

# ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR) FOR THE PROPOSED FAHY BEG WIND FARM, CO. CLARE

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## VOLUME 2 – MAIN EIAR

### CHAPTER 14 – ARCHAEOLOGY, ARCHITECTURAL & CULTURAL HERITAGE

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Prepared for: RWE Renewables Ireland Ltd.



**RWE**

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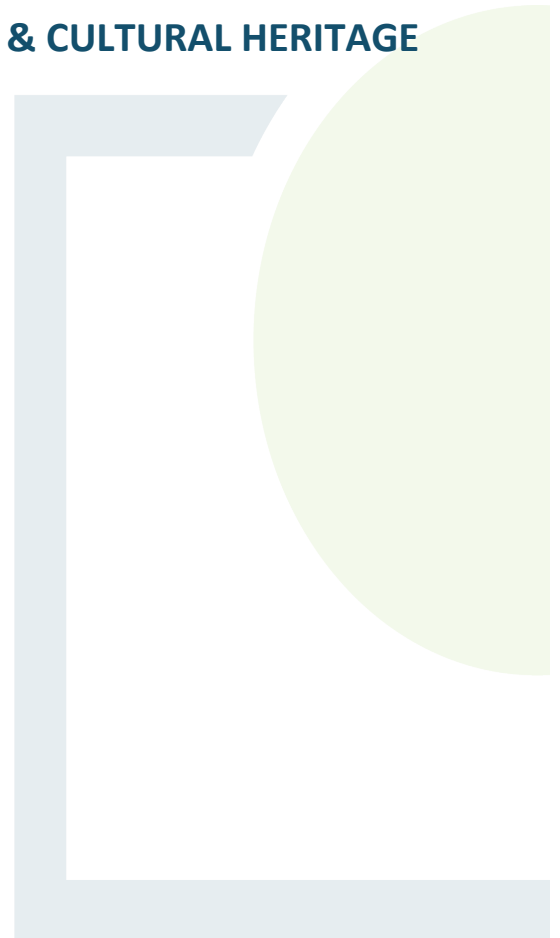
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## 14. ARCHAEOLOGY, ARCHITECTURAL AND CULTURAL HERITAGE

### 14.1 Introduction

This chapter of the EIAR assesses the impacts of the proposed project on the known and potential cultural heritage resource. The term 'Cultural Heritage' encompasses heritage assets relevant to both the tangible resource (archaeology, architecture heritage); and non-tangible resources (history, folklore, tradition, place names etc.). The recorded and potential cultural heritage resource within lands encompassing the proposed wind farm site and the surrounding landscape was reviewed in order to compile a comprehensive cultural heritage baseline for the assessment. The proposed grid connection and the route for the delivery of turbines to the Site were also assessed.

The chapter was prepared by Tony Cummins of John Cronin Associates. Mr. Cummins holds qualifications in archaeology (B.A. and M.A., University College Cork 1992/1994) and has accumulated twenty-eight years' continuous professional experience which has included the compilation of numerous cultural heritage impact assessments for a range of project types, including renewable developments.

A detailed description of the proposed project assessed in this EIAR is provided in Chapter 3 and it is comprised of three main elements:

- The wind farm site (referred to in this EIAR as 'the Site');
- The grid connection (referred to in this EIAR as the 'GCR');
- The turbine delivery route (referred to in this EIAR as the 'TDR');

The Site includes the wind turbines, internal access tracks, hard standings, permanent meteorological mast, onsite substation, internal electrical and communications cabling, temporary construction compound, drainage infrastructure and all associated works related to the construction of the wind farm. The Site includes lands in the townlands of Fahy More North, Ballymoloney, Ballykavin, Ballyquin More, Woodpark and Leitrim.

The GCR will comprise a buried grid cable extending along public roads to the existing Ardnacrusha substation, located c. 8km to the south of the Site.

The TDR will require a number of localised areas of ground works along the margins of the local roads extending to the Site and these locations have also been assessed.

### 14.2 Methodology

The methodology used for this assessment is in accordance with Environmental Protection Agency (EPA 2003) *Advice Notes on Current Practice in the preparation of Environmental Impact Statements* and EPA (2002) *Guidelines on the Information to be contained in Environmental Impact Statements*; as well as more recent (draft) guidance methods have also been utilised per EPA (2015) *Draft Advice Notes for Preparing an EIS* and (2022) *Guidelines for Information to be Contained in EIAR*. The chapter complies with the requirements of Directive 2011/92/EU as amended by Directive 2014/52/EU, the Planning and Development Act, 2000 (as amended) and the Planning and Development Regulations, 2001 (as amended). The assessment has also been carried out in accordance with guidelines for the assessment of impacts on the cultural heritage resource as published by the International Council on Monuments and Sites (ICOMOS 2011).



The assessment was based on a programme of desk-based research combined with a number of site inspections and these studies were undertaken to identify any features of archaeological, architectural or cultural heritage significance likely to be impacted by the proposed development.

The study area for the assessment comprised lands within 1km of the Site as well as 100m wide corridors centred on the GCR and proposed work areas on the road network which will form the TDR. The extent of the 1km study area around the Site was chosen in order to compile a baseline context for the known cultural heritage resource within the Site and its environs as well as to assess potential direct and indirect impacts on the locations and settings of known cultural heritage assets within this area. The extent of the 100m study area centred on the grid connection route and haul route work areas was chosen in order to appraise if there are any known elements of the cultural resource within their localised footprint or close environs, including potential sub-surface elements which may be susceptible to direct or indirect impacts.

A desktop review of the locations of prehistoric archaeological monuments with potential visual alignments located within private lands extending for 10km from the wind farm site boundary was also carried out to assess the potential for any likely significant intrusions on their recorded alignments across the wider landscape. The lands within 10km from the Site were also reviewed to determine whether any National Monuments or World Heritage sites (including tentative sites nominated for inclusion) were present and to assess any potential indirect impacts on their wider setting. The environs of the identified National Monuments were also inspected during the field surveys to assess their potential intervisibility with the proposed wind farm site. The results of the assessment of potential impacts on the setting of cultural heritage assets within the wider landscape are presented in Section 14.4 of this chapter. A review of the assessment of potential visual impacts on cultural heritage receptors within 20km of the wind farm site provided in the Landscape and Visual Impact Assessment chapter was also carried out (see Chapter 15).

#### 14.2.1 Desktop Study

The assessment presents the results of a desktop study of relevant published sources and datasets undertaken in order to identify all recorded and potential archaeological, architectural and other cultural heritage sites/features/areas within the study areas. The principal sources reviewed for the assessment of the recorded archaeological resource were the Sites and Monuments Record (SMR) and the Record of Monuments and Places (RMP). The Record of Protected Structures (RPS) and the National Inventory of Architectural Heritage (NIAH) were consulted for assessing the designated architectural heritage resource. Details on the legal and planning frameworks designed to protect these elements of the cultural heritage resource are also provided.

Other sources consulted as part of the assessment included the following:

##### *Development Plan*

The County Clare Development Plan 2017-2023 was consulted as part of this assessment. This publication outlines the Council's policies for the conservation of the archaeological and architectural heritage resource within the county and includes a list of Record of Protected Structures (RPS) as well as designated Architectural Conservation Areas (ACA).

##### *Nationals Monument Service (NMS): Historic Environment Viewer (HEV)*

While there is currently no published Archaeological Inventory for County Clare, the online HEV map-based database ([www.archaeology.ie](http://www.archaeology.ie)) does provide inventory descriptions for various archaeological sites within the county. The HEV was reviewed in October 2022, and all available descriptions for archaeological sites within the study area are provided within the chapter.



### *Heritage Council of Ireland: Heritage Map Viewer*

This online mapping source ([www.heritagemaps.ie](http://www.heritagemaps.ie)) collates various cultural heritage datasets provided by, among others, the National Monuments Service, the National Museum of Ireland, local authorities, the Royal Academy of Ireland and the Office of Public Works and was reviewed in October 2022.

### *Database of Irish Excavation Reports*

The Database of Irish Excavation Reports contains summary accounts of all archaeological excavations carried out in Ireland (North and South) from 1969 to present. Current data was accessed via [www.excavations.ie](http://www.excavations.ie) in October 2022.

### *National Museum of Ireland (NMI) Topographical Files*

An inspection of the NMI topographical file archive held in the Museum premises in Kildare Street, Dublin was carried out as part of the assessment. These files contain information on the archaeological artefacts in the collections of the NMI and include any recorded information on their locations and the circumstances of their discovery. The archive contains no files for the townlands within the study area.

### *Literary Sources*

Various published sources were consulted in order to assess the archaeological, historical, architectural heritage and folklore record of the study area and these are listed in Section 14-7 of this chapter.

### *Historic Maps*

A review of available historic cartographic sources was undertaken, and these included the 17th-century Down Survey and various map editions published by the Ordnance Survey from the mid-19th century onward. These sources can indicate the presence of past settlement patterns, including features of archaeological and architectural heritage significance that no longer have any surface expression. Extracts from the reviewed maps are presented in Appendix 14.1.

### *Aerial and Satellite imagery*

A review of available imagery of the study area was undertaken in order to review the extent of modern interventions and to ascertain if any traces of undesigned cultural heritage features, including sub-surface archaeological sites, were visible.

### *Irish National Folklore Collection*

Transcribed material from the National Folklore Collection archive has been digitised and published online at [www.duchas.ie](http://www.duchas.ie). This online archive was reviewed in October 2022.

### *UNESCO designated World Heritage Sites and Tentative List*

There are two designated World Heritage sites in Ireland and a number of other significant examples have been included in a Tentative List (2022) that has been put forward by Ireland for inclusion. None of these designated or tentative sites are located within 20km of the study area.



### 14.2.2 Field Surveys

The project areas were inspected on a number of occasions between 2020 and 2022 and this included field-walking surveys of the site as well as inspections of the GCR and sections of the TDR where ground works are proposed. The inspected lands were assessed in terms of historic landscape, existing land use and the potential for the presence and survival of unrecorded archaeological and undesignated architectural heritage sites/features. The results of the field surveys are described within the chapter (Section 14.3.4) while annotated extracts from the photographic record are provided in Appendix 14.2.

### 14.2.3 Consultation

A scoping report was also issued to the National Monuments Service through the Development Applications Unit (DAU). A receipt of this consultation information was acknowledged by the DAU. No observations or recommendations in relation to archaeology, architectural or cultural heritage were received from the DAU during the consultation process.

Further details of project scoping and consultation can be found in Chapter 5.

### 14.2.4 Assessment of Impacts

The following provides a summary of the criteria used to assess impacts in order to concisely outline the methodology specifically applied to the cultural heritage resource which complies with relevant EPA and ICOMOS guidelines (see Section 14.2 above).

#### *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 Effect – 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 Effect – no change or effects that are imperceptible, within the normal bounds of variation for the cultural heritage environment.





- Negative Effect – 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

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

- Direct Impact – where a cultural heritage site is physically located within the footprint of the proposed development, which will result in its complete or partial removal.
- Indirect Impact – where the setting of a cultural heritage site located within the environs of a proposed development, including examples outside its boundary, is impacted.
- No predicted impact – where the proposed development will not adversely or positively affect a cultural heritage site.

#### Magnitude of Effect

This is based on the degree of change, incorporating any mitigation measures, on a cultural heritage asset and can be negative or positive. The magnitude is ranked without regard to the value of the asset according to the following scale: High; Medium; Low and Negligible and has been informed by criteria published in the International Council on Monuments and Sites *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties* (ICOMOS 2011) (Table 14-1).

**Table 14-1: Magnitudes of Effect on Cultural Heritage Assets (after ICOMOS Guidelines 2011)**

Magnitude	Description
High	<p>Most or all key archaeological or architectural materials affected such that the resource is totally altered</p> <p>Comprehensive changes to setting</p> <p>Changes to most or all key historic landscape elements, parcels or components; extreme visual effects; fundamental changes to use or access; resulting in total change to historic landscape character unit</p> <p>Major changes to area that affect Intangible Cultural Heritage activities or associations or visual links and cultural appreciation</p>
Medium	<p>Changes to many key archaeological or historic building materials/elements such that the resource is clearly/significantly modified.</p> <p>Considerable changes to setting that affect the character of the archaeological asset.</p> <p>Changes to the setting of a historic building, such that it is significantly modified.</p> <p>Change to many key historic landscape elements, parcels or components, visual change to many key aspects of the historic landscape, considerable changes to use or access, resulting in moderate changes to historic landscape character.</p> <p>Considerable changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.</p>
Low	<p>Changes to key archaeological materials/historic building elements, such that the resource is slightly altered/slightly different.</p> <p>Slight changes to setting of an archaeological monument.</p> <p>Change to setting of a historic building, such that it is noticeably changed.</p>



Magnitude	Description
	Change to few key historic landscape elements, parcels or components; slight visual changes to few key aspects of historic landscape; slight changes to use or access; resulting in limited change to historic landscape character. Changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.
Negligible	Very minor changes to key archaeological materials or setting. Slight changes to historic building elements or setting that hardly affect it. Very minor changes to key historic landscape elements, parcels or components; virtually unchanged visual effects; very slight changes to use or access; resulting in very small change to historic landscape character. Very minor changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.

#### Value assessment criteria

The Values assigned to cultural heritage assets for the purposes of this assessment are intended as indicators which contribute to a wider judgment based on the individual circumstances of each asset. Other than the level of legal designations, e.g., National Monuments, World Heritage sites, there is no formal grading or rating system for Irish archaeological monuments or architectural heritage structures. The non-statutory National Inventory of Architectural Heritage (NIAH) does apply a ranking system (Local, Regional, National and International) to structures included in that inventory and, while these rankings do not confer a graduated level of statutory protection they have been utilised as a value indicator for NIAH-listed structures for the purpose of this assessment. The criteria for assessing the value of archaeological and other cultural heritage assets as part of this assessment has been informed by the *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties* (ICOMOS 2011, 14-16). The Value of known or potential cultural heritage assets are ranked according to the following scale: Very High, High; Medium; Low, Negligible and Unknown (Table 14.2). Generally, the more criteria that are evident for a given asset, the higher in scale its respective Value is deemed to be. Criteria considered in addition to legal designations include condition / preservation; documentary / historical significance; group value; rarity; visibility in the landscape; fragility / vulnerability and amenity value. The values assigned to identified assets within the study area were determined following the completion of the desktop study combined with site inspections and are identified in Section 14.3.5 of this chapter.

**Table 14-2: Factors applied for assessing the Value of Cultural Heritage Assets (after ICOMOS 2011)**

Value	Examples of Asset Types
Very High (International Significance)	World Heritage Sites (including Tentative List properties) Sites, buildings or landscapes of acknowledged international importance Intangible associations with individuals or innovations of global significance
High (National Significance)	Nationally designated sites, buildings and landscapes of significant quality, rarity, preservation and importance Undesignated assets of the quality and importance to be designated Assets that can contribute significantly to acknowledged national research objectives Archaeological Landscapes with significant group value Intangible associations with individuals or innovations of national significance



Value	Examples of Asset Types
Medium (Regional Significance)	Designated or undesignated assets that can contribute significantly to regional research objectives, including buildings that can be shown to have exceptional qualities in their fabric or historical associations Conservation Areas and historic townscapes containing buildings that contribute significantly to its historic character Intangible associations with individuals or innovations of regional significance
Low (Local Significance)	Assets compromised by poor preservation and/or poor survival of contextual associations Assets of limited value, but with potential to contribute to local research objectives Historic Townscape or built-up areas of limited historic integrity in their buildings and settings Intangible associations with individuals or innovations of local significance
Negligible	Assets with very little or no surviving archaeological interest Landscapes of little or no significant historical interest Buildings or urban areas of no architectural or historical note; buildings of an intrusive character
Unknown Potential	Assets whose importance has not been ascertained Buildings with some hidden (i.e., inaccessible) potential for historic significance

#### Significance of Effects

The significance of effect can be described as Profound, Very Significant, Significant, Moderate, Slight, Not Significant or Imperceptible (Table 14-3) and is assigned based on the combined evaluation of effect magnitude and asset values (Table 14-4).

**Table 14-3: Significance of Effects (per EPA EIAR Guidelines 2022)**

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



**Table 14-4: Significance of Effects Matrix (after EPA Draft EIAR Guidelines 2017)**

<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/Very High</b>
		<b>Value/Sensitivity of the Asset</b>			

### 14.3 Existing Environment

#### 14.3.1 Introduction

The following sections present summaries of the legal and planning frameworks designed to protect the cultural heritage resource which are followed by details on the known and potential cultural heritage resource within the reviewed study area based on information collated during the desktop studies and field inspections.

#### 14.3.2 Legal and Planning Context

The tangible elements of the cultural heritage resource can be loosely divided into the archaeological resource comprising sites and monuments dating from the prehistoric period to the post-medieval period and the architectural heritage resource, encompassing structures and sites of cultural importance often dating to the post-medieval and modern periods. In addition, local place names, folklore and traditions are considered part of the intangible cultural heritage resource. The management and protection of the cultural heritage resource in Ireland is achieved through a framework of international conventions and national laws and policies. This framework was established in accordance with the provisions of the 'European Convention on the Protection of the Archaeological Heritage' (the Valletta Convention) and the 'European Convention on the Protection of Architectural Heritage' (Grenada Convention) which were ratified by Ireland in 1997. In addition, the UNESCO 'Convention for the Safeguarding of the Intangible Cultural Heritage', 2003, was ratified by Ireland in 2015. The relevant legislation and guidelines that are relevant to this assessment include the following:

- National Monuments Act 1930 (as amended);
- Heritage Act (1995);
- National Cultural Institutions Act (1997);
- Architectural Heritage (National Inventory) and Historic Monuments (Misc) Provisions Act (1999);
- Planning and Development Act 2000 (as amended);
- Department of Arts, Heritage and Gaeltacht (2011) *Architectural Heritage Protection: Guidelines for Planning Authorities*
- Department of Arts, Heritage, Gaeltacht and the Islands (1999) *Framework and Principles for the Protection of Archaeological Heritage*



### 14.3.2.1 Relevant Archaeological Legislation and Planning Policies

The National Monuments Service (NMS), currently based in the Department of Housing, Local Government and Heritage, is responsible for the preservation, protection and promotion of Ireland's archaeological heritage. The National Monuments Acts 1930 (and amendments), the Heritage Act 1995 and relevant provisions of the National Cultural Institutions Act 1997 are the primary means of ensuring the satisfactory protection of archaeological remains. There are a number of mechanisms under the National Monuments Acts that are applied to secure the protection of archaeological monuments. These include the designation of National Monument status to significant sites as well as listing sites in the Register of Historic Monuments (RHM), the Record of Monuments and Places (RMP) and the Sites and Monuments Record (SMR). In addition, the Minister may also place Preservation Orders and Temporary Preservation Orders on endangered sites.

A National Monument is described as 'a monument or the remains of a monument, the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto' (Section 2, National Monument Act, 1930). A review of a published dataset<sup>1</sup> of National Monuments in State Care within County Clare revealed three examples within 10km of the Site. These comprise three monuments within, or in the close environs of, Killaloe town which is located c. 6km to the east (St. Molua's Church (National Monument No. 279), St. Flannan's Church (National Monument No. 6) and Brian Boru's Fort (National Monument No. 579)).

The locations of other accessible cultural heritage receptors within 20km of the wind farm site were assessed as part of the Landscape and Visual assessment and the results, which are presented in Chapter 15, were subject to archaeological review during the assessment process.

The Record of Monuments and Places (RMP) was established under Section 12 (1) of the National Monuments (Amendment) Act, 1994 and was based on the Register of Historic Monuments (RHM) and Sites and Monuments Record (SMR). These records comprise lists and maps of all known archaeological monuments and places for each county in the State. All archaeological sites listed in the RMP receive statutory protection under the National Monuments Act 1994 and no works can be undertaken at their locations, including their surrounding Zones of Notification, without providing two months advance notice to the NMS. The RMP lists seven recorded archaeological sites within the boundary of the Site and none of these are included in a nationwide list of monuments which have been assigned Preservation Orders as published by the National Monuments Service<sup>2</sup>. The known archaeological monuments within the study area are identified in Section 14.3.3, which includes summary descriptions of their existing conditions based on information gathered during the assessment. The monuments located within inaccessible areas, including those within surrounding private properties, were assessed based on a combination of reviews of their classifications and condition of preservation as described in published inventory descriptions, depictions on historic mapping and reviews of modern aerial/satellite imagery. The chapter also considers the potential for the presence of hitherto unrecorded, sub-surface archaeological features within areas that will be impacted by ground works during the construction phase.

The County Clare Development Plan 2017-2023 includes the following policies and objectives in relation to the protection of the archaeological resource within the county:

*CDP15.8: Sites, Features and Objects of Archaeological Interest*

*It is an objective of Clare County Council:*

- a) To safeguard sites, features and objects of archaeological interest generally;*
- b) To secure the preservation (i.e. preservation in situ or in exceptional cases preservation by record) of all archaeological monuments included in the Record of Monuments and Places as established under Section 12 of the National Monuments (Amendment) Act, 1994, and of sites, features and objects of archaeological and historical interest*

<sup>1</sup> <https://archaeology.ie/sites/default/files/media/pdf/monuments-in-state-care-clare.pdf>

<sup>2</sup> <https://www.archaeology.ie/sites/default/files/media/publications/po19v1-all-counties.pdf>



generally (in securing such preservation, the Council will have regard to the advice and recommendations of the Department of the Arts, Heritage, Regional, Rural and Gaeltacht Affairs);

c) To permit development only where the Planning Authority is satisfied that the proposals will not interfere with: items of archaeological or historical importance; the areas in the vicinity of archaeological sites; the appreciation or the study of such items.

d) To have regard to the government publication 'Framework and Principles for the Protection of the Archaeological Heritage 1999' in relation to protecting sites, features and objects of archaeological interest;

e) To advocate for greater financial assistance for the maintenance and improvement of features of archaeological interests in County Clare.

CDP15.9 Development Plan Objective: Newly Discovered Archaeological Sites

It is an objective of the Development Plan:

To protect and preserve archaeological sites discovered since the publication of the Record of Monuments and Places.

#### 14.3.2.2 Relevant Architectural Heritage Legislation and Planning Policies

Protection of architectural heritage is provided for through a range of legal instruments that include the Heritage Act 1995, the Architectural Heritage (National Inventory) and National Monuments (Misc. Provisions) Act 1999, and the Planning and Development Act 2000. Section 2(1) of the Heritage Act 1995, defines architectural heritage as including:

*All structures, buildings, traditional and designed, and groups of buildings including streetscapes 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, and, without prejudice to the generality of the foregoing, includes railways and related buildings and structures and any place comprising the remains or traces of any such railway, building or structure.*

The Planning and Development Act 2000 requires Planning Authorities to keep a 'Record of Protected Structures' (RPS) of buildings and other structures that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. All structures listed for protection in current Development Plans, have become Protected Structures and planning permission is required for any works to such structures that would affect their character. 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. The Planning and Development Act 2000 also provides for the inclusion of objectives for preserving the character of places, areas, groups of structures or townscapes of special interest designated as Architectural Conservation Areas (ACAs). There are no Protected Structures within the Site while there is one example within the surrounding study area. This comprises Glenomera House (RPS 427) which is a derelict, single storey house of early 20th century date and is located 560m outside the west end of the Site boundary. There are no Protected Structures located within the 100m corridor centred on the GCR route while one example (RPS 172: Saint Thomas's Church, Bridgetown). is located within the environs of a TDR work area (node ref. 32).

The Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999 established the National Inventory of Architectural Heritage (NIAH), including the NIAH Historic Gardens and Designed Landscapes, to create a record of built heritage structures and associated lands within the State. While inclusion in a NIAH inventory does not provide statutory protection to a structure, the inventory is intended to advise local authorities on compilation of their Records of Protected Structures. There are no NIAH listed structures within the Site or within 1km of its location. There are also no examples within the 100m centred on





the GCR while there is one example within a 100m corridor centred on one of the TDR work areas (This comprises Saint Thomas's Catholic Church (NIAH 20405405) which is also listed as a protected structure.

The current RPS for County Clare is published in the *County Clare Development Plan 2017-2023* which also presents the Council's policies and objectives in relation to the protection of the architectural heritage resource within the county includes the following:

*CDP15.1 Development Plan Objective: Architectural Heritage*

*It is an objective of Clare County Council:*

- a) To ensure the protection of the architectural heritage of County Clare through the identification of Protected Structures, the designation of Architectural Conservation Areas, the safeguarding of historic gardens, and the recognition of structures and elements that contribute positively to the vernacular and industrial heritage of the County;*
- b) To ensure that the architectural heritage of the County is not damaged either through direct destruction or by unsympathetic developments nearby.*

*CDP15.2 Development Plan Objective: Protected Structures*

*It is an objective of Clare County Council:*

- a) To protect, as set out in the Record of Protected Structures, all structures and their settings, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social, or technical interest;*
- b) To review the Record of Protected Structures periodically and add structures of special interest as appropriate, including significant elements of industrial, maritime or vernacular heritage and any twentieth century structures of merit.*

The term 'designated architectural heritage' is hereafter used to describe structures listed in the NIAH and the County Clare RPS.

### 14.3.3 Desktop Study

#### 14.3.3.1 Introduction

The following sections present summary details of the main periods within the Irish archaeological record with references to known archaeological sites, designated architectural heritage structures (RPS and NIAH) and identified undesignated cultural heritage assets located within the reviewed study area around the Site (Section 14.3.3.2), GCR (Section 14.3.3.3) and TDR (Section 14.3.3.4). Datasets have been interrogated and retrieved from current state and local authority sources and are considered accurate at the time of writing in October 2022. All published inventory entries of recorded archaeological sites and designated architectural heritage structures within the study areas for the wind farm site, grid connection and turbine delivery route work areas are also presented. Summary details on the origins, nature and function of the various monument types are included along with references to relevant published material that will provide further information to the reader.

The dating framework used for each period of the archaeological record is based on the *Guidelines for Authors of Reports on Archaeological Excavations* as published by the National Monuments Service<sup>3</sup>.

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



### 14.3.3.2 The Wind Farm Site

There are seven recorded archaeological sites located within the boundary of the wind farm site while there are a further eighteen examples located within the surrounding 1km study area (Table 14-5 and Appendix 14.1; Figure 14-1). None of these recorded archaeological sites are National Monuments in state ownership or guardianship but all are protected under the National Monuments Acts 1930 (as amended).

The recorded archaeological sites within the proposed development boundary include five enclosures, two of which are now located within the quarry property in the western end of the Site (CL044-073---- and CL044-074----), two examples are within pasture fields adjacent to the north and south boundaries (CL044-062---- and CL044-077----) and one is within a clearing in a forestry plantation in the east end (CL044-067----). The recorded location of a children’s burial ground (CL045-052001-) with an associated bullaun stone (CL045-052002-), are within a field located adjacent to the eastern boundary of the Site. The recorded archaeological sites within the surrounding 1km area comprise thirteen enclosures, one *fulacht fiadh*, one unclassified cairn, one holy well, one standing stone and the former location of a levelled 16th/17th century house (Table 14-5).

A review of an area extending for 10km in all directions from the Site boundary revealed a range of megalithic monuments with potential visual alignment attributes within the wider landscape (Table 14-6 and Appendix 14.1; Figure 14-) as well as three National Monuments in State Care which are located in the Killaloe area, c. 6km to the east of the Site (Table 14-7 and Appendix 14.1; Figure 14-).

**Table 14-5: Known archaeological sites within 1km of proposed wind farm site boundary**

Monument ref.	Class	Potential Condition	Townland	ITM E	ITM N	Distance from nearest turbine	Distance from nearest infrastructure
CL044-056----	Enclosure	Partially extant	CLOONYCONRY BEG	561538	670505	1500m west of T1	1240m west of access road
CL044-057----	Holy well	Unknown	BALLYQUIN BEG	561690	670061	1440m southwest of T1	720m west of access road
CL044-058----	Enclosure	Partially extant	BALLYQUIN BEG	561813	670151	1330m southwest of T1	680m northwest of access road
CL044-059----	Enclosure	Partially extant	CLOONYCONRY BEG	561828	670629	1170 west of T1	1120m west of access road
CL044-061----	Enclosure	Extant	BALLYQUIN MORE	562369	670488	650m west of T1	710m west of access road
CL044-062----	Enclosure	Levelled	BALLYMOLONEY	562892	671060	460m north of T1	450m north of T1 hardstand
CL044-063----	Enclosure	Extant	BALLYMOLONEY	563086	671987	1350m north of T1	1370m north of T1 hardstand





Monument ref.	Class	Potential Condition	Townland	ITM E	ITM N	Distance from nearest turbine	Distance from nearest infrastructure
CL044-064----	Enclosure	Partially extant	FAHY BEG	564035	669909	270m east of T3	140m east of T3 hardstand
CL044-065----	Cairn unclassified	Unknown	LACKAREAGH BEG	564063	672185	1560m north of T7	1550m north of T7 hardstand
CL044-066----	Cist	Unknown	LACKAREAGH MORE	564338	671691	1010m north of T7	1000m north of T7 hardstand
CL044-067----	Enclosure	Partially extant	BALLYKNAVIN	564343	670231	225m southeast of T6	60m north of access road
CL044-072----	House 16th/17th century	Levelled	BALLYQUIN MORE	562115	669894	1130m southwest of T1	290m west of access road in quarry
CL044-073----	Enclosure	Removed (quarrying)	BALLYQUIN MORE	562412	669801	N/A	N/A
CL044-074----	Enclosure	Unknown	BALLYQUIN MORE	562423	669622	1040m southwest of T2	100m south of access road in quarry
CL044-075----	Enclosure	Extant	FAHY MORE SOUTH	562745	668313	1690m southwest of T4	360m southeast of access road in quarry
CL044-076----	Enclosure	Levelled	WOODPARK (Tulla Lower By.)	562880	668652	1390m southwest of T4	430m east of access road in quarry
CL044-077----	Enclosure	Levelled	BALLYMOLONEY	562982	669697	810m southwest of T3	280m southeast of access road in quarry
CL044-078----	Enclosure	Partially extant	WOODPARK (Tulla Lower By.)	563072	668723	1160m southeast of T4	510m east of access road in quarry
CL044-079----	Enclosure	Removed (quarrying)	FAHY MORE NORTH	563430	668301	N/A	N/A
CL044-080----	Enclosure	Extant	FAHY MORE NORTH	563647	669062	540m south of T4	190m southwest of access road
CL045-034----	Fulacht fia	Unknown	LACKAREAGH BEG	564706	672288	1590m north of T7	1580m north of T7 hardstand



Monument ref.	Class	Potential Condition	Townland	ITM E	ITM N	Distance from nearest turbine	Distance from nearest infrastructure
CL045-039----	Enclosure	Extant	KNOCKADERREEN (Tulla Lower By.)	565923	670519	1380m east of T7	1370m east of T7 hardstand
CL045-051----	Enclosure	Unknown (within forestry)	KILROUGHIL	564828	670641	300m east of T7	285m east of T7 hardstand
CL045-052001-	Children's burial ground	Boundary levelled	KILROUGHIL	564918	670181	325m southeast of T8	300m southeast of T8 hardstand
CL045-052002-	Bullaun stone	Unknown	KILROUGHIL	564877	670175	295m southeast of T8	270m southeast of T8 hardstand
CL045-053----	Standing stone	Unknown	KILROUGHIL	565233	669332	1320m east of T4	1050m east of access road

**Table 14-6: Monuments with potential visual alignments within 10km of the wind farm site boundary**

Monument Ref.	Class	Extant	Distance from nearest Turbine	Alignment	Aligned towards site?
CL044-052----	Megalithic structure	No published inventory description. 25-inch OS map labels location as 'Cromlech (site of)' indicating it is not extant. Not visible on satellite imagery	2.9km to northwest	None likely	N/A
CL045-015----	Megalithic structure	No published inventory description. Dolmen indicated on Cassini edition OS map but not earlier editions. Not visible on satellite imagery	5.6km to northwest	None recorded	N/A
CL045-036003-	Megalithic structure	No published inventory description. Dolmen indicated on Cassini edition OS map but not earlier editions. Not visible on satellite imagery	2km to north	None recorded	N/A
CL045-055----	Megalithic structure	No published inventory description. Dolmen indicated on Cassini edition OS map but not earlier editions. Not visible on satellite imagery	2.4km to west	None recorded	N/A



Monument Ref.	Class	Extant	Distance from nearest Turbine	Alignment	Aligned towards site?
CL036-031----	Megalithic tomb - unclassified	In ruined condition with only one side stone extant when recorded in 1961 (Survey of Megalithic Tombs of Ireland Vol. 1)	9.3km to northwest	None	N/A
CL044-015----	Megalithic tomb - unclassified	No published inventory description. Not indicated on OS maps and not visible on satellite imagery	5.6km to northwest	None recorded	N/A
CL044-016----	Megalithic tomb - unclassified	No published inventory description. 25-inch OS map labels location as 'Giant's grave (site of)' indicating it is not extant. Not visible on satellite imagery	5km to northwest	None recorded	N/A
TN025-029002-	Megalithic tomb - unclassified	ASI description notes that this is doubtfully a megalithic tomb	9.2km to northeast	None	N/A
CL036-034----	Megalithic tomb - wedge tomb	No published inventory description. Not indicated on OS maps. Potential extant remains visible on satellite imagery	8.3km to west	None recorded	N/A
CL036-038----	Megalithic tomb - wedge tomb	No published inventory description. Not indicated on OS maps. No clear trace visible on satellite imagery	5.4km to northwest	None recorded	N/A
CL036-045----	Megalithic tomb - wedge tomb	No published inventory description. Not indicated on OS maps. No clear trace visible on satellite imagery	9.2km to north	None recorded	N/A
CL037-001----	Megalithic tomb - wedge tomb	In ruined condition when recorded in 1961 (Survey of Megalithic Tombs of Ireland Vol. 1). Satellite imagery shows location within forest clearing	9.8km to north	Opens to west	No
CL044-012----	Megalithic tomb - wedge tomb	Partly collapsed when recorded in 1961 (Survey of Megalithic Tombs of Ireland Vol. 1).	6.5 km to northwest	Opens to west	No
CL044-013----	Megalithic tomb - wedge tomb	Well-preserved when recorded in 1961 (Survey of Megalithic Tombs of Ireland Vol. 1).	6.2km to northwest	Opens to west	No
CL044-014----	Megalithic tomb - wedge tomb	Well-preserved but partially obscured when recorded in 1961 (Survey of Megalithic Tombs of Ireland Vol. 1).	5.8km to northwest	Opens to west	No



Monument Ref.	Class	Extant	Distance from nearest Turbine	Alignment	Aligned towards site?
CL044-017----	Megalithic tomb - wedge tomb	No published inventory description. Not indicated on OS maps. Potential extant remains visible on satellite imagery	5.2km to northwest	None recorded	N/A
CL044-018----	Megalithic tomb - wedge tomb	Scant remains when recorded in 1961 (Survey of Megalithic Tombs of Ireland Vol. 1).	5.4km to northwest	Opens to west	No
CL044-027----	Megalithic tomb - wedge tomb	In ruined condition when recorded in 1961 (Survey of Megalithic Tombs of Ireland Vol. 1). No clear trace visible on satellite imagery	4.3km to north	Opens to west	No
CL044-034----	Megalithic tomb - wedge tomb	In ruined condition when recorded in 1961 (Survey of Megalithic Tombs of Ireland Vol. 1). No clear trace visible on satellite imagery	8.3km to west-northwest	Opens to west	No
CL044-041----	Megalithic tomb - wedge tomb	No published inventory description. Not indicated on OS maps. Forestry at location on satellite imagery	5.7km to west	None recorded	N/A
CL044-045----	Megalithic tomb - wedge tomb	Well-preserved when recorded in 1961 (Survey of Megalithic Tombs of Ireland Vol. 1). Location overgrown on satellite imagery	3.9km to west	Opens to west	No
CL044-051----	Megalithic tomb - wedge tomb	Well-preserved when recorded in 1961 (Survey of Megalithic Tombs of Ireland Vol. 1).	3.1km to northwest	Opens to west	No
CL044-053----	Megalithic tomb - wedge tomb	In ruined condition when recorded in 1961 (Survey of Megalithic Tombs of Ireland Vol. 1).	3km to northwest	Opens to west	No
CL044-068----	Megalithic tomb - wedge tomb	Well-preserved when recorded in 1961 (Survey of Megalithic Tombs of Ireland Vol. 1). Satellite imagery shows location within forest clearing	6.5km to west	Opens to west	No
CL053-020----	Megalithic tomb - wedge tomb	Well-preserved when recorded in 1961 (Survey of Megalithic Tombs of Ireland Vol. 1). Potential extant remains visible on satellite imagery	2.5km to south	Opens to west	No



**Table 14-7: National Monuments within 10km of the wind farm site**

Name	National Monument ref (RMP ref)	Status	Distance from nearest Turbine
St. Molua's Church (Killaloe)	No. 279 (CL045-033015-)	In State Ownership	5.9km to east
St. Flannan's Church (Killaloe)	No. 6 (CL045-033003-)	In State Ownership	6.2km to east
Brian Boru Fort (Killaloe)	No. 579 (CL045-031----)	In State Ownership	6.2km to northeast

### Prehistoric Periods

Until the recent identification of Palaeolithic human butchery marks on a bear bone recovered from a cave site in County Clare, the earliest recorded evidence for human activity in Ireland dated to the Mesolithic period (7000–4000 BC) when groups of hunter-gatherers lived on the heavily wooded island. The archaeological record indicates that these mobile groups tended to favour coastal, lake and river shore locations which provided a transport resource and also provided elements of their varied diet. These groups did not construct any monuments that have left any above ground traces although their presence in an area can often be identified by scatters of worked flints in ploughed fields. The Neolithic period (4000–2400 BC) began with the arrival of agriculture and its establishment as the principal form of economic subsistence, which resulted in more permanent settlement patterns. As a consequence of the more settled nature of agrarian life, new site-types, such as substantial rectangular timber houses, field systems and various types of megalithic tombs, begin to appear in the archaeological record as well as new artefact types, including pottery. Metalworking arrived in Ireland with the advent of the Bronze Age period (c. 2400–500 BC). This new technology introduced a new artefactual assemblage into the Irish archaeological record and this period was also associated with the construction of new monument types such as standing stones, stone rows, stone circles and fulachta fia. The development of new burial practices meant that the construction of funerary monuments such as cairns, barrows, boulder burials and tumuli or cists was a common practice during this period. The arrival of iron-working technology in Ireland saw the advent of the Iron Age (600 BC – 400 AD). Relatively little has been known about settlement patterns during this period until recent decades when the corpus of evidence has been increased by the discovery of sub-surface remains of Iron Age sites during archaeological investigations undertaken as part of development projects. A detailed overview of each of these prehistoric periods is provided in *The Prehistoric Archaeology of Ireland* (Waddell 1998).

There are three recorded archaeological sites located within 1km of the Site that are of probable prehistoric origin, and these comprise a fulacht fiadh (CL045-034----), an unclassified cairn (CL044-065----) and a cist (CL044-066----) which are all located in lands outside the northeast portion of the Site boundary. Fulachta fia (approx. translation ‘cooking place of the deer’) comprise spreads of burnt stones within charcoal-rich deposits and are generally interpreted as the remains of cooking sites. Archaeological evidence indicates that they may have originated in the Neolithic period but did not become widespread until the Bronze Age (Hawkes 2018). Cists comprise rectangular or polygonal burial structures, constructed from stone slabs set on edge and covered by one or more horizontal slabs or capstones and may date to the Bronze/Iron Ages (c. 2400 BC - AD 400). The presence of stone cairns on the summits and ridges of hills and mountains is a common feature in the Irish landscape and may have fulfilled various ritual functions, such as a covering over burial sites (including cists and megalithic tombs), ancient territorial boundaries, memorial features and pilgrimage routes. Cairns may also be associated with more prosaic functions such as modern upland shelters or features resulting from land clearance works. Unclassified cairns, such as the example within the study area, comprise examples which cannot be classified as a specific cairn type and may potentially date from any period from prehistory onwards.



It is noted that while the vast majority of prehistoric settlement sites leave no above ground remains their foundations and occupation deposits, which may contain artefactual and environmental remains, can often survive below modern ground surfaces within undisturbed contexts.

### Early Medieval Period

The Irish early medieval period (c.400–1169 AD) broadly commenced with the arrival of Christianity and continued until the arrival of the Anglo-Normans during the 12<sup>th</sup> century. While the later stages of this period saw the emergence of the first phases of urbanisation around the Hiberno-Norse ports, the dominant settlement pattern continued to be rural-based and a detailed overview of the archaeological context of the period is provided in *The Archaeology of Early Medieval Ireland* (Edwards 1996).

The Site is located c. 6km to the west of Killaloe town which formed the location of an important early medieval ecclesiastical and secular centre situated at a fording point across the River Shannon. The foundations of the town lie in the early medieval period when it developed in association with the monastic settlement of St. Lua. This ecclesiastical settlement is recorded as being originally founded in the 6th century on Friar's Island downstream of the present bridge and the monks later moved Clare side of the river where the settlement became known as *Cill Dálua* or Church of St. Lua. The growth of Killaloe as a secular settlement developed in the following centuries with the rise to regional and then national prominence of the local Dál gCais tribe, which was notably led by Brian Boru in the late 10th and early 11th centuries. The Annals of Clonmacnoise record that shortly after the death of Brian Boru the settlement was attacked and destroyed by men of Connaught. The patronage of the Dál gCais continued into the 12th century, including after the time when they had shifted their base to Limerick, and Killaloe developed as one of the most important religious sites in Munster. At the Synod of Ráth Bressail held in County Tipperary in 1111, Killaloe was made a diocesan capital confirming its place as an influential church centre. The Annals record that the settlement was repeatedly subject to attacks by rival provincial dynasties throughout the 11th and 12th centuries but appears to have continued to prosper as a centre of learning and literature.

The most common early medieval archaeological sites within the Irish landscape are ringforts which comprise circular enclosures delimited by earthen banks formed of material thrown up from a concentric external ditch while stone-built variants known as cashels are also common within western counties. The ubiquity of these enclosures within the Irish landscape is attested to by the fact that their original Gaelic names (*rath, lios and dun*) still form some of the most common place-name elements in the country. Archaeological excavations have demonstrated that the majority comprised enclosed farmsteads containing the foundations of domestic and agricultural buildings. Ringforts may form the visible element of wider farmlands (known as *airlise*) that may contain unrecorded, sub-surface archaeological features such as associated field systems, stockades, barns, mills and drying kilns. There are eighteen recorded enclosure sites located within the study area and, while sites assigned this classification can theoretically date from any period from prehistory onwards, many may form the remains of unclassified ringforts, but this cannot be conclusively proved without recourse to archaeological excavation.

A bullaun stone (CL045-052002-) located in an area of Kilroughil townland within the eastern end of the Site is also of potential early medieval date. The term 'bullaun' (from the Irish word 'bullán', which means a round hollow in a stone, or a bowl) is applied to boulders of stone or bedrock with cut hemispherical hollows or basin-like depressions. They are frequently associated with ecclesiastical sites and may have been used for religious purposes. The example in Kilroughil is located within the environs of a recorded children's burial ground (CL045-052001-) which were traditionally used to bury unbaptised or stillborn children and are often known under various Irish names: Cillín, Caldragh, Ceallúnach or Calluragh. They are often found within former ecclesiastical sites, including those only recorded in local traditions, and the graves are marked by simple, low, upright stones or slabs almost invariably without any inscription or other carving. This burial practice is often traditionally associated with the 19th century Famine period but may be earlier in origin and is known to have continued into the 20th century in some areas. A holy well (CL044-057----) within a section of the study area in Ballyquin





Beg townland outside the west end of the Site, may also be associated with early ecclesiastic activity within the area, although the potential that the veneration of some of these sites may be pre-Christian or alternatively date to more recent centuries. The holy well is named ‘Toberslany’ on the historic OS maps.

High and Late Medieval Periods

The arrival of the Anglo-Normans in the late 12th 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 c.1550. These periods saw the continuing expansion of Irish urbanisation as many of the port cities developed into international trading centres and numerous villages and towns began to develop throughout the country, often within the environs of Anglo-Norman manorial centres which were defended by masonry castles. By the 15th century the native Irish chieftains and lords began to construct tower-house castles within their own landholdings as centres of territorial control. There is little historical information on the settlement and land-use patterns within the environs of the Site during these periods although the area likely formed part of the wider agricultural hinterland of Killaloe town. After the Anglo-Norman conquest of Ireland, Henry II granted the O’Brien lands in the area to Philip De Braose in 1177 but he never managed to take them into his possession. Subsequently, in 1185, Prince John granted “five and a half cantreds of this kingdom, including the borough of Killaloe” to Theobald Walter and Ranulf De Glenville (Bradley 1988, 94). Despite this, the Killaloe area appears to have stayed out of the control of the Anglo-Normans until 1216 when Geoffrey de Marrisco, erected a castle there and as recorded in the Annals of Clonmacnoise, forced the inhabitants to receive an English bishop. This attempt to take control of the bishopric and cathedral ultimately failed as well when the appointed bishop was deposed by the pope in 1221. There is no evidence that the Anglo-Normans ever re-established control over Killaloe or its surrounding lands and there are no recorded late or high medieval sites located within the study area.

Post-Medieval and Early Modern Periods

The centuries following 1550 AD comprise the post-medieval period which continued into the middle of the 19th century with the following period extending into the 20<sup>th</sup> century often described as early modern. The following section provides a high-level overview of the period and further details on the layout of the area between the mid-19<sup>th</sup> and mid-20<sup>th</sup> centuries are provided in the below cartographic review section. The early part of the post-medieval period was a turbulent time in Ireland history and saw a period of wars between the 1560s and 1603 and further conflict during the Cromwellian Wars (1649–53) which saw the extensive dispossession of forfeited Gaelic lands. The mid-17th-century Down Survey records of the place names, landowners and summaries of land use information relating to townlands that extend within the Site prior to and following the Cromwellian wars are presented in Table 14-8.

**Table 14-8: Down Survey records of 17th century landowners within study area**

Townland	17 <sup>th</sup> century name	1641 Landowner	1670 Landowner	Land Use Details
Ballyknavin	Ballyknaum	Inchiquin, Earl of (Protestant)	Inchiquin, Earl of (Protestant)	Unprofitable land: 55 plantation acres Profitable land: 171 plantation acres
Ballymoloney	Ballemull Cashell	O'Bryan, Connor (Catholic)	Stackpoole, Bartholomew (Protestant)	Unprofitable land: 6 plantation acres Profitable land: 374 plantation acres



Townland	17 <sup>th</sup> century name	1641 Landowner	1670 Landowner	Land Use Details
Ballyquin More	Balleisheen	O'Brien, Barnabas earl of Thomond (Protestant)	O'Brien, Barnabas earl of Thomond (Protestant)	Unprofitable land: 30 plantation acres Profitable land: 332 plantation acres
Fahy Beg	Fahymorealias Fahybeg	Inchiquin, Earl of (Protestant)	Inchiquin, Earl of (Protestant)	None recorded
Fahy More North	Fahymorealias Fahybeg	Inchiquin, Earl of (Protestant)	Inchiquin, Earl of (Protestant)	None recorded
Kilroughil	Mountain in Common	-	O'Brien, Barnabas earl of Thomond (Protestant);	Unprofitable land: 72 plantation acres Profitable land: 8 plantation acres
Leitrim	Balleroe and Castle Cryn	Flanning, Thomas (Catholic)	Purefoy, Lt Col William (Protestant)	None recorded
Woodpark	Balleroe and Castle Cryn	Flanning, Thomas (Catholic)	Purefoy, Lt Col William (Protestant)	None recorded

As the post-medieval period progressed high and low status stone houses began to replace simpler cabins throughout the Irish countryside and many farmsteads at this time typically consisted of single-storey cottages with associated outbuildings while two-storey farmhouses became more common into the 19th century. An agricultural boom in the late 18th and early 19th centuries saw a rise in prices for both Irish tillage and dairy produce which resulted in landlords investing in extensive land improvement works within their holdings to increase productivity. This included widespread land drainage works, introduction of soil nutrients, grass planting and the enclosure of open lands into field systems that survive to the present-day. The cultivation of potatoes became widespread and this high-yield crop, which required no processing, was particularly suited to small farm holdings within low-quality reclaimed lands with acidic soils (Feehan 2003, 108). The popularity and success of this crop contributed to a population boom during the 18th and early 19th centuries and its failure in the middle of the latter century was to have devastating consequences. The settlement pattern throughout much of the rural landscape was greatly affected by the Famine period and its aftermath in the middle of the 19th century which saw the depopulation of many areas. The period after the Famine saw an increasing move away from small-scale subsistence farming towards more market-led pasture, assisted by the development of the Co-Op system, which also increased the extent of land reclamation of previously marginal lands.

The *Topographical Dictionary of Ireland* (Lewis 1837) provides descriptions of Irish parishes prior to the famine period and often provides information on contemporary land use patterns, historical events and the locations of archaeological sites and other built structures of note. The Site extends into two civil parishes (O'Briensbridge and Killokennedy) and a 19th century description of the general area published in the *Topographical Dictionary of Ireland* (Lewis 1837) notes that some lands were under mountain pasture and bog and the general area was also a source of good building stones, indicating that quarrying was active within the parishes at that time.





The location of a demolished country house of potential 16<sup>th</sup> or 17<sup>th</sup> century date within a section of Ballyquinn More townland outside the west boundary of the Site is listed as a recorded archaeological site (CL044-072----) and its former grounds are also included in the NIAH Historic Garden Survey (ref. 3665<sup>4</sup>). This house is named Ballyquinn House on the 6-inch OS map and Glenomera House on the 25-inch edition. There are references to it having been built at the start of the 18<sup>th</sup> century as the residence of the Arthurs, who had previously been a notable Limerick based family, when Thomas Arthur took a lease of lands in the area from the Earl of Inchiquin and Sir Donagh O'Brien in 1699 with the condition that a substantial farmhouse be built on the site within nine years<sup>5</sup>. Lewis (1837) makes a brief reference to the house noting that it was still the residence of the Arthurs family in the 1830s and that the property was associated with grouse and pheasant hunting. A review of a revised 6-inch OS map published in 1922 revealed that the house was labelled as being in ruins by that time, possibly after a fire in 1905. The house ruins, which comprised a three-storey house with projecting wings, were demolished during the 20<sup>th</sup> century and its former location is now occupied by a modern house, with potential remains of outbuildings to the south surviving. Both of the 19<sup>th</sup> century OS maps show enclosed garden areas and outbuilding ranges to the south of the main house with a gate lodge and driveway indicated to the northwest. A portion of the grounds in the east end of the townland, which are shown as an undeveloped area on the OS maps, extend into the area now occupied by the modern quarry in the south end of the Site. The 19<sup>th</sup> century OS maps also show extensive areas of woodland, including an area within the west end of the Site, within surrounding townlands and these extend well beyond the Ballyquinn House property and do not form part of the house's curtilage. It is also noted that the NIAH Garden Survey does not indicate 'woodland' as part of the surviving landscape features associated with the house.

#### Database of Irish Excavation Reports

A review of this database revealed one licensed archaeological investigation within a townland in the study area. This entailed archaeological monitoring of ground works during the construction of a private house in Lackareagh Beg townland which revealed nothing of archaeological significance (licence ref. 02E0156<sup>6</sup>). A 2012 programme of test trench excavations at a hillfort site located c.2.6km to the west of the Site revealed the presence of sub-surface remains of two enclosing elements<sup>7</sup>.

#### Review of Cartographic Sources

The following section provides a general overview of the cartographic and aerial images of the wind farm site and further details on the depictions of the locations of proposed construction areas are also provided in Section 14.3.4. The reviewed cartographic sources comprised the 1st edition 6-inch Ordnance Survey (OS) map (surveyed 1839), and the 25-inch edition OS map (surveyed 1893) (Appendix 14.1; Figures 14.4 and 14.5). The Down Survey Barony maps for the area were destroyed in the 18<sup>th</sup> century and no known copies exist<sup>8</sup>. The consulted aerial/satellite images comprised a range of online sources including Bing Maps, Google Maps and Google Earth as well as the Ordnance Survey of Ireland (OSI) Geohive Mapviewer.

The 6-inch OS map surveyed in 1839 shows the lands within the Site boundary occupied by a mix of narrow strip fields, with their long axis typically extending downslope, and more irregular rectangular and sub-rectangular fields elsewhere. There is also a strip of woodland shown extending through the west end of the Site, which is named Ballymoloney Woods on the 25-inch map, and remnant areas of this survive. There is one unlabeled farmyard located within the Site which is located in Ballyknavin townland (@ITM 564370, 670495) and derelict remains of the farm buildings survive. This location was noted at an early stage in the assessment process and was then purposefully avoided by design. A second farmyard shown in the area c. 275m to the west on the 6-inch map is within an area of Fahy Beg townland located outside the Site boundary.

<sup>4</sup> <https://www.buildingsofireland.ie/buildings-search/site/3665/ballyquin-house-killokenne-co-clare>

<sup>5</sup> <https://landedfamilies.blogspot.com/2015/10/191-arthur-of-glenomera.html>

<sup>6</sup> <https://excavations.ie/report/2002/Clare/0007496/>

<sup>7</sup> <https://excavations.ie/report/2012/Clare/0022666/>

<sup>8</sup> <http://downsurvey.tcd.ie/down-survey-maps.php#bm=Tullogh&c=Clare>



The various archaeological enclosures located within the Site boundary and in surrounding fields are depicted as small circular areas on the maps, which do not give an accurate representation of their dimensions or any morphological features. The detail on the 25-inch OS map, which was surveyed in 1893, indicates that the layout of the lands within the Site boundary remained relatively unchanged during the second half of the 19<sup>th</sup> century. No potential unrecorded archaeological sites are indicated on either edition of the 19<sup>th</sup> century OS maps.

#### Designated Architectural Heritage Structures

The current County Clare Record of Protected Structures (RPS) and the National Inventory of Architectural Heritage (NIAH) do not list any buildings or other structures within the Site boundary and there are also no Architectural Conservation Areas within the surrounding study area. There is one Protected Structure within the surrounding 1km study area. This comprises Glenomera House (RPS 427) which is a derelict, single storey house of early 20<sup>th</sup> century date, which shares a name with an earlier house in lands further to the east that is now demolished. It is located 535m outside the west end of the Site boundary (Appendix 14.1; Figure 14-1) and is described as follows in the Clare County Development Plan (2017):

*Date: 1910-1915*

*In use as: Not inhabited*

*Rating: Regional*

*Summary description: Detached derelict single-storey dormer five-bay architect designed, Edwardian house, c.1912. Two central chimneys, advanced wings to central section flanking open “porch”. Gabled extension to left at rear. Ornate carved panelled entrance hall and fireplace.*

*Categories of special interest: Architectural, Detail/Design*

**Table 14-9: Designated Architectural Heritage Structure within 1km of Site boundary**

Structure	RPS	NIAH	SMR	ITM E	ITM N
Glenomra House	427	Not listed	Not listed	561859	570259

#### Undesignated Cultural Heritage Assets

While encompassing the archaeological and designated architectural heritage resources, cultural heritage also includes various undesignated assets such as demesne lands, vernacular structures, folklore, place names and historical events. As previously noted in the Cartographic Review section while there are a number of extant and former 19<sup>th</sup> century farmyards located within the Site, none are located within the footprint of any proposed construction areas. The review of historic cartographic sources also indicates that while there are a number of post-medieval country houses located within the surrounding landscape no associated demesne lands or potential curtilage structures are located within the Site boundary.

The Site extends into a number of townlands which 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 (Table 14-10). The boundaries and names of Irish townlands were recorded and standardised by the Ordnance Survey (OS) in the 19<sup>th</sup> century and typically entailed anglicisations of their original Irish names. The Irish origins of townland names often refer to natural topographical features, past landowners, farming practices, etc. but some name elements may also give an indication of the presence of archaeological sites within the townland, e.g., lios or rath indicate the presence of a ringfort while temple, saggart, termon or kill may record associations with a church site. The translations of the townland names within the Site were sourced from the Placenames Database ([www.logainm.ie](http://www.logainm.ie)) and from *The History and Topography of County Clare* (Frost 1893). A review of the Schools Collection of the Irish National Folklore Collection ([www.duchas.ie](http://www.duchas.ie)) revealed no records of any transcribed folklore or traditions associated with these townlands.



A number of sections of the wind farm access roads extend across the line of townland boundaries but the majority of these either follow existing farm tracks or are now contained with modern forestry plantations and within the modern quarry. The access route to T04 from the west does extend across a tree-lined earthen field bank that separates the townlands of Fahy Beg and Ballyknavin.

**Table 14-10: Townland name translations based on Placenames Database records**

Townland	Irish Origin	Translation	Additional Notes
Ballyknavin	<i>Baile Uí Chnámhín</i>	Knavine's (?) town or The place of the little bone (Frost 1893)	Name listed in early 17th century records
Ballymoloney	<i>Baile Uí Mhaolomhnaigh</i>	Moloney's town	Name listed in early 17th century records
Ballyquin More	<i>Baile Choinn Mór</i>	Quinn's town	Name listed in early 17th century records
Fahy Beg	<i>An Fhaiche Bheag</i>	Small green	Name listed in early 17th century records
Fahy More North	<i>An Fhaiche Mhór Thuaidh</i>	Large green	Name listed in early 17th century records
Kilroughil	<i>Cill Urthaile</i>	<i>Cill</i> = church Also translated as "The wood of the spencil" (Frost 1893)	A burial ground is recorded in townland (CL045-052001- )
Leitrim	<i>Liatroim</i>	grey ridge or long hill	Name listed in early 19th century records
Woodpark (formerly Curraghavatta)	<i>Currach an Bhata</i>	<i>Currach</i> = marsh	18th century deed refers to part of the lands of a deerpark called Woodpark otherwise Curraghavatta. Possibly associated with Ballyquinn House to west. Townland now part of quarry

### 14.3.3.3 Grid Connection Cable Route

The GCR will be formed by a 38kV underground cable measuring c. 11.4 km in length which will be contained within the public road corridor throughout its length with the exception of start and finish points where the cables shall be terminated in the existing Ardnacrusha substation and the proposed onsite substation which is located within the wind farm site. There are no recorded archaeological sites, designated architectural heritage structures or Architectural Conservation Areas directly located on the public road that will form the grid route connection to the Ardnacrusha substation and it does not extend through any historic towns or villages.

There is one known archaeological site located within the 100m corridor centred on the public roads along the GCR and this comprises an enclosure site (CL044-075----) which is located close to a field boundary adjacent to the west side of the road in the townland of Fahy More South (Appendix 14.1; Figure 14-7 and Appendix 14.2;



Plate 14-13). There is no published inventory description of this site, but a review of the historic OS maps revealed that it is indicated as a univallate enclosure (one bank and ditch) on all map editions which also show the public road that extends along its east side. The detail on the 25-inch OS map indicates that the construction of the road may have truncated the south end of the site. A review of aerial and satellite imagery revealed that, while the site is overgrown with trees, the outline of the enclosure is still visible, and it comprises a broadly circular area measuring c. 37m in diameter and a projection of this dataset indicates that the south end may terminate close to the road's edge. The location of the enclosure was also inspected from the adjacent road during the field survey and a summary description is provided in Section 14.3.4.3.

There are two masonry road bridges spanning watercourses located along the route, within the townlands of Tooreen and Aharinaghbeg, and these are not listed in the RMP, RPS or NIAH (Appendix 14.1; Figure 14-6). A review was carried out of a County Clare Bridge Survey dataset published on the Heritage Council's online Heritage Map Viewer<sup>9</sup>. This dataset includes examples listed in the RPS but also includes additional bridges deemed to be of architectural, social or technical merit. Neither of the bridges along the GCR are included in this survey dataset. Summary details on both bridges are provided in Section 14.3.4.2 and location mapping and photographs are presented in Appendices 14-1 and 14-2.

#### 14.3.3.4 Turbine Delivery Route

The only designated cultural heritage asset located within 100m of a TDR work area is Saint Thomas's Catholic Church which is a Protected Structure (RPS 172) and is also listed in the NIAH (ref. 20405405). This is a late 20th-century church which is located in a graveyard that also contains 19th-century headstones. The church is located on the east side of the R466 in Bridgetown village and has been described as follows in the NIAH:

*Freestanding Roman Catholic church, built c. 1980, with four-bay side elevations having projecting flat-roofed porches and sacristy. Possibly incorporating fabric of earlier building. Pitched artificial slate roofs. Rendered walls. Full-height window openings with sloping sills and leaded glass. Half-height window with pointed arch to gable. Glazed timber doors to porches with sidelights. Retaining interior features. Rendered boundary walls. Graveyard to site with grave markers from c. 1850 to present.*

The historic OS maps show an earlier church within the same location as the existing 1980s structure and the current layout of the surrounding graveyard and the roadway to the west has remained unchanged since the 19<sup>th</sup> century (Appendix 14.1; Figure 14-9). The proposed TDR works in this area will entail temporary widening works along a roadside grass verge located on the opposite (west) side of the road from the graveyard boundary wall and no structures or other features of potential cultural heritage interest are shown at this location on the historic OS maps. No interventions within the church property are proposed.

### 14.3.4 Field Survey

#### 14.3.4.1 Wind Farm Site

The Site was inspected on a number of occasions between 2020 and 2022 in clear weather conditions that allowed good landscape visibility. The following section commences with an overview of the existing environment within the Site and further details on the existing environment at the locations of proposed construction areas are provided in Table 14-11. This table includes the distances of each turbine to the nearest archaeological site as well as summaries of the locations of each element of the proposed wind farm as shown on the 19<sup>th</sup> century OS maps and aerial/satellite images published in recent decades.

<sup>9</sup> <https://www.heritagemaps.ie/WebApps/HeritageMaps/index.html>



In addition, details on the distances between known archaeological sites and the nearest locations of other elements of the proposed development, including hardstands and access roads, are provided in Section 14-4 (Table 14-13).

In general, the terrain within the Site extends downward to the south from a south-facing hillside in the northern area. It is occupied by a mix of semi-improved pasture fields, marginal fields, pockets of mature deciduous trees within the northwest portion as well as areas of commercial forestry planted in recent decades. There are four watercourses within the site and an inspection of proposed crossing locations, which will be by clear span bridges, revealed that they comprise narrow streams, generally 1m or less in width, with shallow waters and stony beds. No features of archaeological potential were noted at the crossing locations and the review of historical OS mapping did not reveal any features of heritage interest, such as fords or weirs. A modern quarry operation not present on the historic OS maps is located within the southern end of the Site and the majority of the lands in this property have been reduced down into natural bedrocks. In general, the current use and layout of the lands within the wind farm site when compared to the detail shown on the historic OS maps demonstrates localised modern interventions resulting from the modern woodland plantations and quarrying within former areas of marginal farmlands while other areas of the Site retain a broadly similar layout to that depicted on the 19<sup>th</sup>-century OS maps.

Turbines T05, T06 and T07, will be sited within modern forestry plantations occupied by regularly spaced trees rows and areas of dense undergrowth. The thick forestry cover restricted access to the close environs of these proposed turbine locations (see Table 14-11) but an assessment of the ground disturbance activities resulting from the creation and development of the woodland plantations, including ground preparation works and land drains as well as extensive root networks, was carried out within the general environs of all three locations. The topsoil layer within all planted areas was noted to have been extensively disturbed by root systems and the frequent earth-cut drains extending between the regular tree rows. There were no traces of potential archaeological features, unrecorded built structures, pre-forestry field boundaries or trackways noted during the visual inspections of accessible areas within the plantations. The areas of the Site outside the forestry comprise fields of varying quality which were in use as pasturelands at the time of the site inspections and all proposed development locations within these lands were accessible. The fields boundaries within these areas of the Site comprise overgrown earthen banks with flanking drainage ditches and were accessed via modern farm gates and gaps in field banks. The quarry property in the south end of the Site was also inspected and this entailed a visual appraisal of the locations of proposed development areas within areas that have been impacted by modern quarrying works.

Enclosure CL044-067---- is located in a clearing within a modern forestry location situated between T06 and T08 (Appendix 14.1; Figure 14-2). An inspection of its location revealed that it remains partially extant in an unplanted area with the edges of the forestry set back at an average distance of 15m from its visible enclosing element which comprises a low denuded 1m wide earthen bank that survives to heights of 20cm to 60cm above the surrounding ground surface (Appendix 14.2; Plate 14-11). The overall external diameter of the circular enclosure is c.27m and no traces of any potential internal or external associated archaeological features, including an entrance way or surrounding enclosure ditch, were noted during the inspection. The low earthen banks are colonised by gorse and bushes and these attributes combine to form a low surface visibility even within its close environs. A visual appraisal of Enclosure CL044-064----, which is located within an improved pasture field outside the Site but is located c. 140m to the east of the T03 hardstand, revealed that its low, denuded circular earthen bank, which encloses a c. 30m diameter area, survives to heights of c.30cm to 40cm above ground level and is barely perceptible as low relief feature obscured with vegetation.

An inspection of the modern quarry within the south end of the Site confirmed that the former location of Enclosure CL044-073---- has been impacted by quarrying works which has completely removed this site (Appendix 14.2; Plate 14-1).





The location of a second enclosure within the property (CL044-077----) is within an area not impacted by quarrying works but its location is inaccessible due to presence of thick vegetation overgrowth (Appendix 14.2; Plate 14-2).

No surface traces of any elements of two enclosures in Ballymoloney townland (CL044-062---- and CL044-077---), which are within the Site boundary, were observed during visual appraisals of their recorded locations. There are no proposed elements of the wind farm located within 450m or 270m of their locations, respectively. Access to the recorded location of the children's burial ground and bullaun stone (CL045-052001- and CL045-052002-), within the section of the Site boundary that extends into Kilroughil townland, was constrained by thick vegetation in the area to the west of their location. The burial ground is indicated as a small rectangular enclosure (c. 15m by 20m) on the 6-inch OS map (1837) and a review of satellite images of the location indicates that no surface traces of this enclosure are now extant. There are no proposed works within the close environs of the location and the nearest element of the wind farm is the hardstand of T08 located c. 300m to the northwest.

There were no surface traces of potential unrecorded archaeological sites noted during systematic fieldwalking inspections of the Site. The location of the farmyard in Ballyknavin townland which is shown on the 6-inch and 25-inch OS maps was also inspected. The farmyard is accessed from a farm track to the south and derelict remains of a farmhouse and outbuildings survive in poor to moderate states of preservation (Appendix 14.2; Plate 14-12). The interior of the buildings could not be accessed but the one-storey farmhouse and a number of the outbuildings to the east remain extant but are in very ruinous condition. The farmyard will be avoided by the proposed development and no works or access routes are proposed at its location.



**Table 14-11: Description of wind farm construction areas with references to consulted desktop sources**

Project Element	Townland	Description	Nearest archaeological site	Historic OS Maps	Aerial/Satellite images
Turbine 1	Ballymoloney	Located within small, marginal pasture fields with some gorse growth in area of slightly sloping terrain. The east-west field boundaries extending through the area comprise tree-lined earthen banks. The access track to the location extends for c.290m through an improved pasture field from an existing farm track to the south. (Appendix 14.2; Plate 14-4)	Levelled enclosure (CL044-062----) located 460m to north	Shown as vacant fields on historic OS maps	No potential unrecorded archaeological sites noted at location
Turbine 2	Ballymoloney	Located within large, improved pasture field in area of slightly sloping terrain. The east-west field boundaries extending through the area comprise tree-lined earthen banks. The access track to the location extends for c.120 through area of improved pasture from an existing farm lane to the south. (Appendix 14.2; Plate 14-5)	Levelled enclosure (CL044-077----) located 680m to southwest	Shown as a number of small vacant marginal field on 6-inch OS map and existing field is depicted on 25-inch map	No potential unrecorded archaeological sites noted at location
Turbine 3	Fahy Beg	Located within area of improved pasture with a north to south field boundary extending through location. The access route to location extents for c. 130m through open pasture from existing farm track to south (Appendix 14.2; Plate 14-6)	Partially levelled enclosure (CL044-064----) located 280m to east	Shown as vacant fields on historic OS maps	No potential unrecorded archaeological sites noted at location
Turbine 4	Fahy Beg	Located within area of improved pasture with a north to south field boundary extending through location. The access route to location extents for c. 90m through open pasture from existing farm track to northwest	Partially levelled enclosure (CL044-064----) located 360m to northeast	Shown as vacant fields on historic OS maps. The hardstand extends across a farm track	No potential unrecorded archaeological sites noted at location

Project Element	Townland	Description	Nearest archaeological site	Historic OS Maps	Aerial/Satellite images
Turbine 5	Fahy Beg	Located within area of recently planted forestry. The access route to location extends for c. 650m through woodland to the west (Appendix 14.2; Plate 14-8)	Partially levelled enclosure (CL044-067----) located 220m to southeast	shown on both editions Shown as vacant fields on historic OS maps	OSI aerial photographs show the location as a large pasture field prior to planting. No potential unrecorded archaeological sites noted at location.
Turbine 6	Ballyknavin	Located within modern forestry plantation. The presence of thick growth within the plantation hindered access to the turbine location but an inspection of its environs indicated that the ground surface in the area has been disturbed by planting. The access route to location extends from an existing farm track on the east side of the hardstand (Appendix 14.2; Plate 14-8)	Enclosure (CL044-067----) located 550m to southeast	Shown as vacant fields on all OS maps, which also show a farmyard in the area c. 100m to the northeast of the hardstand. A number of derelict farm buildings remain at this location which will be avoided by development infrastructure.	The location is shown as vacant fields on OSI aerial images prior to forest plantation and no potential unrecorded archaeological sites were noted
Turbine 7	Ballyknavin	Located within modern forestry plantation. The presence of thick growth within the plantation hindered access to the turbine location but an inspection of its environs indicated that the ground surface in the area has been disturbed by planting. The access route to location extends for c. 240m through forestry to the southwest (Appendix 14.2; Plate 14-9)	Partially levelled enclosure (CL045-067----) located 300m to east	Shown as vacant fields on all OS maps, which also show a farmyard in the area c. 60m to the northeast of the hardstand. Derelict farm buildings remain at this location and will be avoided.	The location is shown as vacant fields on OSI aerial images prior to forest plantation and no potential unrecorded archaeological sites were noted





Project Element	Townland	Description	Nearest archaeological site	Historic OS Maps	Aerial/Satellite images
Turbine 8	Ballyknavin	Located within area of improved pasture with a north to south field boundary extending through location. The access route to location extends for c. 600m through open pasture and forestry from an existing farm track to southwest (Appendix 14.2; Plate 14-10)	Enclosure (CL044-067----) located 250m to west	Shown as vacant fields on historic OS maps.	No potential unrecorded archaeological sites noted at location
Substation / compound	Ballyquin More and Leitrim	Within green field area adjacent to quarry	Enclosure (CL044-076----) located 270m to southeast	Shown as vacant fields on historic OS maps.	No potential unrecorded archaeological sites noted at location
Met Mast	Fahy Beg	Located within a vacant green field. Access track to location extends for c.300m alongside a field bank from T4 to the north	Enclosure (CL044-080----) located 275m to southwest	Shown as vacant field area OS maps. A farmhouse shown adjacent to the access road on the 6-inch map is absent on the 25-inch edition	No potential unrecorded archaeological sites noted at location



#### 14.3.4.2 Grid Connection Route

As noted in Section 14.3.3.3, the section of the study area that comprises a 100m corridor centred on the GCR contains one recorded archaeological site which is an enclosure (CL044-075----) located adjacent to a roadside field bank on the north side of a local road that forms a section of the route in Fahy More South townland (Appendix 14.1; Figures 14-6 and 14-7 and Appendix 14.2; Plate 14-13). This site is located within private land, but a visual appraisal was carried out from the public roadway, and this was supplemented with reviews of satellite images of its location. The enclosure is visible from the road as a heavily overgrown circular feature within an improved pasture field and extends it up to the inner side of the linear field boundary bank that flanks the roadside. It appears to be enclosed by an earthen bank and no surface trace of an external ditch was observed. A review of satellite imagery indicates that site is roughly circular in plan and measures c. 30m in diameter. There was no obvious curvature or morphological variation in the section of the field bank directly adjacent to the enclosure observed from the roadway and the potential exists that the bank and road truncated the southern end of the enclosure. The level of the road surface is slightly lower than the adjacent field surface in this area and while its construction potentially removed the southernmost end of the site, the possibility that unrecorded archaeological deposits exist beneath the base of the road makeup material is not discounted.

There are no designated architectural heritage buildings or Architectural Conservation Areas located within the section of the study area centred on the GCR. As noted in Section 14.3.3.3, there are two undesigned masonry bridges (Appendix 14.1; Figure 14-6) located along the route and the summary details on these structures presented in Table 14.12 are based on visual appraisals and reviews of historic OS maps of their locations.

**Table 14-12: Masonry Bridges on GCR**

Townland	Summary Description	ITM E	ITM N
Tooreen	Double arched structure of random rubble limestone construction with single courses of cut limestone voussoirs. Sections of the random parapet wall have been repaired in concrete. Crossing over Glemora Wood Stream shown on all historic OS maps, indicating a pre-1840s date Appendix 14.2; Plate 14-14	559989	665884
Aharinaghbeg	Parapet wall constructed of three courses of cut stone are visible at road level but presence of trees obscures arch details. Not present on 6-inch OS map but is shown on 25-inch edition, indicating a date in second half of 19 <sup>th</sup> century. Appendix 14.2; Plate 14-15	559335	665584

#### 14.3.4.3 Turbine Delivery Route Work Areas

There is one designated architectural heritage structure located within 100m of a proposed TDR work area. This is the late 20<sup>th</sup>-century Saint Thomas's Catholic Church in Bridgetown village which is a Protected Structure (RPS 172) also listed in the NIAH (ref. 20405405). The church is located near the centre of a graveyard that remains in use and also contains 19<sup>th</sup>-century headstones (Appendix 14.1; Figure 14-8). As noted in Section 14.3.3.4, the location of the work area is on the opposite side of the road from the concrete boundary wall around the graveyard and this property line is also shown on the 19<sup>th</sup> century OS maps (Appendix 14.1; Figure 14-9).



The inspection of the works area revealed it to comprise a well-maintain grass verge, delimited on the roadside by a low concrete retaining wall, located on a road bend at a distance of 20m outside of the church property (Appendix 14.2; Plate 14-16). No previously unrecorded features of cultural heritage potential were noted at this location or during a visual appraisal of other localised TDR work areas.

## 14.4 Potential Impacts

### 14.4.1 Introduction

The following section presents assessments of potential impacts on identified cultural heritage assets within the environs of the various elements of the proposed project. The values assigned to the various assets were determined based on their classifications, the results of the desktop study and inspections of accessible sites and follow the criteria guidelines outlined in Table 14-2. The majority of the recorded assets located within lands surrounding the Site are within inaccessible private properties and their current condition and indicative values, as well as potential sensitivities to indirect impacts of a visual nature, have been assessed based on their classifications, designations, inventory descriptions and reviews of historical maps and modern aerial/satellite images and follow the ICOMOS guidelines summarised in Table 14-2 of this chapter. It should be noted that all archaeological sites, including levelled examples, have the potential to possess subsurface features, artefacts, human burials and other archaeological remains, that may be of Very High or High values, but this cannot be ascertained without recourse to archaeological excavation and these are attributes unlikely to be affected in the absence of direct impacts.

### 14.4.2 Do Nothing Scenario

A 'Do Nothing Scenario' will see to the continued preservation of the recorded and potential cultural heritage resource within the study area and the wider landscape.

### 14.4.3 Construction Phase

#### 14.4.3.1 Wind Farm Construction Phase Direct Impacts

There are no recorded archaeological sites located on the footprint of, or directly adjacent to, any of the proposed construction areas within the Site and no potential unrecorded archaeological sites were identified within these areas during the desktop study and field inspections carried out as part of this assessment. The mitigation strategies presented in Section 14.5 include measures to ensure that all identified cultural heritage constraints within lands in the environs of proposed construction areas will be adequately protected within appropriate buffer zones during the construction phase.

Given the above factors, no direct impacts on the known archaeological resource are predicted during the construction phase.

The creation and subsequent development of the forestry plantations that occupy three of the proposed turbine locations (T05, T06 and T07), and their associated hardstands and sections of access routes, in recent decades have resulted in extensive ground disturbance at their locations. A Heritage Council of Ireland study on the impacts of forestry on the archaeological resource concluded that the processes involved in the planting, maturing and rotation of planted lands have a high potential to completely remove or to severely degrade any archaeological sites and associated sub-surface deposits that may exist within plantations (Johnson 1998). While there is a low potential for the survival of unrecorded, archaeological sites within construction areas in



the plantations this cannot be completely discounted. The locations of other the turbines (T01, T02, T03, T04 and T08), and associated infrastructure, are within marginal and semi-improved pasture fields and no surface traces of potential unrecorded archaeological sites were noted at these locations during the assessment. While no surface features were noted in these areas the potential exists for the presence of subsurface archaeological sites, features or artefacts within such green field lands. As the existence, nature and extent of any unrecorded subsurface archaeological remains within the Site are unknown; the magnitude of potential impacts is indeterminable but ground works during the construction phase will have the potential to result in permanent, direct, negative effects on any unrecorded archaeological sites that may exist within the footprint of the construction areas in green field and forestry areas requiring ground excavation works. The elements of the proposed wind farm within the modern quarry in the south end of the Site, including the substation, compound and access roads are within areas reduced down into natural bedrock strata and are deemed to have no potential for the presence of unrecorded archaeological remains.

There were no designated architectural heritage structures, or potential curtilage features, located within the Site. There is one extant farmyard of pre-1830s date within the Site and while the remaining structures are in derelict condition, they do comprise features of local vernacular heritage significance with low cultural heritage value. No interventions to the farmyard will be carried out during the construction phase and no direct impacts are predicted. A direct permanent negative impact will occur on a section of a field boundary that forms part of the townland boundary between Ballyknavin and Fahy Beg. This will be a medium magnitude of impact on an undesignated feature of low (local) value which will result in a slight significance of impact.

#### **14.4.3.2 Wind Farm Construction Phase Indirect Impacts**

The nearest recorded archaeological site to a proposed construction area within the Site is an enclosure (CL044-067---) which is located within a clearing in commercial plantation between T06 and T08 (Appendix 14.1; Figure 14-2 and Appendix 14.2; Plate 14-11). The outer edge of this site is located c.50m from the nearest element of the proposed wind farm which entails an access road within the forestry to the south which extends to T08 in the area to the west. The existing forestry line to the south of this site will be retained and no indirect impacts on the enclosure, or any of the other archaeological sites within the Site or its environs are predicted during the construction phase.

#### **14.4.3.3 Grid Route Connection Construction Phase Direct Impacts**

There are no recorded archaeological sites or designated architectural heritage structures located on the footprint of the grid connection route and it does not extend into any historical villages or towns. There is one known archaeological site located within the 100m corridor centred on the public roads along the GCR and this comprises an enclosure site (CL044-075---) located close to a field boundary adjacent to the west side of the road in the townland of Fahy More South (Appendix 14.1; Figures 14-6 and 14-7 and Appendix 14.2; Plate 14-13). The grid connection will entail a cable trench excavated into the existing roadway surface which will result in no predicted direct impacts on the known elements of this enclosure site. However, the potential for the presence of surface archaeological remains beneath the adjacent section of road cannot be discounted. As the existence, extent, value and magnitude of impact on any unrecorded archaeological features or artefacts beneath the section of road in this area are unknown; the significance of potential construction phase impacts cannot be accurately quantified but ground works during the construction phase will have the potential to result in a permanent, direct, slight to moderate negative impacts on any such remains.

There are two masonry bridges over watercourse crossings along the grid connection route (Table 14 12 and Appendix 14.1; Figure 14-6). It is proposed to install ducting beneath these watercourses using horizontal



directional drilling (HDD) and this methodology will not result in any predicted impacts on either of the bridges or any potential in-channel archaeological features or artefacts.

#### **14.4.3.4 Grid Connection Construction Phase Indirect Impacts**

Given the absence of any recorded archaeological sites, designated architectural heritage structures or historic settlements within the public roads that will form route, no indirect impacts on the cultural heritage resource are predicted to arise during the construction phase.

#### **14.4.3.5 Turbine Delivery Route Construction Phase Direct Impacts**

The delivery of the turbines to the proposed wind farm will not require the construction of any new sections of diversion roads or bridges. The delivery will require localised widening works within localised sections of road margins and one of these is located on the opposite side of the R466 road from the late 20<sup>th</sup> century Saint Thomas's Catholic Church in Bridgetown village which is a Protected Structure (RPS 172) also listed in the NIAH (ref. 20405405). No interventions to the church property, including its enclosing boundary wall, are proposed, and no direct impacts are predicted. There are no other known cultural heritage constraints located within the environs of other proposed TDR work areas and no direct impacts on the cultural heritage resource are predicted to arise from these works.

#### **14.4.3.6 Turbine Delivery Route Construction Phase Indirect Impacts**

The use of public roads to transport the turbines to the Site will not result in any predicted indirect impacts on the cultural heritage resource during the construction phase.

### **14.4.4 Operational Phase**

#### **14.4.4.1 Wind Farm Operational Phase Direct Impacts**

The operational phase of the proposed development will result in no predicted direct impacts on the known archaeological, architectural and cultural heritage resources. The successful implementation of the construction phase mitigation measures outlined in Section 14.5 will result in the preservation *in situ* by avoidance, or the preservation in record by archaeological excavation, of any unrecorded, sub-surface archaeological sites or features that may exist within proposed development areas. There will, therefore, be no predicted direct impacts on any such potential unrecorded archaeological sites during the operational phase.

#### **14.4.4.2 Wind Farm Operational Phase Indirect Impacts**

There are 25 recorded archaeological sites, located within 1km of the proposed wind farm and the majority are either completely or partially levelled (Table 14-5). In addition, all of these sites are located within private lands which are not accessible to the public and have no tourist or amenity attributes. None are National Monuments of potential national significance or are monument types that have potential visual attributes associated with ritual practices such as alignments across the landscape towards astronomical events, e.g., stone circles, stone rows or megalithic tombs, that could be potentially impinged upon by wind turbines. Based on these factors the potential value of the known archaeological sites within surrounding lands have been assessed to range from negligible (sites removed by quarrying) to medium (see Table 14-2 for criteria).



The magnitude of indirect impact on their settings was primarily based on a consideration of their existing condition (e.g., whether extant or levelled) and distances from individual or combined elements of the proposed wind farm infrastructure that may impinge on lands within their immediate environs. As there is a variety in the range of magnitude and significance of impacts on these sites the assessment results are presented in table format below (Table 14-13).

As detailed in Section 14.3.3.2, there are 25 recorded megalithic monuments, which have the potential to possess visual alignment attributes, located within the landscape extending for 10km in all directions from the proposed wind farm (Table 14-6 and Appendix 14.1; Figure 14-10). The Megalithic Survey of Ireland recorded that only seven of these were extant when inspected in the 1960s (De Valera & Ó Nualláin 1961). Based on a review of recorded information on their condition and alignment directions, as sourced from the NMS Historic Environment Viewer, combined with appraisals of their locations on satellite images, while of potential high value none of the extant examples are aligned towards the location of the proposed wind farm. Given this factor, combined with their distances from the Site, the likely magnitude of indirect impacts on their alignments and settings are likely to be negligible to low with imperceptible to slight significance of impacts.

There are no National Monuments in State Care located within the close environs of the Site. The nearest examples are located within the Killaloe area at distances of 5.9km to 6.2km to the west and comprise St. Molua's and St. Flannan's Churches within the town (National Monument Nos. 279 and 006) and Brian Boru Fort (National Monument No. 579) in a woodland area to the north of the town (Appendix 14.1; Figure 14-10). The assessment of visual impacts undertaken by the Landscape and Visual Impact Assessment consultants (Chapter 15) from the Killaloe area was reviewed during the compilation of this chapter. The assessment concludes that the significance of visual impact from the Killaloe-Ballina area, is slight to imperceptible (Chapter 15; VP 16 and VP 17).



**Table 14-13: Operational Phase Impacts on cultural heritage sites within 1km of wind farm**

Monument ref.	Class	Potential Condition	Potential Value Range	Distance from nearest element of wind farm	Impact type	Quality	Magnitude	Duration	Significance
CL044-056----	Enclosure	Partially extant	Medium	1500m west of T1 1240m west of access road	None predicted	Neutral	n/a	n/a	Imperceptible
CL044-057----	Holy well	Unknown	Medium to High	1440m southwest of T1 720m west of access road	None predicted	Neutral	n/a	n/a	Imperceptible
CL044-058----	Enclosure	Partially extant	Medium	1330m southwest of T1 680m northwest of access road	None predicted	Neutral	n/a	n/a	Imperceptible
CL044-059----	Enclosure	Partially extant	Medium	1170m west of T1 1120m west of access road	None predicted	Neutral	n/a	n/a	Imperceptible
CL044-061----	Enclosure	Extant	Medium	650m west of T1 710m west of access road	Indirect	Negative	Negligible	Long term (reversible)	Imperceptible
CL044-062----	Enclosure	Levelled	Low to Medium	460m north of T1 450m north of T1 hardstand	Indirect	Negative	Negligible	Long term (reversible)	Imperceptible
CL044-063----	Enclosure	Extant	Medium	1350m north of T1	None predicted	Neutral	n/a	n/a	Imperceptible
CL044-064----	Enclosure	Partially extant	Medium	270m east of T3 140m east of T3 hardstand	Indirect	Negative	Medium	Long term (reversible)	Moderate
CL044-065----	Cairn unclassified	Unknown	Medium	1560m north of T7	Indirect	Negative	Negligible	Long term (reversible)	Not Significant
CL044-066----	Cist	Unknown	Medium to High	1010m north of T7	Indirect	Negative	Negligible	Long term (reversible)	Not Significant
CL044-067----	Enclosure	Partially extant	Medium	225m southeast of T6 50m north of access road	Indirect	Negative	Medium	Long term (reversible)	Moderate





Monument ref.	Class	Potential Condition	Potential Value Range	Distance from nearest element of wind farm	Impact type	Quality	Magnitude	Duration	Significance
CL044-072----	House 16 <sup>th</sup> /17 <sup>th</sup> century	Levelled	Low to Medium	1130m southwest of T1 290m west of access road in quarry	None predicted	Neutral	n/a	n/a	Imperceptible
CL044-073----	Enclosure	Removed (quarrying)	Negligible	N/A	None predicted	Neutral	n/a	n/a	Imperceptible
CL044-074----	Enclosure	Unknown	Medium	1040m southwest of T2 100m south of access road in quarry	None predicted	Neutral	n/a	n/a	Imperceptible
CL044-075----	Enclosure	Extant	Medium	1690m southwest of T4 360m southeast of access road in quarry	None predicted	Neutral	n/a	n/a	Imperceptible
CL044-076----	Enclosure	Levelled	Low to Medium	1390m southwest of T4 270m southeast east of substation	None predicted	Neutral	n/a	n/a	Imperceptible
CL044-077----	Enclosure	Levelled	Low to Medium	810m southwest of T3 280m southeast of access road in quarry	None predicted	Neutral	n/a	n/a	Imperceptible
CL044-078----	Enclosure	Partially extant	Medium	1160m southeast of T4 510m east of access road in quarry	None predicted	Neutral	n/a	n/a	Imperceptible
CL044-079----	Enclosure	Removed (quarrying)	Negligible	N/A	None predicted	Neutral	n/a	n/a	Imperceptible
CL044-080----	Enclosure	Extant	Medium	540m south of T4 190m southwest of access road	Indirect	Negative	Negligible	Long term (reversible)	Not Significant
CL045-034----	Fulacht fia	Unknown	Medium	1590m north of T7	None predicted	Neutral	n/a	n/a	Imperceptible





Monument ref.	Class	Potential Condition	Potential Value Range	Distance from nearest element of wind farm	Impact type	Quality	Magnitude	Duration	Significance
CL045-039----	Enclosure	Extant	Medium	1380m east of T7 1370m east of T7 hardstand	None predicted	Neutral	n/a	n/a	Imperceptible
CL045-051----	Enclosure	Unknown (forestry)	Medium	300m east of T7 285m east of T7 hardstand	None predicted	Neutral	n/a	n/a	Imperceptible
CL045-052001-	Children's burial ground	Boundary levelled	Medium to High	325m southeast of T8 300m southeast of T8 hardstand	Indirect	Negative	Negligible	Long term (reversible)	Not Significant
CL045-052002-	Bullaun stone	Unknown	Medium	295m southeast of T8 270m southeast of T8 hardstand	None predicted	Neutral	n/a	n/a	Imperceptible
CL045-053----	Standing stone	Unknown	Medium to High	1320m east of T4 1050m east of access road	Indirect	Negative	Negligible	Long term (reversible)	Slight
None	Farmyard in Ballyknavin	Derelict	Low	150m southwest of T7 50m south of T7 hardstand	Indirect	Negative	Medium	Long term (reversible)	Slight



#### 14.4.4.3 Grid Connection Operational Phase Direct/Indirect Impacts

The grid connection will comprise a buried cable within the existing road network and will result in no predicted direct or indirect impacts on the cultural heritage resource during the operational phase.

#### 14.4.4.4 Turbine Delivery Route Operational Phase Direct/Indirect Impacts

No direct or indirect impacts relating to the turbine delivery route will arise during the operational phase as this element of the proposed development will not occur during this phase.

#### 14.4.5 Decommissioning Phase

No impacts on known elements of the cultural heritage resource are predicted during the decommissioning phase as there are no recorded cultural heritage assets located within the footprint, or close environs, of the various elements of the wind farm that will be subject to decommissioning. The decommissioning phase will reverse the slight indirect visual impacts on the settings of cultural heritage receptors within the environs of the proposed development (Table 14-13).

#### 14.4.6 Cumulative Impacts

A review of completed, permitted and proposed developments within the wider landscape extending for 10km from the Site was undertaken in order to assess the potential for cumulative impacts on the cultural heritage resource. This entailed reviews of known cultural heritage assets within their environs as well as any relevant reports included in their online planning files and the descriptions of any archaeological site investigations at their locations published in the Database of Irish Excavations Reports.

##### *Carrownagowan Wind Farm (ABP-Ref. 303105-18)*

A review of the Cultural Heritage EIAR Chapter prepared for this proposed wind farm, which is located 4.6km to the north of the Site, was carried out and it concludes that the proposed development will not result in any significant direct or indirect impacts on any known elements of the cultural heritage resource<sup>10</sup>.

##### *Killaloe Bypass, Shannon Bridge Crossing and R494 Improvement Scheme (ABP Ref. 03.HA0038)*

A review of the Archaeological, Architectural and Cultural Heritage EIS Chapter for this road scheme, which is located 7.3km to the east of the Site, revealed that it concluded that it will not result in any significant direct or indirect impacts on any known elements of the cultural heritage resource<sup>11</sup>.

##### *Faheymore North quarry restoration (Clare County Council Ref. 18995)*

The approved restoration of 3.76 hectares of an extant sand and gravel quarry within the Site to agricultural grassland will result in no likely significant impacts on the cultural heritage resource.

##### *Ballycar Quarry Extension (Clare County Council Ref. 18818)*

A review of the Cultural Heritage EIS Chapter prepared for this approved quarry extension, which is located 7.6km to the south of the Site, was carried out and it concludes that the proposed development will not result in any impacts on known elements of the cultural heritage resource<sup>12</sup>

<sup>10</sup> <https://carrownagowanplanning.ie/wp-content/uploads/2020/12/Chapter%2013%20Cultural%20Heritage.pdf>

<sup>11</sup> <https://www.clarecoco.ie/services/capital-projects/roads-and-bridges/killaloe-bypass-shannon-bridge-crossing/killaloe-bypass-shannon-bridge-crossing-and-r494-improvement-volume-2-environmental-impact-statement-11300.pdf>

<sup>12</sup> <http://193.178.30.219/iDocsWebDPSS/ViewFiles.aspx?docid=427041&format=djvu>



#### *Retention of telecommunications support structure at Aharinaghmore (Clare County Council Ref 18584)*

A review of the location of this structure, which is 3km to the south of the Site, revealed that there are no recorded archaeological sites within 200m of its location. The retention of this existing structure, therefore, likely resulted in no significant impacts on the cultural heritage resource.

#### *Residential projects within 2km of Site*

A review of proposed and approved residential developments within 2km of the Site revealed that they largely comprise the construction of single, detached dwelling houses or the construction of extensions to existing structures. There are no large-scale housing estate schemes within the area. An appraisal of their locations was carried out in comparison with the locations of known archaeological sites and designated architectural heritage structures in the area and none of these residential development properties contain known examples of either cultural heritage asset types.

#### Conclusions

Given the absence of significant direct impacts on the recorded cultural heritage resource arising from the Project, in combination with the results of the above review of developments within 10km of its location, the proposed Project is not predicted to act cumulatively with other proposed or approved developments to result in significant direct cumulative impacts on the cultural heritage resource of the area.

There are no monuments with heightened visual or setting sensitivities, such as National Monuments in State Care, country houses with demesne lands or monument types which have ritual alignments across the landscape, located within the close environs of the Project. As detailed in Table 14-6, a review of archaeological monument types with visual alignment attributes within the 10km of the Site revealed no examples directly aligned towards the Site and no moderate or significant indirect impacts on such monuments are predicted. In addition, the review of available cultural heritage impact assessments of the above developments revealed that none predicted significant, indirect impacts on any monuments within the wider environs of the assessed development locations. It is, therefore, concluded that the Project will not act cumulatively with other proposed or approved and existing developments to result in likely significant indirect negative cumulative impacts on the cultural heritage resource within the wider landscape .

## **14.5 Mitigation Measures and Monitoring**

### **14.5.1 Wind Farm Site**

A suitably qualified archaeologist will be employed to oversee the construction phase of the proposed project. A systematic advance programme of archaeological field-walking surveys will be undertaken within all construction areas located within forestry plantations following pre-construction tree felling to confirm whether there are any surface traces of any potential unrecorded archaeological or architectural heritage sites exist within areas inaccessible due to the presence of thick tree cover. Archaeological monitoring of ground excavation works during the construction phase will then be carried out within all green field and forested areas of the Site under licence by the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage. In the event that any archaeological sites are identified during monitoring, ground works will halt at the location and the archaeological remains will be recorded and cordoned off. The NMS will then be consulted to determine further appropriate mitigation measures, which may include preservation *in situ* by avoidance or preservation by record through systematic archaeological excavations licensed by the NMS. A written and drawn record of the extant townland boundary between Ballyknavin and Fahy Beg which is on the route of an access road will be compiled by the appointed archaeologist during the monitoring of the construction phase and this record will be included in their report.



Archaeological monitoring of all cable trench excavations will be carried out within the section of the local road adjacent to Enclosure CL044- 075---- in Fahy More South and a watching brief will be maintained of other cable trenching works. All TDR ground works within the environs of Saint Thomas's Church in Bridgetown village will also be subject to constant archaeological monitoring.

The locations of all recorded archaeological sites within fields and forestry clearings within the Site will be cordoned off and the outer edges of their Zones of Notification will be clearly signed as 'No Entry: Archaeological Area' for the duration of the construction phase. These sites comprise Enclosures CL044- 064----, CL044- 067--- - and CL044- 077---- as well as the recorded location of a children's burial site and bullaun stone (CL045- 052001- and CL045- 052002-) in the area in the east end of the site. The location of the derelict farmyard within Ballyknavin townland will also be clearly signed as a 'No Entry: Historic Farmyard' during the construction phase. In addition, the site inductions for all construction staff will include information in relation to the locations and access constraints relating to these sites.

## 14.6 Residual Impacts

The mitigation measures presented in Section 14.5 will provide for either the preservation *in situ* of any currently unknown archaeological features within the proposed development site or the proper and adequate recording of this resource by full archaeological excavation. Preservation *in situ* shall allow for a negligible magnitude of impact resulting in a potential not significant/imperceptible significance of effect in the context of residual impact on the unrecorded archaeological resource. Preservation by record shall allow for a high magnitude of impact, albeit ameliorated by the creation of a full and detailed archaeological record, the results of which shall be publicly disseminated. This shall result in a potential slight/moderate range of significance of effect in the context of residual impacts on the unrecorded archaeological resource. While the operation phase of the proposed wind farm will result in indirect, imperceptible to moderate, negative, residual impacts on the wider settings of a number of the archaeological sites within the environs of the Site following mitigation, these impacts will be reversed following the decommissioning phase. No residual impacts on the architectural heritage and undesignated cultural heritage resources are predicted to arise following decommissioning of the wind farm. No residual impacts on the cultural heritage resource are predicted to arise from the grid connection route or turbine delivery route.

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