

14 CULTURAL HERITAGE

14.1 INTRODUCTION

This chapter assesses the impacts of the Development (**Figure 1.2**) on Cultural Heritage. The Development refers to all elements of the application for the construction of Gortyrähilly Wind Farm (**Chapter 2: Development Description**). Where negative effects are predicted, the chapter identifies appropriate mitigation strategies therein. 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 (archaeology, architecture heritage); and non-tangible resources (history, folklore, tradition, place names etc.). The recorded and potential cultural heritage resource within lands encompassing the proposed wind farm site (the Site) and the surrounding landscape was reviewed in order to compile a comprehensive cultural heritage baseline for the assessment. The proposed grid connection and the route for the delivery of turbines to the site were also assessed.

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 documents provided in Volume IV of this EIAR:

- **Appendix 14.1 Plates**

14.1.1 Statement of Authority

The chapter was prepared by Tony Cummins and David Murphy of John Cronin and Associates. Mr Cummins holds B.A. and M.A. degrees in archaeology (University College Cork (UCC) 1992/1994) and has twenty-seven years industry experience. Mr Murphy holds a B.A. degree in archaeology (UCC 2003) and has eighteen years industry experience. Both individuals are licence eligible archaeologists and have extensive experience in preparing archaeological and cultural heritage assessments.

14.1.2 Assessment Structure

The desktop study and the field survey outlined in **Section 14.3** 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 14.2.2** 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

14.2 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

14.2.1 Definition of Study Area

The study area reviewed for the assessment comprised the area within the Redline Boundary (shown in **Figure 14.1**) and the surrounding lands extending for 1km in all directions beyond that boundary as well as a 100m wide area centred on the grid connection and work areas required to facilitate the turbine delivery route. The extent of this study area was chosen in order to assess potential direct and indirect impacts on the locations and settings of known archaeological sites and designated architectural heritage structures, including potential associated curtilage features and attendant lands, within the lands in the environs of the Project. In addition, the wider landscape extending for 10km in all directions from the Redline Boundary 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 sites). 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) as well as intangible assets within the area including Gaeltacht regions. A review of the assessment of the significance of visual impacts on publicly accessible cultural heritage receptors within 20km of the Project as presented in the Landscape and Visual Amenity Assessment chapter was also carried out (see **Chapter 12**). A preliminary archaeological review of this 20km area did not identify other monuments or cultural heritage locations within publicly accessible lands that likely required visual impact assessment.

14.2.2 Assessment Methodology

The methodology used for this assessment is based on Environmental Protection Agency (EPA 2003) *Advice Notes on Current Practice in the preparation of Environmental Impact Statements* and EPA (2002) *Guidelines on the Information to be contained in Environmental Impact Statements*; as well as more recent guidance methods which have also been utilised per EPA (2015) *Draft Advice Notes for Preparing an EIS* and (2022) *Guidelines for*

Information to be Contained in EIAR. The chapter 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).

14.2.3 Relevant Legislation and Guidance

The tangible elements of the cultural heritage resource can be loosely divided into the archaeological resource comprising sites and monuments dating from the prehistoric period to the post-medieval period and the architectural heritage resource, encompassing 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 (and amendments)
- Heritage Act (1995)
- National Cultural Institutions Act (1997)
- Architectural Heritage (National Inventory) and Historic Monuments (Misc) Provisions Act (1999)
- Planning and Development Act (2000) as amended
- Department of Arts, Heritage and Gaeltacht (2011) *Architectural Heritage Protection: Guidelines for Planning Authorities*
- Department of Arts, Heritage, Gaeltacht and the Islands (1999) *Framework and Principles for the Protection of Archaeological Heritage*

14.2.4 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 and relevant provisions of the National Cultural Institutions Act 1997 are the primary means of ensuring the satisfactory protection of archaeological remains. There are a number of mechanisms under the National Monuments Acts that are applied to secure the protection of archaeological monuments. These include the designation of National Monument status, 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). There are no National Monuments in State Ownership or Guardianship or monuments with Preservation Orders located within the study area.

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 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 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 environs¹. 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 a total of three archaeological sites within the Redline Boundary and an additional six sites within the surrounding study area. The known archaeological sites located within the reviewed study areas are identified **in Section 14.4**. The potential for the presence of hitherto unrecorded, sub-surface archaeological features within proposed work areas is also considered.

¹ <https://www.archaeology.ie/sites/default/files/media/publications/archaeology-planning-process-pl13.pdf>

14.2.4.1 Architectural Heritage

Protection of architectural or built heritage is provided for through a range of legal instruments that include the Heritage Act 1995, the Architectural Heritage (National Inventory) and National Monuments (Misc. Provisions) Act 1999, and the Planning and Development Act 2000. Section(2.1) of the Heritage Act 1995, 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 *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 Cork is published in the County Cork Development Plan 2022-2028. The Record of Protected Structures published in the County Cork Development Plan 2014 was also reviewed during the assessment process. 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 and the National Inventory of Architectural Heritage 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.

14.2.4.2 Cork County Development Plan 2022-2028

The County Cork Development Plan 2022-2028 includes a number of policies and objectives in relation to the protection of the cultural heritage resource within the county and these include objectives in relation to the protection of the archaeological resource (HE 16-9b: Management of Monuments within development sites, HE 16-10c: Undiscovered Archaeological Sites, HE 16-7 Battlefield, Ambush and Siege Sites and Defensive Archaeology, HE 16-9: Archaeology and Infrastructure Schemes, HE 16-6 Industrial and Post Medieval Archaeology and HE 16-9c Archaeological Landscapes). The Development Plan also includes a number of policies and objectives in relation to the protection of the architectural heritage resource within the county including the protection of designated structures and Architectural Conservation Areas (HE 16-14: Record of Protected Structures, HE 16-15: Protection of Structures on the NIAH and E 16-18: Architectural Conservation Areas) as well as non-designated features such as vernacular buildings, historic gardens and landscapes, masonry walls, railings, follies, gates, bridges and street furniture that are of built heritage significance (HE 16-16: Protection of Non- Structural Elements of Built Heritage, HE 16-19: Vernacular Heritage and HE 16-20: Historic Landscapes). The Development Plan also includes a number of policies and objectives in relation to the protection of the cultural heritage resource within the county, including aspects such as the cultural heritage of the county (HE 16-23: Cultural Heritage), linguistic heritage (HE 16-22: Gaeltacht Areas), placenames (HE 16-24: Naming of New Developments) and the arts (HE 16-26: The Arts). The *Múscraí Heritage Plan: conservation, management and interpretation plan 2018-2032*² was also reviewed as part of the assessment.

14.3 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 route and haul route. 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:

² <https://www.corkcoco.ie/sites/default/files/2019-01/M%C3%BAscra%C3%AD%20Gaeltacht%20CMIP%20Final%20Draft%20Jan%202019.pdf>

Archaeological Inventory of County Cork Vols. 3 and 5: These publications present summary descriptions of the recorded archaeological sites within this area of the county and relevant entries are included within the chapter. In addition, the current national online database resources pertaining to same were reviewed on the National Monuments Service's Historical Environment Viewer (www.archaeology.ie) in May 2022.

Heritage Council of Ireland Map Viewer: This online mapping source (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 May 2022.

Topographical Files of the National Museum of Ireland: These files, which are archived in the museum premises in Kildare Street, Dublin, were reviewed in August 2021 and there are no entries for any of the townlands within the study area.

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 in May 2022.

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 **Figure 14.10**.

Aerial, Satellite and LiDAR 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.

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.

UNESCO designated World Heritage Sites and Tentative List: There are two designated World Heritage sites in Ireland and a number of other significant examples have been included in a Tentative List (2010) that has been put forward by Ireland for inclusion. None of these designated or tentative sites are located within 20km of the Project.

14.3.1 Field Survey

Proposed development areas were surveyed on 18th June and 11th November 2020 and 26th May and November 3rd 2021 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 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 14.1**.

14.3.2 Consultation

During the scoping stage the Development Applications Unit provided a response on 19th April 2021 to the request for comment on the scoping report provided to it. This response did not include any content in relation to the Cultural Heritage resource'

14.3.3 Predicted Impacts on Archaeological, Architectural and Cultural Heritage

14.3.3.1 Level of Impact

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 relevant EPA and ICOMOS guidelines (see **Section 14.2**).

Duration of Effect

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

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

Quality of Effect

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

- Positive Effect – a change which improves the quality of the cultural heritage environment, (e.g., increasing amenity value of a site in terms of managed access, signage, presentation 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* (ICOMOS 2011) (**Table 14.1**).

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 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 and Negligible. The factors for assessing the value of cultural heritage assets provided in **Table 14.2** have regard to the ICOMOS *Guidance on Heritage Impact*

*Assessments for Cultural World Heritage Properties*³ (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 values assigned to identified assets within the study areas were determined following the completion of the desktop research combined with subsequent site inspections and are presented in **Section 14.4** 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 14.3**) and is assigned based on the combined evaluation of effect magnitude and asset significance (**Table 14.4**).

Table 14.1: Magnitude of Impact Assessment Indicators for Cultural Heritage Assets

Indicative factors for assessing the Magnitude of Impact on the Cultural Heritage Asset (after ICOMOS Guidelines 2011)	
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>

³ https://www.iccom.org/sites/default/files/2018-07/icomos_guidance_on_heritage_impact_assessments_for_cultural_world_heritage_properties.pdf

Indicative factors for assessing the Magnitude of Impact on the Cultural Heritage Asset (after ICOMOS Guidelines 2011)	
	<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 14.2: Value Indicators for Cultural Heritage Assets

Indicative factors for assessing Value of Cultural Heritage Assets (after ICOMOS Guidelines 2011)	
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> <p>Assets that can contribute significantly to international research objectives</p>
High	<p><i>Potential for National Significance which may include</i></p> <p>Designated National Monuments (archaeological)</p> <p>Assets of significant quality and importance, including designated sites</p> <p>Assets that can contribute significantly to acknowledged national research objectives</p> <p>Protected Structures/National NIAH Grade Buildings</p> <p>Conservation Areas containing significant buildings of importance, including group value</p> <p>Archaeological Landscapes with significant inter-group value and potential for presence of hitherto unrecorded archaeological sites</p>
Medium	<p><i>Potential for Regional Significance which may include</i></p> <p>Assets of good quality and importance, including levelled/disturbed sites</p> <p>Assets that can contribute significantly to acknowledged regional research objectives</p> <p>Regional Grade NIAH Buildings</p> <p>Undesignated buildings that can be shown to have exceptional qualities in their fabric or historical associations</p> <p>Conservation Areas containing buildings that contribute significantly to its historic character</p> <p>Historic townscape or built-up areas with important historic integrity in their buildings, or built settings (e.g. including street furniture and other structures)</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, or built settings (e.g. including street furniture and other structures)</p>
Negligible	<p>Assets with very little or no surviving archaeological interest</p> <p>Buildings of no architectural or historical note; buildings of an intrusive character</p>

Table 14.3: Significance of Effects (per EPA EIAR Guidelines 2022)

Indicative factors for assessing Value of Cultural Heritage Assets	
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

Indicative factors for assessing Value of Cultural Heritage Assets	
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment
Profound	An effect which obliterates sensitive characteristics

Table 14.4: Significance of Effects (per EPA EIAR Guidelines 2022)

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

14.4 BASELINE DESCRIPTION

14.4.1 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 haul route. Datasets have been interrogated and retrieved from current state and local authority sources and are considered accurate at the time of writing in May 2022. The published inventory entries of all recorded archaeological sites and designated architectural heritage structures within the study areas are presented within the following sections.

14.4.2 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 shores 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 study area of the Site.

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.

There are three recorded archaeological sites located within the Site. Two of these monuments are extant and comprise two Bronze Age wedge tombs, (CO069-003---- and CO069-093----), which are situated within the northern and southern areas of the Site respectively. Wedge tombs consist of a long burial gallery formed by large stone slabs, sometimes with an antechamber or small closed end-chamber. They are generally broader and higher at the front, which tends to face towards the west and southwest directions. They are roofed by slabs laid directly on the side-walls which often have one or more rows of outer- walling. Evidence from the small number of excavated examples suggests that they were being built between 2,500 and 2,000 BC and represent the last phase of megalithic tomb building. O' Brien⁴ has noted that while a case has been made for associations with potential lunar alignments this is unlikely, and that monuments such as wedge tombs were more probably set towards the general direction of the setting sun in the general southwest

⁴ O'Brien, W. (2012) *Iverni: A prehistory of Cork*. The Collins Press. pg 192-3..

quadrant during darker months of the year. He notes that this alignment was likely an expression of ritual beliefs centred on themes of birth and rebirth based on an association between death and the setting/dying sun which formed an important focus of worship during prehistoric periods. The following descriptions of the two examples within the Site have been published by the Archaeological Survey of Ireland⁵:

Megalithic Tomb CO069-003---- On level spur in cut-away bog overlooking Douglas River valley to NE. Comprises ruined gallery (L 2.3m; Wth c. 0.9m at E end) aligned ENE-WSW, represented by two jamb-like stones at W end, single sidestones to N and S, and doubling of backstone at E end; outer-wall stones to N, E and S. Upright slab to NW may be remains of facade or part of pre-bog wall which skirts N side of monument (CO069-070---).

Megalithic Tomb CO069-093----: The tomb is located in a narrow strip of level ground (Wth c. 8m) between two rocky ridges which are aligned E-W. The tomb faces west (270°) with a good view in that direction. The tomb (L c. 4.25m; Wth at W end c. 3.85m; Wth at E end c. 2.45m) is generally defined by two rows of side stones, by two endstones, and by four capstones. The front capstone is now lying on the ground at the front of the tomb. The middle two capstones have slipped off the inner sidestones on the north side and now rest at an askew angle largely blocking access to the chamber area. The rearmost capstone is also lying on the ground. There is some access to the interior at the western end beneath the leaning capstones. Parallel with the front sidestone and c. 0.35m inside it and 0.9m back from its front edge, is a single upright stone (0.5m x 0.1m; H 0.3m) on which rests a subsidiary capstone. The visible area of the interior is strawn with loose stones. There are four inner sidestones on the north side and three outer ones, the two lines set c. 0.5m apart. The tallest and largest upright stone now evident is the front (W) outer sidestone on the north side (H 1.15m; L 1.15m; Wth 0.25m). There is a further upright stone in line with the endstones which is slightly outside the line of the inner stones. The sidestones on the south side are not as well preserve, but appear to be four inside and outside; the eastern-most stone on the inside line is fallen as are the second and fourth stone from the front on the outside line. The two parallel endstones are set c. 2m apart. The inner stone is the larger of the two.

The third recorded archaeological site within the Site comprised a field boundary feature (CO069-070----), which was identified by the Cork Archaeological Survey in proximity to the northern wedge tomb (CO069-003----) in Na Doirí townland. As detailed in **Table 14.9**, no surface trace of this feature was identified during field surveys carried out as part of this assessment and its potential location was impacted by mechanised land improvement works in recent years. The classification of 'field boundary' as an archaeological monument refers to field enclosures of potential antiquity and is often applied to remnant traces of walling sealed by bog growth. Isolated sections of such walling can be revealed by bog cutting works and may be an indication of the presence of wider field systems which may

⁵ Power, D. 1997 *Archaeological Inventory of County Cork. Volume 3: Mid Cork*. Dublin: Stationery Office

remain undetected below existing ground surfaces. While the origins of these site types cannot be ascertained without recourse to archaeological excavation, it is noted that the recorded proximity of this example to a Bronze Age monument may suggest that they are contemporary in date. The following description of the example within the Site has been published by the Archaeological Survey of Ireland⁶:

Field Boundary CO069-070----: In upland, covered with blanket bog, c. 28m to W and SW of wedge tomb (CO069-003-). Turf cutting exposed lines of stones at depth of 0.6m-0.7m under bog. Most substantial wall runs NNE-SSW for distance of 112m, curving gently. Second line of stones, parallel to and c. 3-5m E of above wall, extends from cutting 8m beyond NNE end of it and runs SSW for c. 28m; after gap of 6m, wall continues SSW for 58m before disappearing into bog. Immediately S of 6m gap is wall, not fully exposed, extending E; second E-W wall (L 20m) lies 38m to NNE of main NNE-SSW wall. May be remains of laneway with walls extending from it on either side.

As detailed in **Section 14.4.12**, the field surveys carried out as part of this assessment revealed that the locations of each of these three monuments have been incorrectly mapped by the Archaeological Survey of Ireland on the Record of Monument and Places mapping and on the online National Monuments Service's Historic Environment Viewer. The correct locations of the two extant wedge tombs were identified during field inspections carried out as part of this assessment and are described in **Section 14.4.12** and are also illustrated in mapping presented in **Volume III**. The location of field boundary CO069-070---- is not shown on the mapping as it was incorrectly mapped by the Archaeological Survey of Ireland and no surface traces were identified during fieldwalking surveys as part of the assessment. The Record of Monuments and Places mapping also shows its location to the east of the incorrect location of wedge tomb CO069-003----. However, based on the detail presented in the above Archaeological Survey of Ireland inventory description, this is also a mapping error as it was in fact described as being to the west and southwest of the wedge tomb. As detailed in **Section 14.4.12**, no visible surviving surface traces of the field boundary were observed during fieldwalking of the improved areas of grassland to the west and southwest of the correct location of wedge tomb CO069-003----. Consultation with the farmer during the field survey revealed that the former marginal heathland in these areas was subject to extensive mechanised ground excavations works during land improvement operations in recent years. While the location of field boundary CO069-070---- was incorrectly mapped by the Archaeological Survey of Ireland, the extensive ground works within the lands to the west of wedge tomb CO069-003---- would have likely resulted in the removal any sections of a drystone boundary wall that may have existed in this area.

⁶ Power, D. 1997 *Archaeological Inventory of County Cork. Volume 3: Mid Cork*. Dublin: Stationery Office

The lands within the 1km study area surrounding the Site contain an additional Bronze Age monument, and this comprises a radial stone cairn (CO069-040----) which is located 70m outside the south-eastern end of the Redline Boundary in the townland of Gort na Binne. This site type comprises a mound constructed primarily of stone which is delimited by a series of spaced stones set with their long axes aligned towards the centre of the cairn. While their precise function is unknown, they can be found within the environs of Bronze Age stone circles and stone rows, indicating that they may be associated with ritual traditions dating to the middle/late Bronze Age (c. 2400-500 BC).

Radial Stone Cairn CO069-040----: In rough pasture, on crest of low ridge on S-facing slope of Toon River valley. Six stones, four set radially (H 0.55m to 0.85m), delimit W perimeter of low mound (H c. 0.4m; diam. c. 6m).

A review of recorded monuments within 10km of the Redline Boundary revealed the presence of 57 Bronze Age lithic monuments with visual alignment attributes relating to ritual aspects of their original function. These external monuments comprise 33 wedge tombs, 7 stone rows, 7 standing stone pairs and 10 stone circles and none of these are located within 2km of the Redline Boundary. All of these monuments are located within private properties which are not accessible to the public and the majority are located in lands to the south and south-west of the Site. 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 only one example has a potential direct alignment towards the Site and this comprises a partially extant wedge tomb (CO069-069----) located 2km to the north of the Site which faces directly to the south (see location in **Figure 14.13**).

The presence of these ritual monuments within the Site and the surrounding landscape indicates the existence of an established population within this region during the Bronze Age. It is noted that the settlement sites during this period typically comprised one or more timber structures and that the remains of their foundations and habitation deposits can survive beneath modern ground surfaces.

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 known as cashels. 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. While there are notable early medieval ecclesiastic sites located within the Baile Bhúire and Gougane Barra areas in the wider landscape, there are no recorded examples within the study area.

There is one definitive early medieval settlement site located within the study area and this comprises a cashel (CO069-004001-) which is located in Gortyrähilly townland, 320m to the north of the Redline Boundary. Cashels comprise a roughly circular or oval area, though some examples are rectangular, surrounded by a drystone wall which functioned as residences and/or farmsteads and broadly date from 500 to 1000 AD. There is also a possible internal souterrain (CO069-004002-) within the north-eastern quadrant of the cashel enclosure. Souterrains are underground structures consisting of one or more chambers connected by narrow passages, usually constructed of drystone-walling with a lintelled roof over the passages and a corbelled roof over the chambers. Most appear to have been built in the early medieval period as a defensive feature and/or for storage purposes. The following descriptions of these monuments have been published by the Archaeological Survey of Ireland⁷:

Cashel CO069-004001-: In level pasture. Circular area (34m N-S; 36m E-W) enclosed by substantial stone wall (H 2.1m; T 3m) SE->NNE; collapsed elsewhere. Wall rebuilt in places; batter on external face. Fallen stones against inner and outer face of wall to height of 0.6m. Ledge (Wth 0.4m) c. 0.5m above ground level on internal face of wall. Interior boggy to E; possible souterrain (CO069-004002-) in NE quadrant.

Souterrain CO069-004002-: In NE quadrant of cashel (CO069-004001-); depression indicates position. According to local information, stone-built chamber with lintelled roof, long axis N-S. Inaccessible. Further recent collapse to NW.

There are three enclosure sites (CO069-002----; CO069-036---- and CO069-074----) located within the surrounding study area in the townlands of Na Doirí, Cathair Na Cáithe and An Rath Thiar respectively. This monument class refers to enclosed sites that possess no diagnostic features which would allow classification within another monument category. These sites can date from any period from late prehistory onward and, while it is not possible to ascertain their origin without recourse to archaeological excavation, the potential exists that they may comprise unclassified cashels or animal stockades of more recent origin. The

⁷ Power, D. 1997 *Archaeological Inventory of County Cork. Volume 3: Mid Cork*. Dublin: Stationery Office

following descriptions of the three enclosures have been published by the Archaeological Survey of Ireland⁸:

Enclosure CO069-002----: In rough grazing, on N-facing slope. Depicted as hachured roughly circular enclosure (diam. c. 20m) on 1842 OS 6-inch map. Oval area (20m E-W; 16m N-S) enclosed by low wall of dry-stone construction, set in a random fashion. Interior level; broken occasionally by rock outcrop; irregular area to NE (L 1.7m; Wth 0.6m) enclosed by loose rubble.

Enclosure CO069-036----: In pasture, on S-facing slope. Artificially raised circular platform (max. H1.2m; diam. c. 55m) with smaller circular enclosure centrally sited on top. Inner enclosure (c. 30m E-W; c. 45m N-S) is enclosed by earth and stone bank (H 0.9m). Interior damp and boggy.

Enclosure CO069-074: On rough mountain side, on NE-facing slope. Oval area (17.6m E-W; 11.9m N-S) enclosed by stone wall (H 1.1m; Wth 1.36m) WSW->NW; single stones, some of which are contiguous, elsewhere. Wall consists of several boulders along base with smaller stones packed in between and on top. Interior level and grass-covered; small boulder (H 0.4m; 0.89m x 0.95m) c. 5m inside E end of enclosure. Locally known as 'Mike Jack's cahereen' and thought to have 'something to do with rounding up cattle'.

The arrival of the Anglo-Normans in the late 12th century broadly marks the advent of the Irish high medieval period which continued to c.1400 and was followed by the late medieval period which extended to c.1550. These periods saw the continuing expansion of Irish urbanisation as many of the port cities developed into international trading centres and numerous villages and towns began to develop throughout the country, often within the environs of Anglo-Norman manorial centres which were defended by masonry castles. By the 15th century, the native Irish chieftains and lords began to construct tower-house castles within their own landholdings as centres of territorial control. In 1207, King John granted Richard de Cogan rights to an area taking in all or part of Muskerry much of which was still under Gaelic control at that time. The initial land grant for what was to become the barony of Múscraí dates to 1352 when lands on the Cork-Kerry border were the subject of grant from the English crown to Cormac McCarthy. It has been noted that much of the subsequently conquered lands within the region were concentrated along the Lee Valley and that many remote mountainous areas remained in Gaelic control⁹. There are no recorded late or high medieval monuments located within the study area.

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

⁸ Power, D. 1997 *Archaeological Inventory of County Cork. Volume 3: Mid Cork*. Dublin: Stationery Office

⁹ Butler, W. A. (1910) 'The Barony of Muskerry'. *Journal of the Cork Historical and Archaeological Society*, Vol. 16, No. 86, p. 81-8.

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-17th 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 Gortyrähilly and surrounding townlands. The annotated maps indicate that land use within the general area was dominated by rough mountain lands, pasture and woodlands. These maps typically only depict larger settlements as well as other significant features such as castles, churches, roads and bridges, none of which are shown within the general area around Gortyrähilly. The Down Survey records that the lands within the Redline Boundary were controlled by Catholic landowners in 1641, with William Óg Herlihy possessing the majority of the lands at this time, while John McFinan Carty owned a portion of the southernmost area. The lands around in Baile Mhic Íre/Baile Bhúirne and Cúil Aodha were granted to John Colthurst who inherited c.15,000 acres of profitable land. The lands granted to Colthurst were in the main disposed from a Catholic named William Herlihy. The 1671 Down Survey records note that the Herlihy lands formed part of the extensive landholdings of John Colthurst while the southern area is listed as a possession of Callaghan McCarthy, Earl of Clancarty.

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 areas. The population records in the wider area region note a 32.7% drop in population in Baile Bhúirne and 35.1% drop in Cill na Martra between 1841 and 1851¹⁰.

*The Topographical Dictionary of Ireland*¹¹ 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

¹⁰ <https://www.corkcoco.ie/sites/default/files/2019-01/M%C3%BAscra%C3%AD%20Gaeltacht%20CMIP%20Final%20Draft%20Jan%202019.pdf>
¹¹ Lewis, S. (1837) *Topographical Dictionary of Ireland*. 2 Volumes, Lewis & Company, London

within the civil parish of Ballyvourney and Lewis's description of this area concentrates on the settlement of the same name but, while it contains no references to the Gortyrähilly area, does note that other areas of the parish contained about 16,000 acres of rough pasture and moorland, which might be drained and brought into a state of profitable cultivation. Further details on the character of the Development and its environs during the 19th century are presented in the review of historical Ordnance Survey (OS) maps (**Section 14.4.10**). There are no recorded post-medieval archaeological sites or designated architectural heritage structures dating to this period located within the Site or within 1km of its Redline Boundary.

14.4.3 Record of Monuments and Places

There are three recorded archaeological monuments located within the Site Redline Boundary, each of which have been incorrectly mapped by the Archaeological Survey of Ireland. Field inspections carried out as part of this assessment confirmed the correct locations of two of these monuments within the Site (Wedge Tombs CO069-003---- and CO069-093----) while the location of the third example (Field boundary CO069-070----), as extrapolated from its description in the Archaeological Survey of Ireland inventory entry, appears to have been in an area impacted by mechanised ground excavations during land improvement works in recent years and no surviving surface trace was identified.

There are also a further six archaeological sites located within the surrounding study area (**Table 14.5** and **Figure 14.1**). The majority of these sites are in private lands that were not accessible for inspection, but they were appraised by reviews of their classifications, published inventory descriptions, aerial/satellite images and historic cartographic sources. The southern end of the zone of notification, as defined by the National Monuments Service, around one of these external monuments (Enclosure CO069-002----) extends into the Redline Boundary. This site was inspected during field surveys and the nearest element of the low drystone walling forming this enclosure is located 30m outside the Redline Boundary. None of these monuments are designated as National Monuments in State Ownership or Guardianship or have been assigned Preservation Orders but are afforded legal protection by their inclusion in the Record of Monuments and Places.

Table 14.5: Recorded Archaeological Monuments within Wind Farm Study Area

Monument no.	Class	Townland	Distance from nearest construction area
CO069-002----	Enclosure	Na Doirí	40m north of substation
CO069-003----	Megalithic tomb - wedge tomb	Na Doirí	70m east of T9 hardstand
CO069-004001-	Ringfort - cashel	Gort Uí Raithile	865m north-east of T13 and

Monument no.	Class	Townland	Distance from nearest construction area
			580m north-east of new Site Access Road
CO069-004002-	Souterrain	Gort Ui Raithile	865m north-east of T13 and 580m north-east of new Site Access Road
CO069-036----	Enclosure	Cathair Na Cáithe	1460m south of T1
CO069-040----	Cairn - radial-stone cairn	Gort Na Binne	615m south of T14 and 70m east of existing farm road which will be used as a Site Access Road
CO069-070----	Field boundary (levelled)	Na Doirí	Incorrectly mapped by Archaeological Survey of Ireland and no surviving traces identified within Site. Potential location is in area disturbed by extensive mechanised excavations during recent land improvement works (see Table 14.9 below)
CO069-074----	Enclosure	An Rath Thiar	1010m east of T14
CO069-093----	Megalithic tomb - wedge tomb	Gort Na Binne	470m to southwest of T4 and 185m south of site access road

14.4.4 Topographical Files of the National Museum of Ireland

The National Museum of Ireland's Topographical File archive, which is stored in the museum premises at Kildare Street, Dublin were inspected in August 2021. The archive contains no files for any of the townlands within the study area.

14.4.5 Aerial Photography & LiDAR

A review of online aerial/satellite images of the site revealed that the proposed turbine locations have been occupied by areas of heathland, improved fields and commercial forestry plantations since at least the 1990s. A study by the Heritage Council of Ireland¹² on the impacts of forestry plantation works on archaeological sites, including their surface and buried elements, has noted that the initial planting process involves a number of ground disturbance activities, such as ploughing, drainage, access roads and planting, that have the potential to destroy or severely impact any sites within the plantation. Further impacts are also likely to occur during the operational phase of the plantation through continued disturbance by extensive root systems, which will entwine with any sub-surface archaeological deposits or features with little or no potential of removal without causing their destruction. Additional impacts during subsequent harvesting and replanting processes were also noted. The study also concluded that given the impossibility of aerial

¹² Johnson, G. (1998) *Archaeology and Forestry in Ireland*. The Heritage Council of Ireland

reconnaissance and access constraints during field surveys, the potential for detecting unrecorded sites within forestry plantations is unlikely to be possible. However, the development and widespread use of LiDAR technology in recent years has allowed for the potential for reconnoitring forestry plantations through the use of aerial imagery that can screen out the forestry canopy and allows for the assessment of the presence of surface traces of potential archaeological sites, which can be visible as surface anomalies indicated the presence of features such as enclosing ditches, low mounds and partially levelled structures. To this end, LiDAR imagery commissioned by the Developer was made available for archaeological review as part of this assessment (**Figures 14.11 and 14.12**) This imagery encompasses the locations of all turbines and the majority of other infrastructure within the Site apart from the location of the substation in the north end. The imagery clearly outlines the extent of ground disturbance within the forestry plantations which is visible as close set, linear surface anomalies resulting from cultivation and drainage ground works. The imagery also shows the presence of linear land drains extending through areas of open heath as well as surface traces of ground works undertaken to create areas of improved grassland during modern land reclamation works. The detail on the imagery also depicts the uneven nature of the ground terrain within areas of rocky heathland. No surface traces of potential unrecorded archaeological sites or architectural heritage structures were noted within the Redline Boundary during this review.

14.4.6 Cork County Development Plan

The current Record of Protected Structures for County Cork, as published in the County Cork Development Plan 2022-2028, does not list any structures or Architectural Conservation Areas located within the Site. The nearest Protected Structure is the late 19th century Naomh Lachtáin Roman Catholic Church (RPS 00419) in Reananerree which is 2.3km to the east of the Redline Boundary. The planning objectives presented in the Development Plan which are relevant to the cultural heritage resource are identified in **Section 14.2.4.2**.

14.4.7 National Monuments in State Ownership/Care Cork

There are two archaeological monuments located within 10km of the Development which are designated as National Monuments in State Care. These comprise Lissacresig ringfort (CO070-017----) and five-stone circle (CO070-016----) which are both located in close proximity to one another within private lands located 9km east-northeast of the Site (**Figure 14.13**). These two monuments have been listed under the one National Monument number (no. 571).

14.4.8 National Inventory of Architectural Heritage

The National Inventory of Architectural Heritage does not list any structures or historic demesnes or gardens within the Site or within 1km of the Redline Boundary. The nearest listed structure is a late 19th-century two-storey, residential house (NIAH 20906901) located within Reenaree village at a distance of 1.76km to the east of the Redline Boundary.

14.4.9 Previous Archaeological Work in the Wider Area: Excavations Database

The Excavation Database contains no entries for any archaeological investigations within the study area. A programme of archaeological monitoring of the Ballymakeera to Reananerree road widening scheme in the lands further to the east of the Site revealed nothing of archaeological significance (Licence 02E1598¹³). A review of the results of archaeological assessments and site investigations undertaken during the development of wind farms located within 10km of the Project was also carried out as part of the Cumulative impact assessment and the results are summarised in **Table 14.13** (below).

14.4.10 Ordnance Survey Maps

The first edition 6-inch Ordnance Survey (OS) map (1830s-40s series) shows the lower lying lands within the Site occupied by clusters of small, irregular, field enclosures. The map shows the lands within the remainder of the Redline Boundary as areas of vacant, marginal heathland sub-divided into large holdings by linear boundary features. No potential unrecorded archaeological sites were noted within the study area during the review of this map. The only structures shown within the Site are a small number of farm buildings within Gortnabinna townland in the southern area. There are no construction works proposed at the locations of these buildings. The coverage of the 25-inch OS map (1888-1913 series) does not extend into the Redline Boundary.

14.4.11 Undesignated Cultural Heritage Assets

While encompassing the protected archaeological and architectural heritage resources, cultural heritage also includes various undesignated assets such as demesne landscapes and vernacular structures as well as intangible assets such as folklore, placenames and historical events and associations.

The Site extends into six townlands which are the smallest unit of land division in the Irish landscape, and many may preserve early Gaelic territorial boundaries that pre-date the Anglo-Norman conquest. Townland boundaries were recorded and standardised by the Ordnance Survey (OS) during the 19th century and their names typically comprise

¹³ <https://excavations.ie/report/2005/Cork/0013256/>

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 translations of the townland names that extend into the Site were sourced from the Placenames Database (www.logainm.ie). Two of the townland names (Cahernacaha and Rath West) contain elements which appear to refer to known archaeological sites within those townlands that are located outside the Redline Boundary and another two examples contain name elements that suggest that those townlands were occupied by oak woodlands in antiquity (Derryfineen and Derree) (**Table 14.6**).

Table 14.6: Translation of Townland Names

Townland	Irish Origin	Translation	Placename Database notes	Archaeological Indicator?
Gortyrhilly	<i>Gort Uí Raithile</i>	O' Rahilly's field	Mentioned in late 16th century records	No
Derree	<i>Na Doirí</i>	oak wood	Mentioned in 17th century records	Past land use
Gortnabinna	Gort na Binne	field of the peaked hill	Mentioned in 17th century records	No
Cahernacaha	<i>Cathair na Cáithe</i>	fort of the chaff	Mentioned in 17th century records.	Name may refer to a known enclosure within townland (CO069-036----) which is located 120m outside the redline boundary
Derryfineen	<i>Doire Fhínín</i>	Fineen's oakwood	Mentioned in 17th century records	Past land use
Rath West	<i>An Ráth Thiar</i>	Fort (west)	Mentioned in 16th century records.	Name may refer to a known enclosure within townland (CO069-074----) which is 180m outside the redline boundary

The proposed Project is located within the Múscraí Gaeltacht area with a number of settlement centres located within the wider landscape, e.g., Réidh na Doirí (Reenaree), Cúil Áodha (Coolea), Béal Átha an Ghaorthaidh (Ballingearry), Baile Bhúirne (Ballyvourney) and Baile Mhic Íre (Ballymakeera). The location has seen a general decline in population within the modern period and there are no settlement centres located within the Site or within 1km of the Redline Boundary. The region also has notable associations with other intangible elements of the cultural heritage resource such as music, including Sean-nós singing, poetry and dance traditions. The online database of the Irish National Folklore Schools Collection (www.duchas.ie) was reviewed and it does not contain entries for any of the townlands within the study area. There are also no 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. The Cork County Council *Múscraí Heritage Plan: conservation, management and interpretation plan 2018-2032*¹⁴ identifies a range of assets and attributes considered to be of cultural heritage significance within the region, including specific examples of the location of assets considered to be of archaeological, architectural, historic, artistic and scientific interest. While the plan does not purport to be an exhaustive list of such assets, it is noted that none of the identified assets are located in townlands within or adjacent to the Redline Boundary of the Site.

A war memorial plaque dated to 1970, and unveiled by Taoiseach Jack Lynch, is located on the side of a public road to the south of the Site which commemorates the “first armed action after 1916” which refers to an event in July 1918 when two Royal Irish Constabulary (R.I.C.) men, named Butler and Bennett, were held up at the Mouth of the Glen by local volunteers¹⁵ (**Appendix 14.1; Plate 14.9**). An account of the event records that it was limited in extent and entailed the two men being disarmed and their side-car was pushed off the road¹⁶ while another account refers to the R.I.C men being wounded¹⁷. Section 12.5.5 of the County Cork Plan sets out, with regard to War of Independence and Civil War sites that ‘it is the intention of Cork County Council to acknowledge the importance of these sites and to endeavour to protect and preserve them as places of historic heritage’. It is noted that the location of the plaque is located outside the Redline Boundary, and that the section of road containing its location does not form part of the grid connection or turbine delivery routes. In addition, the account of the 1918 event indicates that it was a minor engagement centred on the roadway and did not extend into the wider landscape and it is not mentioned in the *Múscraí Heritage Plan: conservation, management and interpretation plan 2018-2032*.

14.4.12 Grid Connection

The section of the study area centred on the grid connection route comprises a 100m wide corridor centred on the route and contains one recorded archaeological site. This comprises a 19th century lime kiln (CO057-002001-) within Milleeny townland which is situated in a field located adjacent to a section of a public road that forms part of the route (**Figure 14.9** and **Appendix 14.1; Plate 14.7**). The following description of this site has been published by the Archaeological Survey of Ireland¹⁸:

¹⁴ <https://www.corkcoco.ie/sites/default/files/2019-01/M%C3%BAscra%C3%AD%20Gaeltacht%20CMIP%20Final%20Draft%20Jan%202019.pdf>

¹⁵ Creedon, C. 2015 *The Immortal Deed of Michael O'Leary*. Cork City Library

¹⁶ <https://www.militaryarchives.ie/collections/online-collections/bureau-of-military-history-1913-1921/reels/bmh/BMH.WS1532.pdf>

¹⁷ <https://www.militaryarchives.ie/collections/online-collections/bureau-of-military-history-1913-1921/reels/bmh/BMH.WS1543.pdf>

¹⁸ Power, D. 1997 *Archaeological Inventory of County Cork. Volume 3: Mid Cork*. Dublin: Stationery Office

Lime Kiln CO057-002001- : Small, roughly-square mid/late 19th-century kiln on E side of road. Front elevation (S) (H 3.4m; Wth 3.8m) has lintelled recess (H 1.65m; Wth 1.1m; D1.7m), with sloping slabs immediately inside front lintel. Funnel visible but inaccessible.

There are no designated architectural heritage structures located within the study area centred on the grid connection, or within 1.8km of its route, and it does not extend through any historic settlements or Architectural Conservation Areas. The route follows sections of public roads extending from the Site to the Inchamore area to the north which are present on historic Ordnance Survey maps, and it then primarily extends along modern forestry roads thereafter. The forestry roads extend through plantation areas which are shown as vacant upland on historic Ordnance Survey mapping. No potential unrecorded archaeological sites or other cultural heritage assets were noted in the environs of the route during the desktop study.

14.4.13 Turbine Delivery Route Work Areas

The desktop review of the locations of localised off-road work areas for the proposed turbine delivery route along the public road to the northeast of the Site, revealed no recorded archaeological sites, designated architectural heritage structures or potential unrecorded cultural heritage assets within 100m of their locations. The route will also entail the creation of a temporary diversion over a section of the River Sullane to the west of Ballyvourney village. This will be at the same location as a clear span bridge and access tracks previously constructed as part of the Grousemount wind farm development. This location was subject to a pre-construction archaeological assessment as part of the Grousemount project, which included a pre-construction archaeological underwater and riverbank survey which extended from a point 40m upstream to a point 20m downstream of the proposed crossing¹⁹. This survey revealed nothing of archaeological significance within the inspected section of the river channel. Archaeological supervision of construction phase ground works was also carried out at this location as part of the Grousemount project and revealed nothing of archaeological significance. The proposed clear span bridge will be at the same location as the previous temporary bridge, it will require no in-stream works and its abutments will be set 5m back from the riverbank. The topsoil placed over the base course of the Grousemount access track on both sides of the river will be removed and a 150mm thick layer of crushed stone will be placed over this existing material.

¹⁹ <https://excavations.ie/report/2017/Cork/0026510/>

14.4.14 Field Work

The Development, including the Site, grid route and turbine delivery work areas, was inspected by the authors on 18th June and 11th November 2020 and 26th May and November 3rd 2021. These inspections comprised field walking surveys of all proposed construction areas, inspections of known archaeological monuments within the Redline Boundary and visual appraisals of examples within private lands in the environs of public roads. The purpose of the field surveys was to assess the potential for direct and indirect impacts on the locations and settings of known monuments, to establish if any unrecorded features of cultural heritage interest exist at proposed work locations and to appraise the potential for the presence of sub-surface archaeological sites or features at such locations.

The results of the field survey are presented below in tables which describe the condition, and correct locations, of the known archaeological monuments within the Site (**Tables 14.7, 14.8 and 14.9**) as well as descriptions of the existing environment at the locations of proposed construction locations, which collates information gathered during reviews of historic mapping, aerial and LiDAR sources for each location (**Table 14.10**).

Table 14.7: Collated information on Wedge Tomb CO069-093---

Recorded Monument	Class	Townland	Recorded ITM (ASI)	Actual ITM
CO069-093---	Wedge Tomb	Gort Na Binne	515990,571313	515937, 571374
ASI Description	<p><i>The tomb is located in a narrow strip of level ground (Wth c. 8m) between two rocky ridges which are aligned E-W. The tomb faces west (270°) with a good view in that direction. The tomb (L c. 4.25m; Wth at W end c. 3.85m; Wth at E end c. 2.45m) is generally defined by two rows of side stones, by two endstones, and by four capstones. The front capstone is now lying on the ground at the front of the tomb. The middle two capstones have slipped off the inner sidestones on the north side and now rest at an askew angle largely blocking access to the chamber area. The rearmost capstone is also lying on the ground. There is some access to the interior at the western end beneath the leaning capstones. Parallel with the front sidestone and c. 0.35m inside it and 0.9m back from its front edge, is a single upright stone (0.5m x 0.1m; H 0.3m) on which rests a subsidiary capstone. The visible area of the interior is strewn with loose stones. There are four inner sidestones on the north side and three outer ones, the two lines set c. 0.5m apart. The tallest and largest upright stone now evident is the front (W) outer sidestone on the north side (H 1.15m; L 1.15m; Wth 0.25m). There is a further upright stone in line with the endstones which is slightly outside the line of the inner stones. The sidestones on the south side are not as well preserve, but appear to be four inside and outside; the eastern-most stone on the inside line is fallen as are the second and fourth stone from the front on the outside line. The two parallel endstones are set c. 2m apart. The inner stone is the larger of the two.</i></p>			
Field Survey Notes	<p>The wedge tomb (CO069-093---) in the south end of the landholding was incorrectly mapped by the Archaeological Survey of Ireland and its actual location was identified 70m to the north-west during the field survey (Figures 14.1 and 14.5). The monument survives extant in the same condition as described by the Archaeological Survey of Ireland. It is situated within the base of a natural gully orientated east to west, which effectively screens its location from the north, south and east. The long axis of the monument is aligned to the west and the wider landscape in that direction is clearly visible. See Appendix 14.1; Plates 14.1 and 14.2</p>			

Table 14.8: Collated information on Wedge Tomb CO069-003----

Recorded Monument	Class	Townland	Recorded ITM (ASI)	Actual ITM
CO069-003----	Wedge Tomb	Derree	516084, 573739	515877, 573437
ASI Description	<i>On level spur in cut-away bog overlooking Douglas River valley to NE. Comprises ruined gallery (L 2.3m; Wth c. 0.9m at E end) aligned ENE-WSW, represented by two jamb-like stones at W end, single sidestones to N and S, and doubling of backstone at E end; outer-wall stones to N, E and S. Upright slab to NW may be remains of facade or part of pre-bog wall which skirts N side of monument (CO069-070---). (Ó Nualláin 1989, 135)</i>			
Field Survey Notes	<p>There were no surface traces of this monument and a nearby field boundary (CO069-070----) identified during a survey of their location as indicated on Record of Monuments and Places mapping and the National Monuments Service's Historic Environment Viewer. It was observed during a preliminary field survey that the landscape setting at the recorded location of this monument differed from that described in the inventory entry and potential was noted that it had been incorrectly mapped by the ASI. A review of the reference cited in the Archaeological Survey of Ireland's description of the monument (Ó Nualláin 1989, 135) revealed that it refers to the <i>Megalithic Survey of Ireland Vol. 5: Sligo</i> which also contains a catalogue of discovered megaliths elsewhere in the country. This includes a reference to an example discovered in Derree townland, Co. Cork in 1987 which was located at W 159, 733. A subsequent survey of this general location in combination with information provided by a local farmer, revealed the low remains of the wedge tomb within an area of rough heathland 350m to the southwest of its recorded location. It comprises a ruinous, overgrown low structure which survives as described by the Archaeological Survey of Ireland. It is almost completely obscured by overgrowth and its interior now contains a small scatter of field clearance stones which were not described in the inventory description. Extensive land improvement works have been undertaken in recent years within the areas to the west and south of its location, including machine-cut drains located 15m-20m in these directions, and the former heathlands in these areas are now occupied by well-drained grassland. These land works have not resulted in any observable direct impacts on the monument which remains as described by the Archaeological Survey of Ireland. However, no visible surface trace of the upright slab at an unspecified distance to the northwest mentioned by Ó Nualláin was noted, and the potential exists that this was removed by the land improvement works undertaken in that direction.</p> <p>See Figures 14.1, 14.3 and 14.4 Appendix 14.1; Plate 14.3</p>			

Table 14.9: Collated information on Field Boundary CO069-070---

Recorded Monument	Class	Townland	Recorded ITM (ASI)	Potential ITM
CO069-070----	Field Boundary	Derree	516114, 573745	515862, 573437
ASI Description	<i>In upland, covered with blanket bog, c. 28m to W and SW of wedge tomb (CO069-003-). Turf cutting exposed lines of stones at depth of 0.6m-0.7m under bog. Most substantial wall runs NNE-SSW for distance of 112m, curving gently. Second line of stones, parallel to and c. 3-5m E of above wall, extends from cutting 8m beyond NNE end of it and runs SSW for c. 28m; after gap of 6m, wall continues SSW for 58m before disappearing into bog. Immediately S of 6m gap is wall, not fully exposed, extending E; second E-W wall (L 20m) lies 38m to NNE of main NNE-SSW wall. May be remains of laneway with walls extending from it on either side.</i>			
Field Survey Notes	<p>No surface traces of the lines of stones forming the field boundary described by the Archaeological Survey of Ireland were noted during an inspection of the surrounds of the wedge tomb (CO069-003----). The Archaeological Survey of Ireland's description of the location and orientation (NNE-SSW) of the lines of stones exposed by turf-cutting indicated that they did not extend towards the location of T9 which is located within an area of reclaimed grassland 70m directly to the west of the wedge tomb. A north-south machine-excavated drainage ditch (2m wide by 1.5m deep) is located 15m west of the wedge tomb and forms a boundary with the improved grassland to the west. An inspection of the drain sections revealed an irregular concentration of loose stones within peaty soils immediately beneath the sod level in the eastern section which may form a surviving section of a drystone wall that extends into the undisturbed heathlands to the east while no corresponding feature was noted in the west section, which extends into the disturbed area of improved grassland. An inspection of the sides of a second modern land drain in the area to the south of the wedge tomb did not reveal any potential features. The local farmer informed the survey team that the land reclamation works carried out to create the improved grasslands within former areas of heathland to the west of the wedge tomb included extensive machine excavation works. A review of a series of Google Earth satellite images of the area published between 2012 and 2021 demonstrate the extent of these ground works and a 2019 image appears to show that the peat topsoil was completely removed from the reclaimed area to the west of the wedge tomb (Figure 14.4). The potential exists that any sections of the lines of stones formerly located within reclaimed grassland areas to the south-southwest of the wedge tomb were removed by these clearance works. In addition, a visual appraisal of the ground surface in the improved grassland fields within the surrounding area revealed that their ground levels were lower than the surface of the adjoining area of undisturbed heathlands to the east, indicating ground reduction works may have occurred during the land improvement works, and did not reveal any traces of differential growth that may indicate the presence of surviving buried stone walling.</p> <p>See Appendix 14.1; Plates 14.4 and 14.18</p>			

Table 14.10: Summary of Field Survey Results

Development Element	Townland	Distance to nearest archaeological site	6-inch OS Map	Aerial and LiDAR images	Field Survey Notes
Turbine 1	Cahernacaha Gortyrhilly	Wedge tomb located 1,350m to southeast (CO069-093----)	Map shows the location of turbine, hardstand and access road within large vacant fields in marginal land.	Shown within area of vacant rocky land on aerial images. No potential archaeological sites or built structures noted on LiDAR imagery	Location comprises an area of heathland on a large rocky ridge. There were no traces of improved grassland or other features associated with the fields shown in the area on the 6-inch OS map noted. The site access road will extend to its location from T2 to the north-east
Turbine 2	Gortyrhilly	Wedge tomb located c. 1,070m to southeast (CO069-093----)	Map shows the location of turbine, hardstand and access road within large vacant marginal fields.	Shown within area of vacant rocky land on aerial images. No potential archaeological sites or built structures noted on LiDAR imagery	Location comprises an uneven area of rocky heathland, with localised areas of cutaway bog, situated to the west of an existing roadway.
Turbine 3	Gortnabinna	Wedge tomb located 650m to southeast (CO069-093----)	Map shows the location of turbine, hardstand and access road as vacant, unenclosed marginal land.	Shown within forestry on aerial images. No potential archaeological sites or built structures visible on LiDAR imagery. Access route to south follows existing forest road	Location comprises a level area of forestry adjacent to the east side of a roadway. The location of the hardstand and turbine within the plantation were accessible and the underlying ground surface has been disturbed by tree planting. A section of the north end of the hardstand extends into a vacant area of heathland.
Turbine 4	Gortnabinna	Wedge tomb located 520m to southwest (CO069-093----)	Map shows the location of turbine, hardstand and access road as vacant, unenclosed marginal land.	Shown within forestry on aerial images. No potential archaeological sites or built structures visible on LiDAR imagery.	Located within an area of inaccessible upland forestry with no forest tracks extending to location. A visual appraisal of the plantation margin closest to its location indicated that the underlying ground surface has been heavily disturbed by tree growth and forest drains.
Turbine 5	Gortnabinna	Wedge tomb located 800m to southwest (CO069-093----)	Map shows the location of turbine, hardstand and access road as vacant, unenclosed marginal land.	Shown within forestry on aerial images. No potential archaeological sites or built structures visible on LiDAR imagery.	Located within an area of inaccessible upland forestry with no forestry roads extending to location. A visual appraisal of the plantation margin closest to its location indicated that the underlying ground surface has been heavily disturbed by tree growth and forest drains
Turbine 6	Gortyrhilly	Wedge tomb located 1,025m to north (CO069-003----)	Map shows the location of turbine, hardstand and access road as vacant, marginal fields.	Aerial image shows turbine and west end of hardstand within vacant, marginal land with forestry occupying east end of hardstand and access	Location comprises a vacant area of open heath, with natural bedrock outcropping, that slopes gradually down to south. The east end of the hardstand extends into mature standing

Development Element	Townland	Distance to nearest archaeological site	6-inch OS Map	Aerial and LiDAR images	Field Survey Notes
				track. No potential archaeological sites or built structures visible on LiDAR imagery.	forestry and a visual appraisal of the underlying ground surface indicates that it has been heavily disturbed.
Turbine 7	Gortyrhilly	Wedge tomb located 800m to north (CO069-003----	Map shows the location of turbine, hardstand and access road as vacant, unenclosed marginal land.	Shown within area of vacant marginal land on aerial images. No potential archaeological sites or built structures noted on LiDAR imagery. Access route to northeast and southwest follows an existing track	Location comprises a vacant, level area of open heath with areas of rocky ground on the east side. It is accessed via an existing road which extends along the west side of the hardstand.
Turbine 8	Derree	Wedge tomb located 570m to northeast (CO069-003----	Map shows the location of turbine, hardstand and access road as vacant, unenclosed marginal land.	Shown within area of vacant marginal land on aerial images. No potential archaeological sites or built structures noted on LiDAR imagery.	Location comprises an uneven area of vacant heath on a west-facing hillslope adjacent to an existing roadway.
Turbine 9	Derree	Edge of hardstand located c.70m to west of correct location of Wedge tomb (CO069-003----). No surface traces of a potential field boundary (CO069-070----) were noted at hardstand location during a preliminary site inspection	Map shows the location of turbine, hardstand and access road as vacant, unenclosed marginal land.	Shown within area of vacant marginal land on aerial images with a modern farm track extending through location. No potential archaeological sites or built structures noted on LiDAR imagery. Aerial and LiDAR both show a 30m wide linear north-south area of ground disturbance in land between tomb and hardstand likely the result of turf-cutting prior to land reclamation works. Location of turbine and hardstand shown as disturbed ground on Google Earth satellite images between 2012 and 2019 (Figure 14.4). A preliminary site inspection indicated that recent land improvement works not captured by imagery have been carried out in general area	Location is within a level, vacant area of improved grassland created during modern land reclamation works (see Tables 14.8 and 14.9 for further details).
Turbine 10	Gortyrhilly	Wedge tomb located 700m to northwest (CO069-003----	Map shows the location of turbine, hardstand	Aerial image shows turbine and east end of hardstand within forestry with the west end of hardstand extending	The west end of the hardstand extends into a vacant area of gradually sloping heath with natural bedrock outcropping. The east of the

Development Element	Townland	Distance to nearest archaeological site	6-inch OS Map	Aerial and LiDAR images	Field Survey Notes
			and access road as vacant, marginal land.	into marginal, vacant land. No potential archaeological sites or built structures visible on LiDAR imagery.	hardstand and the turbine location are within mature standing forestry and a visual appraisal of the underlying ground surface indicates that it has been heavily disturbed. The access route from west extends through an open area of rocky heath with localised areas of turf-cutting. No traces of potential archaeological features or any agricultural fields or structures of any date were noted. It crosses one small streamlet which appeared to have been recently cleaned out and recut by machine during drainage works.
Turbine 11	Gortyrhilly	Radial Stone Cairn located 1,100m to southeast (CO069-040----)	Map shows the location of turbine, hardstand and access road as vacant, marginal land.	Aerial image shows turbine and east end of hardstand within vacant, marginal land with forestry occupying east end of hardstand. Access routes from south and west extend through areas of forestry. No potential archaeological sites or built structures visible on LiDAR imagery.	Location comprises a vacant area of rocky heath with expansive views to the east. No surface traces of any potential archaeological features or structures of any date were noted at the location. Sections of the forestry adjacent to the access routes from the south and east were recently felled, and the underlying ground surface has been heavily disturbed by tree growth and drainage works. The access route from west extends through an open area of rocky heath and no traces of potential archaeological features or any historic fields or structures of any date were noted. The access route crosses one small streamlet which appeared to have been recently cleaned out and recut by machine.
Turbine 12	Gortyrhilly	Wedge tomb located 570m to northeast (CO069-003----)	Map shows the location of turbine, hardstand and access road as vacant, marginal land.	Shown within area of vacant marginal land on aerial images. No potential archaeological sites or built structures noted on LiDAR imagery.	Location comprises a north-facing hillslope occupied by marginal land with localised areas of improved grassland. The site access roads to the location extend through vacant areas of upland rocky heath towards T13 to the east and T10 to the west.
Turbine 13	Gortyrhilly	Radial Stone Cairn located 950m to south (CO069-040---)	Shown within cluster of small, irregular fields with no farm buildings indicated	Shown within area of vacant marginal land on aerial images. No potential archaeological sites or built structures noted on LiDAR imagery.	The location comprises an uneven area of sloping upland heath with frequent natural bedrock outcrops. Fragmentary traces of field boundaries indicated on the 6-inch OS map survive and comprise low drystone walls (often

Development Element	Townland	Distance to nearest archaeological site	6-inch OS Map	Aerial and LiDAR images	Field Survey Notes
					<p>collapsed) constructed with field clearance stones and boulders. The former fields in the area are not in active use and have been colonised by gorse. No potential unrecorded archaeological features or built structures of any date were noted at the location of the proposed turbine, hardstand and access routes.</p> <p>A visual appraisal of the surrounding landscape resulted in the identification of an upright stone located c.70m downslope (ITM 517252, 572947) of the southern end of the hardstand ground works (Figure 14.8). This comprised a narrow (10cm wide) slab measuring 90cm high by 60cm wide and was set slightly off a north to south long axis. The potential that this may comprise a prehistoric standing stone is noted. A number of overgrown land drains exist within its environs and the potential that it was set in its current position during recent land works is not discounted.</p>
Turbine 14	Derryfineen	Radial Stone Cairn located 615m to south (CO069-040---)	Map shows the location of turbine, hardstand and access road as vacant, marginal land.	Aerial image shows extensive ground works likely associated with land reclamation at turbine and hardstand location. No potential archaeological sites or built structures noted on LiDAR imagery.	<p>The location is now occupied by a level area of improved grassland pasture which is on the footprint of the ground works shown on modern aerial imagery. No potential unrecorded archaeological features or built structures of any date were noted at the location.</p> <p>The site access road to the south will extend through forestry to an existing forest road and leads to a farm lane that connects to the public road to the south. The radial stone cairn (CO069-040----) is within a pasture field to the east of the farm lane. A visual appraisal of the site indicates that it remains extant in an area of the field 65m from the farm lane.</p>
Site Compound	Gortnabinna	Radial Stone Cairn located 1,010m to east (CO069-040----)	Map shows the location as vacant, marginal land.	Aerial image shows forestry at location with an existing forest road along north side. No potential	Located within a level area adjacent to an existing forest road. A visual appraisal of area indicated that the ground surface within the

Development Element	Townland	Distance to nearest archaeological site	6-inch OS Map	Aerial and LiDAR images	Field Survey Notes
				archaeological sites or built structures noted on LiDAR imagery.	plantation has been extensively disturbed by tree planting
Substation	Derree	North edge of earthworks is 40m south of an extant drystone Enclosure (CO069-002----). The RMP mapping indicates the presence of a wedge tomb (CO069-003----) and field boundary (CO069-070----) adjacent to the south side of the earthworks. These are incorrectly mapped and are located c.370m to the southwest	Map shows the location as vacant, marginal land and also depicts the enclosure site in lands to the north	Located outside coverage area of LiDAR datasets. Aerial images show location as rocky raised area of vacant ground.	Location comprises a vacant east-west orientated bedrock ridge above an existing farm road to the south. The locations of the incorrectly mapped wedge tomb (CO069-003----) and field boundary (CO069-070----) to the south of the road were inspected and it was confirmed that no surface traces of any archaeological sites are located in this area. The area between the proposed location of the substation and the enclosure site to the north was also inspected and comprises an area of improved grassland created during modern land improvement works with no surface traces of any potential archaeological features. The enclosure survives as described by the ASI, i.e., an oval area (20m E-W; 16m N-S) enclosed by low wall of dry-stone construction, set in a random fashion. The dimensions of the enclosure are not suggestive of an early medieval cashel site and the potential that it comprises an animal enclosure of more recent origin was noted. The proposed location of the substation to the south is clearly visible from the enclosure, which is in private lands not accessible to the public.
Met Mast	Gortyrhilly	Wedge tomb located 1000m to the north (CO069-003----)	Map shows the location as vacant, marginal land.	Shown within area of vacant marginal land on aerial images. No potential archaeological sites or built structures noted on LiDAR imagery.	The location of the met mast and proposed access road from an existing roadway to the east are occupied by vacant rocky heath in an area that slopes gradually down to the west
Grid Connection	Various	Lime Kiln located in field to east of road forming grid connection (CO057-002001-)	-	-	Lime kiln (CO057-002001-) is the only recorded archaeological site within the 100m corridor centred on the grid connection route and is clearly visible in an adjacent field set back from the edge of the roadway (Figure 14.9 and Appendix 14.21; Plate 7).. No potential unrecorded archaeological sites were noted

Development Element	Townland	Distance to nearest archaeological site	6-inch OS Map	Aerial and LiDAR images	Field Survey Notes
					<p>along the road verges during an inspection of the route.</p> <p>None of the buildings or bridges within the 100m corridor are listed as Protected Structures or are included in the National Inventory of Architectural Heritage. In addition, there are no designated architectural heritage structures located within 1.8km of the route. The route crosses two watercourses spanned by undesignated masonry road bridges both of which have been subject to modern interventions. The proposed watercourse crossing methodology will comprise horizontal directional drilling and no works to the bridge structures or river channels will be carried out.</p> <p>No potential unrecorded features of archaeological, architectural or cultural heritage interest were noted during inspections of the localised green field areas along the route.</p>
Turbine Delivery Route Work Areas	Derree	None within 100m of work locations	Proposed work locations to northeast of Site shown as vacant lands	Proposed work locations to northeast of Site shown as vacant lands on aerial images. No potential archaeological sites or built structures noted on LiDAR imagery.	<p>The turbine delivery route will include a road diversion to the west of Ballyvourney village. As described in Section 14.4.13, this will entail the installation of a temporary clear span bridge over the River Sullane, which will not require any in-stream works, with access tracks on both sides of the river. These proposed works are at the same location as a temporary bridge and access track constructed as part of the Grousemount wind farm project and these remained in situ at the time of the site inspection.</p> <p>This location was subject to archaeological investigations as part of the Grousemount project, which included a pre-construction archaeological underwater survey and monitoring of construction phase ground works.</p>

Development Element	Townland	Distance to nearest archaeological site	6-inch OS Map	Aerial and LiDAR images	Field Survey Notes
					<p>Nothing of archaeological significance was identified²⁰.</p> <p>No known archaeological sites or architectural heritage structures are located in localised work areas where the route will diverge from the existing public road to the northeast of the Site. An inspection of these areas showed them to comprise vacant areas of improved pasture and unenclosed rocky, marginal land. There are no recorded archaeological sites within 200m of this section of road and there are no designated architectural structures within 1km.</p>

²⁰ <https://excavations.ie/report/2017/Cork/0026510/>

14.4.15 Summary

While there are three recorded archaeological sites within the Redline Boundary and an additional six examples within the surrounding study area, none are located on the footprint of any proposed construction areas. A potential unrecorded standing stone located 70m to the south of T13 was identified during a field survey carried out as part of this assessment and this will be retained *in situ* within the Site.

There are no designated architectural heritage structures located within 1km of the Site. No potential undesignated features of architectural heritage interest, such as large country houses, with associated designed gardens/demesne lands, are located within the Site or within 1km of the Redline Boundary. There were also no undesignated vernacular structures of potential cultural heritage significance identified within the environs of proposed construction areas during the desktop study and field surveys carried out as part of this assessment.

There are no recorded archaeological sites or designated architectural heritage structures located within the footprint of the proposed grid connection route or turbine delivery work areas. There is one recorded archaeological site within the 100m corridor centred on the grid connection route and this comprises a lime kiln (CO057-002001-) located within a field adjacent to the section of public road that will contain the cable trench. This kiln structure has no elements that extend into the public roadway. There are no recorded archaeological sites located within 100m of the proposed turbine delivery work areas. In addition, there are no designated architectural heritage structures located within 1.8km of the grid connection route or within 1.5km of turbine delivery work areas.

14.5 ASSESSMENT OF POTENTIAL EFFECTS

14.5.1 Construction Phase – Direct Impacts

The construction phase will result in no predicted direct impacts on the extant archaeological monuments within the Site and its close environs (Wedge tombs CO069-003---and CO069-093--- and Enclosure CO069-002----). No surviving surface traces of a field boundary feature (CO069-070----) were identified within the Site and a review of the inventory description of this feature published by the Archaeological Survey of Ireland indicates that its recorded former extent did not extend into a construction area (see **Table 14.9**). The results of the field inspection indicated that the former heathland environment containing the general location of the field boundary was extensively impacted by land improvement works to create the existing reclaimed grasslands at some stage after the

inspection of the area by the Archaeological Survey of Ireland. This was confirmed during consultations with the farmer who indicated that the creation of the improved grassland in the area was carried out in recent years and involved mechanised ground clearance as part of the land improvement works. No direct construction phase impacts on the field boundary are, therefore, predicted.

In addition, there are no designated architectural structures located within the Site and no undesignated features of cultural heritage interest were identified at proposed construction areas. It is, therefore, concluded that the construction phase will not result in any direct impacts on these elements of the cultural heritage resource.

The forestry plantations which occupy areas of the Site (shown on **Figure 14.1**) have resulted in extensive ground disturbance which has a high potential to remove or severely degrade archaeological sites and associated sub-surface deposits and there is a low potential for the presence of unrecorded, archaeological sites within such forested areas, although the potential for the survival of elements of unrecorded archaeological remains cannot be completely discounted. The potential for the presence of sub-surface archaeological sites and artefacts exists within the areas of improved pasture and heathlands within the Site. Given the presence of known archaeological sites within the Site and its surrounds, the lands outside the forested areas are adjudged to have a medium archaeological potential. While the existence as well as location, extent and nature of such unrecorded, sub-surface archaeological remains are indeterminable the potential exists for direct, negative impacts on any examples that may exist within proposed construction areas. As the existence, extent, value and magnitude of impact on any unrecorded archaeological features or artefacts within the Site are unknown; the significance of potential construction phase impacts cannot be accurately quantified but ground works during the construction phase will have the potential to result in a permanent, direct, moderate to significant, negative direct impacts on any such remains.

The majority of the grid connection route extends along public and forest roads with two localised sections within green field areas. These comprise a c. 600m long section extending from the substation in the north end of the Site to the public road to the north and a c. 300m long section in Inchamore townland. There are no recorded archaeological sites or designated architectural heritage structures located on the direct footprint of the grid connection route and it does not extend into any historical villages or towns. The proposed grid connection will, therefore, result in no direct impacts to the known elements of these resources. There is one recorded archaeological site located within the 100m wide corridor

centred on the grid connection route and this comprises a lime kiln (CO057-002001-) located within a field to the east of the road and is on the opposite side of a roadside field bank (**Figure 14.9** and **Appendix 14.1; Plate 14.7**). The excavation of the cable trench within the road will have no predicted direct impact on this archaeological site which has no elements that extend into the road corridor. While the ground excavation works undertaken during the construction of the public roads and modern forestry roads along the grid connection route likely reduced original ground down to the level of natural subsoils the potential for the presence of hitherto unrecorded archaeological features within their footprint is low but cannot be entirely discounted.

There are no designated architectural heritage sites located within the 100m wide corridor centred on the grid connection route and, in addition to this, none exist within 1.8km of the route. The grid connection methodology will involve the use of horizontal directional drilling under two undesignated masonry road bridges which span watercourses on the route and will not require any works to these structures. This methodology will also avoid impacts on watercourses which may contain potential unrecorded underwater archaeological features or artefacts. No potential unrecorded cultural heritage features were identified within dryland areas in the environs of the crossings and the horizontal drilling works on either side of crossings will result in no predicted impacts on the known cultural heritage resource.

There were no known or previously unrecorded undesignated cultural heritage assets identified within the environs of turbine delivery route work areas. The proposed temporary River Sullane crossing, comprising a clear span bridge and access tracks, is at the same location as a temporary crossing used for the Grousemount wind farm project. An underwater archaeological survey of the river crossing and archaeological monitoring of construction phase ground works were carried out at the location as part of that project and nothing of archaeological significance was uncovered. The works to facilitate the turbine delivery route will, therefore, result in no predicted construction phase impacts on the known cultural heritage resource.

14.5.2 Construction Phase – Indirect Impacts

There are two extant recorded archaeological sites within 100m of the locations of proposed construction areas within the Site and these comprise a partially levelled wedge tomb (CO069-003----) located 70m to the east of T9 and an enclosure (CO069-002----) located 40m to the north of the substation. The latter archaeological site is located outside the Redline Boundary. The wider settings of both of these extant monuments will be subject to short term, slight, negative, indirect impacts during the construction phase. No surviving

surface traces of field boundary feature CO069-070---- were identified within the Site and a review of the description of this feature published by the Archaeological Survey of Ireland indicates that its recorded extent did not extend into the T9 construction area in the reclaimed lands to the west of wedge tomb CO069-003----. The site inspection and consultations with the farmer in this area also indicated that its potential location was subject to extensive mechanised excavations during modern land improvement works. No indirect construction phase impacts on this feature and its former setting are, therefore, predicted.

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

The proposed Project is located within the Múscraí Gaeltacht area. While the construction phase will see the arrival of construction workers to the area, this will be a short term occurrence and will not result in permanent settlement of the area by non-Irish speakers. The Project is, therefore, predicted to result in a negligible, indirect, not significant impact on the Irish language during the construction phase.

A memorial plaque commemorating a 1918 event associated with the War of Independence is located on the side of a public road to the south of the Site. This is located outside the Redline Boundary and this section of road does not form part of the grid connection or turbine delivery route. The historical accounts of the commemorated event indicate that it was a minor, localised incident centred on the public roadway and did not comprise a military action that spread into the wider landscape. The Project will, therefore, have no predicted impact on this historical association.

The lime kiln (CO057-002001-) within the environs of the grid connection route is within a field adjacent to the road in which the cable will be excavated and is separated from the road by a field bank. There are no designated architectural structures located within the environs of the route. There are also no recorded archaeological sites or designated architectural heritage structures located within the environs of the turbine delivery route work areas. The construction of the grid connection route and turbine delivery route work areas will, therefore, not result in any predicted indirect impacts on the cultural heritage resource.

Table 14.11: Summary of construction phase impacts on archaeological sites in study area

Monument	Classification (Condition)	Value	Type of impact	Quality of impact	Magnitude of impact	Duration	Significance
CO069-002----	Enclosure	High	Indirect	Negative	Negligible	Short term	Slight
CO069-003----	Wedge tomb (partially levelled)	High	Indirect	Negative	Negligible	Short term	Slight
CO069-004001-	Cashel (extant)	High	No predicted impact	Neutral	n/a	n/a	None
CO069-004002-	Possible souterrain (unknown)	Medium-High	No predicted impact	Neutral	n/a	n/a	None
CO069-036----	Enclosure	High	No predicted impact	Neutral	n/a	n/a	None
CO069-040----	Radial-stone cairn	High	No predicted impact	Neutral	n/a	n/a	None
CO069-070----	Field boundary (levelled)	Medium	No predicted impact	Neutral	n/a	n/a	None
CO069-074----	Enclosure	High	No predicted impact	Neutral	n/a	n/a	None
CO069-093----	Wedge tomb	High	No predicted impact	Neutral	n/a	n/a	None
CO057-002001-	Lime Kiln	Medium	No predicted impact	Neutral	n/a	n/a	None

14.5.3 Operational Phase – Direct Impacts

The operational phase of the proposed Project will result in no predicted direct physical impacts on the known archaeological, architectural and cultural heritage resources. In addition, the successful implementation of the mitigation measures outlined in **Section 14.6** 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.

14.5.4 Operational Phase – Indirect Impacts

There are nine recorded archaeological monuments located within 1km of the Site and one within 100m of the grid connection route. There are no recorded archaeological sites located within 100m of the turbine delivery route work areas. As detailed in **Table 14.12**, the operational phase will result in a range of indirect negative impacts of a visual nature on the wider setting of a number of examples which will range from slight to moderate in significance.

The locations of the turbines have been sited to avoid the direct alignments of the two wedge tombs (CO069-003---- and CO069-093----) located within the Site which extend across the wider landscape to the west-southwest and west respectively. Wedge tomb CO069-093---- is located c. 2km to the south of wedge tomb CO069-003---- and their locations are not intervisible due to natural topography. Based on the absence of any views between their locations combined with their alignments towards the landscape to the west-southwest and west, it is likely that the monuments were not constructed to form a ritual visual alignment between their locations. In addition, both of the monuments are located within private lands inaccessible to the public and do not form amenity features in the area.

The location of T9 at a distance of 100m to the west of wedge tomb CO069-003---will impinge on the margins of its recorded alignment to the west-southwest and also on its general setting. This monument is in a ruinous condition and, while it contains a number of partially collapsed, low side stones, it has no extant capstone or clearly defined entrance feature and its surviving remains do not retain any clearly evident expression of the structure's original alignment attribute. In addition, it does not form a prominent feature within the landscape and is barely perceptible from close distances within the heathland at its location. Given the poor state of preservation of this monument, it is concluded that the proposed location of T9 to the west during the operational phase will result in a low magnitude, long-term, indirect, negative, moderate impact on a partially collapsed feature which will be reversed following the decommissioning phase.

The capstone of Wedge tomb CO069-093---- is no longer *in situ* but it does retain upright side stones on both sides which form a well-preserved, coherent structure and clearly mark the orientation of its entrance facing to the west. There are no turbines sited within the environs of its direct alignment in this direction and its setting at the base of a steep sided gully screens views from its location towards T4 and T5 which are located at distances of 520m and 880m to the north respectively. It is concluded that these factors will result in a low magnitude, long-term, indirect, slight, negative impact on this monument during the operational phase which will be reversed following decommissioning.

As detailed in **Section 14.5.1**, no surviving surface traces of a field boundary feature (CO069-070----) were identified within the Site and its potential location was extensively impacted by land improvement works in recent years. No indirect operational phase impacts on the field boundary are, therefore, predicted.

The substation is located 40m to the south of Enclosure CO069-002----. This monument type has no visual alignment attributes that will be impacted by the Project, but the location of the substation will result in a permanent, indirect, negative, moderate impact on its general setting during the operational phase.

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, i.e., ritual alignments. This revealed the presence of 28 wedge tombs, 6 stone rows, 6 standing stone pairs and 6 stone circles within this area (**Figure 14.13**). As depicted on **Figure 14.13**, there is a smaller overall subset of these monuments located in the lands to the east or northeast of the Site (5 wedge tombs, 2 stone rows and 4 stone circles). Given that the majority of these monument types have alignments towards the west and south-west, this means that the majority of the recorded examples within 10km of the Site are not located in the areas of potential heightened visual sensitivity to the east and north-east. As all of the examples within 10km of the Site are located within private lands not accessible to the public, the methodology used to assess whether any have direct alignments to the Site entailed reviews of each of their archaeological inventory descriptions to determine their recorded alignments, which were then analysed by cross-referencing each of the monuments' locations in relation to the Site. This revealed that only one example has a potential direct alignment towards the Site, and this comprises a wedge tomb (CO69-069----) located 2km to the north and which faces directly to the south. While this monument has legal protection by its inclusion on the Recorded of Monuments and Places, it is not designated as a National Monument in State Care considered to be of national significance. The monument is located within private lands not accessible to the public and is recorded as being only partially extant by the Archaeological Survey of Ireland. Given its distance from the Site in combination with its recorded designation, inaccessibility and partial surviving extent, the potential indirect, negative impact on its wider setting is appraised as being low in magnitude and slight in significance. None of the other monuments with potential visual alignments in the reviewed 10km area are located within 2km of the Site. Given the distances of these monuments 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 decommissioning.

There is one National Monument in State Care located within 10km of the Site and this comprises Lissacresig Ringfort and Stone Circle (Nat. Mon. ref. 571) which are located within close proximity to one another in private farmland located 9km east-northeast of the

Site (**Figure 14.13**). An inspection of a public road within the environs of these monuments revealed that the fields within the area are bounded by tall trees and hedgerows and no evident clear views towards the Site from this general location were noted. Given the distance of these monuments from the Site combined with vegetation and topographical screening, it is concluded that the Project will result in a likely imperceptible impact on their location during the operation phase.

The Landscape and Visual Amenity (LVA) chapter (**Chapter 12**) assesses two visually sensitive cultural heritage receptors accessible to the public within the wider landscape. These comprise the summits of 'the Paps of Anu' (VP 13) located 12.2km to the north of the Site and an St. Finbarr's Oratory (CO080-012001-) in Gougane Barra (VP 15a) located 7.6km to the southwest. The east and west summits of the Paps of Anu each contain prominent stone cairns (CO069-002---- and KE076-019----). While the date and original functions of these monument types cannot be accurately ascertained without recourse to systematic archaeological excavation, they are likely of prehistoric date and may potentially contain burial sites and have had visual associations with other upland monuments in the wider landscape. The LVA assessment concludes that the Project will result in a low magnitude of visual impact of moderate significance on the summits of the Paps of Anu. In addition, there are no recorded upland cairns or other visually prominent sites located within the Site or its wider environs and, therefore, no impacts on any potential visual association between the Paps of Anu cairns and other upland sites within the wider landscape are predicted. The LVA appraisal of views from St Finbarr's Oratory in Gougane Barra concluded that none of the proposed turbines will be visible from this location and the magnitude of visual impact is assessed as negligible with an imperceptible significance.

In conclusion, while the Project 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.

The grid connection cable will comprise a buried feature during the operational phase and once all turbine components have been delivered to Site and turbines have been commissioned, the River Sullane temporary bridge and access tracks will be removed. The grid connection and turbine delivery elements of the Project will, therefore, result in no predicted impacts on the cultural heritage resource during the operational phase of the proposed development.

The proposed Project is located within the Múscaí Gaeltacht area. The requirement for low numbers of onsite staff during the operation phase of the Project will be intermittent and this will not result in any predicted impacts on the Irish language.

Table 14.12: Summary of operational phase impacts on archaeological sites in study area

Monument	Classification (Condition)	Value	Type of impact	Quality of impact	Magnitude of impact	Duration	Significance
CO069-002----	Enclosure	High	Indirect	Negative	Medium	Permanent	Moderate
CO069-003----	Wedge tomb (partially levelled)	High	Indirect	Negative	Medium	Long term (reversible)	Moderate
CO069-004001-	Cashel (extant)	High	Indirect	Negative	Low	Long term (reversible)	Slight
CO069-004002-	Possible souterrain (unknown)	Medium-High	None	Neutral	n/a	n/a	None
CO069-036----	Enclosure	High	Indirect	Negative	Low	Long term (reversible)	Slight
CO069-040----	Radial-stone cairn	High	Indirect	Negative	Low	Long term (reversible)	Slight
CO069-070----	Field boundary (levelled)	Low-Medium	Indirect	Negative	Low	Long term (reversible)	Slight
CO069-074----	Enclosure	High	Indirect	Negative	Low	Long term (reversible)	Slight
CO069-093----	Wedge tomb	High	Indirect	Negative	Low	Long term (reversible)	Slight
CO057-002001-	Lime Kiln	Medium	None	Neutral	n/a	n/a	None

14.6 MITIGATION MEASURES AND RESIDUAL EFFECTS

14.6.1 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 layout was also designed to avoid any potential significant impacts on the alignments of the two wedge tombs (CO069-003---- and CO069-093----) located within the Site, which are in good to poor states of preservation respectively.

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 the *2006 Wind Energy Development Guidelines*²¹ (Section 7.4) and the *2019 Draft Revised Wind Energy Development Guidelines*²² (Section 7.6).

The location of T9 and associated hardstand and access roads are within an area of improved green field land located 70m to the west of Wedge Tomb CO069-003----, and possibly within the general environs of any potential unrecorded sub-surface features associated with field boundary (CO069-070----). This grassland contains suitable ground conditions for undertaking a geophysical survey and this type of investigation will, therefore, be carried out in within the footprint of the T9 hardstand and access roads in the grassland area in advance of the construction phase. This will be followed by targeted archaeological test trenching of any identified features of archaeological potential which will also be carried out during the pre-construction phase. These investigations will be carried out under licences issued by the National Monuments Service.

Ground works during the construction phase within all other areas of the Site as well as in green field locations within the grid route and turbine delivery work areas will be subject to constant archaeological monitoring under licence by the National Monuments Service. All grid connection road works within 50m of the location of lime kiln (CO057-002001-) will also be subject to constant archaeological monitoring and the location of this structure will also be clearly marked by signage during the construction phase. An archaeological watching brief of grid connection trench excavations within other sections of public roadways and forest roads will be carried out as part of the programme of licensed archaeological monitoring of the Project and the extent of this supervision will be agreed in advance with the National Monuments Service as part of the license application process.

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. All construction phase ground works within felled areas shall then be subject to constant archaeological monitoring.

²¹ <https://www.gov.ie/en/publication/f449e-wind-energy-development-guidelines-2006/>

²² <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 these site investigations they will be recorded and then securely cordoned off while the National Monuments Service are consulted to determine further appropriate mitigation measures, which may include preservation in situ (by avoidance) or preservation by record (archaeological excavation).

Buffer zones at the edge of proposed construction areas within the environs of the known locations of the following extant archaeological monuments will be securely cordoned off and their locations clearly signed as 'No Entry: Archaeological Area' for the duration of the construction phase: Wedge Tomb CO069-003----, Wedge Tomb CO069-093---- and Enclosure CO069-002----. The locations of these monuments will also be identified as 'no-entry' areas during the construction phase site inductions. The location of the potential standing stone identified 70m to the south of T13 will also be cordoned off and clearly signed as a 'no-entry' area during the construction phase.

The Project is located within the Múscaí Gaeltacht area and any signage erected within the public realm during the construction phase will include Irish and English text.

14.6.2 Construction Phase Residual Impacts – Direct

The mitigation measures presented in **Section 14.6.1** 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. No residual construction phase direct impacts are predicted following the implementation of these mitigation measures.

14.6.3 Construction Phase Residual Impacts – Indirect

The buffer zone mitigation measures presented in **Section 14.6.1** 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.

14.6.4 Operational Phase

Following the successful implementation of the mitigation measures presented in **Section 14.6.1**, the operational phase of the Project will result in no predicted direct impacts on the known archaeological, architectural and cultural heritage resources and, therefore, no mitigation measures for direct operational phase impacts will be required.

As detailed in **Section 14.5.4**, the Project 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 slight to moderate in significance (**Table 14.12**). Given the nature of the wind farm turbines there are no mitigation measures that can address these visual impacts but it is noted that they will be reversible by the decommissioning phase apart from the indirect impacts on the setting of Enclosure CO069-002---- created by the permanent substation located 40m to the south of its location.

14.6.5 Operation Phase Residual Impacts - Direct

No operation phase direct residual impacts on the cultural heritage resource are predicted following the successful implementation of mitigation measures.

14.6.6 Operation Phase Residual Impacts - Indirect

The operation phase will result in a range of slight to moderate, long term residual indirect impacts on archaeological sites within the environs of the Project. It is noted that these will be reversible following decommissioning apart from the permanent, indirect, moderate, negative impact on the setting of Enclosure CO069-002---- created by the presence of the permanent substation located 40m to the south of its location.

14.7 CUMULATIVE IMPACTS

A review of operational, permitted and proposed wind farm developments within 10km of the Project was carried out in order to assess potential cumulative impacts on the cultural heritage resource (**Table 14.13**). This included a review of available archaeological and cultural heritage impact assessments of these developments included in the online planning files published on the Cork County Council and Kerry County Council planning enquiry systems as well as the Excavations Database. A review of other developments within 3km of the Project was also undertaken and the results are presented below.

Table 14.13: Review of wind farms within 10km of the Project

Wind Farm	Status	No. of Turbines	Approximate Distance to the Site Boundary	Direction from the Development	Cultural Heritage Review
Cleanrath	Operational	9	3.05km	South East	Archaeological testing and monitoring carried out as part of this development revealed nothing of archaeological significance ²³
Clydaghroe, Clonkeen	Operational	4	8.77km	North East	The Excavations Database does not contain any entries for this development. A review of its location revealed that the site does

²³ <https://excavations.ie/report/2019/Cork/0029095/>

Wind Farm	Status	No. of Turbines	Approximate Distance to the Site Boundary	Direction from the Development	Cultural Heritage Review
					not contain any designated cultural heritage sites
Coumaclovane, Coolea	Permitted	1	5.02km	North West	The Excavations Database does not contain any entries for this development. A review of its location revealed that the site does not contain any designated cultural heritage sites
Coolknoohil, Inchee	Operational	2	4.3km	North West	Archaeological monitoring of this development revealed nothing of archaeological significance ²⁴
Coolknoohil, Kilgarvan	Operational	11	3.5km	North West	Archaeological monitoring of this development revealed nothing of archaeological significance ²⁵
Coomagearlahy Kilgarvan	Operational	15	5.91km	North West	Archaeological monitoring of this development revealed nothing of archaeological significance ²⁶
Cummeennabuddoge, Clydaghroe, Cloonkeen	Operational	2	9.55km	North East	The Excavations Database does not contain any entries for this development. A review of the EIS for the development revealed that its location does not contain any designated cultural heritage sites ²⁷
Curraglass	Permitted	7	8.62km	South West	An earlier wind farm development at this location was subject to archaeological monitoring and nothing of significance was uncovered ²⁸
Derragh	Operational	6	189m	South	A review of the Cultural Heritage Chapter in the EIS prepared for the for this development was carried out and revealed that it was assessed to have no predicted direct or significant impacts on the cultural heritage resource ²⁹ . The assessment also concluded that the visual impacts on archaeological sites within the surrounding landscape would be slight in significance.
Gortnakilla, Clonkeen Killarney	Permitted	4	6.76km	North West	A review of the cultural heritage assessment prepared for this location was carried out and revealed that it contained no known cultural heritage assets ³⁰
Grousemount, Barnastooka	Operational	24	4.50km	West	Archaeological investigations at this development revealed various features including the remains of upland hut sites (Licence 16E0127 ³¹). All of these were preserved <i>in situ</i> by avoidance apart from one example which was

²⁴ <https://excavations.ie/report/2013/Kerry/0024269/>

²⁵ <https://excavations.ie/report/2004/Kerry/0011861/>

²⁶ <https://excavations.ie/report/2005/Kerry/0013693/>

²⁷ <http://docstore.kerrycoco.ie/planningfiles/061680.pdf>

²⁸ <https://excavations.ie/report/2005/Cork/0013198/>

²⁹ <http://planning.corkcoco.ie/ePlan/AppFileRefDetails/156966/0>

³⁰ <http://docstore.kerrycoco.ie/planningfiles/061396.pdf>

³¹ <https://excavations.ie/report/2016/Kerry/0025172/>

Wind Farm	Status	No. of Turbines	Approximate Distance to the Site Boundary	Direction from the Development	Cultural Heritage Review
					preserved by record by an archaeological excavation which revealed it to be a cairn containing a Bronze Age 'short cist' (Licence 18E0324 ³²).
Inchamore	Pre-planning, design not finalised	6	4.7km	North-West	A review of the emerging layout of this proposed development revealed no recorded cultural heritage assets located within its proposed footprint
Inchee, Poulbatha & Foilgreana	Operational	6	5.44km	North West	Archaeological monitoring of the construction of this development revealed nothing of archaeological significance ³³
Inchincosh Kilgarvan	Operational	6	8.12km	North West	Archaeological monitoring of the construction of this development revealed nothing of archaeological significance ³⁴
Rosseightragh, Lettercannon, Kilgarvan	Operational	7	7.56km	North West	Archaeological monitoring of the construction of this development revealed nothing of archaeological significance ³⁵
Shehy More	Operational	11	8.31km	South	Archaeological monitoring of the construction of this development revealed nothing of archaeological significance ³⁶
Sillahertane Kilgarvan	Operational	10	3.89km	East	Archaeological monitoring of the construction of this development revealed nothing of archaeological significance ³⁷
Cummeennabuddoge	Pre-planning	17	8.03km	North East	A review of the location of this proposed development revealed that there are no recorded archaeological sites or designated architectural heritage structures within its boundary

Given the absence of significant direct impacts on the recorded cultural heritage resource arising from the Project, in combination with the results of the above review of wind farms, the proposed Project is not predicted to contribute to any significant direct cumulative impacts on the cultural heritage resource of the wider area.

It is noted that while the Gortyrhilly Project will result in slight to moderate indirect impacts on the settings of two wedge tombs (CO069-093---- and CO069-003---- respectively) located within the Redline Boundary, none of the reviewed developments are located within the environs of these monuments or directly impinge on their recorded alignments. Given

³² <https://excavations.ie/report/2018/Kerry/0027273/>

³³ <http://docstore.kerrycoco.ie/planningfiles/031188.pdf>

³⁴ <https://excavations.ie/report/2008/Kerry/0019629/>

³⁵ <https://excavations.ie/report/2008/Kerry/0019629/>

³⁶ <https://excavations.ie/report/2005/Cork/0013198/>

³⁷ <https://excavations.ie/report/2008/Kerry/0019648/>

the distances and locations of the reviewed developments from the Gortyrahilly Project, it is concluded that they will not act in combination to result in significant indirect cumulative impacts on the settings of these two monuments or any other recorded cultural heritage assets within the environs of the Project.

In addition, as described in **Section 14.4.2** a review of archaeological monument types with visual alignment attributes within the 10km of the Site revealed that the Project will not result in any predicted moderate or significant indirect negative impacts on their settings or alignments. The review of available cultural heritage impact assessments of the wind farm developments listed in **Table 14.13** revealed that none of these assessments predicted significant, indirect impacts on any monuments within the wider environs of the assessed wind farm locations. It is, therefore, concluded that the Project will not act in combination with the reviewed wind farm developments to result in likely significant indirect negative cumulative impacts on the settings or alignments of such ritual monuments within the wider landscape.

The locations of other developments, including residential and agricultural developments, within 3km of the Project were also reviewed on the planning enquiry system mapping (**Appendix 2.5**). These reviewed developments are typically small-scale in extent, including house and farmyard extensions, and no examples that will result in likely direct impacts, or indirect significant impacts, on any recorded archaeological sites or designated architectural heritage structures were noted. The review did not identify any examples that will combine with the Project to result in any likely cumulative impacts on the cultural heritage resource.

14.8 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, or close environs, of the various elements of the wind farm that will be subject to decommissioning. Any previously unrecorded archaeological remains identified during the site investigations detailed in **Section 14.6** 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 the majority of archaeological monuments located within the environs of the Site and the wider landscape (**Table 14.12**).

14.9 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 green field locations in proposed construction areas within the Site and a series of pre-construction and construction phase archaeological investigation 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 excavations.

The proposed Project 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 14.12**). The majority of these indirect impacts will be long term in duration and will be reversible during the decommissioning phase.

14.10 SUMMARY OF SIGNIFICANT EFFECTS

No predicted significant direct, indirect or cumulative effects on the Cultural Heritage resource arising from the proposed Project have been identified.

14.11 STATEMENT OF SIGNIFICANCE

An assessment has been made of the potential for significant effects of the Proposed Project 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 onsite archaeological works prior to and during the construction phase, the Proposed Development is not predicted to result in likely significant effects on the cultural heritage resource.