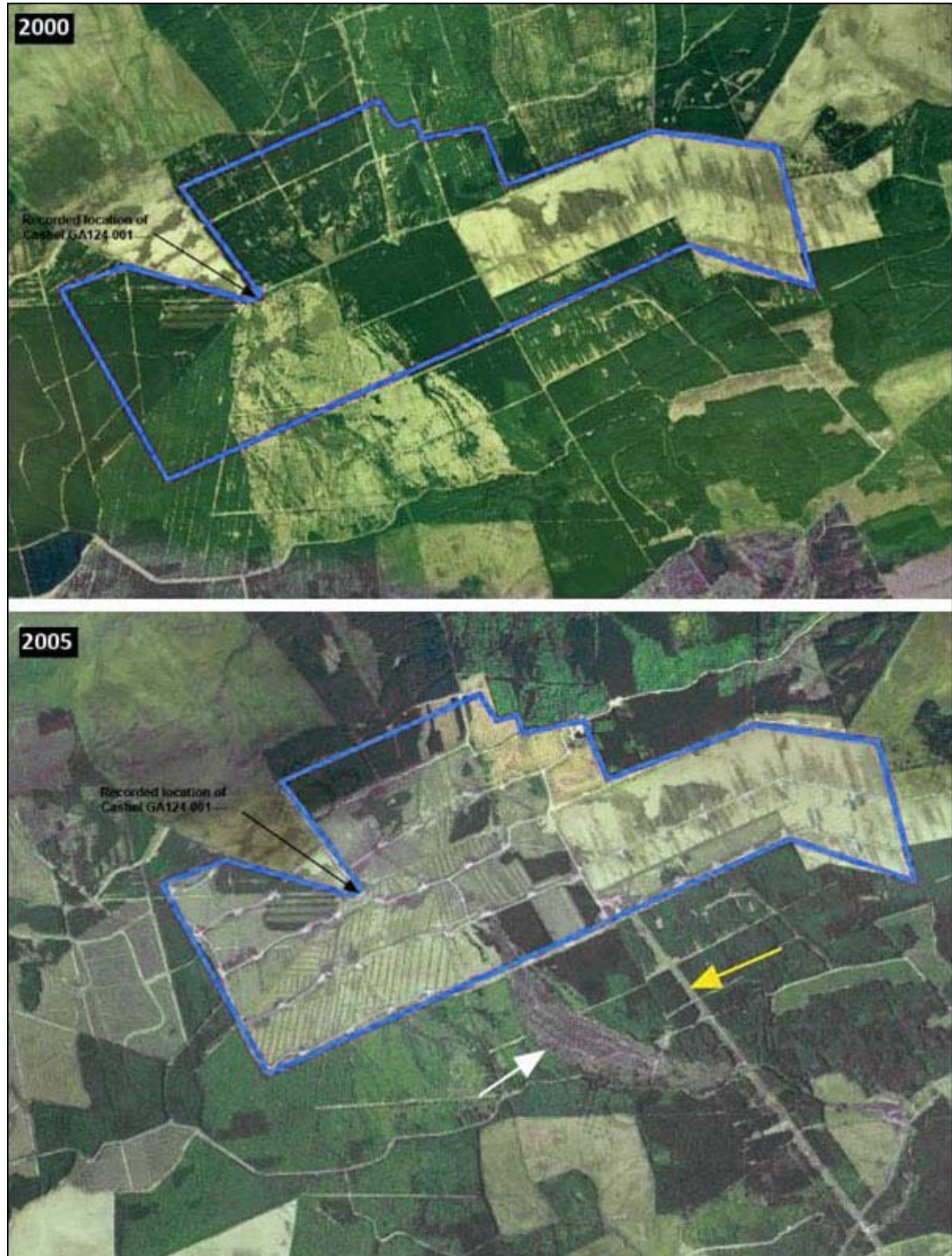


Figure 15-5 Extracts from OSI aerial images showing the general wind farm location prior to and after construction. The locations of the peat slide (white arrow) and north end of the grid connection route (yellow arrow) are indicated on the 2005 image (OSI Licence ref. 0003319)

### 15.2.3.6 Previous Archaeological Assessments

An EIS prepared for the wind farm development contains an archaeological assessment which was prepared by Matt Hodd (Archaeology B.A)<sup>5</sup>. This noted that a cairn indicated within the wind farm site on historic OS maps appeared to have been removed by forestry works. The assessment concluded that while no extant traces of archaeological sites or features were identified within the forestry that occupied the proposed wind farm site, ground works during the construction phase would have the potential to impact on any unrecorded, sub-surface archaeological sites that may exist within the landholding. The assessment, therefore, recommended that an archaeologist be employed to monitor the construction phase of the wind farm. The grants of planning permission for the wind farm development issued by Galway County Council and An Bord Pleanála included conditions requiring archaeological monitoring of ground works during the construction phase.

The Excavations Database contains an entry describing licensed monitoring of the excavation of geotechnical pits within the wind farm which states that nothing of archaeological significance was identified within the investigated areas (see **Table 15.6**: Licence 01E0763). While the Excavations Database does not contain any entries for the construction phase of the wind farm, a 2005 archaeological report prepared by Eoghan Kieran of the Moore Group does describe the results of the constant supervision of ground works required for the turbine bases, hardstands and internal cables between 2004-5 (Excavation Licence 03E1069). This report is presented as Appendix 15-3 and provides a summary archaeological baseline context for the development area followed by a written and photographic record of the monitoring works and concludes by stating that no archaeological material, finds or features were identified within the site. The report also states that an earlier programme of archaeological monitoring associated with phase one of the wind farm was undertaken. While the report on the phase one archaeological monitoring could not be sourced, the archaeologist (Christopher Read) who undertook this work was consulted and provided a written confirmation that nothing of archaeological significance was identified in any area of the site. A report submitted by ESB International to Galway County Council as part of an extension application for the wind farm (planning ref. 05/317) lists a site archaeologist among the staff attending site works during this phase<sup>6</sup>. The report also states that archaeological monitoring of the construction of roads and turbine bases will continue during the proposed extension period.

The NMS Archives Unit kindly provided the authors a digital copy of a second Moore Group report which presents an archaeological assessment of the location of the peat slide and proposed remedial works at the peat depository at Black Road bridge (NMS ref. 05N0467). This assessment report is presented as Appendix 15-4 and was

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<sup>5</sup> <http://gccapps.galwaycoco.ie/ViewPlanningDocuments/ViewPDF?ref=781951>

<sup>6</sup> <http://gccapps.galwaycoco.ie/ViewPlanningDocuments/ViewPDF?ref=789379>



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based on a desktop study and site inspection of the location of proposed works, which were to include the removal of areas of slippage and spreading the peat as a thin layer on adjacent lands. The report notes that there are no recorded archaeological sites within the environs of the assessed area and no potential unrecorded examples were identified during the site inspection. The potential for the presence of unrecorded, sub-surface archaeological features was recognised and the assessment recommended that archaeological monitoring of ground works should be undertaken (*ibid.*).

Archaeological monitoring of the construction of a wind farm development in Sonnagh Old townland, approx. 4.5km to the north of Derrybrien wind farm, as well as roadways within the proposed Kilderry wind farm approx. 3km to the west revealed nothing of archaeological significance (**Table 15.6**).

**Table 15-6 Excavations Database entries for investigations within environs of study area**

Location	Licence	Summary
Derrybrien North	01E0763	The digging of eight site investigation pits in advance of a wind turbine plant across the top of Cashlaundrumlahan in the Slieve Aughty Mountains, c. 13km east of Gort, was monitored in September 2001. The pits revealed the extent and nature of the blanket bog on the mountain, but no archaeological features or artefacts were exposed. All further groundwork on site relating to the construction of the wind turbines is to be monitored.  Kenneth Wiggins
Sonnagh Old	02E1264	The proposed development, which consists of a substantial wind farm involving the construction of ten wind turbines and several kilometres of new access roads, is situated 8km south-west of Loughrea, Co. Galway, along a ridge of low hills that forms the northern limit of the Slieve Aughty Mountains. The site is in a large state-owned forestry planted on blanket bog 1–2m deep. There are no known monuments in the vicinity. A strategy of testing and monitoring was used to investigate the site. No archaeological features, finds or deposits were uncovered.  Christopher Read
Keelderry	11E0289	Planning permission was granted by An Bord Pleanála, subject to compliance with the relevant planning conditions, for a 48-turbine wind farm at



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Location	Licence	Summary
		<p>Keelderry. Construction works commenced on the site in 2007 and consisted of topsoil-stripping of the road network (monitoring was undertaken by another archaeological firm). Monitoring of site investigations was undertaken over one day in 2011. No monitoring of the remainder of the groundworks took place in 2011, as an extension to the planning lifetime of the site was granted to the client.</p> <p>Annette Quinn</p>

## 15.2.4 Designated Architectural Heritage

The National Inventory of Architectural Heritage (NIAH) lists three structures within the study area and these are located within the village of Derrybrien to the south: St Patrick's church (NIAH 30412401), its associated gates, railings and walls (NIAH 30412403) and an 18<sup>th</sup>/19<sup>th</sup> century house (NIAH 30412403). The church and its associated boundary features are also listed in the RPS published in the current County Galway Development Plan 2015 (RPS refs 452/35934). These structures are located approx. 2km to the southwest of the peat slide and remedial works, 2.3km south of the wind farm and 2.2km west of the overhead line.

There are no built structures of any date indicated within the locations of the wind farm, peat slide, overhead line and substation on the consulted historical maps and no built structures pre-dating the development were noted during the site inspection of these areas.

**Table 15-7 Designated architectural heritage structures within study area**

RPS	NIAH ref.	Name	Townland	Structure Type	ITM
-	30412403	House	Derrybrien West	1780-1820 house	599233, 701867
452	30212401	St. Patrick's Church	Derrybrien West	Church/chapel	559084, 701924
3594	30412402	St. Patrick's Church	Derrybrien West	Gates/railings/walls	559084, 701881

## 15.2.5 Intangible Cultural Heritage Assets

Whilst encompassing the archaeological and designated architectural heritage resources, cultural heritage also includes various undesignated assets such as settlements, demesne landscapes, vernacular structures, folklore, placenames, townland boundaries and historical events.

### 15.2.5.1 Placename Evidence

Townlands are the smallest unit of land division in the Irish landscape and many may preserve early Gaelic territorial boundaries that pre-date the Anglo-Norman conquest. The layout and nomenclature of the Irish townlands was recorded and standardised by the work of the Ordnance Survey in the 19<sup>th</sup> century. The Irish translations of the townland names often refer to natural topographical features, but name elements may also give an indication of the presence of past human activity within the townland. The translations of the townland names within the study area were sourced from [www.logainm.ie](http://www.logainm.ie) and mainly record topographical features and associations with past landowners.

The wind farm is located within the Civil Parishes of Killeenadeema and Killinan and is in the Barony of Loughrea. Parishes comprise ecclesiastical administrative divisions originally introduced to Ireland in the 13<sup>th</sup> century and were adapted as the basis of civil divisions during 17<sup>th</sup> century land surveys. Baronies had been introduced to Iveragh by the end of the 16<sup>th</sup> century and it has been postulated, in an Irish context, that some of these Norman land divisions may reflect the layout of earlier *tuath* boundaries (Nolan 1982). Townlands comprise the smallest unit of land division in the Irish landscape, with over 61,000 examples existing, and many may preserve early Gaelic territorial boundaries that pre-date the Anglo-Norman conquest. The layout and nomenclature of the Irish townlands was recorded and standardised by the work of the Ordnance Survey of Ireland (OSI) during the 19<sup>th</sup> century. The Irish roots of townland names often refer to natural topographical features but some may also indicate an association with archaeological sites, e.g. *lios* and *rath* are early Irish names for ringforts while *kill* and *temple* were used to refer to church sites.

The wind farm and grid connection extend into the townlands of Derrybrien North, Derrybrien West, Derrybrien East, Boleyneendorrish, Toormacnevin, Bohaboy and Loughatorick North (**Table 15.8**). While none of the townland names in the study area refer to archaeological sites, a number suggest the presence of native woodlands within the study area prior to the compilation of the OS maps in the 19<sup>th</sup> and 20<sup>th</sup> centuries which show the area dominated by open heathland and dispersed small field systems. The name of the hill in the west end of the wind farm, Cashlaundrumlahan ('castle of the broad ridge'), has been interpreted by the ASI as an indication of the former presence of a cashel site (GA124-001----) at this location.

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**Table 15-8 Translation of townland names (source: [www.logainm.ie](http://www.logainm.ie))**

Townland	Irish origin	Translation
Derrybrien North/West/East	Daraidh Braoin	'Breen's oak wood'
Boleyneendorrish	Buaile an Aon Dorais	'dairy of the one door'
Toormacnevin	Tuar Mhic Cnáimhín	'MacNevin's bleach or field'
Bohaboy	Botha Buí	'yellow road'
Loughatorick North	Loch an Tóraic Thuaidh	'lake of the ?'

#### 15.2.5.2 Folklore

The School's Collection and forms part of the National Folklore Collection and has been published online at [www.duchas.ie](http://www.duchas.ie). It contains a number of records of stories and traditions associated with the Derrybrien area including an account of two locals encountering a group of men playing a midnight hurley match on the mountain between the village and Toormacnevin, which generally correlates to the wind farm locale, who disappeared as they approached the match. The Collection also records stories relating to the famine period within the general area but no contains no examples that relate to the potential presence of unrecorded cultural heritage sites such as holy wells or other potential archaeological features.

#### 15.2.5.3 Undesignated Architectural Heritage

The review of historical mapping sources indicates that there were no built structures at the locations of the wind farm, peat slide, remedial measures, overhead line and Annyagal substation in the 19<sup>th</sup> century and no structures pre-dating the wind farm were noted during the site inspections of these areas. An undesignated bridge on the R353 road to the south of the wind farm, known as the Flaggy Bridge, was noted during the site inspection and is interpreted as being of local architectural heritage interest. This structure is described in the following section detailing the results of the site inspections (Section 15.2.6).

### 15.2.6 Site Inspections

The wind farm and locations of associated off-site grid connection, peat slide and remedial works were inspected in August 2018 and October 2019. The wind farm is sited on a broad upland ridge, which prior to the construction of the wind farm consisted of open area of upland bog land in the eastern end and a commercial forestry plantation elsewhere. The environs of all internal elements of the wind farm

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development were inspected, i.e. turbines, road system, sub-station, masts and former borrow pits. A visual inspection of the overhead line, substation and the locations of the peat slide and remedial works was also undertaken during the site inspections.

The wind farm is located on the upper slopes of Cashlaundrumlahan Mountain within the Slieve Aughty range and comprises 70 wind turbines, an internal substation, three borrow pits (two infilled), two anemometers and a network of access tracks. It occupies a gently sloping plateau aligned on a northeast to southwest axis with a summit elevation of 365mOD with a general gentle slope down towards the south. The site which commands extensive views of the landscape in all directions, especially over the lowlands to the south. The wind farm and its surrounds are characterised by upland blanket bog which in recent decades has been used for commercial forestry within the central and western parts of the site, with ongoing peat harvesting in unplanted turbary plots in the east side of the site.

It is noted that much of the wind farm, as well as the peat slide footprint and overhead line, were previously occupied by commercial forestry. The construction of the wind farm entailed the felling of approximately 222a of trees, including the removal of root networks, which was carried out by Coillte in advance of construction works. Much of the landscape around the wind farm still remain under extensive forestry plantations. A Heritage Council archaeological study of the impact of such plantations has noted that any archaeological sites, including their sub-surface elements, that may have existed within modern forestry plantations are often removed or damaged by a combination of site preparation mounding works as well as the growth and subsequent removal of root networks (Johnson 1998). The study also noted the potential for greater levels of disturbance within plantations in upland peaty soils as the roots spread over a wider area in order to secure anchorage against the wind.

The location of a 19<sup>th</sup> century folly structure known as the Earl's Chair, which is a recorded archaeological site (GA124-006----), is within an area of forestry 225m to the north of the access road that extends to the wind farm from the Black Road to the east. There are no visible traces of this partially levelled feature from the access road. There are no recorded archaeological sites or architectural heritage structures located along Black Road margins and no unrecorded examples were noted during the site inspection of sections of this road that were upgraded as part of the proposed development (Plate 15-16).

The location of Cashel GA124-001---- exists as a level, soil-covered area flanked by an access track to the south and east which curves around its recorded location in the northwest corner of the wind farm (Plate 15-10). This area was previously inspected by the ASI and was also inspected during the pre-development archaeological assessments of the proposed wind farm. No traces of potential

archaeological features were noted in this area during any of these site inspections. No surface traces of stone spreads originating from a levelled enclosing wall or artefacts were identified during a walkover of this location undertaken as part of the current assessment. The consulted site drawings indicate the location of Borrow Pit 2 within the environs of this area which was subsequently infilled. There was no clear surface trace of this infilled pit feature noted during the site inspection and it is noted that nothing of archaeological significance was identified in this area during the monitoring of the wind farm construction.

The footprint of the wind farm turbines, roads, substation, overhead grid connection and ancillary works remains confined within the area of their original construction and, other than the remedial peat slide works, no areas of additional ground works, which may have had the potential to impact on unrecorded, sub-surface archaeological features, were noted during the inspection of the wind farm. Access roads/tracks within site for the construction, operation and maintenance of the wind farm comprised approximately 14.6km of new floating access tracks, 0.9 km of new non-floating access tracks (including access tracks rebuilt within the wind farm site at T68 and between T23 and T70 to replace sections of on-site floating roads damaged by the 2003 peat slide) and the upgrade of 2km of pre-existing floating roads. The extensive use of floating tracks across the peat surface would have likely avoided direct impacts on any potential archaeological sites or features buried beneath the peat deposits. There were localised surface repairs to some sections of tracks observed during the site inspection and these were typically confined to their existing footprint and no traces of excavations below their surfaces were noted in these areas. The wind farm contains approximately 39km open drainage channels, 27km of which were pre-existing and subject to improvement works while 12km new drains were constructed as part of the wind farm development. A visual inspection of a number of the earth-cut drain sections was carried out during the site inspection and no traces of potential buried archaeological features or deposits were noted. Localised clearance of tree regrowth within the vicinity of elements of the development has not resulted in any evident ground reduction works. The maintenance of the turbines and other elements of the wind farm development have not resulted in any evident ground works that have the potential to impact on sub-surface archaeological features. The south-facing hillslope on the footprint of the peat slide is now occupied by forestry regrowth and no traces of recent ground excavations works were noted in its vicinity (Plate 15-13).

Access to the wind farm site continues to be gained via the pre-existing forestry track extending from the Black Road to the east and the section of this public road to the east of the wind farm was upgraded during works. There are no recorded archaeological sites or architectural heritage structures located along the Black Road margins and no unrecorded examples were noted during the site inspection of sections of this road that were upgraded as part of the development. The small bridges on this road are of modern concrete construction with sections of recently

constructed rubble masonry walling attached to the concrete slab parapets (Plate 15-17). The remedial work locations on the east and west sides of the road were inspected in advance of the works during the archaeological assessment prepared by the Moore Group and nothing of significance was identified (see Appendix 15-4). These locations and their environs were also inspected as part of the current assessment. The barrages comprise rock boulders set on existing ground and no potential unrecorded archaeological or architectural heritage features were noted at their locations or along their approaches from the road (Plate 15-15). There are no recorded archaeological sites or designated architectural heritage structures located within the sections of the Coillte landholding impacted by access, drainage and barrage works undertaken within the vicinity of the peat slide, including a small borrow pit adjacent to Barrage 1, and the area remained under forestry at the time of inspection. A two-arch masonry road bridge, known as the Flaggy Bridge, over a stream flowing under a section of the R353 road to the southeast of the wind farm and to the south of the peat slide remedial works was also inspected (Plate 15-18). This bridge is not listed in the RPS or NIAH but is of potential 18<sup>th</sup>/19<sup>th</sup> century date and is of local architectural heritage significance. It has round arches with tooled voussoirs, a central u-cutwater and low random rubble parapet walls. Repairs to the roadside parapet of this structure have not impacted on the underlying arches, which remain well-preserved, and have been undertaken with appropriate random rubble limestone material.

The locations of the overhead line and Agannygal substation were also visually appraised during the site inspections. The overhead line measures c.7.8km in length and consists of 43 structures in total comprising 34 double wood pole sets and 6 angle masts, 1 intermediate mast and 2 end masts. It extends through felled sections of the forestry plantation (c. 33.1ha of felled forestry) that occupies the hillslopes extending down from the wind farm site and then continues southwards through cleared corridors within the modern forestry planted in a slightly undulating area of blanket bog land until it reaches the substation which is also within a cleared area of forestry. Apart from the footprint of the overhead structures and regrading under the 400kV line for clearance purposes, the ground levels within the felled corridor appear to have otherwise remained undisturbed during the construction of the overhead line and periodic cutting of regrowth which has not entailed root extractions. The line extends over the Owendalulleagh River and no in-channel works were undertaken during its construction. The historic OS maps indicate that the section of the overhead line within lowlands to the south of Derrybrien were primarily composed of vacant bog land during the middle of the 19<sup>th</sup> century while small, dispersed field systems within reclaimed areas had begun to be developed by the end of that century and continued to expand into the 20<sup>th</sup> century until the area was extensively planted with the existing forestry. There are no farmyards or other built features shown on the footprint of the overhead line and substation on any of the historic OS maps and no unrecorded features were noted during the inspections. As previously noted, there are no recorded archaeological sites or designated architectural heritage structures located within the 100m wide study area centred on the overhead line and the nearest

example is an enclosure site (GA124-004----) located approx. 1.2km to the west. The nearest recorded archaeological site to the substation is a chapel site (GA124-004-- --) which is located 1.8km to the east.

In conclusion, were no surface traces of any potential unrecorded archaeological sites identified within the proximity of any of the work areas associated with the wind farm, overhead line, Agannygal substation, peat slide and remedial works. Flaggy Bridge located on a section of the R353 road to the south of the wind farm is interpreted as an undesignated structure of local/low architectural heritage significance.

## 15.2.7 Summary of baseline information

### 15.2.7.1 Wind farm, peat slide and remedial works

There are no extant archaeological sites or architectural heritage structures located within the wind farm site or the locations of the peat slide and remedial measures. There are no recorded archaeological monuments or architectural heritage structures located in the area where felling took place, immediately to the west of the wind farm site, which took place between 2016-2018. The ASI records that a potential cashel site (GA124-001----) formerly located in the northwest corner of the wind farm was destroyed by the commercial forestry plantation prior to the commencement of the wind farm development. There were no visible traces of this monument noted during the site inspection carried out as part of the pre-development archaeological assessments of the proposed wind farm undertaken as part of the planning applications for the development. Its recorded former location was inspected as part of the site inspection carried out as part of the current assessment and no surface traces of any potential archaeological features were noted. The Excavations Database does not list any entries detailing a licensed excavation of any newly discovered archaeological features at this location or in other areas of the site during the archaeological monitoring of the construction of the wind farm. The archaeologist (Christopher Read) who undertook the monitoring of the first construction phase has provided written confirmation that nothing of archaeological significance was identified in any area of the site during that phase. The report on the archaeological monitoring of the wind farm construction phase in 2004-5 also states that no archaeological materials or features were identified within any area of the site during that phase of works (Appendix 15-3).

There are no other recorded archaeological sites within 400m of the wind farm boundary and there are no National Monuments or archaeological sites subject to Preservation Orders located within the 3km study area. There are also no monuments with potential visual alignment attributes, such as megalithic tombs or stone circles, located within the 3km study area.



There are no structures of architectural heritage significance located within the wind farm site and none of the structures located within 2km of its boundary are listed as Protected Structures or are included in the NIAH. No potential architectural heritage structures (whether designated or not) were identified during the pre-development assessments of the wind farm. No potential negative impacts on architectural heritage, folklore or traditions were predicted during the pre-development cultural heritage assessment of the wind farm.

There are no recorded archaeological sites within 1.9km of the locations of the peat slide and the various mitigation measures subsequently enacted. There are no designated architectural heritage structures within 2km of the locations of the peat slide and the mitigation measures subsequently enacted. The remedial works in the peat slide area at Black Road bridge were subject to an advance archaeological assessment and nothing of archaeological significance was noted within the slide area or on the footprint of proposed remedial works during a desktop study and site inspection (Appendix 15-4).

Apart from the peat slide mitigation measures and localised track/drain repairs, no traces of additional ground works associated with the operational phase of the wind farm and grid connection were noted during the site inspections carried out as part of the current assessment.

#### 15.2.7.2 Overhead Line and Agannygal substation

There are no recorded archaeological sites or architectural heritage structures located within the study area extending for 100m from either side of the overhead line grid connection route and Agannygal substation. In addition, there are no recorded archaeological sites within 1.2km of the grid connection route or within 1.8km of the location of Agannygal substation. Much of the route of the overhead line and the location of the substation were occupied by forestry plantations prior to their construction which would have had a likely negative impact on any potential unrecorded archaeological sites or features that may have existed on their footprints.

#### 15.2.7.3 Decommissioning

The details of the decommissioning phase of the wind farm are presented in Section 2.10 of Chapter 2 and a summary of the cultural heritage context for each element of the development follows hereafter. The decommissioning of the wind farm will involve the removal of above ground elements, including the turbines and substation buildings, as well as underground cables and these works will be undertaken from existing hardstand areas. The ground surface at the locations of the underground cables was previously disturbed during their installation. The turbine bases, crane pads, access tracks, drains and borrow pits will be left in-situ and it is not proposed to carry out any remedial works on any of the elements of the wind farm that will be



left in place after decommissioning. The overhead line (OHL) infrastructure between Derrybrien and Agannygal substations will be removed. There are no recorded cultural heritage assets within the environs of the line, and none were noted during a review of potential access routes, comprising existing tracks, that may be used during this work. The above ground elements at Agannygal substation will be removed. There are no recorded cultural heritage assets located in the environs of its location and demolition works will be undertaken from existing hardstands. It is proposed that Barrages 3 and 4 will be removed and their locations regraded to match existing ground surfaces with the barrage material brought to Borrow Pit 3 on the wind farm site. There are no recorded cultural heritage assets within the environs of these two barrages or Borrow Pit 3.

#### 15.2.7.4 Other developments

The locations of a high percentage of the wind farm site as well as the footprints of the peat slide, remedial measures, grid connection and Agannygal substation were occupied by commercial forestry plantations prior to the development. A Heritage Council study on the archaeological impacts of such plantations has concluded that they have the likely potential to remove or damage any archaeological features or deposits that may have existed on their footprints (Johnson 1998). The forestry plantation outside the wind farm boundary is recorded by the ASI to have impacted on two recorded archaeological sites within the study area: a 19<sup>th</sup> century monument (GA124-006----) and a levelled cashel site (GA124-001----).

An area of approximately 67ha of drained turbary land occupies the eastern part of the wind farm site. There are approximately 85 turbary plots within the wind farm site boundary, 5 plots partially within the boundary and 6 outside the boundary. Turf cutting (peat extraction) under turbary rights has historically been and continues to be carried out in these plots. There are no recorded archaeological monuments or architectural heritage structures located in the turbary lands within the wind farm site boundary.

Nothing of archaeological significance was discovered during archaeological monitoring of the construction phases of the Sonnagh Old wind farm and the Keelderry wind farm internal roads which are both located within the surrounding Slieve Aughty Mountains landscape (Table 15-6).

A review of a 10km section of the route of the Moneypoint-Oldstreet 400kV overhead transmission line centred on the location where it intersects with the Derrybrien-Agannygal line was carried out and there are no recorded archaeological sites or designated architectural heritage structures located within 400m of this section of that line. A cultural heritage assessment of the proposed refurbishment of the entire line was undertaken as part of the planning application for that project (Galway County Council ref. 16/1747) and no impacts to the cultural heritage resource were

predicted<sup>7</sup>. The Ennis - Shannonbridge line was installed in 1952 with some further structures installed in 1968. The Derrybrien Wind Farm Project connected into this line. Specifically, the construction of Agannygal Substation for the Derrybrien Wind Farm Project resulted in the line being split into two circuits: Agannygal - Shannonbridge (Galway West) and Agannygal - Ennis (Galway West). Works undertaken to achieve this split entailed the construction of two end masts within Agannygal substation. There are no cultural heritage assets within the substation or its environs and this work resulted in no likely impacts on the cultural heritage resource.

The Tynagh 400MW Power Station was constructed within the existing Tynagh Mines site approximately 10km to the northeast of the wind farm site. The cultural heritage chapter in the EIS prepared for the Tynagh 220kV grid connection to the ESB Oldstreet to Cashla Line concluded that the connection works would have a negligible impact on the cultural heritage resource<sup>8</sup>.

A review of the Excavation Database did not reveal any entries relating to the discovery and excavation of any archaeological sites or features during the Gort Regional Water Supply Scheme or during flood relief projects undertaken to date in Gort, Kiltartan and Kinvarra. The proposed Gort Lowlands Flood Relief Scheme is currently in the preliminary engineering and feasibility stage and will be subject to cultural heritage screening and assessment as part of the planning process.

The privately owned four-span Beagh Bridge at the outlet of Lough Cutra which provides access to a private house and farm was structurally assessed by ESBI in August 2004. This followed on from the temporary installation of straw filter barriers on the upstream face of the bridge in the aftermath of the peat slide to capture and filter any suspended sediment that may have transported from the landslide area. The assessment identified corrosion of deck slab reinforcement bars, some cracks in pier wall and some scouring at base of two of the three intermediate piers. It was noted by ESBI engineers at the time that the installation of straw filter barriers could not have caused or contributed to the corrosion in deck or cracks in pier wall. Repair works to the pier bases were undertaken in January 2005. This bridge was constructed in 1957 and it comprises a deck and parapet of concrete construction supported by random rubble piers. This modern structure is not listed in the RPS or NIAH and there are no earlier structures shown at its location on historic OS maps. There are also no recorded archaeological sites or designated architectural heritage structures within 300m of its location. It is, therefore, concluded that the repair works to this modern structure likely resulted in no impacts on the cultural heritage resource.

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<sup>7</sup> <http://gccapps.galwaycoco.ie/ViewPlanningDocuments/ViewPDF?ref=2104155>

<sup>8</sup> <https://gccapps.galwaycoco.ie/ViewPlanningDocuments/ViewPDF?ref=715481>

There are no recorded cultural heritage sites at the location of a sand extraction site at Cloghvoley townland. A cultural heritage assessment undertaken as part of the EIS prepared for a proposed quarry extension in Ballynakill (Galway County Council ref. 18/687) concluded that the proposed development would not result in any likely direct or indirect impacts on archaeological or architectural heritage features<sup>9</sup>. The location of a registered Coillte quarry site to the east of the junction between the R353 and the Black Road was reviewed and there are no recorded cultural heritage sites at its location or close environs.

Archaeological investigations undertaken in advance of the M18 Oranmore to Gort road scheme revealed 21 previously unrecorded, sub-surface archaeological features each of which were subject to mitigation by systematic excavation in advance of the construction phase (Delaney and Tierney 2011). This scheme is located approximately 14km to the west of the Derrybrien wind farm and the excavated sub-surface archaeological sites and features had no likely recorded associations or visual relationships with any recorded archaeological sites within the environs of the wind farm.

A desktop review was carried out of the locations of tree planting works within forestry compartments in County Tipperary and County Roscommon which were undertaken between 2003 and 2008 arising from the felling licence associated with forestry felled on the Derrybrien wind farm site. There are no recorded archaeological sites located within the boundaries of the planted lands at Ardcorcoran, Brackloon, Oldtown (County Roscommon) and Foilmanonmore (County Tipperary) or within lands extending for 300m from each of their boundaries. There are also no recorded archaeological sites located within the planted lands at Coonmore, County Tipperary although the SMR does list a levelled field boundary feature of potential post-medieval date (TN038-024----) within an adjacent field. The full extent of this boundary feature is clearly visible as a cropmark on OSI Digital Globe imagery captured between 2011-13, and therefore after the planting works, and its nearest element is 40m outside the planted area. There are no ancillary planting works, such as an access route, visible within its environs on aerial images and it is, therefore, concluded that tree planting within the Coonmore lands had no likely impact on field boundary TN038-024----. There is one recorded archaeological monument located within the boundary of the planted lands at Knocknabansha in County Tipperary and this comprises the remains of a wedge tomb (TN039-007----). The ASI description of this monument records that it has been situated within a forestry clearing since at least the 1980s. A review of OSI aerial images from the early 2000s indicates that the edge of the clearing was at that time located approx. 5m from the monument. A review of recent Google Earth imagery indicates that the size of the forest clearing was expanded during the replanting works undertaken in the mid-2000s when the edge of the treeline was set back 30m from the monument in all directions. The

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<sup>9</sup> <http://gccapps.galwaycoco.ie/ViewPlanningDocuments/ViewPDF?ref=2176848>

increase in the extent of the clearing resulting from the tree replant works is likely to have resulted in a slight positive impact on the setting of the wedge tomb (TN039-007----), There are no designated architectural heritage structures located within any of the above planted areas or within 500m of their boundaries.

## 15.3 Impact of the Development

### 15.3.1 Impacts which have occurred

#### 15.3.1.1 Construction: circa June 2003-March 2006

Given the baseline factors outlined in Section 15.2.7.1, it is concluded that no other effects have occurred on the archaeological, architectural heritage and cultural heritage resources during this phase of construction of the wind farm which was subject to continuous archaeological monitoring.

#### 15.3.1.2 Works associated with peat slide (Oct 2003-end 2005)

Given the baseline factors outlined in Section 15.2.7.1, it is concluded that no effects occurred on the archaeological, architectural heritage and cultural heritage resources during this peat slide and subsequent mitigation measures which were subject to a pre-works archaeological assessment (see Appendix 15-4).

#### 15.3.1.3 Construction (circa June 2004-March 2006)

Given the baseline factors outlined in Section 15.2.7.1, it is concluded that no effects have occurred on the archaeological, architectural heritage and cultural heritage resources during this phase of construction of the wind farm which was subject to constant archaeological monitoring (see Appendix 15-3).

#### 15.3.1.4 Operation (circa March 2006 -mid 2020)

Given the baseline factors outlined in Section 15.2.7.1, it is concluded that no effects have occurred on the archaeological, architectural heritage and cultural heritage resources during operation of the wind farm to mid 2020.

### 15.3.2 Impacts which are occurring

#### 15.3.2.1 Construction

There are no construction works occurring that will result in any likely predicted effects on the archaeological, architectural heritage and cultural heritage resources.

#### 15.3.2.2 Operation

The occurring operation of the wind farm will result in no likely predicted effects on the archaeological, architectural heritage and cultural heritage resources.

### 15.3.3 Impacts which are likely to occur

#### 15.3.3.1 Operation (2020 to end of operation)

The future operation of the wind farm will result in no likely predicted effects on the archaeological, architectural heritage and cultural heritage resources.

#### 15.3.3.2 Decommissioning Phase

Given the baseline factors outlined in Section 15.2.7.3, no negative impacts to the cultural heritage resource are predicted to occur during the decommissioning of the wind farm.

### 15.3.4 Interaction between impacts

Given the absence of any identified impacts on the archaeological, architectural and cultural heritage resources, no interaction between impacts is predicted.

### 15.3.5 Cumulative Impacts

#### 15.3.5.1 Cumulative impacts which have occurred

Given the baseline factors outlined in Section 15.2.7.4, it is concluded that no cumulative impacts on the cultural heritage resource arose in combination with the reviewed developments in the wider landscape during the Derrybrien wind farm construction phases, peat slide, remedial works, grid connection and Agannygal substation or during the operational phase between 2005-2020.

#### 15.3.5.2 Cumulative impacts which are occurring

Given the baseline factors outlined in Section 15.2.7.4, it is concluded that no cumulative impacts on the cultural heritage resource are currently occurring.

#### 15.3.5.3 Cumulative impacts which are likely to occur

Given the baseline factors outlined in Section 15.2.7.4, it is concluded that no cumulative impacts on the cultural heritage resource are likely to occur.

## 15.4 Remedial (Mitigation) Measures and Monitoring

### 15.4.1 Remedial Measures & Monitoring for significant effects

No significant effects to the cultural heritage resource were identified during this assessment and no remedial measures and monitoring for any such effects are, therefore, required.

#### 15.4.2 Mitigation Measures for non-significant effects

No mitigation measures to prevent, reduce or offset likely non-significant adverse cultural heritage effects are required for the continuing operational period of the wind farm. All detailed proposals for the decommissioning of the wind farm and overhead line will be subject to an archaeological assessment to determine if ground works will be required in undisturbed areas outside the footprint of the existing development that may have the potential to impact on any unrecorded, sub-surface archaeological features or artefacts that may exist within the subject areas. Any such works will be subject to archaeological monitoring carried out by a suitably qualified archaeologist operating under a licence issued by the NMS.

There a number of obligatory processes to be undertaken as part of archaeological licence applications and these will allow for monitoring of the successful implementation of any required archaeological mitigation measures. A method statement detailing the proposed monitoring strategy will be submitted for approval to the NMS as part of the licence application. This will clearly outline the proposed extent of works requiring monitoring and outline the consultation process to be enacted in the event that any unrecorded archaeological sites or features are identified. A report will then be compiled which will clearly present the results in written, drawn and photographic formats. Copies of this report will be submitted to the National Monuments Service (NMS), Galway County Council and the National Museum of Ireland (NMI).

### 15.5 Residual Impacts

Given the baseline factors outlined in Section 15.2.7 combined with the adoption of the mitigation measures for any proposed further ground works presented in Section 15.4, the construction, operation and decommissioning of the wind farm, in conjunction with the peat slide and subsequent remedial works as well as the construction, operation and decommissioning of the overhead line and Agannygal substation are not predicted to result in any residual impacts on the cultural heritage resource.

### 15.6 Conclusions

The locations of the wind farm development, peat slide area and remedial works were subject to pre-work archaeological assessments and nothing of archaeological significance was identified in any areas. The wind farm pre-development assessments included inspections of the recorded location of a cashel site (GA124-001----) adjacent to the northwest boundary of the development area and no traces of the site were identified. The ASI description of this site indicates that it was added to the Sites and Monuments Record after the construction of the wind farm. It also records that no visible remains of the site exist and that its location may have been

previously impacted by the forestry plantation. Nothing of archaeological significance was identified in any area of the site during continuous archaeological monitoring of ground works during the construction phases of the wind farm. The Excavation Database does not list any entries for a licensed archaeological excavation of any newly discovered archaeological features, including any associated with the levelled cashel site, uncovered during the construction phase of the wind farm site. There are no other recorded archaeological sites or designated architectural heritage structures located within 400m of the assessed areas. A summary of likely impacts on cultural heritage assets within the study area during the construction, remedial, operation and decommissioning phases of the development is presented in Table 15-9.



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**Table 15-9 Summary of impacts on cultural heritage assets within study area during construction, remedial, operation and decommissioning phases**

Asset Designation	Name/Class	Distance from wind farm	Potential Value	Extent of Impact	Phase	Magnitude of Impact	Significance of Impact
GA115-007--- -	Children's burial ground	1.2km to north	Medium	None	All	Negligible	Imperceptible
GA124-001--- -	Cashel	Within boundary	Low (location impacted by forestry prior to wind farm development and nothing identified at location during archaeological monitoring of construction phases). )	None recorded	All	Negligible	Imperceptible
GA124-003--- -	Redundant record	2.29km to south	Negligible	None	All	Negligible	Imperceptible
GA124-004--- -	Enclosure	2.78km to south	Medium	None	All	Negligible	Imperceptible
GA124-005--- -	Burial ground	2.5km to south	Medium	None	All	Negligible	Imperceptible
GA124-005001-	Bullaun stone	2.5km to south	Medium	None	All	Negligible	Imperceptible
GA124-006--- -	Monumental structure	0.4km to east	Low (levelled by forestry)	None	All	Negligible	Imperceptible

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Asset Designation	Name/Class	<i>Distance from wind farm</i>	<i>Potential Value</i>	<i>Extent of Impact</i>	<i>Phase</i>	<i>Magnitude of Impact</i>	<i>Significance of Impact</i>
GA124-008--- -	Redundant record	2.26km to south	Negligible	None	All	Negligible	Imperceptible
GA124-009--- -	Boundary mound	2.65km to west	Medium	None	All	Negligible	Imperceptible
GA124-010--- -	Boundary mound	2.5km to west	Medium	None	All	Negligible	Imperceptible
GA124-013--- -	Church	2.3km to south	Medium	None	All	Negligible	Imperceptible
RPS 452 NIAH 30212401	St. Patrick's Church	2.3km to south	Medium	None	All	Negligible	Imperceptible
RPS 3594 NIAH 30412402	Church railings	2.3km to south	Medium	None	All	Negligible	Imperceptible
NIAH 30412403	House	2.3km to south	Medium	None	All	Negligible	Imperceptible
None	Flaggy Bridge	2.4km to south	Low (undesigned feature)	Parapet repairs	Remedial	Low	Not significant

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