

## 13 CULTURAL HERITAGE

### 13.1 INTRODUCTION

This chapter assesses the impacts of the Development on the Cultural Heritage resource. The Development refers to all elements of the application for the construction of Dyrick Hill Wind Farm (**Chapter 2: Development Description**). The assessment considers the potential effects during the following phases of the Development:

- Construction of the Development
- Operation of the Development
- Decommissioning of the Development

The term 'Cultural Heritage' encompasses heritage assets relevant to both the tangible resource (including archaeology and architecture heritage); and non-tangible resources (including history, folklore, tradition and placenames). The recorded and potential cultural heritage resource within lands encompassing the proposed wind farm site (the Site), grid connection route and work areas required to facilitate the delivery of turbines to the Site as well as surrounding lands was reviewed in order to compile a comprehensive cultural heritage baseline for the assessment.

Common acronyms used throughout this EIAR can be found in **Appendix 1.2**. This chapter of the EIAR is supported by Figures provided in Volume III and by the following Appendix document provided in Volume IV of this EIAR:

- **Appendix 13.1 Plates**

An Outline Construction and Environmental Management Plan (CEMP) is appended to the EIAR in **Appendix 2.1**. This document will be developed into a Site-Specific Dyrick Hill CEMP post consent/pre-construction once a contractor has been appointed and will cover construction of the Development. It will include all of the mitigation recommended within the EIAR. For the purpose of this application, a summary of the mitigation measures is included in **Appendix 17.1**.

#### 13.1.1 Statement of Authority

The chapter was prepared by Tony Cummins, a Senior Archaeologist with John Cronin and Associates. Mr Cummins holds B.A. and M.A. degrees in archaeology (University College Cork, 1992/1994) and has accumulated twenty-eight years' continuous industry experience. He was confirmed as a licence eligible archaeologist by the National Monuments Service in

1998 and has extensive experience in the preparation of cultural heritage assessments for renewable energy developments.

### 13.1.2 Assessment Structure

The results of desktop study and field surveys which are provided in **Section 13.3** together with the other assessments are considered to allow the Board to carry out an assessment of the Development from a Cultural Heritage perspective. In line with the revised EIA Directive and current EPA guidelines (as detailed in **Section 13.2.2** below) the chapter provides considerations of effects based on the following:

- Assessment of cultural heritage value and sensitivity
- Assessment of the magnitude of cultural heritage effects within the Study Area
- Assessment of the significance of cultural heritage impacts
- Assessment of cumulative cultural heritage impacts

## 13.2 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

### 13.2.1 Definition of Study Area

The study area reviewed for the assessment comprised the area within the Site and the surrounding lands extending for 1km in all directions from its Redline boundary as well as a 100m wide area centred on the grid connection and location of works required to facilitate the turbine delivery route. 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 turbine delivery route work areas was chosen in order to appraise if there are any known elements of the cultural resource within their localised footprints or close environs, including potential sub-surface elements which may be susceptible to direct or indirect impacts.

In addition, the wider landscape extending for 10km in all directions from the Site was reviewed to determine the presence of any nationally significant cultural heritage assets with heightened visual sensitivities, i.e., National Monuments in State Care and World Heritage sites (including tentative list). This also included a review of other cultural heritage assets with visual attributes that extend beyond their immediate settings within this area, such as archaeological monuments with ritual visual alignments across the wider landscape (e.g., stone circles, stone rows and megalithic tombs). The extent of the 10km area was chosen in order to appraise if the wider landscape contains individual or groupings of such

visually sensitive assets that may be susceptible to potential medium-to-high magnitudes of indirect impacts on their wider settings or alignments.

A review of the assessment of the significance of visual impacts on publicly accessible cultural heritage receptors within 20km of the Project presented in the Landscape and Visual Amenity Assessment chapter was also carried out and this does not predict any significant visual impacts on any cultural heritage receptors within this area (see **Chapter 11**).

The Chapter author was also consulted in relation to emerging Development proposals during the design phase, and this included the provision of specialist advice in relation to elements of the Development within the environs of known cultural heritage constraints in order to avoid any direct impacts on their locations and to ensure their preservation *in situ*.

### 13.2.2 Assessment Methodology

The methodology used for this assessment follows guidelines presented in the Environmental Protection Agency (EPA 2003) *Advice Notes on Current Practice in the preparation of Environmental Impact Statements (2003)*, *Guidelines on the Information to be contained in Environmental Impact Statements (2002)*, *Draft Advice Notes for Preparing an EIS (2015)* and *Guidelines for Information to be Contained in EIAR (2022)*. The chapter seeks to comply with the requirements of Directive 2011/92/EU as amended by Directive 2014/52/EU, and the Planning and Development Act, 2000 (as amended) and Planning and Development Regulations, 2001 (as amended).

### 13.2.3 Relevant Legislation and Guidance

The tangible elements of the cultural heritage resource can be broadly 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 standing structures and sites of cultural importance often dating to the post-medieval and modern periods. In addition, assets such as local placenames, 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). Both of these conventions were ratified by Ireland in 1997. While there is no current national legislation providing legal protection for

the Irish intangible heritage resource it is noted that the UNESCO *Convention for the Safeguarding of the Intangible Cultural Heritage*, 2003, which seeks to safeguard and promote awareness of this element of cultural heritage, was ratified by Ireland in 2015.

The legislation and guidelines that are relevant to this assessment comprise the following:

- National Monuments Act 1930 as amended
- Heritage Act (1995) as amended
- National Cultural Institutions Act (1997) as amended
- Architectural Heritage (National Inventory) and Historic Monuments (Misc.) Provisions Act (1999) as amended
- Planning and Development Act (2000) as amended
- Department of Arts, Heritage and Gaeltacht (2011) *Architectural Heritage Protection: Guidelines for Planning Authorities*<sup>1</sup>
- Department of Arts, Heritage, Gaeltacht and the Islands (1999) *Framework and Principles for the Protection of Archaeological Heritage*<sup>2</sup>

#### 13.2.4 Archaeological Heritage

The National Monuments Service is currently based in the Department of Housing, Local Government and Heritage and is responsible for the preservation, protection and promotion of Ireland's archaeological heritage. The National Monuments Acts 1930 (and amendments), the Heritage Act 1995, as amended, and relevant provisions of the National Cultural Institutions Act 1997, as amended, 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, the Register of Historic Monuments, the Record of Monuments and Places and the Sites and Monuments Record as well as the placing of 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). The Record of Monuments and Places was established under Section 12(1) of the National Monuments (Amendment) Act, 1994 and was based on the Sites and Monuments Record and Register of Historic Monuments. These records

---

<sup>1</sup> <https://www.gov.ie/en/publication/0937a-architectural-heritage-protection-guidelines-for-planning-authorities/>

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

comprise lists and maps of all known archaeological monuments and places for each county in the State. The National Monuments Service maintains an online Historic Environment Viewer<sup>3</sup> which comprises an interactive map/search facility that provide access to records stored on its national database of sites and monuments. The Viewer includes designated areas around recorded monuments known as 'zones of notification' which do not comprise buffer zones but are intended to indicate areas of archaeological potential within their environs<sup>4</sup>. All archaeological sites listed in the Record of Monuments and Places 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 National Monuments Service. The Sites and Monuments Record and Record of Monuments and Places list four archaeological sites within the Site as well as a further fifteen examples within the surrounding 1km study area (**Figure 13.1**) and these are detailed in **Sections 13.2** and **13.3**. The potential for the presence of hitherto unrecorded, sub-surface archaeological features within proposed construction areas is also considered.

#### 13.2.5 Architectural Heritage

The protection of the architectural heritage resource is provided for through a range of legal instruments that include the Heritage Act 1995, as amended, the Architectural Heritage (National Inventory) and National Monuments (Misc. Provisions) Act 1999, as amended, and the Planning and Development Act 2000, as amended. Section(2.1) of the Heritage Act 1995, describes architectural heritage as follows:

*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 maintain a 'Record of Protected Structures' 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, are designated Protected Structures and planning permission is required for any works to such structures that would affect their character. A protected structure also includes the lands and other structures within its curtilage. While the notion of curtilage is not defined by legislation, the

<sup>3</sup> <https://maps.archaeology.ie/HistoricEnvironment/>

<sup>4</sup> <https://www.archaeology.ie/sites/default/files/media/publications/archaeology-planning-process-pl13.pdf>

*Architectural Heritage Protection Guidelines for Local Authorities* (Department of 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 current Record of Protected Structures for County Waterford is published in the Waterford County Development Plan 2022-2028. 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.

The Architectural Heritage Act 1999 established the National Inventory of Architectural Heritage, including Historic Gardens and Designed Landscapes, to create a record of built heritage structures and associated lands within the State. While inclusion in the National Inventory of Architectural Heritage does not provide statutory protection to a structure, it does provide an indication of architectural heritage value and the inventory is intended to advise local authorities on compilation of their Records of Protected Structures.

### **13.2.6 Waterford City and County Development Plan 2022-2028**

The *Waterford City and County Development Plan 2022-2028* 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)<sup>5</sup>. The Development Plan presents a wide range of objectives in relation to the protection of the architectural heritage resource within the county including the protection of Protected Structures (Policy BH01), Architectural Conservation Areas (BH05), historic demesnes (BH18), industrial heritage (BH21) and vernacular buildings (BH24). The Plan also presents a range of objectives in relation to the protection of the archaeological resource and these include the protection of recorded archaeological sites (AH1) as well as the following objectives in relation to development and archaeology (AH3 and AH4):

*"AH3: Waterford City & County Council shall, in an appropriate manner, secure either by preservation in-situ or preservation-by-record, the archaeological heritage. In this regard priority shall be given to the preservation in-situ of any archaeological monument/site/place as the first option considered. If preservation in-situ cannot be achieved, or can only be achieved in-part, then preservation-by-record of elements of the archaeological heritage will be required –this will require the full archaeological excavation and recording of the monument/site, according to best professional practice. Where excavation is required this shall also include the preparation of appropriate reports, post-excavation analyses and publications. The costs of assessing and mitigating archaeological impacts shall form part of development costs as borne by the developer.*

---

<sup>5</sup> <https://consult.waterfordcouncil.ie/en/consultation/waterford-city-county-development-plan-2022-%E2%80%932028/chapter/chapter-11-heritage>

*AH4: Ensure that development in the vicinity of a site of archaeological interest shall be designed and sited sympathetically and shall not be detrimental to the character of the archaeological site or its setting by reason of its location, scale, bulk or detailing. When considering development in the vicinity of all archaeological sites including remnants of the city and town walls, the planning authority will require the preparation of an archaeological assessment detailing the potential impact of any development on upstanding structures, buried structures and deposits. The report will also include a visual impact assessment to ensure adequate consideration of any potential visual impact the proposed development may have on any upstanding remains...”.*

### 13.2.7 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 of the Site, grid connection and turbine delivery work areas. The principal sources reviewed for the assessment of the recorded archaeological resource were the Sites and Monuments Record and the Record of Monuments and Places. The Record of Protected Structures and the National Inventory of Architectural Heritage 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:

*Archaeological Inventory of County Waterford:* This publication presents summary descriptions of the recorded archaeological sites within this area of the county and the relevant entries are provided in **Section 13.3.3**. In addition, the current national online database resources pertaining to same were reviewed on the National Monuments Service's Historical Environment Viewer in February 2023.

*Heritage Council of Ireland 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 February 2023.

*Topographical Files of the National Museum of Ireland* – These files, which are archived in the museum premises in Kildare Street, Dublin, were reviewed as part of the assessment. The entries related to the study area are outlined in **Section 13.4.4**.

*Database of Irish Excavation Reports:* This database contains summary accounts of all archaeological excavations carried out in Ireland (North and South) from 1970 to present. Current data was accessed via [www.excavations.ie](http://www.excavations.ie) in February 2023.

*Literary Sources:* Various published sources were consulted in order to assess the archaeological, historical, architectural heritage and folklore record of the study area.

*Cartographic Sources:* 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. Relevant extracts from the reviewed cartographic sources are presented in **EIAR Volume III**.

*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 unrecorded archaeological sites were visible within the Site. The consulted imagery was sourced from datasets published by the Ordnance Survey of Ireland (OSI), Google Earth and Bing Maps.

*Irish National Folklore Collection:* A review was undertaken of transcribed material from the National Folklore Collection archive which has been digitised and published online at [www.duchas.ie](http://www.duchas.ie).

*UNESCO designated World Heritage Sites and Tentative List:* There are two designated World Heritage sites in Ireland, Brú na Bóinne and Sceilg Mhichíl, and a number of other significant examples have been recently included in a 2022 Tentative List<sup>6</sup> that has been put forward by Ireland for inclusion. None of these designated or tentative sites are located within 20km of the Project.

### 13.2.8 Field Surveys

The proposed Development was surveyed on 25<sup>th</sup> August 2021, 1<sup>st</sup> July 2022 and 1<sup>st</sup> December 2022 and included inspections of the Site, grid connection route and sections of the haul route where ground works are required. The inspected lands were assessed in terms of historic landscape, existing land use, tree cover and the potential for the presence

<sup>6</sup> <https://www.gov.ie/en/press-release/72ef0-ministers-announce-new-world-heritage-tentative-list-for-ireland/#:~:text=World%20Heritage%20Properties%20are%20sites%20of%20cultural%20and%20For,and%20Sceilg%20Mhich%C3%AD%2C%20both%20inscribed%20in%20the%201990s.>



and survival of unrecorded archaeological and undesignated architectural heritage sites/features. The results of the field surveys are described within the chapter while annotated extracts from the photographic record are provided in **Appendix 13.1**.

### 13.2.9 Consultation

The Development Applications Unit of the Department of Housing, Local Government and Heritage provided a response on 11<sup>th</sup> July 2022 to a request for comment on the EIAR scoping report provided to it. This response did not include any content in relation to the Cultural Heritage resource.'

### 13.2.10 Predicted Impacts on Archaeological, Architectural and Cultural Heritage

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 has been informed by Environmental Protection Agency (EPA) and International Council on Monuments and Sites (ICOMOS) guidelines (see **Section 13.2.3**).

#### *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., enhancement of amenity in terms of facilitating access 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)

#### *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 EIA Development, which will result in its complete or partial removal.
- Indirect Impact – where a cultural heritage site or its setting in the landscape is located within the environs of the EIA Development.
- No predicted impact – where the EIA 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*<sup>7</sup> (ICOMOS 2011) (**Table 13.1**).

#### *Value assessment criteria*

The evaluation of the values of cultural heritage asset used for the purposes of assessment is not intended as definitive, but rather an indicator which contributes to a wider judgment based the individual circumstances of each asset. The factors for assessing the value of cultural heritage assets provided in **Table 13.2** are sourced from the ICOMOS *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties* (ICOMOS 2011, 14.17). This guidance is intended as indicative and is used in combination with a consideration of the condition/preservation; documentary/historical significance, group value, rarity, visibility in the landscape, fragility/vulnerability and amenity value of the cultural heritage assets on a case-by-case basis. The value of all known or potential assets that may be affected by development are ranked according to the following scale: Very High; High; Medium; Low, Negligible and Unknown. The values assigned to identified cultural heritage assets within the study area were determined following the completion of the

---

<sup>7</sup> [https://www.iccom.org/sites/default/files/2018-07/icomos\\_guidance\\_on\\_heritage\\_impact\\_assessments\\_for\\_cultural\\_world\\_heritage\\_properties.pdf](https://www.iccom.org/sites/default/files/2018-07/icomos_guidance_on_heritage_impact_assessments_for_cultural_world_heritage_properties.pdf)

desktop research combined with subsequent site inspections and are identified in **Section 13.4** of this chapter.

#### *Significance of Effects*

The significance of effect can be described as Profound, Very Significant, Significant, Moderate, Slight, Not Significant or Imperceptible (**Table 13.3**) and is assigned based on the combined evaluation of effect magnitude and asset significance (**Table 13.4**).

**Table 13.1: Magnitude of Impact Assessment Indicators for Cultural Heritage Assets**

<b>Indicative factors for assessing the Magnitude of Impact on the Cultural Heritage Asset (after ICOMOS Guidelines 2011)</b>	
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</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> <p>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</p> <p>Changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation</p>
Negligible	<p>Very minor changes to key archaeological materials or setting</p> <p>Slight changes to historic building elements or setting that hardly affect it</p> <p>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</p> <p>Very minor changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation</p>

**Table 13.2: Value Indicators for Cultural Heritage Assets**

<b>Indicative factors for assessing Value of Cultural Heritage Assets (after ICOMOS Guidelines 2011)</b>	
Very High	<p><i>Potential for International Significance which may include</i></p> <p>World Heritage Sites (including Tentative List properties)</p> <p>Assets of acknowledged international importance</p>

Indicative factors for assessing Value of Cultural Heritage Assets (after ICOMOS Guidelines 2011)	
	Assets that can contribute significantly to international research objectives
High	<p><i>Potential for National Significance which may include</i></p> <p>Nationally designated sites, buildings and landscapes of significant quality, rarity, preservation and importance</p> <p>Undesignated assets of the quality and importance to be designated</p> <p>Assets that can contribute significantly to acknowledged national research objectives</p> <p>Archaeological Landscapes with significant group value</p> <p>Intangible associations with individuals or innovations of national significance</p>
Medium	<p><i>Potential for Regional Significance which may include</i></p> <p>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</p> <p>Conservation Areas and historic townscapes containing buildings that contribute significantly to its historic character</p> <p>Intangible associations with individuals or innovations of regional significance</p>
Low	<p><i>Potential for Local Significance which may include</i></p> <p>Assets compromised by poor preservation and/or poor survival of contextual associations</p> <p>Assets of limited value, but with potential to contribute to local research objectives</p> <p>Historic Townscape or built-up areas of limited historic integrity in their buildings and settings</p> <p>Intangible associations with individuals or innovations of local significance</p>
Negligible	<p>Assets with very little or no surviving archaeological interest</p> <p>Landscapes with little or no significant historical interest</p> <p>Buildings or urban areas of no architectural or historical note; buildings of an intrusive character</p>
Unknown	<p>Assets whose importance has not been ascertained</p> <p>Buildings with some hidden (i.e., inaccessible) potential for historic significance</p>

**Table 13.3: Significance of Effects (per EPA EIAR Guidelines 2022)**

Indicative factors for assessing Value of Cultural Heritage Assets (after ICOMOS Guidelines 2011)	
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 13.4: Significance of Effects (per EPA EIAR Guidelines 2022)**

<b>Magnitude of Impact</b>	<b>High</b>	Not Significant/ Slight	Moderate/ Significant	Significant/ Very Significant	Very Significant/ Profound
	<b>Medium</b>	Not Significant	Slight	Moderate/ Significant	Significant/ Very significant

	<b>Low</b>	Not Significant/ Imperceptible	Slight/ Not Significant	Slight	Moderate
	<b>Negligible</b>	Imperceptible	Not Significant/ Imperceptible	Not Significant/ Slight	Slight
		<b>Negligible</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
<b>Value/Sensitivity of the Asset</b>					

### 13.3 BASELINE DESCRIPTION

#### 13.3.1 Introduction

The following sections presents summary details of the main periods within the Irish archaeological record with references to known archaeological sites, designated architectural heritage structures listed in the Record of Protected Structures and National Inventory of Architectural Heritage and identified undesignated cultural heritage assets located within the study areas around the Site, grid connection route and turbine delivery route work areas. Datasets have been interrogated and retrieved from current state and local authority sources and are considered accurate at the time of writing in February 2023. **Section 13.3.2** provides a chronological overview of the study area since prehistory and includes references to known archaeological monuments within the area which are mapped on **Figures 13.1-13.4**. The published Archaeological Survey of Ireland inventory descriptions of these monuments are then presented in **Section 13.3.3**. Other baseline information relevant to the Site are presented in Sections **13.3.4** to **13.3.11** (inclusive) while baseline information on the grid connection route and turbine delivery route work areas have been collated in **Sections 13.3.12** and **13.3.13**.

#### 13.3.2 The Wind Farm Site: Archaeological and Historical Background

##### *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. They did not construct any settlements or 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 or sub-surface traces of their settlements revealed during earth-moving undertaken as part of development works. 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. There are no known archaeological sites dating to the Mesolithic or Neolithic periods located within the Site or external lands extending for 1km in all directions.

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 fiadh. 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 greatly increased by the discovery of Iron Age sites during archaeological investigations undertaken as part of various development projects.

The Site contains two prehistoric monuments of likely Bronze or Iron Age date, both of which comprise extant standing stones (WA013-020002- and WA013-021----). These monuments are typically associated with functions such as prehistoric burial markers, commemorative monuments, indicators of routeways or boundaries and often date to the Bronze Age with some examples potentially of Iron Age date. The surrounding 1km study area contains an additional standing stone (WA013-008----) and a Bronze Age pit-burial (WA013-042----) revealed during ploughing activity. A review of recorded monuments within 10km of the Redline Boundary revealed the presence of nine lithic monument types of likely Bronze Age origin, which were constructed to incorporate potential visual alignments across the landscape which related to ritual aspects of their original function. These external monuments comprise one unclassified megalithic structure, four stone rows and four standing stones pairs and details on these are provided in **Section 13.3.3**. The presence of these monuments within the Site and the surrounding landscape indicates the presence of human settlement activity within the general region during the Bronze Age which likely continued into the Iron Age.

#### *Early Medieval to Post-Medieval Periods*

The early medieval period began with the introduction of Christianity to Ireland and continued until the arrival of the Anglo-Normans in the late 12th century (c. 400–1169 AD). While this period saw the emergence of the first phases of urbanisation around the larger monasteries and the Hiberno-Norse ports, the dominant settlement pattern continued to be rural-based and founded on an agricultural economy centred on enclosed farmsteads known as ringforts, with stone-built equivalents often found in western counties known as cashels. Ringforts comprise roughly circular farmstead enclosures delimited by earthen banks formed by upcast soil from a concentric external ditch. They are one of the most common archaeological sites in the Irish landscape and their original Gaelic names (rath/lis/dun) still form some of the most common placename elements in the country. The enclosures may form the visible element of wider agricultural holdings (known as airlise) that may contain unrecorded, sub-surface archaeological features such as associated field systems, stockades, barns, mills and drying kilns. The early medieval church sites were often morphologically similar to ringforts but are often differentiated by the presence of features such as church buildings, graves, stone crosses and shrines.

There is one ringfort (WA013-022----) within the Redline Boundary while an additional four examples are located within the surrounding 1km study area (WA013-024----, WA013-025---, WA022-002---- and WA022-004----) and these attest to the presence of farming communities within the area during the early medieval period. The recorded site of an early ecclesiastical church (WA013-023001-), with an associated graveyard (WA013-023003-) is located 990m outside the east end of the Site. The only remains of this ecclesiastical site are very slight surface traces of an oval enclosure within a green field location. A fragment of a high cross (WA013-023002-) was recorded within the enclosure during the 19<sup>th</sup> century but this is no longer present.

The arrival of the Anglo-Normans in the late 12<sup>th</sup> century broadly marks the advent of the Irish high medieval period which continued to c.1400 and was followed by the late medieval period which extended to 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 are no definite late or high medieval monuments located within the Site or within 1km of the Redline Boundary. The recorded location of a church and graveyard (WA022-014001- and WA022-014002-) labelled as 'St. Oran's Church (in ruins)' on the 1<sup>st</sup> edition 6-inch OS map (1840) in an area

located 715m to the southwest of the Site entrance may indicate the presence of a church of potential medieval date. The only surviving surface traces of the church site comprises the low, overgrown remains of a rectangular structure within a green field location.

The centuries following 1550 comprise the post-medieval period which continued into the middle of the 19th century and the period thereafter is often described as early modern. The early phase of the post-medieval period was a turbulent time in Ireland and saw a period of wars between the 1560s and 1603 with further conflict during the mid-17<sup>th</sup> century Cromwellian Wars which resulted in extensive dispossession of forfeited Gaelic lands. The 17th century Down Survey records compiled following the latter period of conflict provide very little information on the study area. The relevant townlands were all recorded as having Protestant owners in the Survey records dating to 1641 and 1670. Only one landowner was named, Lord Deece, who counted the townlands of Corradoon and Ballynaguilkee Upper amongst his Waterford holdings in both years.

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 and enclosure of open lands into field systems that survive to the present-day. The post-medieval period saw the development of high and low status stone houses throughout the Irish countryside and rural settlement clusters at this time typically consisted of single-storey thatched cottages with associated farm buildings while two-storey farmhouses became more common during the 19th century. 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 rural areas.

*The Topographical Dictionary of Ireland*<sup>8</sup> by Lewis, provides descriptions of Irish parishes during the early decades of the 19th century and often provides information on contemporary land use patterns, historical events and the presence of archaeological sites and features of architectural heritage interest such as large country houses. The Development is located at a point where three parishes converge: Lickoran, Seskinan and Modeligo (Modelgoe). Lewis's descriptions of these parishes do not mention any of the townlands located within the Site. There are no recorded post-medieval archaeological sites or designated architectural heritage structures located within the study area, although the potential exists that St. Oran's Church and graveyard (WA022-014001- and WA022-014002-) to the southwest were in use during this period. Further details on the character

---

<sup>8</sup> Lewis, S. (1837) *Topographical Dictionary of Ireland*. 2 Volumes, Lewis & Company, London



of the Site and its environs during the 19<sup>th</sup> century are presented in the review of historical Ordnance Survey (OS) maps (**Section 13.4.10**).

### 13.3.3 Record of Monuments and Places

There are four recorded archaeological monuments located within the Redline Boundary and these comprise a ringfort (WA013-022---), a levelled hut site (WA013-020001-) and two standing stones (WA013-020001- and WA013-021----), the former of which was re-erected in recent years. There are also an additional fifteen recorded archaeological sites located within the lands extending for 1km outside the Redline Boundary (**Figure 13.1** and **Table 13.5**). Of the overall nineteen archaeological sites within the study area, the Archaeological Survey of Ireland have recorded that thirteen either retain no surface expression or are levelled with only slight surface traces surviving. None of the sites within the study area are designated as National Monuments in State Ownership or Guardianship or have been assigned Preservation Orders but they are afforded legal protection by their inclusion in the Record of Monuments and Places. All of these archaeological sites are located within private farmlands which are inaccessible to the public.

As previously noted, the landscape extending for 10km in all directions from the Site contains one unclassified megalithic structure, four stone rows and four standing stones pairs (**Table 13.6** and **Figure 13.4**). None of these are designated as National Monuments and all are located in private lands which are not accessible to the public. The methodology used to assess whether any examples have direct alignments to the Site entailed reviews of each of their archaeological inventory descriptions to determine their recorded alignments, and these were then analysed by cross-referencing each of the monuments' locations in relation to the Site. This revealed that three examples have potential direct alignments towards the general area of the Site, and these comprise two stone rows (WA013-007---- and WA006-022002-) and one standing stone pair (TS091-005----). The Archaeological Survey description of one of these stone rows (WA013-007----), which is located 6.9km to the northeast, records that it is now incorporated into a field boundary wall and no longer comprises a free-standing feature within open land. A review of satellite imagery of the location of the second stone row (WA006-022002-), which is located 9.9km to the northeast, revealed that it is now within a modern forestry plantation which likely screens landscape views in all directions from its location. A review of the location of the standing stone pair site (TS091-005----) revealed that it is situated within a pasture field located 3.1km to the northeast of the Site. The natural ground level within the environs of this monument rises steadily upwards to the southwest which likely restricts ground level views from its location towards the general direction of the Site.

**Table 13.5: Recorded Archaeological Monuments within the Site and 1km study area extending from its boundary**

Monument no.	Class	Townland	Archaeological Survey of Ireland inventory description	ITM E	ITM N	Approx. distance from nearest construction area
WA013-020001-	Hut site	BALLYNAGUILKEE UPPER	Situated on a SW-facing slope of Mweeling Hill, with the col between Broemountain and Mweeling Hill c. 200m to the NW. A grass-covered circular platform (diam. c. 12m; H 0.2m) with some stones on the perimeter abuts a field bank. A standing stone (WA013-020002-) lies c. 30m to the W.	615297	605749	25m south of T6 hardstand
WA013-020002-	Standing stone	BALLYNAGUILKEE UPPER	Situated on a SW-facing slope of Mweeling Hill, with the col between Broemountain and Mweeling Hill c. 250m to the NW. This is a sandstone monolith with a subrectangular cross-section (dims. 0.5m x 0.35m; H 1.6m) oriented NE-SW. The stone had fallen over by 2010. A possible hut site (WA013-020001-) lies c. 30m to the E.	615269	605747	30m south of T6 hardstand
WA013-021----	Standing stone	BROEMOUNTAIN	Situated in a clearing in a coniferous forest on the E-facing slope of a col between Dyrick Hill c. 500m to the SE and a N-S spur c. 350m to the NW. This is a conglomerate stone with a rectangular cross-section (dims. 0.7m x 0.25-0.5m; H 1.8m) oriented NE-SW. The top of the stone is damaged.	615243	604781	60m north of access road to T9
WA013-022----	Ringfort	LISLEAGH	Situated on a gentle E-facing slope with the headwaters of the N-S Aughkilladoon stream c. 40m to the W. Subcircular area (dims. 33m E-W; 27.5m N-S) defined by an eroded earthen bank (Wth 3m at S to 7m at N; int. H 0.9m; ext. H 1.2-1.5m), which is incorporated into a road bank NE-S. Traces of a fosse survive W-NE. There is no visible entrance, and the bank is planted with trees.	617228	604397	175m east of access road
WA013-008----	Standing stone	DOON	Situated on level ground E of the Knockmealdown Mountains. This is a conglomerate stone with a rectangular cross-section (dims. 1m x 0.6m; H 1.85m) oriented NE-SW, and a pointed top.	616009	606483	715m north of T5 hardstand
WA013-042----	Pit burial	CORRADOON	An encrusted urn (Kavanagh 1973, 565) was found inverted in a pit over the cremated remains of a child, with fragments of a possible bowl food vessel. It was found in ploughing during 1967. (Lucas, 1971 <sup>9</sup> ; Waddell 1990 <sup>10</sup> )	616887	606028	860m northeast of T5 hardstand
WA013-052----	Enclosure	BROEMOUNTAIN	At the base of a NE-facing slope in upland terrain, in pasture, overlooking a valley to the E. Monument identified on Bing Maps <a href="http://binged.it/14YWrv5">http://binged.it/14YWrv5</a> . A circular area (diam. 19.8m) defined by a broad, flattened bank (int. H 0.25-	614259	607407	820m north of T13 hardstand

<sup>9</sup> Lucas, A. T. (1971) National Museum of Ireland: archaeological acquisitions in 1968. JRSAI 102, 181-239.

<sup>10</sup> Waddell, J. (1990) The Bronze Age burials of Ireland. Galway University Press

Monument no.	Class	Townland	Archaeological Survey of Ireland inventory description	ITM E	ITM N	Approx. distance from nearest construction area
			0.35m; ext. H 0.15-0.6m; Wth at top 2.5m; overall Wth 7.5m) which is built into the hillslope in the uphill SW sector. There is no well-defined entrance, though there is a dip in the flattened bank in the ESE quadrant. The monument is known to the landowner as a lios.			
WA022-001----	Enclosure	LYRATTIN	Marked faintly as a small feature (diam. c. 20-25m) on the 1840 ed. of the OS 6-inch map. Situated in pasture on a S-facing slope, it is not visible at ground level.	615322	603962	690m southeast of T9 hardstand
WA022-003001-	Ringfort	LISLEAGH	Located on a S-facing slope. Circular grass-covered area (diam. S4m N-S; 50m E-W) defined by an overgrown earthen bank (Wth 7-9.5m; into H 0.6-1.5m; ext. H 1.7-1.9m). The entrance (Wth 5m) is at ESE and there are two possible hut sites in the interior. There is no visible fosse.	617697	603920	485m east of access road
WA022-003002-	Hut site	LISLEAGH	Located on a S-facing slope. There are two possible hut sites in the interior of rath (WA022-003001-).	617697	603920	485m east of access road
WA022-014001-	Church	FARNANE LOWER	Marked 'St. Oran's Church (in ruins)' on the 1840 ed. of the OS 6-inch map, and situated on the S-facing slope of a W-E valley, just E of the NW-SE Farrane stream at the point where it turns E. The overgrown foundations of a rectangular structure (dims. 19.5m NW-SE; 8.5m NE-SW), traditionally associated with a children's burial ground, survive but no enclosure or grave-markers are visible. There is a record of a bullaun stone or stoup that can no longer be found, and a holy well had been obliterated by a change in the course of the stream while a roadway that approached the site had long been removed by the landowner (Power 1986 <sup>11</sup> ).	617057	602488	715m southwest of Site entrance
WA022-014002-	Graveyard	FARNANE LOWER	Marked as the site of a graveyard on the 1840 ed. of the OS 6-inch map, and situated on the S-facing slope of a W-E valley, just E of the NW-SE Farrane stream at the point where it turns E. It is traditionally regarded as a children's burial ground associated with the church (WA022-014001-), but no enclosure or grave-markers are visible.	617040	602470	715m southwest of Site entrance
WA013-023001-	Church	BALLYNAGUILKEE LOWER	Situated in pasture on level ground at the top of an E-facing slope down to the N-S Finisk River, c. 300m to the SE. This is an early ecclesiastical site with traces of an oval enclosure (dims. 63m N-S; 46m E-W) visible as a scarp N-S and a slight dip S-W. The perimeter is incorporated into a field bank W-	618216	605008	1,270m east of access road

<sup>11</sup> Power, Rev. P. (1896) The ancient ruined churches of Waterford. WAJ. 2, 2-15, 195-298.

Monument no.	Class	Townland	Archaeological Survey of Ireland inventory description	ITM E	ITM N	Approx. distance from nearest construction area
			N. The base of a stone cross (dims. c. 0.35m x 0.25m; H c. 0.23m) with interlace and fret patterns and part of the shaft, which were recorded by DuNoyer in the 19th century, are now missing (Harbison 1992 <sup>12</sup> ).			
WA013-023002-	High cross	BALLYNAGUILKEE LOWER	Same description as WA013-023001-	618195	605002	1,270m east of access road
WA013-023003-	Ecclesiastical enclosure	BALLYNAGUILKEE LOWER	Same description as WA013-023001-	618233	605010	1,270m east of access road
WA013-024----	Ringfort	BALLYNAGUILKEE LOWER	Situated on an E-facing slope down to the N-S Finisk River, c. 100m to the SE. Circular grass-covered area (diam. 40m N-S; 40m E-W) defined by an earthen bank (Wth 7-7.35m; int. H 0.6-0.7m; ext. H 1.1-1.7m), which is reduced to a scarp N-E. There is an outer U-shaped fosse (Wth at top 7m; ext. D 0.5-1.1m) E-W and at NW, and an external bank (Wth c. 3m; max. ext. H 0.4m) SE-SW. There is no identifiable entrance, but there is a wide gap in the inner bank at W.	618445	604882	1,470m east of access road
WA013-025----	Ringfort - unclassified	BALLYNAGUILKEE LOWER	Marked as an embanked enclosure (ext. diam. c 55-60m) on the 1840 ed. of the OS 6-inch map, and situated in pasture on an E-facing slope. It is not visible at ground level.	618476	604193	1,280m east of access road
WA022-002----	Ringfort - unclassified	LYRATTIN	Marked as a subcircular embanked enclosure (ext. diam. c. 40m N-S; c. 35m E-W) on the 1840 ed. of the OS 6-inch map. Situated in pasture on a SE-facing slope, it is not visible at ground level.	615458	603580	1,080m south of T9 hardstand
WA022-004----	Ringfort - unclassified	BALLYNAGUILKEE LOWER	Marked faintly as a circular feature (diam. c. 35m) on the 1840 ed. of the OS 6-inch map. Situated in pasture on an E-facing slope overlooking the N-S Finisk River, it is not visible at ground level.	618216	605008	1,280m east of access road

<sup>12</sup> Harbison, P. (1992) The high crosses of Ireland: an iconographical and photographic survey, 3 vols. Royal Irish Academy, Dublin.

**Table 13.6: Recorded Archaeological Monuments with potential visual alignments within 10km of Site**

Monument no.	Class	Townland	Extant?	Distance from nearest Turbine	Recorded Alignment (ASI)	Existing direct alignment view to Site?	ITM E	ITM N
WA023-076----	Megalithic tomb - unclassified	COUMARAGLINMOUNTAIN	Yes	8.2km to east	NE-SW	No	624520	602887
WA013-038002-	Stone row	KNOCKBOY	Yes	5.25km to east	NE-SW	No	621800	605280
WA014-033002-	Stone row	COUMARAGLINMOUNTAIN	Partial (2 of 5 stones)	9.8km to east	NW-SE	No	626427	604705
WA013-007----	Stone row	REANADAMPAUN COMMONS	Yes but has been incorporated into a field bank	6.9km to northeast	NE-SW	No	621953	609341
WA006-022002-	Stone row	TOOREEN EAST	Yes but now located in forestry plantation	9.9km to northeast	NE-SW	No	624487	611543
WA014-031----	Standing stone pair	KILBRYAN UPPER	Yes	6.8km to east	NNW-SSE	No	624550	604469
WA014-033010-	Standing stone pair	COUMARAGLINMOUNTAIN	Yes	9.8km to east	NNE-SSW	No	626430	604471
TS091-005----	Standing stone pair	AUGHAVANLOMAUN	Yes	3.1km to northeast	NE-SW	Yes	616637	608884
TS091-004----	Standing stone pair	CURRAGHCLONEY	Only one upright stone	4.37km to northeast	E-W	No	616228	610459

### 13.3.4 Topographical Files of the National Museum of Ireland

The National Museum of Ireland (NMI) Topographical File archive is stored in the museum's premises in Kildare Street, Dublin and comprises a database and paper record of the known locations of the discovery of archaeological objects within the State. The archive was inspected as part of the assessment to determine if there are any records of discoveries within the study area. This revealed files recording the discovery of a number of objects as well as cremated human bone in Corradoon townland which are likely associated with a recorded pit burial (WA013-042----). This burial was uncovered during ploughing of a field in this townland at a location c.640m outside the east end of the Site and the recorded objects comprised the following:

- 1968:218 Human cremated remains
- 1968: 217 Bronze Age vessel
- 1968:216 Encrusted urn (ref Kavanagh, RM 1973 PRIA 73C)
- 1968:219 Biconical stone object (topsoil in field)
- 1968:220 Polished stone ball (topsoil)

### 13.3.5 Aerial and Satellite Images

A review of Ordnance Survey of Ireland, Google Earth and Bing Maps online aerial/satellite images of the Site revealed that the much of the internal lands have remained relatively unchanged from 1995 to present. The western area is shown as undeveloped open uplands while the lower lands in the eastern area are shown occupied by enclosed agricultural fields with farmyards in adjoining lands. The most significant change in depicted land use during recent decades is the planting of areas of commercial forestry in the north end of the Site in fields that were shown as grass covered as recently as 2000 with the forestry planted by 2005. No potential unrecorded archaeological sites were noted within the Site during the review of the aerial and satellite imagery.

### 13.3.6 Waterford City and County Development Plan 2022-2028

The current Record of Protected Structures for County Waterford does not list any Protected Structures or Architectural Conservation Areas located within the Site or in the surrounding 1km study area.

### 13.3.7 National Monuments in State Care

A review of the locations of National Monuments in State Ownership or Guardianship revealed that there are no examples located within 10km of the Site.

### 13.3.8 National Inventory of Architectural Heritage

The National Inventory of Architectural Heritage does not list any structures, gardens or landscapes within the Site or within the surrounding 1km study area.

### 13.3.9 Previous Archaeological Work in the Study Area: Excavations Database

A review of the Database of Irish Excavation Reports<sup>13</sup> revealed that no licensed archaeological investigations have taken place within the Site or in the surrounding 1km study area. It is noted that one of the standing stones (WA013-0200002-) within the Site was recorded as a collapsed stone lying flat on the ground by the Archaeological Survey of Ireland in 2010. This stone is now standing upright and was, therefore, re-erected at some point during the past decade. The Database does not contain an entry for any licensed archaeological investigations associated with this resetting of the stone, such as advance test trenching to identify its original ground socket or any associated sub-surface deposits. The potential therefore exists that, while the current location of the upright stone is likely within the environs of its original setting, it may have been re-erected in a different position.

### 13.3.10 Ordnance Survey Maps

A review of historic Ordnance Survey (OS) maps surveyed in the 19<sup>th</sup> and 20<sup>th</sup> centuries was carried out as part of the desktop study. The first edition 6-inch map of 1840 shows the western end of the Site primarily occupied by vacant uplands with no farm or settlement features indicated while the lower lying eastern area is shown occupied by large, irregular fields with associated small farmyards containing one to two buildings. A large section of the western end of the Site is outside the coverage of the 25-inch edition OS map of 1906. The detail on this map shows that the field systems in the depicted eastern area of the Site had been extensively reorganised during the second half of the 19<sup>th</sup> century with smaller and more regular fields evident. Many of these fields, which are now pasture grasslands, are depicted as marginal lands which likely indicates that land improvement works continued within the Site during the 20<sup>th</sup> century. There are no potential unrecorded archaeological sites, large country houses, landscaped gardens or demesne lands indicated within the Site, which appears to have been occupied by small farm holdings and vacant areas of marginal uplands from at least the middle of the 19th century. Further details on the depiction of turbine and associated infrastructure locations within the Site on the historic Ordnance Survey maps are presented in **Table 13.9 (Section 13.3.14)**.

---

<sup>13</sup> <https://excavations.ie/>

### 13.3.11 Undesignated Cultural Heritage Assets

While encompassing the protected archaeological and architectural heritage resources, cultural heritage also includes various undesignated assets such as demesne landscapes, vernacular structures as well as intangible assets such as folklore, placenames and historical events and associations. As noted in the review of historic Ordnance Survey maps (**Section 13.3.10**), these cartographic sources depict a number of undesignated farm buildings within the Site. Their locations were inspected during the field surveys to ascertain if remains of these buildings are extant and to appraise their existing condition. Further details on these structures are provided in **Section 13.3.14**.

The proposed construction areas within the Site extend into seven townlands: Broemountain, Scartmountain, Corradoon, Ballynaguilkee Upper, Dyrick, Lisleaghmountain, and Lickoranmountain. Townlands are the smallest unit of land division in the Irish landscape, and many may preserve early Gaelic territorial boundaries that pre-date the Anglo-Norman conquest. Townland boundaries were recorded and standardised by the Ordnance Survey (OS) during the 19th century and their assigned names typically comprise anglicisations of their original Irish names which often refer to natural topographical features, past landowners and farming practices, but some may also indicate the presence of archaeological sites within the townland, e.g. lios or rath typically indicate the presence of a ringfort, while temple, saggart, termon or kill may record associations with a church site. The Development will entail construction works on the footprint of two field banks that form parts of townland boundaries. Their locations were inspected during the field surveys and details are provided in **Section 13.3.14**.

The available translations of names of the townlands within the Site were reviewed on the Placenames Database<sup>14</sup> and one example (Corradoon) may be associated with a ringfort monument. It is noted that the majority of this townland is located outside the Site and it shares a placename element with the adjoining townland of Doon which does contain a known ringfort.

**Table 13.7 Translations of Townland Names with Site**

Townland	Irish Origin	Translation and notes	Archaeological Indicator?
Dyrick	Deighric	"Meaning unclear"	No
Broemountain	Cnoc Breó	No translation	No
Lisleagh	An Lios Liath	The Grey Ringfort	There are two known ringforts within this townland, including one example within the Site (WA013-022----

<sup>14</sup> [www.logainm.ie](http://www.logainm.ie)



Townland	Irish Origin	Translation and notes	Archaeological Indicator?
Lisleaghmountain	Sliabh an Leasa Léith	Mountain of the Grey Ringfort	Relates to known ringforts in this townland
Corradoon	Corrdhún	Round Fort	There are no recorded ringforts within this townland, though there is an example in the adjacent townland of Doon, which has a shared placename root as Corradoon and may have formerly formed part of the same land division.
Ballynaguilkee Upper	Baile na Giolcaí Uachtarach	Broom town	No
Lickoranmountain	Sliabh Leic Dhobhráin	Mountain of the flat stone	No
Scartmountain	Sliabh na Scairte	Mountain of the thickets	No

The online database of the Irish National Folklore Schools Collection<sup>15</sup> was reviewed to ascertain if it contains any records for the townlands in the study area. The only entry in the database relates to Lisleagh townland which notes that the placename derives from the recorded ringforts in this area (WA013-022---- and WA022-003001-).

There are no cultural heritage institutions, such as local museums or other heritage centres, associated with the intangible cultural heritage of the area located within the Site or surrounding study area. In addition, the Site is not located within, or in the close environs of the County Waterford Gaeltacht area.

### 13.3.12 Grid Connection

A review of cultural heritage constraints within a 100m wide area centred on the underground grid connection route within public roads extending from the Site was carried out. This revealed a total of twelve constraints within this area which are variously listed in the Record of Protected Structures, the Record of Monuments and Places and the National Inventory of Architectural Heritage (**Table 13.8** and **Figure 13.9**). The majority of these constraints are located within private properties adjacent to sections of the public road network that forms the route and only one example, Mountain Stage Bridge which is a Protected Structure (RPS ref. WA750688), is located within a section of the public road network forming the grid connection route. The majority of the other Protected Structures within the reviewed study area are buildings located within a small settlement cluster known as Millstreet which is centred on the west and east sides of a cross-roads in the townlands of Farnane Upper and Lower (**Table 13.8**). The majority of the buildings in the settlement are not present on the 1840 OS map but are depicted on the 1906 edition indicating that

<sup>15</sup> [www.duchas.ie](http://www.duchas.ie)

the settlement dates to the second half of the 19th century. The grid connection route will extend in a north to south direction through the cross-roads and will not require any interventions to the buildings within the settlement.

Details on each of the identified constraints within the environs of the grid connection route, including their published inventory entries, are presented in **Table 13.8** and their locations are mapped on **Figure 13.9**.

**Table 13.8: Cultural Heritage Sites within 100m wide corridor centred on grid connection route**

Designation	Name/Class	Townland	Inventory Description Extracts	Observations
NIAH 22903003	Master McGrath Monument	BALLYMACMAGUE SOUTH	Freestanding drag edged cut-limestone monument, erected 1873, on a square plan on limestone-covered plinth. Repositioned, 1933. Road fronted on a wedge-shaped site. (Source: National Inventory of Architectural Heritage)	The repositioned location of this feature is set against a modern wall on its west side and is located 7m to the south of the roadside. No interventions to this feature will occur
RPS WA750672 NIAH 22903004	Thatched cottage	BALLYMACMAGUE SOUTH	Detached five-bay single-storey thatched cottage, c.1840. Extensively renovated and extended, c.1990, comprising two-bay single-storey return to north with single-bay single-storey projecting porch added to centre, and window openings remodelled... Set back from line of road with gravel grounds to site.	This building is located within a private property at a distance of 10m to the east of the roadside. The area between the road and the concrete boundary wall is occupied by a 7m wide grass verge. No interventions to this building or its associated property will occur
RMP WA022-056----	Children's burial ground	COLLIGAN MORE	Marked as a small oval enclosure (dims. c. 30m E-W; c. 15m N-S) and denoted 'Faheen' on the 1st ed. of the OS 6-inch map, it is reputedly the site of a children's burial ground (Power 1952, 121) <sup>16</sup> . Situated in pasture on an E-facing slope, it is not visible at ground level.	The recorded location of this levelled site is located c.25m to the west of the roadside within a private property. No interventions to the recorded location of this site and its associated property will occur
RPS WA750048 RMP WA022-017----	Fortified House - 17th century	SLEADYCASTLE	Situated at the W edge of a broad plateau. It was built by Philip McGrath or McCreagh in 1628 (Ryland 1824, 314), and Curraghnasledy was still owned by Philip McGrath in 1641 (Simington 1942, 60)...This is a large rectangular structure (ext. dims. 21.85m E-W; 9.22m N-S; int. dims. 18.2m E-W; 6.3m N-S) of three bays with three-storeys and an attic. It survives in good condition with dressed quoins, except the N wall and the N stairs tower, if there was one, which have completely disappeared. All the dressed stone from fireplaces and most of the windows is missing. (Source: Archaeological Survey of Ireland)	The extant remains of this monument are located within a private property 30m to the south of the roadside. No interventions to this monument will occur
NIAH 22902213	Thatched cottage	MOUNTAINCASTLE SOUTH	Detached five-bay single-storey thatched cottage, c.1750. Renovated, c.1950, with single-bay single-storey gabled projecting porch added. Undergoing renovation, 2003. Hipped and pitched roof with reed thatch having rope work to ridge, and rendered chimney stack.... Set back from road in own grounds with courtyard to front. (Source: National Inventory of Architectural Heritage)	This house remains in use and is located c.15m to north of the roadside within a private property. No interventions to this building or its associated property will occur
RPS WA750756 RMP WA022-015---- NIAH 22902212 (house)	Mountain Castle House (tower house)	CASTLEQUARTER	Located on high ground overlooking the Finisk River, which is c. 60m to the W. Built by the McGrath or McCreagh family in the early 16th century and owned by Garret Fitzgerald of Dromana (WA029-021----) in 1640 when it was described as a small defensible castle (Simington 1942, 60) <sup>17</sup> . J. O'Donovan described it c. 1840 as	While the tower house is located c.90m to the south of the section of the road that forms part of the grid connection, the property gateway and boundary walls do extend along the roadside and form part of the curtilage of this Protected

<sup>16</sup> Power, Rev. P. (1952) *The placenames of the Decies*. (second ed.) Cork University Press.

<sup>17</sup> Simington, R. C. (ed.) (1942) *The Civil Survey AD 1654-1656, vi, the County of Waterford*. Irish Manuscripts Commission. Dublin.

Designation	Name/Class	Townland	Inventory Description Extracts	Observations
NIAH 22902215 (gate/boundary)			<p>comprising three storeys with dressed quoins (O'Flanagan 1929, 49)<sup>18</sup>. The building is now reduced to two storeys with an attic and has been refurbished as a modern dwelling. It is a rectangular structure (ext. dims. 10.1m N-S; 8m E-W; int. dims. 5.8m x 3.3m) with an external base-batter. The original pointed doorway is towards the W end of the N wall with a mural stairs, now preserved in a wall-cupboard, off the lobby in the N wall. Spiral stairs rise from the first floor at the NE angle. No vaulting survives and there are no original windows (Source: Archaeological Survey of Ireland)</p> <p>Gateway, c.1740, comprising pair of sandstone ashlar panelled piers with moulded cornices having domed capping over with finials, decorative wrought iron double gates, and square-headed flanking pedestrian gateways with decorative wrought iron gates having sandstone ashlar voussoirs over, and cut-stone coping. Road fronted at entrance to grounds of Mountain Castle. (Source: National Inventory of Architectural Heritage)</p>	Structure. The gate and boundary wall are also listed in the NIAH (22902215). No interventions to the house property, roadside gate and boundary wall are proposed
RPS WA750688 NIAH 22902211	Mountain Castle Bridge	CASTLEQUARTER	<p>Three-arch limestone road bridge over river, dated 1872. Irregular coursed rock-faced squared limestone walls with cut-limestone triangular cut-waters to piers, cut-stone stringcourse, and broken coursed squared limestone parapets having cut-stone date stone/plaque, and cut-stone parapet. Series of three segmental arches with rock-faced limestone ashlar voussoirs, and squared rubble stone soffits having render over. Sited spanning Finisk River with grass banks to river. An elegantly-proportioned bridge built by John Sheehan (n. d.) to designs prepared by the engineer Charles Tarrant (1815 – 1877). The construction in limestone serves to assimilate the composition into the surrounding landscape, while the civil engineering heritage importance of the bridge is identified by the profile of the arches, which have retained their original shape. (Source: National Inventory of Architectural Heritage)</p>	Located on the public road forming the grid connection route. The use of HDD at this location will avoid any interventions to the bridge structure and any potential unrecorded archaeological features that may exist within the associated watercourse
RPS WA750686 NIAH 22902209	O'Brien house	FARNANE LOWER	<p>Detached four-bay two-storey house, c.1860, on a corner site retaining original fenestration with single-bay single-storey return to north-west. Renovated, c.1935, to accommodate commercial use to part ground floor. Pitched slate roofs with clay ridge tiles, cut-stone chimney stacks having moulded capping and yellow terracotta polygonal flues, and cast-iron rainwater goods on slightly overhanging rendered eaves. Unpainted rendered, ruled and lined</p>	One of the buildings within the Millstreet settlement which dates to the second half of the 19 <sup>th</sup> century. This is located adjacent to the east side of the section of road that forms part of the grid connection route. No intervention to the building is proposed.

<sup>18</sup> O'Flanagan, M. (Compiler) (1929) *Letters containing information relative to the antiquities of the county of Waterford collected during the progress of the Ordnance Survey in 1841*. Typescript. Bray.

Designation	Name/Class	Townland	Inventory Description Extracts	Observations
			walls with rendered quoins to ends, and pebbledashed panel, c.1935, to first floor with raised lettering....Pair of freestanding iron-clad petrol pumps, c.1935, to front (south-east) on concrete base... (Source: National Inventory of Architectural Heritage)	
RPS WA750690 NIAH 22902206	House	FARNANE UPPER	Terraced three-bay two-storey house, c.1860, retaining original fenestration. Reroofed, c.1960. Pitched roof with replacement artificial slate, c.1960, clay ridge tiles, rendered chimney stacks, and iron rainwater goods on overhanging rendered eaves. Unpainted rendered, ruled and lined walls with rendered quoins to ends, and moulded stringcourse to first floor....Attached three-bay single-storey rubble stone creamery, c.1860, to left (north-east) with square-headed carriageway. Now disused. Unpainted lime rendered walls over random rubble stone construction... (Source: National Inventory of Architectural Heritage)	One of the buildings within the Millstreet settlement which dates to the second half of the 19th century. This is located 20m to the west of the section of road that forms part of the grid connection route. No intervention to the building are proposed.
RPS WA750687 NIAH 22902210	Outbuilding	FARNANE LOWER	Detached two-bay single-storey over raised base rubble stone outbuilding, c.1850, retaining original fenestration. Reroofed, c.1950.... Limewashed random rubble stone wall to front (north-west) elevation with unpainted random rubble stone walls to remainder. Square-headed window opening with no sill, timber lintel, and 1/1 timber sash window having wrought iron bars. Square-headed door opening with timber lintel, and timber panelled door. Road fronted with sections of limewashed random rubble stone flanking boundary walls having wrought iron gate. (Source: National Inventory of Architectural Heritage)	One of the buildings within the Millstreet settlement which dates to the second half of the 19th century. This is located adjacent to the east side of the section of road that forms part of the grid connection route. No intervention to the building is proposed.
RPS WA750692 NIAH 22902208	House	FARNANE UPPER	End-of-terrace four-bay single-storey house, c.1840, retaining some original fenestration. Reroofed, c.1965. Renovated and part refenestrated, c.1990, with one window opening remodelled. Now in commercial use. Road fronted with concrete footpath to front... (Source: National Inventory of Architectural Heritage)	One of the buildings within the Millstreet settlement which dates to the second half of the 19th century. This is located 45m to the west of the section of road that forms part of the grid connection route. No intervention to the building are proposed.
RPS WA750691 NIAH 22902207	House	FARNANE LOWER	Terraced two-bay two-storey house, c.1840. Reroofed, c.1965. Refenestrated, c.1990, with one window opening remodelled. Pitched roof with replacement artificial slate, c.1960, clay ridge tiles, and cast-iron rainwater goods on rendered eaves. Unpainted rendered walls with rendered heraldic shield to ground floor, and rendered quoined pier to right first floor...Road fronted with concrete footpath to front. (Source: National Inventory of Architectural Heritage)	One of the buildings within the Millstreet settlement which dates to the second half of the 19th century. This is located 30m to the west of the section of road that forms part of the grid connection route. No intervention to the building is proposed.

### 13.3.13 Turbine Delivery Route Work Areas

A review of the turbine delivery route from Waterford city to the Site was carried out. While there are a range of recorded cultural heritage assets located within private lands close the public roadways forming the delivery route, the use of public roads as driving routes will have no predicted potential to impact on these assets or their associated properties. The assessment focused on the locations of Points of Interest (POI) along the route which require works to facilitate the delivery of turbines to the Site, as identified in a Pell Frischmann report<sup>19</sup> prepared for this element of the Development in **Appendix 14.1**. A review of historic Ordnance Survey mapping of the route revealed that the roads were present during the 19<sup>th</sup> century and no potential extant unrecorded features of cultural heritage interest were noted within any of the POI locations. There are no bridges along the route designated as Protected Structures or included in the National Inventory of Architectural Heritage and no interventions to other undesignated masonry bridges are proposed.

The review revealed that four POI locations are within the environs of known cultural heritage constraints (**Figures 13.10 to 13.13**) and these are detailed below.

POI No. 8 is located on the opposite side of the roadway from the Master McGrath monument which is listed in the National Inventory of Architectural Heritage (NIAH ref. 22903003) (see **Table 13.8** for inventory description). The works in this area will entail the laying of a loadbearing surface on the north eastern verge on the inside of the right turn and the removal of three road signs and two bollards. The location of these works is at a distance of c.50m to the east of the Master McGrath monument.

POI No. 9 is located within a section of the roadway adjacent to a thatched cottage listed as a Protected Structure (RPS WA750672) (see **Table 13.8** for inventory description). The works in this area will be limited to trimming of roadside vegetation within the environs of the property and no interventions to the cottage or its roadside boundary are proposed.

POI 10 is located within a section of the road located c.25m to the east of the recorded location of a children's burial ground listed as an archaeological site (RMP WA022-056----) (see **Table 13.8** for inventory description). The works in this area will entail laying of a loadbearing surface on the grass verge on the west side of the road in an area located c.25m from the recorded location of the archaeological site.

---

<sup>19</sup> a Pell Frischmann (2022) *Dryick Hill Abnormal Indivisible Load Route Survey*.

PO1 23 is located within a section of a road bend located 40m to the southeast of the recorded location of a levelled ringfort (WA022-004----) which has been recorded as follows by the Archaeological Survey of Ireland:

*WA022-004----*

*Townland BALLYNAGUILKEE LOWER*

*Marked faintly as a circular feature (diam. c. 35m) on the 1840 ed. of the OS 6-inch map.*

*Situated in pasture on an E-facing slope overlooking the N-S Finisk River, it is not visible at ground level.*

The works at this location will require land reprofiling within a section of a field adjoining the north side of the road bend and this area is located c.50m to the east of the recorded location of the levelled ringfort. A review of the 1840 OS 6-inch map revealed that the indicated extent of the ringfort site did not extend into the location of the proposed works. One other feature of potential cultural heritage was noted within the environs of the land profiling location on the north side of the road on this map, and this comprised the former site of building labelled as 'Ballynaguilkee School'. A review of a 1906 edition OS map revealed that this building was no longer present and a small quarry is shown at its former location.

#### 13.3.14 Field Work

The field surveys of the Development included inspections of the locations of the four recorded archaeological sites within the Site to confirm that they have been mapped in the correct locations by the Archaeological Survey of Ireland and remain as described in their inventory descriptions as presented in **Table 13.5** and mapped on **Figure 13.1**.

The standing stone (WA013-020002-), which was recorded as collapsed in the Archaeological Survey of Ireland inventory description dating to 2010, was re-erected in an upright position at some point during the past decade. The base of the reset stone has been bolstered with field stones, presumably intended to act as supports to prevent another collapse. Its current position is within the same general area indicated on the National Monument Service's Historic Environment Viewer. However, as previously noted there is no record that any advance archaeological excavations, which are typically carried out to ensure that such re-erection works are carried out accurately, were undertaken to ensure that the monument was reset in the correct location and without impacting on any associated sub-surface archaeological remains. The nearby grass-covered platform comprising the remains of a hut site (WA013-020001-) is now located within the outer margins of a commercial forestry plantation, with planted trees, field clearance boulders and a timber ESB pole close to its recorded location. No surface trace of the platform feature described in the inventory entry for this site (**Table 13.5**) were observed and it was noted

that root action from the nearby trees has likely resulted in disturbance of any sub-surface remains of this site.

The second standing stone within the Site (WA013-021----) remains upright at its recorded location and is within the southern margins of a modern forestry plantation which screens views from its location in all directions apart from to the south. The ringfort within the east end of the Site (WA013-022----) is at its recorded location and remains as a tree-covered enclosure as described by the Archaeological Survey of Ireland.

The results of the field surveys of the Development areas are presented in **Table 13.9** which describes the existing environment at the locations of proposed development areas and also collates information gathered during reviews of historic mapping and aerial/satellite images for each location. The reviewed aerial/satellite images were sourced from those published online by Ordnance Survey of Ireland, Bing Maps and Google Earth. Information on a number of undesignated features of cultural heritage interest noted within the environs of the Site are also provided in this table and these include a number of derelict farm buildings, a 19<sup>th</sup> century roadway, townland boundaries and one upland cairn feature. The locations of these undesignated features are mapped on **Figures 13.7** and **13.8**.



**Table 13.9: Summary of Field Survey of the Development**

Development Element	Townland	Distance to nearest archaeological site	Historic OS Maps	Aerial and Satellite images	Field Survey Notes
Turbine 1	Lisleaghmountain	Ringfort located 830m to southeast (WA013-022----)	Depicted on 1840 6-inch OS map within unenclosed marginal land with a farm lane shown c.100m to north of the hardstand. The existing field is shown on the 1906 25-inch OS map	Shown within centre of vacant rectangular green field. No potential unrecorded archaeological sites noted at proposed turbine location or along access route.	Located within a level area within an improved pasture field. No potential unrecorded cultural heritage assets were noted at the location.
Turbine 2	Lisleaghmountain Lickoranmountain	Ringfort located 780m to east (WA013-022----)	Depicted on 1840 6-inch OS map within unenclosed marginal land. The hardstand extends across the boundary between the townlands of Lisleaghmountain and Lickoranmountain. The existing fields are shown on the 1906 25-inch OS map	Shown extending into sections of three vacant green fields. No potential unrecorded archaeological sites noted at proposed turbine location or along access route.	The hardstand extends into three improved pasture fields and across a section of the boundary between Lisleaghmountain and Lickoranmountain townlands. This comprises an overgrown earthen field bank which is of similar construction to the other field boundaries in the area.
Turbine 3	Lisleaghmountain	Standing stone located 860m to west (WA013-021----)	Depicted on 1840 6-inch OS map within enclosed field with farm lane extending east-west through south end of hardstand. The hardstand is located adjacent to the east side of the boundary between the townlands of Lisleaghmountain and Dyrick. The same layout is shown on the 1906 25-inch OS map	Shown within south end of a vacant green field and the lane depicted on the OS maps is not visible. No potential unrecorded archaeological sites noted at proposed turbine location or along access route.	Located within a level area within an improved pasture field. No potential unrecorded cultural heritage assets were noted at the location of the turbine hardstand. A section of the access road to the south will extend through the boundary between the townlands of Lisleaghmountain and Dyrick which is marked by an overgrown earthen field bank which is of similar construction to the other field boundaries in the area.
Turbine 4	Dyrick	Hut site located 530m to northwest (WA013-0200001-)	Depicted on 1840 6-inch OS map within enclosed fields with a farm building shown 30m to southwest of hardstand. Additional enclosed fields are shown in	Shown extending into sections of three vacant green fields. Ruins of farm building to southwest are visible. No potential unrecorded archaeological sites noted at	Located within sections of three improved pasture fields within area of level land. The field boundaries are formed by earthen banks capped with trees. The ruins of a one-story farm building are located 30m to the southwest of the outer edge

Development Element	Townland	Distance to nearest archaeological site	Historic OS Maps	Aerial and Satellite images	Field Survey Notes
			area on the 1906 25-inch OS map	proposed turbine location or along access route.	of the hardstand (Figure 13.8; Farm Building B). The random rubble walls remain extant, but the roof is absent and the interior is inaccessible due to thick overgrowth. The fragmentary remains of an outbuilding on the north side are located 17m outside the hardstand footprint.
Turbine 5	Ballynaguilkee Upper	Hut site located 635m to west (WA013-0200001-)	Depicted on 1840 6-inch OS map within large, vacant, marginal field with similar layout shown on 1906 25-inch OS map	Shown within modern commercial forestry plantation on images from 2005 onward. Review of 1995 and 2000 images show location as vacant green field area. No potential unrecorded archaeological sites noted at proposed turbine location or along access route.	<p>An existing forestry road extends to the location, with most of the hardstand area being within the forest plantation. An inspection of the ground surface within the forested area revealed that it has been extensively disturbed by drains and tree growth.</p> <p>The western section of the existing access track extends along the north side of a farmhouse shown on the 1840 OS map which remains extant but is in derelict condition (Figure 13.8; Farm Building A). There is an electricity connection to the house indicating that it remained occupied into the late 20<sup>th</sup> century. The historic maps also show an unlabelled road extending along the north site of the farmyard which was known locally as Ballynaguilkee Boreen. This route was blocked off in the 1960s and the section within the Site is now occupied by an access track and a stone surfaced forest road which extend from the public road to the west towards T5 (Figure 13.8)</p>
Turbine 6	Ballynaguilkee Upper	Hut site and standing stone located 30m to south of hardstand and access route from west (WA013-0200001-, WA013-0200002-)	Depicted on 1840 6-inch OS map within small, vacant, irregular fields. The detail on the 1906 25-inch OS map shows a new field layout with linear boundaries.	Shown within modern commercial forestry plantation on images from 2005 onward. Review of 1995 and 2000 images show location as vacant green field area. No potential unrecorded archaeological sites noted at proposed turbine location or along access route.	<p>An inspection of the ground surface within the forested area revealed that it has been extensively disturbed by drains and tree growth. The access track to the location will extend through the improved pasture field to the west. No potential unrecorded cultural heritage assets were noted at the location.</p> <p>The re-erected standing stone (WA013-0200002-) to the southwest now stands upright and a number of field stones have been placed at the</p>

Development Element	Townland	Distance to nearest archaeological site	Historic OS Maps	Aerial and Satellite images	Field Survey Notes
					base to act as supports. There was no surface trace of the potential hut site (WA013-020001-) to the east and a mature tree at the edge of the forestry now stands at its location.
Turbine 8	Broemountain	Standing stone located 650m to southeast (WA013-0200002-)	Depicted on 1840 6-inch OS map within unenclosed vacant land. A farm lane extends close to south end of hardstand but terminates before reaching location. The layout of the area is similar on the 1906 25-inch OS map, but this does show a new field boundary feature extending through southern end of hardstand	Shown within vacant land with no potential unrecorded archaeological sites noted at proposed turbine location or along access route.	Located on an east-facing moderate slope within a vacant, unenclosed upland setting. No potential unrecorded cultural heritage assets were noted at the location.
Turbine 9	Broemountain	Standing stone located 410m to east of turbine (WA013-021----) A section of the access route to the turbine extends c.50m to the south of this standing stone	Depicted on 1840 6-inch OS map within unenclosed vacant land. The 1906 25-inch OS map shows an enclosed field at the location with a farmyard adjacent to east side of hardstand. This likely dates to late 19 <sup>th</sup> century	Shown within vacant green field and farmyard to east is heavily overgrown on all images. No potential unrecorded archaeological sites noted at proposed turbine location or along access route. A section of the access route from the east extends c.50m to the south of standing stone (WA013-021----)	Located within an improved pasture field within level area of land. A section of the access route from the east extends c.50m to the south of this standing stone (WA013-021----). The location of the farmyard shown to the east on the 1906 OS map is now heavily overgrown (Figure 13.8; Farm Building E). The location of one outbuilding within the yard is visible and its southern end has been completely demolished. No associated structures are located within the footprint of the hardstand.
Turbine 10	Broemountain	Standing stone located 490m to southeast (WA013-021----)	Depicted on 1840 6-inch OS map within unenclosed vacant land and is outside the coverage of the 1906 25-inch OS map	Shown within vacant land with no potential unrecorded archaeological sites noted at proposed turbine location or along access route.	Located within vacant marginal land on lower hillslope. The ground in the area has some grass and gorse growth and contains natural spreads of surface stones and bedrock outcrops. No potential unrecorded cultural heritage assets were noted at the location.

Development Element	Townland	Distance to nearest archaeological site	Historic OS Maps	Aerial and Satellite images	Field Survey Notes
Turbine 11	Broemountain	Standing stone located 700m to east (WA013-0200002-)	Depicted on 1840 6-inch OS map within unenclosed vacant land and is outside the coverage of the 1906 25-inch OS map	Shown within vacant land with no potential unrecorded archaeological sites noted at proposed turbine location or along access route.	Located within vacant marginal land near middle of south-facing hillslope. The ground in the area has thick gorse growth and contains natural spreads of surface stones and bedrock outcrops. No potential unrecorded cultural heritage assets were noted at the location.
Turbine 12	Broemountain	Standing stone located 910m to southeast (WA013-0200002-)	Depicted on 1840 6-inch OS map within unenclosed vacant land and is outside the coverage of the 1906 25-inch OS map	Shown within vacant land with no potential unrecorded archaeological sites noted at proposed turbine location or along access route.	Located within vacant marginal land on upper hillslope. The ground in the area has thin grass growth and contains natural spreads of surface stones and bedrock outcrops. No potential unrecorded cultural heritage assets were noted at the location.
Turbine 13	Broemountain	Enclosure located 830m to north (WA013-052----)	Depicted on 1840 6-inch OS map within unenclosed vacant land and is outside the coverage of the 1906 25-inch OS map	Shown within vacant land with no potential unrecorded archaeological sites noted at proposed turbine location or along access route.	<p>Located close to hill summit on margins of area of reclaimed farm fields with a modern forestry plantation to the north. A rough, stone surfaced farm track extends through the location. This is not indicated on the historic OS maps, which do depict other farm tracks within the wider lands and it is of likely modern origin, perhaps associated with land improvement works within area.</p> <p>A small stone cairn feature was noted in a vacant gorse-covered area located c.60m to the southwest of the nearest section of the hardstand and 55m to the west of the edge of the access route to the turbine. The visible section of this feature measured c.0.8m in height and c.1m in diameter. The exposed stacked stones were well-sorted, and no evident collapse was visible. It is located adjacent to the north side of the farm track that extends through this area. The potential that this cairn feature is archaeological in origin is noted but the possibility that it comprises a clearance feature of more recent date cannot be discounted.</p>

Development Element	Townland	Distance to nearest archaeological site	Historic OS Maps	Aerial and Satellite images	Field Survey Notes
Substation	Dyrick	Standing stone located 180m to west (WA013-021----)	Depicted on 1840 6-inch OS map within large vacant field. The 1906 25-inch OS map shows an enclosed field at the location with farm buildings located 40m to the north	Shown within vacant green field and farm building to the north is obscured by trees on all images. No potential unrecorded archaeological sites noted at proposed substation location or along access route.	Located within an area of naturally raised ground within an improved pasture field. The farm building indicated on the 1906 OS map is within an overgrown area in the field to the north (Figure 13.8; Farm Building D). The access route to the substation from the southeast extends through a field located 40m from the location of another farm building shown on the OS maps (Figure 13.8; Farm Building C). No potential unrecorded cultural heritage assets were noted at the proposed substation location.
Borrow Pit	Broemountain	Standing stone located 170m to southeast (WA013-021----)	Depicted on 1840 6-inch OS map within unenclosed vacant land. The layout of the location is similar on the 1906 25-inch OS map which does show a farm building located 30m to the south. This is now occupied by a modern forestry plantation.	Shown within vacant land with no potential unrecorded archaeological sites noted at proposed borrow pit location	Located within vacant marginal land on lower hillslope with modern forestry plantation to east and south. The ground in the area has some grass and gorse growth and contains natural spreads of surface stones and bedrock outcrops. No potential unrecorded cultural heritage assets were noted at the location.
Site Access Road	Lickoran	Ringfort located 175m to east (WA013-022----)	The area containing the Site access route is shown as vacant, enclosed fields on the historic OS maps. A number of the depicted field boundaries are no longer extant and this is likely the result of 20 <sup>th</sup> century land improvement works.	Shown extending through a number of vacant pasture and marginal fields. No potential unrecorded archaeological sites were noted along the route.	The access road from the Site entrance on the R671 road to the south extends upslope through three improved pasture fields before crossing a local road and then extends through an additional three poorly drained marginal fields within an area of level land. It then connects with an existing stone surfaced farm track which it follows towards Turbines 1 and 2 to the west. No potential unrecorded cultural heritage assets were noted during an inspection of the route.
Grid connection route	Various	See Table 13.8	The majority of the sections of public roadways that form the grid route connection are present on the 1840 OS map. A c.800m long section of the existing road extending south from the	No potential unrecorded archaeological or architectural heritage features were identified during a review of aerial and satellite images of	The public roads that form the route extend through an undulating landscape and in general are broadly level with adjoining lands, which are primarily occupied by pasture farmland. The sides of the roads are typically bound by adjoining field banks of earthen construction. The settlement pattern along the roadsides

Development Element	Townland	Distance to nearest archaeological site	Historic OS Maps	Aerial and Satellite images	Field Survey Notes
			Site is not present and is shown as vacant land. This section of road is shown on the 1906 OS map. Both maps show a generally dispersed settlement pattern along the roadsides which predominately appear to be farmyards.	lands along the existing road margins	comprise a mixture of 20 <sup>th</sup> century residences and a number of farmyards, some of which are indicated on the historic OS maps. No unrecorded features of potential archaeological, architectural or vernacular heritage interest were noted within the road corridors. The locations of the recorded heritage assets within the 100m study area were inspected from the roadsides and all remain as described in the inventory entries presented in <b>Table 13.8</b> .
Turbine Delivery Route Work Areas	Various	See Section 13.3.13	The public roadways that form the turbine delivery route are present on the historic OS maps	No potential unrecorded archaeological or architectural heritage features were identified during a review of aerial and satellite images of Point Of Interest work areas along the existing road margins	A windshield survey of the route was carried out which included inspections of the four work areas that are located within the environs of the cultural heritage sites detailed in <b>Section 13.3.13</b> . This revealed no potential unrecorded archaeological or other cultural heritage features at any of the proposed work locations.

### 13.3.15 Summary

There are four recorded archaeological sites located within the Site and each of these will be preserved *in situ* as part of the Development. There are an additional fifteen recorded archaeological sites located within 1km of the Site (**Figure 13.1**) and, of these, the Archaeological Survey of Ireland have recorded that thirteen retain little or no surviving surface traces. All are located within private lands not accessible to the public and none have been designated as National Monuments in State Care. One previously unrecorded feature of archaeological potential, which comprises a small stone cairn located c.60m to the southwest of the Turbine 13 hardstand, was identified during field surveys carried out as part of the assessment and this feature will be retained *in situ* (**Figure 13.7**).

There are no designated National Monuments in State Care located within lands extending for 10km in all directions from the Site. A review of prehistoric archaeological monuments with potential ritual alignments across the wider landscape within the 10km area revealed one extant example (Standing Stone Pair TS091-005----) with a potential existing visual towards the general location of the Site. This monument is located within private farmland at a distance of 3.1km to the northeast of the Site.

There are no designated architectural heritage structures or associated lands located within the Site or in the surrounding 1km study area. In addition, no potential undesignated features of architectural heritage interest, such as large country houses with associated designed gardens or demesne lands, are located in the Site or within the surrounding 1km study area.

The recorded archaeological sites within the Site and the surrounding 1km study area are types commonly found within the Irish landscape, are all located within inaccessible private lands, the majority are wholly or partially levelled and none retain discernible amenity or tourist attributes. Their current condition as well as potential sensitivities to indirect impacts of a visual nature, have been assessed based on their classifications, designations, existing conditions as described in Archaeological Survey of Ireland inventory descriptions, reviews of historical maps and modern aerial/satellite images and the ICOMOS guidelines outlined in **Table 13.2**. The indicative values assigned to these archaeological sites are identified in **Table 13.10**. It should be noted that levelled archaeological sites while not retaining any surface expressions of high value do have the potential to retain sub-surface remains which may be of high values. However, while this cannot be ascertained without recourse to archaeological excavation, such potential high value attributes are unlikely to be subject to effects in the absence of direct impacts.

The derelict remains of a number of farm buildings shown within the Site on the historic OS maps remain extant (**Figure 13.8**). While none of these buildings are of architectural heritage significance, they do comprise ruined vernacular structures of local (low) cultural heritage significance and all will be retained *in situ*.

There are no recorded archaeological sites or designated architectural heritage structures located within the footprint of works required to facilitate the grid connection route and the delivery of turbines to the Site. While Mountain Stage Bridge (Protected Structure WA750688) is located within the section of road which will form the grid connection route (**Table 13.8** and **Figure 13.9**), the grid connection methodology at its location, and other watercourse crossings along the route, will involve the use of horizontal directional drilling under the watercourse. This will not require any works to this historic bridge structure or within any watercourses, which may have the potential to contain underwater archaeological features.

## 13.4 ASSESSMENT OF POTENTIAL EFFECTS

### 13.4.1 Construction Phase – Direct Impacts

#### *The Site*

The layout of the Development has been designed to avoid the locations of the recorded archaeological sites within the Site and the construction phase will not result in any predicted direct impacts on the known archaeological resource. A programme of tree felling within the environs of Turbine 6 to incorporate a bat buffer will extend into the environs of the recorded location of a levelled hut site (WA013-020001-) (**Figure 13.3**). No removal of tree root bowls will occur within the designated zone of notification around this hut site and the tree stumps in this area will be left *in situ* to ensure that no direct impacts on any sub-surface archaeological remains associated with the hut site occur. The proposed felling methodology in this area will entail the use of tree-cutter plant machinery which will brace, cut and then lift the trees away from the location. This methodology will avoid any potential direct impacts resulting from trees falling on the location of the hut site as well as a standing stone site (WA013-020002-) located within a green field area 30m to the west of the edge of the plantation.

A small, previously unrecorded, stone cairn feature of archaeological potential was identified during a fieldwalking survey of the Site carried out as part of the assessment. This feature is located c.60m to the southwest of the nearest section of the Turbine 13 hardstand and will not be directly impacted (**Figure 13.7**).



The potential exists for the presence of sub-surface archaeological remains within the Development area. While the existence as well as location, extent and nature of such potential unrecorded, sub-surface archaeological remains are indeterminable the potential exists for direct, negative impacts on any examples that may exist within proposed development areas, and this will require mitigation (see **Section 13.5.1**). There are no proposed works that will result in direct impacts on watercourses that may contain unrecorded underwater archaeological features or artefacts.

There are no designated architectural structures located within the Site or within the surrounding 1km Study Area and the construction phase will, therefore, not result in any direct impacts on this element of the cultural heritage resource.

The Development will result in localised direct impacts on two field boundary banks that form sections of townland boundaries between Lisleaghmountain and Lickoranmountain and between Lisleaghmountain and Dyrick. An inspection of these features revealed that they are similar in form to other field boundaries in surrounding fields and do not contain any notable attributes. The construction phase will result in direct, permanent, low magnitude, slight, negative impacts on these elements of the undesignated local (low value) cultural heritage resource.

The former route of a section of a historic boreen that extends through an area of the Site in Ballyguilkee Upper townland within the environs of Turbines 5, 6 and 7 is an undesignated feature of local (low value) cultural heritage interest (**Table 13.9** and **Figure 13.8**). No turbines are located on the footprint of the former boreen and the layout of its route will not be removed or impinged upon. Given that much of its route within the Site is now occupied by a resurfaced modern forestry road, the use of this section of the boreen as part of a Site access route is assessed as resulting in a direct, permanent, negative, low magnitude impact of slight significance.

The derelict remains of a number of one-storey farmhouses shown on historic OS maps are located within the Site (**Table 13.9** and **Figure 13.8**) and these form elements of the local (low value) vernacular heritage resource. No direct impacts on any of these undesignated structures are predicted during the construction phase.

#### *Grid Connection Route*

There is one masonry road bridge listed as Protected Structure (Mountain Stage Bridge RPS WA750688) located within the section of the study area centred on the grid connection

route (**Figure 13.9**). The grid connection methodology at its location, and other watercourse crossings, will involve the use of horizontal directional drilling under the watercourse and this will not require any works to this bridge structure. This methodology will also avoid interventions to watercourses along the route which may contain potential unrecorded underwater archaeological features or artefacts. The other cultural heritage assets identified within a 100m corridor centred on the grid connection route are located within private properties where no works are proposed. The construction phase of the grid connection route will, therefore, result in no predicted direct impacts on any known cultural heritage assets.

#### *Turbine Delivery Work Areas*

There are no recorded cultural heritage constraints located within the footprint of proposed construction phase works areas required to facilitate the delivery of turbines to the Site and these works will, therefore, result in no predicted direct impacts on the cultural heritage resource.

### **13.4.2 Construction Phase – Indirect Impacts**

#### *The Site*

There are four recorded archaeological sites within the Site and an additional fifteen examples within the surrounding 1km study area, the majority of which are either wholly or partially levelled (**Table 13.5** and **Figure 13.1**). The construction phase will involve ground works at a distance of 30m from the current setting of standing stone (WA013-020002-) and the recorded location of a levelled hut site (WA013-020001-) which are located to the south of Turbine 6 (**Figure 13.1**). As previously noted, the standing stone was re-erected at its existing location in recent years and the Database of Irish Excavation Reports contains no record of any archaeological supervision of this work. The construction phase will result in a negative, slight-moderate, temporary, indirect impact on the current setting of this re-erected stone during the construction phase. The location of the levelled hut site is now occupied by the margins of a commercial forestry plantation and no surface traces were noted during the field surveys carried out as part of this assessment. The construction phase, including tree felling within the adjoining forestry plantation, will result in a negative, slight, short-term, indirect impact on the recorded location of the levelled hut site during the construction phase. There are no other recorded archaeological sites located within 60m of any proposed development areas within the Site and the construction phase will not result in any other predicted indirect impacts on the known archaeological resource.

There are no designated architectural heritage structures within 1km of the Site and no indirect impacts on this element of the cultural heritage resource are predicted during the construction phase.

The derelict remains of a number of undesignated, one-storey farmhouses shown on historic OS maps are located within the environs of development areas within the Site (**Table 13.9** and **Figure 13.8**). The construction phase will result in negative, slight, short-term, indirect impacts on the settings of these elements of the local (low value) vernacular heritage resource.

#### *Grid Connection Route*

The grid connection trenching works within public roads during the construction phase will result in no likely indirect impacts on known cultural heritage resource within adjoining private properties as, apart from Mountain Stage Bridge (Protected Structure WA750688), none contain features that extend into the road corridors that form the route. The use of horizontal directional drilling at the location of Mountain Stage Bridge, and under the associated watercourse will result in no predicted indirect impacts on this structure or any potential unrecorded underwater archaeological remains at the crossing location.

#### *Turbine Delivery Work Areas*

There are no recorded cultural heritage constraints located within the footprint of proposed construction phase works areas required to facilitate the delivery of turbines to the Site and these works will, therefore, result in no predicted indirect impacts on the cultural heritage resource.

### **13.4.3 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. In addition, the successful implementation of the mitigation measures outlined in **Section 13.5.1** 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 construction areas. There will, therefore, be no predicted direct impacts on any such potential unrecorded archaeological sites during the operational phase.

#### 13.4.4 Operational Phase – Indirect Impacts

There are four recorded archaeological sites within the Site and an additional fifteen examples located within 1km of its Redline Boundary (**Figure 13.1**). In addition, a small upland stone cairn of unknown date identified c.60m from the Turbine 13 hardstand during field surveying is tentatively interpreted as a feature of archaeological potential. As previously noted, the majority of these archaeological sites are either wholly or partially levelled, all are in private lands and retain no amenity value attributes. As detailed in **Table 13.10**, the operational phase will likely result in a range of indirect, negative impacts of a visual nature on the wider setting of a number of extant archaeological sites within the environs of the Site which will range from imperceptible to moderate in significance.

The recorded archaeological resource within an area extending for 10km from the Site was assessed to determine the presence of other monuments within the wider landscape that may have potential visual sensitivities beyond their close settings, i.e., monuments with ritual alignments across the landscape. This revealed that only one identified example has a potential direct alignment towards the Site, and this comprises a standing stone pair (TS091-005----) located 3.1km to the northeast. While this monument has legal protection by its inclusion in the Recorded of Monuments and Places, it is not designated as a National Monument in State Care considered to be of national significance. In addition, this monument is located within private lands not accessible to the public. Given its distance from the Site and its inaccessibility, the potential indirect, negative impact on its wider setting is appraised as being low in magnitude and slight in significance. Given the distances of the other monuments with visual alignment attributes from the Site in combination with the absence of recorded direct visual alignments towards its location, no predicted moderate or significant indirect negative impacts on their settings are predicted and likely slight indirect impacts on their wider settings will be reversed following the decommissioning phase.

A review of the landscape extending for 10km from the Site revealed that there are no National Monuments in State Care or World Heritage sites (including tentative list) located within this area. The operational phase will therefore not result in any predicted indirect impacts on archaeological sites assigned these designations.

There are no designated architectural heritage structures located within 1km of the Site and no likely significant indirect impacts on this element of the cultural heritage resource are predicted.

The derelict remains of a number of undesignated, one-storey farmhouses shown on historic OS maps are located within the environs of development areas within the Site (**Table 13.9** and **Figure 13.8**). The operational phase will result in negative, slight, permanent, indirect impacts on the settings of these elements of the local (low value) vernacular heritage resource.

In conclusion, while the turbines within the Site will be visible from various cultural heritage assets within the surrounding landscape, no likely significant, indirect impacts on examples with notable visual or amenity sensitivities are predicted during the operational phase.

**Table 13.10: Summary of operational phase impacts on archaeological sites within Site study area**

Monument ref. no.	Classification (Condition)	Indicative Value Range	Type of Impact	Quality of impact	Magnitude of impact	Duration of Impact	Significance of Impact
WA013-020001-	Hut site (levelled and within forestry)	Medium	Indirect	Negative	Low	Long term (reversible)	Imperceptible
WA013-020002-	Standing stone (Re-erected without archaeological supervision)	Medium	Indirect	Negative	Medium	Long term (reversible)	Moderate
WA013-021----	Standing stone (Extant within margin of forestry)	High	Indirect	Negative	Negligible	Long term (reversible)	Slight
WA013-022----	Ringfort (Extant)	High	Indirect	Negative	Negligible	Long term (reversible)	Slight
WA013-008----	Standing stone (Extant)	High	Indirect	Negative	Negligible	Long term (reversible)	Slight
WA013-042----	Pit burial (Excavated)	Low	None predicted	Neutral	n/a	n/a	n/a
WA013-052----	Enclosure (Levelled)	Medium	None predicted	Neutral	n/a	n/a	None
WA022-001----	Enclosure (Levelled)	Medium	None predicted	Neutral	n/a	n/a	None
WA022-003001-	Ringfort (Extant)	High	Indirect	Negative	Negligible	Long term (reversible)	Slight
WA022-003002-	Hut site (Levelled)	Medium	None predicted	Neutral	n/a	n/a	None
WA022-014001-	Church (Levelled)	Medium to High	None predicted	Neutral	n/a	n/a	None
WA022-014002-	Graveyard (Levelled)	Medium to High	None predicted	Neutral	n/a	n/a	None

Monument ref. no.	Classification (Condition)	Indicative Value Range	Type of Impact	Quality of impact	Magnitude of impact	Duration of Impact	Significance of Impact
WA013-023001-	Church (Levelled)	Medium to High	None predicted	Neutral	n/a	n/a	None
WA013-023002-	High cross (Removed)	Low	None predicted	Neutral	n/a	n/a	None
WA013-023003-	Ecclesiastical enclosure (Levelled)	Medium	None predicted	Neutral	n/a	n/a	None
WA013-024----	Ringfort (Extant)	Medium	None predicted	Neutral	n/a	n/a	None
WA013-025----	Ringfort unclassified (Levelled)	Medium	None predicted	Neutral	n/a	n/a	None
WA022-002----	Ringfort unclassified (Levelled)	Medium	None predicted	Neutral	n/a	n/a	None
WA022-004----	Ringfort unclassified (Levelled)	Medium	None predicted	Neutral	n/a	n/a	None
None	Cairn (potential archaeological feature)	Low-Medium	Indirect	Negative	Negligible	Long term (reversible)	Slight

## 13.5 MITIGATION MEASURES AND RESIDUAL EFFECTS

### 13.5.1 Construction Phase

The wind farm layout was informed by the archaeological desktop studies and fieldwork undertaken during the design and assessment phases and was designed to avoid the known locations of the archaeological monuments within the Site.

The mitigation measures presented in this section include pre-construction and construction phase archaeological site investigations as well as protection measures for known monuments. These mitigation measures are in accordance with guidelines for planning conditions for wind energy developments within close proximity to recorded archaeological monuments as published in Section 7.4 of the *2006 Wind Energy Development Guidelines*<sup>20</sup> and Section 7.6 of the *2019 Draft Revised Wind Energy Development Guidelines*<sup>21</sup> (Section 7.6).

Ground works during the construction phase will be subject to archaeological monitoring by a suitably qualified archaeologist under licence by the National Monuments Service. A systematic advance programme of archaeological field-walking surveys will also be carried out within construction areas in forestry plantations following tree felling to confirm the conditions predicted in this assessment, i.e., that they contain no visible surface traces of potential unrecorded archaeological or architectural heritage sites.

The proposed felling methodology at Turbine 6, which is located in the environs of the recorded location of a levelled hut site (WA013-020001-) in the margins of the forestry plantation and a standing stone (WA013-020001-) in the field to the west, will be carried out to establish a required bat buffer area around this turbine (**Figure 13.3**). This work will entail the use of tree-cutter plant machinery which will brace, cut and then lift the trees away from the location and this will avoid any potential impacts on the archaeological sites from falling trees. The machine will avoid traversing the locations of the two archaeological sites and will extend toward the recorded location of the level hut site, which is in the margins of the forestry plantation within the felling area, from the north. The tree stumps within the zone of notification around the levelled hut site will be left to remain *in situ* in order to avoid any impacts on sub-surface remains associated within this site. This work will be subject to licensed archaeological monitoring by the archaeologist appointed to supervise the construction phase.

<sup>20</sup> <https://www.gov.ie/en/publication/f449e-wind-energy-development-guidelines-2006/>

<sup>21</sup> <https://www.gov.ie/en/publication/9d0f66-draft-revised-wind-energy-development-guidelines-december-2019/>



In the event that any sub-surface archaeological features are identified during archaeological monitoring of the construction phase they will be securely cordoned off, cleaned and recorded *in situ*. The National Monuments Service will then be notified and consulted to determine further appropriate mitigation measures, which may include preservation *in situ* (by avoidance) or preservation by record (archaeological excavation).

The archaeologist appointed to monitor the construction phase will also supervise the establishment of minimum 25m radius concentric buffer zones around the external-most elements of Standing Stone (WA013-021----), Standing Stone (WA013-020002-), Hut Site (WA013-020001-), Ringfort (WA013-022----) and the location of a cairn feature located c.60m to the southwest of Turbine 13, which is tentatively identified as being of archaeological potential. These buffer zones will be securely fenced off and their locations will be clearly signed as 'No Entry' for the duration of the construction phase. No ground excavation works of any kind (including but not limited to advance geotechnical site investigation) and no machinery, storage of materials or any other activity related to construction will occur within these buffer zones. The location of the derelict farm buildings within the Site will also be clearly signed as "No Entry" during the construction phase. The locations of these onsite archaeological monuments and farm buildings will also be identified as 'no-entry' areas during the construction phase site inductions.

### 13.5.2 Construction Phase Residual Impacts – Direct

The mitigation measures presented in **Section 13.5.1** will provide for either the avoidance of the potential unrecorded, sub-surface archaeological resource within the footprint of proposed construction locations 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.

### 13.5.3 Construction Phase Residual Impacts – Indirect

The buffer zone mitigation measures presented in **Section 13.5.1** will provide for protection of known archaeological monuments within environs of proposed construction locations. No residual construction phase indirect impacts are predicted following the implementation of these mitigation measures.

#### 13.5.4 Operational Phase

Following the successful implementation of the mitigation measures presented in **Section 13.5.1**, the operational phase of the Development will result in no predicted direct impacts on the known archaeological, architectural and cultural heritage resources and, therefore, no additional mitigation measures for direct operational phase impacts will be required.

As detailed in **Section 13.4.4**, the Development will result in a range of long term, indirect negative impacts of a visual nature on the wider setting of archaeological sites within the environs of the Site which will range from imperceptible to moderate in significance. Given the nature of the wind farm turbines there are no mitigation measures that can address these indirect setting impacts, but it is noted that they will be reversed following the decommissioning phase.

#### 13.5.5 Operation Phase Residual Impacts - Direct

No operation phase direct residual impacts on the cultural heritage resource are predicted following the implementation of mitigation measures presented in **Section 13.5.1**.

#### 13.5.6 Operation Phase Residual Impacts - Indirect

The operation phase will result in a range of imperceptible to moderate, long term residual indirect impacts on the extant archaeological sites within the environs of the Development. It is noted that these indirect impacts will be reversed following the decommissioning phases.

### 13.6 CUMULATIVE IMPACTS

A review of a list of operational, permitted and proposed developments within 20km of the Development provided by Jennings O'Donovan was carried out in order to assess potential cumulative impacts on the cultural heritage resource (**Table 13.11**). This included a review of available information on archaeological and cultural heritage impact assessments of these developments as published on the Waterford City and County Council planning enquiry system<sup>22</sup>, the An Bord Pleanála website<sup>23</sup> and the Database of Irish Excavation Reports<sup>24</sup>.

<sup>22</sup> <https://www.eplanning.ie/WaterfordCCC/searchtypes>

<sup>23</sup> <https://www.pleanala.ie/en-ie/home>

<sup>24</sup> <https://excavations.ie/>

**Table 13.11 Review of other developments within 20km of the Development**

Wind Farm	Status	No. of Turbines	Approximate Distance to the Site Boundary	Direction from the Development	Cultural Heritage Review
Coumragappul	Pre-planning, design not finalised	11	7.1 km	East	John Cronin and Associates have been commissioned to advise on the design of this proposed development to ensure that it avoids significant impacts on the cultural heritage resource. A cultural heritage impact assessment will be prepared for the proposed development as part of the planning application.
Woodhouse Wind Farm (Woodhouse)	Connected	8	10.8 km	South	The construction phase of this development was archaeologically monitored in 2013 and nothing of archaeological significance was identified. A report on this work was submitted to National Monuments Service and Waterford City and County Council <sup>25</sup> .
Knocknamona Wind Farm (Knocknamona)	Permitted	8	11.6 km	South	The grant of planning for this permitted development includes a condition requiring archaeological monitoring of the construction phase (ABP ref. PL.93.244006)
Barranafaddock Wind Farm (Barranafaddock)	Connected	9	19.3 km	West	Archaeological site investigations carried out as part of this development revealed a previously unrecorded burnt spread at one location which was subject to a full archaeological excavation <sup>26</sup> .
Ballycureen Wind Farm (Rathnameneenagh)	Connected	2	20.0 km	Southeast	Archaeological site investigations carried out as part of this development revealed nothing of archaeological significance. <sup>27</sup>

Given the absence of significant impacts on the recorded cultural heritage resource arising from the Development, in combination with the results of the above review, the Development is not predicted to contribute to any significant direct cumulative impacts on the cultural heritage resource within the wider landscape. As described in **Section 13.4.2**, a review of archaeological monument types with visual alignment attributes within the 10km of the Site revealed that the Development will not result in any predicted moderate or significant indirect negative impacts on their settings or alignments. The review of available information on cultural heritage impact assessments of the developments listed in **Table 13.11** revealed no instances of predicted significant, indirect impacts on any monuments within the wider environs of the assessed development locations. Given these factors in combination with the distances of the reviewed developments from the Development it is,

<sup>25</sup> John Cronin and Associates (2013) *Archaeological Monitoring Report, Woodhouse Wind Farm, Woodhouse & Keereen Upper, Co. Waterford*. Unpublished report submitted to National Monuments Service and Waterford City and County Council

<sup>26</sup> <https://excavations.ie/report/2014/Waterford/0023861/>

<sup>27</sup> <https://excavations.ie/report/2013/Waterford/0023024/>

therefore, concluded that the Development will not act in combination with the reviewed developments to result in likely significant indirect negative cumulative impacts on the settings or alignments of such ritual monuments within the wider landscape.

### 13.7 DECOMMISSIONING IMPACTS

No direct 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 of the various elements of the wind farm that will be subject to decommissioning. Any previously unrecorded archaeological remains identified during the archaeological monitoring of the construction phase will either be preserved by avoidance within the Site or preserved by record (excavation) and no decommissioning impacts on such potential features are predicted. The decommissioning of the Development will result in the reversal of the long term, indirect, negative visual impacts on archaeological monuments located within the surrounding landscape (**Table 13.10**).

### 13.8 CONCLUSIONS

The proposed development will not result in any predicted direct negative impacts on any known archaeological monuments, designated architectural heritage structures or undesignated cultural heritage assets.

The potential exists for the presence of unrecorded, sub-surface archaeological features within the Development area and archaeological monitoring of the construction phase under licence by the National Monuments Service will be carried out by a suitably qualified archaeologist.

In the event that any sub-surface archaeological remains are identified during site investigations, they will be cleaned, recorded and left to remain *in situ* within cordoned off areas while the National Monuments Service are notified and consulted in relation to appropriate future mitigation strategies, which may entail preservation *in situ* by avoidance or preservation by record by archaeological excavation.

The Development will result in a range of slight-moderate indirect visual impacts on the settings of archaeological monuments located within surrounding lands during the operational phase (**Table 13.10**). These indirect impacts will be long term in duration and will be reversed following the decommissioning phase.

**13.9 SUMMARY OF SIGNIFICANT EFFECTS**

No predicted significant direct, indirect, cumulative or residual effects on the cultural heritage resource arising from the proposed Development have been identified.

**13.10 STATEMENT OF SIGNIFICANCE**

An assessment has been made of the potential for significant effects of the Development on the cultural heritage resource. Following the application of effective mitigation measures based on best practice guidelines, including archaeological inputs during the Project design process combined with archaeological monitoring of the construction phase, the Development is not predicted to result in likely significant effects on the cultural heritage resource.