

14 CULTURAL HERITAGE

14.1 INTRODUCTION

This chapter of the EIAR provides an assessment of the likely significant direct and indirect effects of the Project (as defined in **Chapter 2: Project Description** and **Figure 1.2**) on the cultural heritage resource. The Project refers to all elements of the application for the construction of Moanmore Lower Wind Farm (**Chapter 2: Project Description**).

The assessment considers the potential effects during the following phases of the Development:

- Construction of the Project
- Operation of the Project
- Decommissioning of the Project

Where adverse effects on the cultural heritage are predicted, the chapter identifies appropriate mitigation strategies, where feasible, and then provides an assessment of residual effects.

The term 'Cultural Heritage' encompasses heritage constraints relevant to both the tangible resource (including archaeology and architectural heritage); and non-tangible resources (including historical associations, folklore, tradition, language and placenames). The recorded and potential cultural heritage resource within lands encompassing the Project and the surrounding landscape was reviewed in order to compile a comprehensive cultural heritage baseline for the assessment.

Common acronyms used throughout this EIAR can be found in **Appendix 1.4**. This chapter of the EIAR is supported by figures provided in **Volume III** and by the following appendix document which is provided in **Volume IV** of this EIAR:

- **Appendix 14.1 Photographic Record**

14.1.1 Statement of Authority

The chapter was prepared by Tony Cummins of John Cronin and Associates. Mr Cummins holds B.A. and M.A. degrees in archaeology (University College Cork (UCC) 1992/1994) and has thirty years industry experience. He was approved as licence eligible archaeologist by the National Monuments Service in 1998 and has extensive experience in the preparation of archaeological, architectural and cultural heritage assessments for renewable energy projects.

14.1.2 Assessment Structure

The desktop study and field surveys described in **Section 14.3** together with the other assessments will allow the planning authority to carry out an assessment of the Development from a cultural heritage perspective. In line with the revised EIA Directive as amended as well as the EPA (2022) *Guidelines on the information to be contained in Environmental Impact Assessment Reports* and the European Commission (2017) *Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report* 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
- Assessment of the significance of cultural heritage effects
- Assessment of cumulative cultural heritage effects

14.2 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

14.2.1 Definition of Study Area

There are no professional guidelines which define the extent of study areas required to assess the effects of wind farm developments on the cultural heritage resource. The extent of the study areas used for this assessment are, therefore, informed by the years of experience and professional judgement of the specialist and are considered suitable for the assessment of potential effects. The Study Area reviewed for the assessment comprised the area within the wind farm (hereafter 'the Site') and the surrounding lands extending for 2km in all directions as well as a 100m wide area centred on the Grid Connection Route and work areas required to facilitate the delivery of turbines to the Site. The extent of the 2km Study Area around the Site is suitable as it facilitated the compilation of a baseline context for the known cultural heritage resource within the Site and its surrounds which informed the assessment of potential direct and indirect effects of potential medium-high magnitude on the locations and settings of known cultural heritage constraints within this area. The extent of the 100m Study Area centred on the Grid Connection Route and Turbine Delivery Route work areas is suitable as it facilitated the compilation of a baseline context of known and potential cultural heritage constraints within the vicinity of their localised footprints and also allowed an appraisal of the potential presence of any sub-surface elements which may be susceptible to direct or indirect effects.

In addition, the wider landscape extending for 10km in all directions from the Site was reviewed to determine the presence of any nationally significant cultural heritage constraints with heightened visual sensitivities, such as National Monuments in State Care, including

sites subject to Preservation Orders, and World Heritage Sites, including tentative list sites. This also included a review of other cultural heritage constraints within the 10km of the Site that possess visual attributes that extend beyond their immediate settings, such as any archaeological monuments with potential ritual visual alignments across the wider landscape (e.g., stone circles, stone rows and megalithic tombs). The extent of this 10km area is based on professional judgement and is suitable to appraise if the wider landscape contains individual or groupings of such visually sensitive monuments that may be susceptible to potential high-to-medium magnitudes of indirect effects on their wider settings or alignments.

The assessment of the significance of visual effects is presented in **Chapter 11: Landscape and Visual Assessment** which was reviewed as part of this assessment.

14.2.2 Assessment Methodology

The methodology used for this assessment is based on Environmental Protection Agency (EPA 2022) *Guidelines on the information to be contained in Environmental Impact Assessment Reports (EIAR)*¹ and the European Commission (2017) *Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report*². The chapter has been compiled to comply with the requirements of Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment as amended by Directive 2014/52/EU, and the Planning and Development Act (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 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, historical associations, language, folklore and traditions form 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

¹ https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf

² <https://op.europa.eu/en/publication-detail/-/publication/2b399830-cb4b-11e7-a5d5-01aa75ed71a1>

Protection of the Archaeological Heritage (Revised) (ETS No. 143)' (the Valletta Convention) and the 'Convention for the Protection of the Architectural Heritage of Europe (ETS No. 121)' (Grenada Convention). Both of these conventions were ratified by the Republic of 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:

- Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023;
- National Monuments Acts (as amended);
- Heritage Council Act 1995 (as amended);
- National Cultural Institutions Act, 1997 (as amended)
- Planning and Development Act 2000 (as amended);
- Department of Arts, Heritage and Gaeltacht (2011) *Architectural Heritage Protection Guidelines for Planning Authorities*³;
- Department of Arts, Heritage, Gaeltacht and the Islands (1999) *Framework and Principles for the Protection of the Archaeological Heritage*⁴
- Office of the Public Regulator (2022) *A Guide to Architectural Heritage*⁵;
- Office of the Public Regulator (2021) *Archaeology in the Planning Process*⁶; and
- International Council on Monuments and Sites (2011) *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*⁷
- The Heritage Council (2013) *The Onshore Wind Farm Sector In Ireland Planning In Harmony With Heritage: Policy Research Paper*.⁸
- EirGrid (2015) *Cultural Heritage Guidelines for Electricity Transmission Projects*.⁹

14.2.3.1 Archaeological Heritage

The National Monuments Service is currently based in the Department of Housing, Local Government and Heritage (DHLGH) and is responsible for the preservation, protection and promotion of Ireland's archaeological heritage.

³ <https://www.gov.ie/en/publication/0937a-architectural-heritage-protection-guidelines-for-planning-authorities/>

⁴ <https://www.archaeology.ie/sites/default/files/media/publications/framework-and-principles-for-protection-of-archaeological-heritage.pdf>

⁵ <https://www.opr.ie/wp-content/uploads/2022/10/Planning-Leaflet-12-A-Guide-to-Architectural-Heritage.pdf>

⁶ <https://www.opr.ie/wp-content/uploads/2022/10/Planning-Leaflet-13-Archaeology-in-the-Planning-Process.pdf>

⁷ https://openarchive.icomos.org/id/eprint/266/1/Guidance_on_heritage_impact_assessments.pdf

⁸ <https://www.heritagecouncil.ie/content/files/Onshore-Wind-Farm-Sector-In-Ireland-Planning-in-Harmony-with-Heritage.pdf>

⁹ <https://cms.eirgrid.ie/sites/default/files/publications/Cultural-Heritage-Guidance-for-Electricity-Transmission-Projects.pdf>

The Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 was signed into law on October 13th, 2023¹⁰. The DHLGH circulated a guidance document in relation to this Act in November 2023¹¹ which provides an overview of its current status, and this is summarised hereafter. While the Act is now law most of its provisions will not enter into force until the Minister has made one or more "Commencement Orders". This means that section 7 of the Act (which provides for the repeal of the National Monuments Acts 1930 to 2014 and related legislation) has not entered into force. Accordingly, the National Monuments Acts 1930 to 2014 and other legislation which section 7 of the Act will, when it comes into force, repeal, remains fully in force as they stood on 13th October and will continue to do so for the time being. The Act contains transitional provisions which will, if necessary, enable certain aspects of the existing National Monuments Acts 1930 to 2014 to continue in operation notwithstanding their repeal post-commencement of the Act while successor provisions are being brought fully into operation. This includes provisions enabling the Record of Monuments and Places to continue to have effect pending the establishment of the new Register of Monuments (see section 48 of the Act).

The National Monuments Acts 1930 (as amended), the Heritage Acts 1995 (as amended) and relevant provisions of the National Cultural Institutions Act 1997 (as amended) therefore remain the primary means of ensuring the satisfactory protection of archaeological remains. There are a number of mechanisms under the National Monuments Acts 1930 (as amended) 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 Care or archaeological sites subject to Preservation Orders located within or adjacent to the Site, the Grid Connection route or Turbine Delivery Route work areas.

¹⁰ <https://www.irishstatutebook.ie/eli/2023/act/26/>

¹¹ <https://www.archaeology.ie/news/enactment-of-historic-and-archaeological-heritage-and-miscellaneous-provisions-act-2023-and>

The locations of one National Monument in State Care and one archaeological site subject to a Preservation Order located within 10km of the Site are detailed in **Section 14.3.7** of this chapter.

The Record of Monuments and Places (RMP) was established under Section 12(1) of the National Monuments (Amendment) Act, 1994 and was based on the earlier Sites and Monuments Record (SMR) and Register of Historic Monuments (RHM). 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 (HEV) which comprises an interactive map/search facility that provide access to current SMR records stored on its national database. The HEV 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 environs¹². All archaeological sites listed in the RMP receive statutory protection under the National Monuments (Amendment) Act, 1994 (as amended) and no works can be undertaken at their locations without providing two months advance notice to the National Monuments Service. The known archaeological sites located within the Study Areas for the Site, Grid Connection Route and Turbine Delivery Route work areas which collectively form the Project are detailed in **Section 14.3**. The potential for the presence of hitherto unrecorded, sub-surface archaeological features within proposed construction areas is also considered.

14.2.3.2 Architectural Heritage

The role of the National Built Heritage Service (NBHS), which is currently based in the DHLGH, includes ensuring that the architectural heritage resource is protected and carefully adapted where necessary, so that its character and special interest is maintained. The protection of the architectural heritage resource is provided for through a range of legal instruments that include the Heritage Act 1995 (as amended), 1999, and the Planning and Development Act 2000 (as amended). Section 2(1) of the Heritage Act 1995 (as amended), 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

¹² <https://www.archaeology.ie/sites/default/files/media/publications/archaeology-planning-process-pl13.pdf>

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 (as amended) requires Planning Authorities to maintain Records of Protected Structures (RPS) of buildings and other structures that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. All structures listed for protection in current Development plans, are designated Protected Structures and planning permission is required for any works to such structures that would affect their character. Protected Structures 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 Planning 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 RPS for County Clare is published in the *County Clare Development Plan 2023-2029*. The Planning and Development Act 2000 (as amended) also provides for the inclusion of objectives for preserving the character of places, areas, groups of structures or townscapes of special interest to be designated as Architectural Conservation Areas (ACA).

The National Inventory of Architectural Heritage (NIAH), including its Historic Gardens and Designed Landscapes Survey, comprises a non-statutory record of a representative sample of post AD 1700 architectural heritage structures and associated lands. While inclusion in the inventory does not provide statutory protection to listed structures or lands, it does provide an indication of their architectural heritage value and is intended to advise Local Authorities on the compilation of their Records of Protected Structures.

14.2.4 Clare County Development Plan 2023-2029

The *County Clare Development Plan 2023-2029* includes various policies/objectives in relation to the assessment and protection of the archaeological and architectural heritage resource within the county and these are detailed below. The Development and the assessment provided in this chapter are in compliance with the relevant policies/objectives:

CDP16.8: Sites, Features and Objects of Archaeological Interest

It is an objective of Clare County Council:

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

- c) In securing such preservation, the Council will have regard to the advice and recommendations of the Department of the Culture, Heritage and the Gaeltacht;*
- d) To have regard to the government publication 'Framework and Principles for the Protection of the Archaeological Heritage 1999' in relation to protecting sites, features and objects of archaeological interest;*
- e) To advocate for greater financial assistance for the maintenance and improvement of features of archaeological interests in County Clare.*

CDP16.9 Development Plan Objective: Newly Discovered Archaeological Sites

It is an objective of Clare County Council:

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

CDP16.10 Development Plan Objective: Zones of Archaeological Potential

It is an objective of Clare County Council:

To protect the Zones of Archaeological Potential located within both urban and rural areas as identified in the Record of Monuments and Places.

CDP16.11 Development Plan Objective: Archaeology and Infrastructure Schemes

It is an objective of Clare County Council:

To ensure that decisions relating to development (including infrastructure associated with broadband, telecommunications, renewable energy, major road/ rail infrastructure, flood relief schemes and other services) which may have implications for Recorded Archaeological Monuments/Sites, Zones of Archaeological Potential or undiscovered archaeology, are informed by an appropriate level of archaeological investigation undertaken by qualified persons and the case of flood relief schemes have regard to archaeological Guidelines for Flood Relief Schemes (DHLGH and OPW2022).

CDP16.13 Development Plan Objective: Underwater Archaeology

It is an objective of Clare County Council:

To protect and preserve the archaeological value of underwater archaeological sites in rivers, lakes, intertidal and sub-tidal environments.

The County Clare Development Plan 2023-2029 details the Clare County Council's objectives in relation to the protection of the architectural heritage resource within the county which include the following relevant objectives:

CDP16.1 Development Plan Objective: Architectural Heritage

It is an objective of Clare County Council:

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

CDP16.2 Development Plan Objective: Protected Structures

It is an objective of Clare County Council:

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

CDP16.3 Development Plan Objective: Industrial Heritage

It is an objective of Clare County Council:

To protect and preserve buildings and features of industrial heritage such as mills, bridges, lighthouses, harbours, amongst others. Proposals for refurbishment works to, or redevelopment/ conversion of, these sites will be subject to a full architectural and archaeological assessment together with an ecological assessment with respect to the presence of protected species.

CDP16.4 Development Plan Objective: Vernacular Heritage

It is an objective of Clare County Council:

To seek the retention, appreciation and appropriate revitalisation of the vernacular heritage of County Clare, in both towns and rural areas, by discouraging the replacement of good quality vernacular buildings with modern structures and by protecting vernacular buildings where they contribute to the character of an area or town and/or where they are rare examples of a structure type.

CDP16.5 Development Plan Objective: Architectural Conservation Areas

It is an objective of Clare County Council:

To ensure that new developments within or adjacent to an ACA respect the context of the area and contribute positively to the ACA in terms of design, scale, setting and material finishes.

The *County Clare Development Plan 2023-2029* also contains objectives in relation to the cultural heritage of the county and these relate to the Art, Heritage, Cultural and Creative Sectors (Plan ref. CDP16.14), Museums, Heritage and Cultural Centres (Plan ref. CDP16.15), Genealogy (Plan ref. CDP16.16), Linguistic Heritage (Plan ref. CDP16.17) and Folklore and Oral Cultural Heritage (Plan ref. CDP16.18).

14.2.5 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 constraints within the Study Areas for the Site, Grid Connection Route and Turbine Delivery Route work areas which collectively form the Project. The principal sources reviewed for the assessment of the recorded archaeological resource were the current SMR database, as published on the online HEV resource, and the RMP for County Clare. The current County Clare RPS and the NIAH were consulted for assessing the locations of designated elements of the architectural heritage resource.

Other sources consulted as part of the desktop study included the following:

*National Monuments Service's Historical Environment Viewer*¹³: There is currently no published archaeological inventory for County Clare but the online Historic Environment Viewer, which collates current SMR datasets, does present summary descriptions of certain recorded archaeological sites within the county. A review of this online resource was, therefore, carried out to ascertain if it contains any descriptions for archaeological sites within the environs of the Development. Where no inventory descriptions were available for archaeological sites located surrounding third-party lands on the Historic Environment Viewer, a review of historic mapping and modern aerial/satellite images of their locations was carried out to appraise their condition.

*Heritage Council of Ireland Map Viewer*¹⁴: This online mapping resource collates various cultural heritage datasets provided by, among others, the National Monuments Service, the National Museum of Ireland, Local Authorities and the Office of Public Works. This resource also includes datasets on surveys of County Clare Bridges and features of Industrial Heritage which were commissioned by Clare County Council and includes examples listed as Protected Structures as well as additional structures of architectural, industrial, social or

¹³ www.archaeology.ie accessed in April 2025

¹⁴ www.heritagemaps.ie accessed in April 2025

technical merit. The locations of structures listed in these surveys were reviewed as part of the assessment.

Topographical Files of the National Museum of Ireland: These files comprise paper and digital records of known information on Irish artefacts, including their discovery locations. The file archive is stored in the museum premises in Kildare Street, Dublin and was inspected as part of the assessment.

Database of Irish Excavation Reports: This online database contains summary accounts of archaeological site investigations carried out in Ireland (North and South) from 1970 to present¹⁵.

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 online historic cartographic sources was undertaken, and these included the 17th-century Down Survey and various maps published by the Ordnance Survey from the mid-19th century onward. These sources can indicate the presence of potential unrecorded features of cultural heritage interest that no longer have any surface expression or are not subject to statutory protection. Relevant extracts from the reviewed cartographic sources are provided in **Volume III**.

Aerial, Satellite and LiDAR imagery: A review of available online imagery (Tailte Éireann, Google Earth, Apple and Bing) of the Site and its environs was undertaken in order to review the extent of modern interventions and to ascertain if any traces of unrecorded archaeological sites were visible within proposed development areas. This included a review of LiDAR datasets commissioned by the Developer.

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 World Heritage Sites and Tentative List: There are currently two designated World Heritage sites in Ireland (Brú na Bóinne, Co. Meath and Sceilg Mhichíl, Co. Kerry). A

¹⁵ www.excavations.ie accessed in April 2025

number of other significant examples have been included in a Tentative List (2022) nominated by Ireland for consideration as World Heritage sites and these comprise the Passage Tomb Landscape of County Sligo, the Transatlantic Cable Ensemble, County Kerry and the Royal Sites of Ireland (Dún Ailinne County Kildare; Hill of Uisneach, County Westmeath; Rock of Cashel, County Tipperary; Rathcroghan, County Roscommon and Tara, County Meath)¹⁶. None of these sites are located in County Clare or are within the environs of its boundary.

14.2.6 Field Survey

Proposed construction locations within the Site were subjected to field walking surveys and inspections of the Grid Connection Route and work areas along the Turbine Delivery Route where ground works are required were also carried out. These field surveys were carried out in May 2022, July 2023 and September 2024. While there are no relevant guidelines in relation to cultural heritage field surveys for wind farm developments, the field surveys carried out as part of the assessment were informed by the Eirgrid (2015) *Cultural Heritage Guidelines for Electricity Transmission Projects*.¹⁷ In the professional judgement of the specialist, the duration, frequency and method of the field surveys carried out as part of this assessment were suitable to the existing environment at the location of the Development. The surveyed lands were assessed in terms of historic landscape, existing land use, vegetation cover and the potential for the presence and survival of unrecorded archaeological and undesignated architectural heritage sites or features. The results of the field surveys are described within the chapter (**Section 14.3.14**) and annotated extracts from the photographic record are provided in **Appendix 14.1**. The cultural heritage constraints within the sections of the Study Area outside the boundary of the Development are located within private properties which were not accessible during field surveys. These constraints were assessed based on a combination of reviews of their classifications and conditions of preservation as described in available published inventory descriptions as well as reviews of their locations on consulted historic mapping and modern aerial/satellite imagery.

14.2.7 Consultation

The scope for this assessment has been informed by consultation with statutory consultees, bodies with environmental responsibility and other interested parties. Consultation responses relating to cultural heritage are detailed below.

¹⁶ [Ministers announce new World Heritage Tentative List for Ireland | Tentative List | World Heritage | World Heritage Ireland](#)

¹⁷ <https://cms.eirgrid.ie/sites/default/files/publications/Cultural-Heritage-Guidance-for-Electricity-Transmission-Projects.pdf>

Table 14.1: Scoping Responses and Consultation

Consultee	Summary of Consultee Response in relation to Cultural Heritage
Irish peatland conservation council	National Monuments Peatlands in Ireland hold a great deal of cultural and ancestral history, preserved in the anaerobic conditions. Ireland has international obligations under the European Convention on the Protection of the Archaeological Heritage, ratified by Ireland in 1997. Article 1 of this convention states that Ireland must “protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study”. There needs to be scientific supervision from an independent body that will evaluate the proposed wind farm area for its archaeological importance. The IPCC could not support the development before a full archaeological survey is undertaken and the necessary precautions and mitigations are in place to ensure that no loss of cultural archaeological information occurs as course of the proposed development if permitted. <u>Response:</u> provided in Section 14.3.14 and 14.5

14.2.8 Assessment of Effects Methodology

The following section provides a summary of the criteria used to assess effects in order to outline the methodology specifically applied to the cultural heritage resource which complies with relevant guidelines published by the Environment Protection Agency (EPA 2022) and International Council on Monuments and Sites (ICOMOS 2011) (see Section 14.2.2).

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 through remediation or restoration

Quality of Effect

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

- 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.
- Adverse 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 effect.

- Direct Effect – 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 Effect – where a cultural heritage site or its setting in the landscape is located within the environs of the EIA Development.
- Cumulative Effect - The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.
- 'Do-nothing Effects' - The cultural heritage environment as it would be in the future should the Project not be carried out.
- 'Worst-case' Effects - The effects arising from a Project in the case where mitigation measures substantially fail.
- Indeterminable Effects - When the full consequences of a change in the environment cannot be described.
- Irreversible Effects - When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
- Residual Effects - The degree of environmental change that will occur after the proposed mitigation measures have taken effect.

Magnitude of Effect

This is based on the degree of change, incorporating any mitigation measures, on a cultural heritage asset and can be adverse 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 (ICOMOS) *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*¹⁸ (**Table 14.2**).

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 on 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 14.3** also have regard to the ICOMOS *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*. 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 14.4**) and is assigned based on the combined evaluation of effect magnitude and asset significance (**Table 14.5**). The descriptions of the significance effects provided in **Table 14.4** are sourced from the EPA EIAR guidelines (2022) which provides general descriptions of these varying levels of significance of effects.

Table 14.2: Magnitude of Effect Assessment Indicators for Cultural Heritage Constraints

Indicative factors for assessing the Magnitude of Effect on Cultural Heritage Constraints (per ICOMOS 2011)	
High	Most or all key archaeological or architectural materials affected such that the resource is totally altered. Comprehensive changes to setting.

¹⁸ 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 Effect on Cultural Heritage Constraints (per ICOMOS 2011)	
	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. Major changes to area that affect Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.
Medium	Changes to many key archaeological or historic building materials/elements such that the resource is clearly/significantly modified. Considerable changes to setting that affect the character an asset. Changes to the setting of a historic building, such that it is significantly modified. Change to many key historic landscape elements, visual change to many key aspects of the historic landscape, considerable changes to use or access. Considerable changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.
Low	Changes to key archaeological materials/historic building elements, such that the resource is slightly altered/slightly different. Slight changes to setting of an archaeological monument. Change to setting of a historic building, such that it is noticeably changed. Change to few key historic landscape elements, parcels or components; slight visual changes to few key aspects of historic landscape; slight changes to use or access; resulting in limited change to historic landscape character. Changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.
Negligible	Very minor changes to key archaeological materials or setting. Slight changes to historic building elements or setting that hardly affect it. Very minor changes to key historic landscape elements, parcels or components; virtually unchanged visual effects; very slight changes to use or access; resulting in very small change to historic landscape character. Very minor changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.

Table 14.3: Value Indicators for Cultural Heritage Constraints

Indicative factors for assessing Value of Cultural Heritage Assets (after ICOMOS 2011)	
Very High	World Heritage Sites (including Tentative List properties) Sites, buildings or landscapes of acknowledged international importance Intangible associations with individuals or innovations of global significance
High	Nationally designated sites, buildings and landscapes of significant quality, rarity, preservation and importance

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

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

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

Table 14.5: Significance of Effects (per EPA EIAR Guidelines 2022)

Magnitude of Effect	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					

14.2.9 Limitations

No limitations or difficulties relating to factors that may affect the accessibility or reliability of relevant baseline datasets were encountered during the compilation of this assessment. As noted in **Section 14.2.6**, the cultural heritage constraints outside the boundary of the Development are located within private properties which were not accessible during field surveys. These constraints were assessed based on a combination of reviews of their classifications and conditions of preservation as described in available published inventory descriptions as well as reviews of their locations on consulted historic mapping and modern aerial/satellite imagery.

14.3 BASELINE DESCRIPTION

14.3.1 Introduction

The following sections present summary details of the main periods within the Irish archaeological record with references to known cultural heritage constraints based on current state and local authority datasets and other sources reviewed during the desktop study (see **Section 14.2.5**). The dating framework used for archaeological periods is based on the *Guidelines for Authors of Reports on Archaeological Excavations* published by the National Monuments Service.¹⁹

¹⁹ <https://www.archaeology.ie/sites/default/files/media/publications/excavation-reports-guidelines-for-authors.pdf>

14.3.2 The Site: Archaeological and Historical Background

Until the recent identification of Palaeolithic human butchery marks on a bear bone recovered from a cave site near Ennis in County Clare, the earliest recorded evidence for human activity in Ireland dated to the Mesolithic period (7000–4000 BC) when groups of hunter-gatherers lived on the heavily wooded island. The archaeological record indicates that these mobile groups tended to favour coastal, lake and river shore locations which provided a transport resource and also provided elements of their varied diet. They did not construct any settlements or monuments that have left any above ground traces although their presence in an area can often be identified by scatters of worked flints in ploughed fields or sub-surface traces of their settlements revealed during earth-moving undertaken as part of development works. The Neolithic period (4000-2400 BC) began with the arrival of agriculture and its establishment as the principal form of economic subsistence, which resulted in more permanent settlement patterns. As a consequence of the more settled nature of agrarian life, new site-types, such as substantial rectangular timber houses, field systems and various types of megalithic tombs, begin to appear in the archaeological record. There are no known archaeological sites dating to the Mesolithic or Neolithic periods located within the 2km Study Area around the Site. In addition, there are no recorded Neolithic period monuments with potential visual alignments, such as megalithic tombs dating to this period, located within the 10km study area surrounding 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. Based on the information currently available, a *fulacht fia* (CL057-071----) in Carnaun townland is the only recorded archaeological site within the 2km Study Area that is of probable late prehistoric date as excavations of these site types typically produce Bronze Age dates. This archaeological site is located 1.6km to the south of the Site.

A review of the lands extending for 10km in all directions from the Site was carried out to ascertain if they contain any prehistoric archaeological monuments, with potential ritual visual alignments across the wider landscape. The reviewed monument types included all classes of megalithic monuments, stone circles, stone rows and standing stone pairs. Only one example was identified within the 10km of the Site, and this comprises a megalithic structure (CL056-040002-) located within the south-west outskirts of Kilkee town at a distance of c.9.9km to the west of the Site (**Figure 14.3**). There is no inventory description available for this monument and it also is not included in a published survey of County Clare megalithic tombs.²⁰ The Archaeological Survey of Ireland apply the description 'megalithic structure' to a construction of large stones of 'megalithic' proportions which, though comparable in certain respects with megalithic tombs, cannot be classified as any other known archaeological monument type on present evidence.

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 and their stone-built equivalents known as cashels. Ringforts are the most common early medieval sites within the Irish landscape and comprise circular enclosures delimited by earthen banks formed of material thrown up from a concentric external ditch. The ubiquity of these enclosures within the Irish landscape is attested to by the fact that their original Gaelic names (rath and lios) still form some of the most common place-name elements in the country. Archaeological excavations have demonstrated that the majority comprised enclosed farmsteads containing the foundations of domestic and agricultural buildings. Ringforts may form the visible element of wider farmlands (known as airliise) that may contain unrecorded, sub-surface archaeological features such as associated field systems, stockades, barns, mills and drying kilns.

There are two recorded ringforts in the 2km Study Area and one of these (CL057-037----) is located within the east end of the Site. There is currently no inventory description of this ringfort published on the National Monument Service's HEV, but an inspection of its location was carried out as part of this assessment (see **Section 14.3.14**). The assessment also included reviews of aerial/satellite/LiDAR images and historical mapping of the location of

²⁰ De Valera, R. and O' Nuallain, S. 1961 *Survey of the Megalithic Tombs of Ireland, Volume 1: County Clare*. The Stationary Office. Dublin.

the ringfort (see **Sections 14.3.5** and **14.3.10**). The second ringfort within the Study Area (CL057-024----) is located in the townland of Moanmore South and is c.1,175m from the nearest turbine within the Site (T1). A review of aerial images of its location revealed that sections of the enclosing bank remain extant although its northern end appears to have been incorporated into a field boundary.

There are also four enclosures located within the Study Area and while sites assigned this classification can theoretically date from any period from prehistory onwards, many may form the remains of unclassified ringforts, but this cannot be conclusively proved without recourse to archaeological excavation. One of these enclosures (CL057-023----) is located immediately outside the north end of the Site. This enclosure site has been levelled and its southern end appears to have been removed by the excavation of a large drainage channel. No visible surface traces of the enclosure were noted during an inspection of the section of the field within the Site immediately to the south of its location (see **Section 14.3.14**). In addition, reviews of aerial/satellite/LiDAR images of the location of the enclosure revealed no evident surviving traces of its southern end within the Site (see **Section 14.3.5**).

The Study Area also contains a burial ground (CL057-039001-) with an associated enclosure (CL057-039002-) in Breaghva townland which are located at a distance of 1.2km to the east of the Site. The burial ground is known locally as Kilkeevan or Breaffa graveyard and is now occupied by late 19th and 20th century grave headstones²¹. The burial ground has been associated with an early ecclesiastical site dedicated to St. Caomhan, but no standing remains of an early medieval church or associated features are present at the location.²²

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

²¹https://www.clarelibrary.ie/eolas/coclare/genealogy/don_tran/graves/kilkeevan_graveyard_kilrush_transcriptions.htm

²² Frost, J. 1893 *The History and Topography of the County of Clare* available at https://www.clarelibrary.ie/eolas/coclare/history/frost/chap6_kilrush_parish.htm

within their own landholdings as centres of territorial control. There are no recorded late or high medieval archaeological sites located within the Study Area.

The centuries following AD1550 comprise the post-medieval period which continued into the middle of the 19th century and the period thereafter is often described as early modern. The early phase of the post-medieval period was a turbulent time in Ireland and saw a period of wars between the 1560s and 1603 with further conflict during the mid-17th century Cromwellian Wars which resulted in extensive dispossession of forfeited Gaelic lands. An agricultural boom in the late 18th and early 19th centuries saw a rise in prices for farm produce which resulted in landlords investing in extensive land improvement works within their holdings to increase productivity. This included widespread land drainage works and the enclosure of open lands into field systems that survive to the present-day. The post-medieval period also saw the development of high and low status stone houses throughout the Irish countryside and farm settlements at this time typically consisted of single-storey thatched cottages with associated outbuildings 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 in the middle of the 19th century which saw the depopulation of many areas.

There are no recorded post-medieval archaeological sites located within the Study Area.

Samuel Lewis's *The Topographical Dictionary of Ireland* (1837)²³ presents high-level descriptions of Irish parishes during the early decades of the 19th century which often provide 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 Site is located within the civil parish of Kilrush and Lewis's description of this area does not contain references to any of the townlands located within or adjacent to the Site. A review of the Ordnance Survey Letters²⁴ compiled during the 1830s revealed that their description of Kilrush parish contains no references to any potential unrecorded archaeological sites within the townlands extending into the Site. Further details on the character of the Site and its environs during the 19th century are presented in the review of historical maps (**Section 14.4.10**).

²³ <https://www.libraryireland.com/topog/>

²⁴ https://www.clarelibrary.ie/eolas/coclare/history/osl/kilrush_parish.htm

14.3.3 Record of Monuments and Places

As detailed in **Section 14.4.2**, there are eleven recorded archaeological sites located within the 2km Study Area and one of these has been classified as a 'redundant record' by the Archaeological Survey of Ireland (**Table 14.6** and **Figure 14.1**). None of these monuments are designated as National Monuments in State Ownership or Guardianship or have been assigned Preservation Orders but they are protected through their inclusion in the RMP. **Table 14.6**, below, identifies each of the recorded archaeological sites within the 2km Study Area and includes a summary of their condition which is based on reviews of available Archaeological Survey of Ireland inventory descriptions, historic Ordnance Survey (OS) maps and modern aerial/satellite imagery published online by Tailte Éireann, Google Earth, Apple and Bing.

Table 14.6: Recorded Archaeological Monuments within 2km of the Site

Monument No.	Type	Condition (based on reviews of historic OS maps and aerial imagery)	Townland	Approx. distance from nearest development area in Site
CL057-023----	Enclosure	Northern half of circular enclosure is depicted on 25-inch OS map (1898). The detail on that map indicates that the southern end of the enclosure was removed by a large drainage ditch. Sub-surface traces of north end of levelled enclosure are discernible as a soil mark in a field outside the north end of the Site.	Moanmore Lower	90m north of site access track to T1 and 215m north-east of T1
CL057-024----	Ringfort	Shown on historic OS maps and extant above ground remains are visible on modern aerial images.	Moanmore South	875m north-east of site access track to T1 and 1,175m north-east of T1
CL057-037----	Ringfort	Shown on historic OS maps which all depict a quarry directly adjacent to its south-east quadrant. This extant ringfort is located within the Site and is described in Section 14.3.14 of this chapter.	Moanmore Lower	450m south-east of T1 and 40m north-west of substation.
CL057-038----	Enclosure	Shown on historic OS maps. Review of modern aerial images indicates that the enclosure has been mostly levelled.	Breaghva	1,100m east of site access track to T1 and 1,600m east of T1
CL057-059----	Enclosure	Not indicated on historic OS maps and no surface traces were noted on modern aerial images.	Carnaun	1,530m south of T3
CL057-072----	Redundant record	The Archaeological Survey of Ireland records that this refers to a quern stone located in a farmyard and that this not an archaeological site.	Breaghva	1,660m east of T3
CL067-004----	Enclosure	Shown as a small circular enclosure on the 1842 OS map. No surface traces are visible on aerial images.	Carnaun	1,690m south of T3
CL067-071----	Fulacht fia	This site is not indicated on historic OS maps and no traces of surface remains were noted on modern aerial images.	Carnaun	1,750m south of T3
CL057-039001-	Burial Ground	Shown on historical OS maps. Modern graveyard shown on modern aerial images	Breaghva	2,160m east of T3
CL057-039002-	Enclosure	Shown on historical OS maps. Modern graveyard shown on modern aerial images	Breaghva	2,160m east of T3

Monument No.	Type	Condition (based on reviews of historic OS maps and aerial imagery)	Townland	Approx. distance from nearest development area in Site
CL057-040----	Ringfort	Shown on historic OS maps and extant above ground remains are visible on modern aerial images.	Durha	1.820m south-west of T2

14.3.4 Topographical Files of the National Museum of Ireland

The National Museum of Ireland (NMI) Topographical File archive, which is stored in the museum premises at Kildare Street, Dublin was inspected as part of the assessment. The inspection confirmed that the archive contains no files recording the discovery of archaeological objects within the townlands (Moanmore Lower and Moanmore South) extending into the Site. The files do contain a record of the discovery of a socketed bronze axehead (NMI ref. 1931:11) within Carnaun townland, which is located outside the south end of the Site.

14.3.5 Aerial/Satellite and LiDAR Imagery

A review of online aerial and satellite images published online by Tailte Éireann, Google Earth, Apple, and Bing, which were captured between 1995-2023, did not reveal the presence of any potential unrecorded archaeological sites or other features of potential cultural heritage within the Site. The ringfort (CL057-037----) within the Site is clearly visible on all of the reviewed images as is the disused quarry that directly abuts its south-east quadrant, which is also depicted on historic Ordnance Survey maps (see Section 14.3.10). An existing stone-surfaced farm track that extends in the area c.25m to the south of the ringfort is not present on the historic Ordnance Survey maps but is visible on all the reviewed aerial/satellite images, indicating that it was constructed during the 20th century. The northern end of a levelled archaeological enclosure (CL057-023----), which is in the south end of a field located immediately outside the north end of the Site, is discernible as a semi-circular soil-mark on aerial/satellite images. A large, east-west drainage channel appears to have removed the south end of the enclosure, and no traces of this site were noted within the field to the south which is located within the Site boundary.

A review of LiDAR imagery of the Site commissioned by the Developer was also carried out and no potential unrecorded archaeological sites were noted at the locations of the turbines or associated infrastructure within the Site. The LiDAR review of the spoil retention area within the Site, which is within a field on the opposite (east) side of the public road from the main area of the Site, did identify eight irregularly spaced potential archaeological sites (A-H) located close to the south boundary of the field (**Table 14.7** and **Figure 14.8**). These potential archaeological sites comprise small circular features (5m-9m in diameter) which are reminiscent of prehistoric burial/ritual sites such as barrows or ring-ditches that may potentially date to the Bronze/Iron Ages (c.2400 BC - AD 400). The boundary of the spoil retention area was amended to exclude the area of the field containing these potential archaeological sites. The amended boundary extends at distances of 15m-20m from their locations and they will remain *in situ* within a fenced off area located outside the Site

boundary. The LiDAR review did not reveal any potential unrecorded archaeological sites within the remainder of this field. A number of linear land drains and areas of differential vegetation growth are visible while an area of ground disturbance in the section of the field to the west of the potential archaeological sites is associated with modern agricultural activity which includes areas of vehicle wheel ruts and turning points.

The surviving northern end of a levelled enclosure site (CL057-023----) are visible immediately outside the north end of the Site on the imagery but no traces of the south end of the enclosure were noted extending into the Site and it appears to have been removed by a large drainage channel that extends through its location. The enclosing element of a ringfort (CL057-037----) located within the Site is also visible on the imagery and no traces of any potential unrecorded associated external features were noted (**Figure 14.7**).

Table 14.7: Potential archaeological sites located outside spoil retention area

Site Ref.	Approx. Diameter	ITM E	ITM N
Site A	9m	498533	658086
Site B	6m	498537	658102
Site C	8m	498579	658095
Site D	5m	498605	658100
Site E	7m	498619	658100
Site F	8m	498643	658110
Site G	6m	498521	658102
Site H	5m	498523	658093

Further details on the review of the aerial/satellite and LiDAR imagery in relation to the specific locations of various elements of the Development within the Site are presented in **Table 14.9**.

14.3.6 County Clare Development Plan 2023-2029

The Record of Protected Structures (RPS) published in the *Clare County Development Plan 2023-2029* does not include any structures located within the Site and it is not located within, or in the close environs of, an Architectural Conservation Area. There is one Protected Structure located within the surrounding 2km Study Area and this comprises Moyasta Station (RPS 324), which is located c.1.3km to the north-west of the Site (**Figure 14.1**). This station formed part of the West Clare railway line which was constructed in the 1890s and continued in operation until 1961. The route of this railway line does not extend within the

environs of the Site. The former railway station had been in use as a West Clare Railway heritage museum and is described in the RPS as follows:

Detached four-bay single-storey railway station, built c.1892, on an L-shaped plan with single-bay single storey return to rear; renovated and extended to rear, c.1990, comprising single-bay single-storey flat-roofed return to accommodate use as heritage centre. Detached single-bay single-storey rubble stone-built outbuilding with cut-stone voussoirs and keystone.

14.3.7 National Monuments in State Care

A review of the landscape extending for 10km in all directions from the Site revealed that there is one National Monument in State Care located within this area. This is a monastic site on Scattery Island (National Monument in State Ownership no.10), which is located c.5.15km to the south of the Site (**Figure 14.3**). This location is also subject to a Preservation Order (PO no. 1/1971) made under the National Monuments Act 1930 (as amended). The origins of the monastic site on the island, which was known as Inis Cathaigh, are associated with the 6th century St Senan and contains several extant ecclesiastical structures including a round tower, cathedral and a number of medieval churches.²⁵ The island and its visitor centre are accessible to the public during summer months via a ferry service operating from Kilrush and guided tours of the remains of the monastic site are provided by the Office of Public Works.²⁶

There is an additional archaeological monument subject to a Preservation Order (PO7/1978) located within 10km of the Site and this comprises a ringfort (CL056-044----) which contains an internal sub-surface souterrain (CL056-044002-) (**Figure 14.3**). This monument, which is not listed as a National Monument in State Ownership or Guardianship, is located in the outskirts of Kilkee town at a distance of c.8.36km to the west of the Site. The ringfort and souterrain are located within private farmland and a review of aerial/satellite images of their location did not reveal any routes that facilitate public access to their location.

14.3.8 National Inventory of Architectural Heritage

The National Inventory of Architectural Heritage does not list any structures or historic gardens within 2km of the Site.

²⁵ <https://www.clarelibrary.ie/eolas/coclare/places/scattery.htm>

²⁶ <https://heritageireland.ie/places-to-visit/scattery-island-visitor-centre/>

14.3.9 Previous Archaeological Work in the Wider Area: Excavations Database

A review of the Database of Irish Excavation Reports, which contains summary accounts of licensed archaeological investigations carried out in Ireland from 1969 to present, revealed that two licensed archaeological site investigations have taken place within the Study Area. There were no finds or features of archaeological significance identified at either location and the following entries for these two site investigations are included in the database:

Licence number: 15E0107

Townlands: Tullabrack and Moanmore South.

Author: Laurence Dunne.

Testing excavations were undertaken at Tullabrack and Moanmore South townlands c. 5km north of Kilrush, Co. Clare, with regard to a planning application to construct a proposed wind farm. A series of eighteen test trenches (T1-18) were excavated with negative results.

Licence number: 04E1051

Townland: Moanmore South

Author: Ed Danaher

Archaeological work was carried out in association with a proposed wind farm at Moanmore South, Kilrush, Co. Clare. Monitoring of the groundworks associated with the construction of seven wind turbines and the laying of cables connecting these turbines to the nearby ESB substation was carried out during the topsoil-stripping phase of this development. No archaeological features or deposits were recovered during these works.

14.3.10 Historic Maps

The Down Survey was compiled in the mid-17th century in order to establish records on lands to be forfeited to members of the Cromwellian army as payment for service. The survey included map sets which typically only depict larger settlements as well as other notable built features such as castles, churches, roads and bridges. A review of the Down Survey mapping of this area of County Clare revealed that Moanmore is depicted with no notable structures shown at its location. The first edition 6-inch Ordnance Survey (OS) map (published 1842) shows the lands within the western end of the Site as part of a large open area of vacant bogland while sections of the eastern area are sub-divided into irregular enclosed fields (**Figure 14.4**). There were no buildings or other features of potential cultural heritage significance depicted within the vicinity of the locations of the turbines, hardstands and associated infrastructure other than a recorded ringfort (CL057-037----) located within the east end of the site. The ringfort is labelled 'Rathooan' on the map and an unlabelled quarry feature is shown directly abutting its south-east side. An existing farm track to the

south of the ringfort, which will be utilised as a Site Access Track as part of the Development, is not present on this map. This track extends through the extent of the quarry, which has been partially infilled, as depicted on this map. In addition, a recorded archaeological enclosure (CL057-023----), which is located within the south end of a field immediately outside the north end of the Site boundary, is also not depicted on this map.

The detail on the 25-inch OS map (published 1898) shows some minor changes in the layout of the field boundaries that are shown within the east end of Site on the 1842 OS map, and it also depicts two small buildings within a reclaimed area on the east side of the open bogland in the western end of the Site (**Figure 14.5**). These unnamed small buildings, which likely comprised late 19th century farm buildings, are no longer extant and no proposed Development works are proposed at their former locations. The ringfort (CL057-037----) within the Site is indicated at the same location and the quarried area on its south-east side is labelled as a 'Gravel Pit (Disused)', indicating that extraction works at the location had halted towards the end of the 19th century. The existing farm track to the south of the ringfort is also not shown on this map. The northern half of the archaeological enclosure (CL057-023----) located immediately outside the north end of the Site boundary is shown as a hachured semi-circular area (c.35m diameter) on this map. The map shows no traces of the south end of the enclosure extending into the field to the south which is located within the Site. An existing east-west aligned, large drainage channel is shown immediately adjacent to the south end of the hachured area and its excavation appears to have removed the southern end of the enclosure site.

The detail on the 2nd edition OS map (published 1922) indicates that the layout of the Site remained relatively unchanged during the early part of the 20th century (**Figure 14.6**). The location of the two small farm buildings depicted within the west end of the Site on the 25-inch map is shown as a vacant plot, indicating that these structures had been demolished by this time. The map indicates that turf-cutting or drainage works were ongoing within the bogland area in the west end of the Site, including within the environs of T2. The existing farm track to the south of ringfort CL057-037---- is not present on this map.

14.3.11 Undesignated Cultural Heritage Assets

While encompassing the protected archaeological and architectural heritage resources, cultural heritage also includes various undesignated assets such as demesne landscapes and vernacular structures as well as intangible assets such as folklore, placenames and historical events and associations. The Site is located within the townlands of Moanmore Lower and Moanmore South and adjoins the townland of Carnaun to the south. A review of

the National Folklore Collection UCD Digitisation Project²⁷ revealed that it does not contain any entries in relation to traditions or folklore associated with these townlands.

Townlands are the smallest unit of land division in the Irish landscape, and many may preserve early Gaelic territorial boundaries that pre-date the Anglo-Norman conquest. The boundaries and names of Irish townlands were recorded and standardised by the Ordnance Survey (OS) during the 19th century and their names typically entailed anglicisations of their original Irish names. The Irish origins of townland names often refer to natural topographical features, past landowners, farming practices, etc. but some name elements may also give an indication of the presence of archaeological sites within the townland, e.g., 'lios', 'rath' or 'dun' typically indicate the presence of a ringfort or cashel while 'temple', 'saggart', 'termon' or 'kill' may record associations with an ecclesiastical site. In addition, the boundaries between townlands can mark historic territorial divisions and often comprise features such as field boundaries, rivers, and roads. There is one townland boundary extending through the Site and this comprises a public road which forms the division between Moanmore Lower and Moanmore South.

The Irish origins of the townland names presented in **Table 14.8** have been sourced from the Placenames Database of Ireland²⁸ and *The History and Topography of the County of Clare* by James Frost (1893) which is published on the County Clare Library website.²⁹

Table 14.8: Translation of Townland Names

Townland	Irish Origin	Translation
Moanmore (Lower & South)	An Mhóin Mhór	Large bogland
Carnaun	An Carnán	A small heap of stones.

14.3.12 Grid Connection Route

There are no recorded archaeological sites or designated architectural heritage structures located within a 100m wide corridor centred on the Grid Connection Route to the existing Tullabrack 110kV substation. The route extends along public roads between the two locations and a review of historic OS maps revealed that these roads are shown on the first edition 6-inch OS map (1842). No potential undesignated features of cultural heritage

²⁷ <https://www.duchas.ie/en>

²⁸ <https://www.logainm.ie/en/7051>

²⁹ https://www.clarelibrary.ie/eolas/coclare/history/frost/appendix7_clare_local_names.htm

interest, such as road bridges, are depicted within the road corridor. A cultural heritage assessment of an alternative route to Moneypoint is included in **Appendix 3.1** of the EIAR.

14.3.13 Turbine Delivery Route Work Areas

The delivery of turbines along the section of public roads from Tullabrack townland to the Site entrance will require widening and vegetation strimming works along existing road verges. A vertical realignment of a section of the L6132 road in Gower East townland will also be required. There are no recorded archaeological sites or designated architectural heritage structures located within a 100m wide corridor centred on these sections of public roads. The public roads containing areas requiring works are present on the 1st edition 6-inch OS map (1842) and no potential undesignated features of cultural heritage interest, such as road bridges, are depicted within the road corridors.

The location of the Blade Transfer Area in Tullabrack East townland is within a coniferous forestry plantation on the south side of the L6132 road. There are no recorded cultural heritage constraints located within the Blade Transfer Area or within 100m of its boundary. A review of 1842 and 1898 OS maps revealed that the lands within the boundary of this area were occupied by a vacant area of marginal land. Forestry cultivation works are visible at the location on a 2018 Tailte Éireann aerial image and a review of LiDAR imagery shows extensive ground disturbance associated with tree planting works.

14.3.14 Field Work

Field surveys of the Development locations were carried out in May 2022, July 2023 and September 2024 and extracts from the photographic record are provided in **Appendix 14.1**. The inspection of the ringfort (CL057-037----) within the Site revealed that the partially collapsed earthen bank survives as a low (c.40cm high) feature on all sides, and it encloses a level, vacant internal space measuring c.25m in diameter. The internal area appears to contain an artificially raised ground surface perhaps created by the introduction of fill material in order to form a level surface within an area of naturally sloping ground. No visible traces of the external enclosure ditch were noted but these features are often infilled by soil slipping from the internal earthen banks and typically survive beneath modern ground surfaces. The south-east side of the ringfort ditch has likely been truncated by historic gravel extraction works shown on 19th century Ordnance Survey (OS) maps (see Section 14.3.10). The gravel pit in this area is still present but has been partially infilled and the ground surface at its existing base is level with a modern farm track which extends adjacent to the quarry edge and is located c.25m to the east of the nearest section of the ringfort.

The field survey of the area within the Site immediately to the south of the location of a levelled enclosure (CL057-023----), which is within the south end of a field outside the north end of the Site, revealed that a large drainage channel (c.10m wide and c.5m in depth) extends east to west through the south end of its location and this is likely to have completely removed any sub-surface remains of the southern end of the enclosure. No surface traces of any potential associated features were noted within the section of the field within the Site directly to the south of the enclosure. No surface traces of any potential unrecorded archaeological sites or structures of architectural heritage significance were identified within the Site during the field survey. **Table 14.9** below presents descriptions of the locations of various elements of the Development and also collates summary information on historical mapping as well as details on aerial, satellite and LiDAR imagery for each of these locations.

Table 14.9: Field Survey Results

Development Element	Nearest cultural heritage constraint	Historic OS Map Detail	Aerial, Satellite & LiDAR imagery	Field Survey Notes
Turbine 1	Levelled enclosure CL057-023---- located 215m north-east of turbine and 90m north of site access track to its location	Shown within large, vacant field on the 1842 and 1898 OS maps	Shown within a vacant green field area with linear drainage ditches on all reviewed images. No traces of potential unrecorded archaeological sites were noted at location.	Located within broadly level area within a grassland field with areas of reed growth. The field is intersected with open linear field drains and no surface traces of any potential features of cultural heritage interest were observed.
Turbine 2	Levelled enclosure CL057-023---- located 700m to the north-east	Shown within vacant area of bogland on the 1842 and 1898 OS maps. Potential turf-cutting indicated at location on 1922 OS map.	Shown within vacant area of open bogland on all reviewed images and no traces of potential unrecorded archaeological sites were noted at location.	Located within open area of bogland that has been subject to turf extraction. The environs of its location contains large, machine-cut drainage channels. No traces of any potential features of cultural heritage interest were observed on the ground surface or in inspected sections of drains and turf cutting works.
Turbine 3	Extant ringfort CL057-037---- located 560m to the east	Shown within vacant field on the 1842 and 1898 OS maps	Shown within a vacant green field area with linear drainage ditches on all reviewed images and no traces of potential unrecorded archaeological sites were noted at location.	Located within a grass and reed covered area of open bogland which is intersected with large machine-excavated drainage channels. No surface traces of any potential features of cultural heritage interest were observed.
Spoil Retention Area	Extant ringfort CL057-037---- located 190m to the west	Shown as vacant small fields on the 1842 and 1898 OS maps	Shown as single field with linear drains visible. A number of previously unrecorded potential archaeological sites (small enclosures) were noted within the south end of the field during the LiDAR review (see Section 14.3.5). These are located at distances of 15m-20m outside of the spoil retention area. No potential archaeological sites were noted within	Located within a level, marginal pasture field on opposite (east) side of road from the remainder of the Site. No surface traces of any features of potential cultural heritage interest were noted within the spoil retention area. The location of the potential archaeological sites outside the spoil area, which were noted during a review of LiDAR imagery, was overgrown and no surface traces of these potential archaeological sites were visible.

Development Element	Nearest cultural heritage constraint	Historic OS Map Detail	Aerial, Satellite & LiDAR imagery	Field Survey Notes
			the boundary of the spoil retention area.	
Flood Compensation Areas	Levelled enclosure CL057-023---- located 110m to the north	Shown within large, vacant field on the 1842 and 1898 OS maps	Shown within a vacant green field area with linear drainage ditches on all reviewed images. No traces of potential unrecorded archaeological sites were noted at location.	Located within broadly level area within a grassland field with areas of reed growth. The field is intersected with open linear field drains and no surface traces of any potential features of cultural heritage interest were observed.
Onsite substation	Extant ringfort CL057-037---- located 40m to the north-east.	Shown within large, vacant field on the historic OS maps	Shown within a green field area on all reviewed images. No traces of potential unrecorded archaeological sites were noted at location.	Located within broadly level area within an improved pasture field in an area adjacent to a modern farm track. No surface traces of any potential features of cultural heritage interest were observed.
Temporary compound	Extant ringfort CL057-037---- located 100m to the west	Shown within large, vacant field on the 1842 and 1898 OS maps	Shown within a vacant green field area with traces of recent land improvement works visible in the south end. No traces of potential unrecorded archaeological sites were noted	The temporary compound is located in a field adjacent to modern agricultural outbuildings and the southern end of its location has been subject to modern ground disturbance works. No potential unrecorded cultural heritage sites were noted during an inspection of the location.
Grid Connection Route	No recorded constraints are located within a 100m wide corridor centred on the public road that the route follows	The section of road that the route follows is shown on the 1842 and 1898 OS maps	There were no potential unrecorded archaeological sites noted within 100m of the route during review of imagery	No potential unrecorded cultural heritage sites were noted during an inspection of the public road and its margins.
Turbine Delivery Route work areas	No recorded constraints are located within a 100m wide corridor centred on the relevant public roads or within 100m of the Blade Transfer Area.	The section of roads where works are required are shown on the 1842 and 1898 OS maps. The Blade Transfer Area is shown as vacant marginal land on the OS maps.	There were no potential unrecorded archaeological sites noted within 100m of the road widening areas during review of imagery. Forestry cultivation works are visible at the location of the Blade Transfer Area on a 2018 Tailte Éireann aerial image	No potential unrecorded cultural heritage sites were noted during an inspection of the relevant sections of public roads and its margins. The ground surface within the Blade Transfer Area has been impacted by cultivation and drainage works within the forestry plantation as well as by the subsequent development of extensive root systems. No potential

Development Element	Nearest cultural heritage constraint	Historic OS Map Detail	Aerial, Satellite & LiDAR imagery	Field Survey Notes
			and a review of LiDAR imagery shows extensive ground disturbance associated with tree planting works.	unrecorded cultural heritage constraints were noted within the area during the inspection.

14.3.15 Summary

Wind Farm Site

There are no recorded cultural heritage constraints located within the footprint of the turbines, hardstands or associated infrastructure within the Site. There is one recorded archaeological site located within the Site boundary, and this comprises an extant ringfort (CL057-037----) (**Figure 14.2**). There is an existing farm track located c.25m to the south of the ringfort and the area between their locations has been extensively disturbed by a 19th century gravel quarry which has likely resulted in the reduction of ground levels down into natural subsoil. The excavation of the gravel quarry appears to have removed the outer section of the south end of the enclosing ditch around the ringfort. The northern half of an enclosure site (CL057-023----) is located in the south end of a field immediately outside the north end of the Site (**Figure 14.2**). The southern end of the enclosure appears to have been removed by the excavation of a large drainage channel and no potential traces of this archaeological site were identified within the Site.

None of the recorded archaeological sites with the surrounding 2km Study Area are of types that have associated ritual alignment attributes which may be susceptible to intrusions by wind turbines. In addition, there are no National Monuments in State Care or archaeological sites subject Preservation Orders located within the 2km Study Area.

A review of the landscape extending for 10km in all directions from the Site revealed that there is one National Monument in State Care located within this area. This comprises the early medieval ecclesiastical site on Scatterry Island (National Monument (State Ownership) no. 10) which is located c.5.15km to the south of the Site (**Figure 14.3**). There is also one archaeological site subject to a Preservation Order located within 10km of the Site and this comprises a ringfort, (CL056-044----) containing an internal sub-surface souterrain (CL056-044002-) (PO ref. PO7/1978). This archaeological site, which is not listed as a National Monument in State Ownership or Guardianship, is located on the outskirts of Kilkee town at a distance of c.8.36km to the west of the Site (**Figure 14.3**).

There are no designated architectural structures (RPS or NIAH) located within the proposed Site and it is not located within, or in the environs of, an Architectural Conservation Area. There is one Protected Structure located within the surrounding 2km Study Area and this comprises the former Moyasta railway station (RPS 324) which is located c.1.3km to the west of the Site (**Figure 14.1**). There are no structures or gardens listed in the NIAH located within the 2km Study Area. A review of historic cartographic sources and modern aerial/satellites images indicates that much of the west end of the Site has been occupied

by vacant bogland in recent centuries while the eastern end has been in use as pasture farmland. Two small late 19th century farm buildings are shown within the Site on the 1898 OS map and are not present on the 1922 OS map, indicating that they were demolished during the early 20th century. No surface traces of potential unrecorded archaeological sites or structures of vernacular interest were noted during field walking inspections of the Site.

A review of LiDAR imagery of the Site identified eight potential archaeological sites located close to the south boundary of a field which will be used as a spoil retention area (**Table 14.7** and **Figure 14.8**). These potential sites comprise small circular features (5m-10m in diameter) which are reminiscent of prehistoric burial/ritual sites such as barrows or ring-ditches that may potentially date to the Bronze/Iron Ages (c.2400 BC - AD 400). The boundary of the spoil retention area has been amended to exclude the area of the field containing these potential archaeological sites. The amended boundary extends at distances of 15m-20m from their locations and they will remain *in situ* within a fenced off area located outside the Site boundary.

Grid Connection Route Options

There were no cultural heritage constraints identified within a 100m wide corridor centred on the Grid Connection Route to Tullabrack 110kV substation noted during desktop studies and site inspections.

Turbine Delivery Route work areas

There were no cultural heritage constraints identified within a 100m wide corridor centred on the sections of public roads requiring works to facilitate the delivery of turbines to the Site during desktop studies and site inspections.

14.4 ASSESSMENT OF POTENTIAL EFFECTS

14.4.1 Introduction

The following section presents assessments of potential effects on identified cultural heritage constraints. The values assigned to the various constraints were determined based on their classifications, the results of the desktop study and inspections of accessible sites and follow the criteria guidelines outlined in **Table 14.3**. The known cultural heritage constraints located within inaccessible private lands surrounding the Development comprise features of medium-high values and their current condition and indicative values, as well as potential sensitivities to indirect effects of a visual nature, have been assessed based on their classifications, designations, and reviews of historical maps and modern aerial/satellite images. There is one National Monument in State Care and an additional

archaeological site subject to a Preservation Order located within 10km of the Site and these constraints are deemed to be of High Value.

It should be noted that all archaeological sites, including levelled examples, have the potential to possess subsurface features, artefacts, human burials and other archaeological remains that may be of High or Very High values. While this cannot be ascertained without recourse to archaeological excavation, such attributes are unlikely to be subject to any effects in the absence of direct effects.

14.4.2 Construction Phase – Direct Effects

Wind Farm Site

There is one recorded archaeological site (Ringfort CL057-037----) located within the Site boundary and no ground works are proposed at its location. The Development will entail the use of an existing farm track located 25m to the south of this archaeological site as a Site Access Track and a partially infilled gravel quarry is situated between the ringfort and the section of the farm track to the south of its location. The inspection of the area revealed that the excavation of the quarry has likely removed the projected outer edge of the southern end of the ringfort's enclosing ditch. The line of the existing farm track to the south extends through the original extent of the partially infilled quarry as depicted on the 1842 OS map (**Figure 14.4**). The existing farm track will be upgraded and slightly widened by c.1m on the north side in the area directly to the south of the ringfort. This area is within the infilled quarry and the upgrading of the existing track will, therefore, not result in any predicted direct effects on the ringfort which is 25m to the north. The north end of a levelled enclosure site (CL057-023----) is located immediately outside the north end of the Site and the excavation of a large drainage channel has likely removed the southern end of this archaeological site. No ground works are proposed within 90m of the enclosure site and, therefore, no direct effects are predicted.

The construction phase will result in no predicted direct effects on the known archaeological sites within the wider landscape surrounding the Site as no examples are located within 875m of any proposed Development areas within the Site.

The construction phase within the Site will require no excavation works in any rivers or streams and, therefore, no effects on any potential underwater archaeological remains are predicted.

A review of LiDAR imagery of the Site identified eight potential unrecorded archaeological sites located close to the south boundary of the field which will be used as a spoil retention area (**Figure 14.8**). These potential archaeological sites comprise small circular features (5m-9m in diameter) which may comprise barrows or ring-ditches of potential Bronze/Iron Age origin (c.2400 BC - AD 400). The boundary of the spoil retention area has been amended to exclude the area of the field containing these potential archaeological sites. The amended boundary extends at distances of 15m-20m from their locations and no direct construction phase effects are, therefore, predicted on these potential archaeological sites.

There are no designated architectural structures located within the Site, or within 1.3km of its boundary, and no extant undesigned structures of cultural heritage interest were identified within its boundary during the desktop study and field surveys carried out as part of this assessment. The construction phase will, therefore, not result in any predicted likely significant effects on the architectural heritage resource.

There is one feature of cultural heritage interest located within the Site boundary, and this comprises a section of the townland boundary between Moanmore Lower and Moanmore South. A modern, tarmac-surface roadway occupies the line of this section of the boundary and no potential effects on any potential historic land division features associated with this boundary are predicted.

While no potential unrecorded archaeological sites were identified within the boundary of the Site during desktop studies or site inspections the potential for the presence of unrecorded, subsurface archaeological sites within the Site cannot be discounted. While the existence, location, extent and significance of any such unrecorded, sub-surface archaeological remains is unknown, the potential exists for direct, adverse and permanent construction phase effects of medium to high magnitude on any such remains that may be located within the footprint of proposed construction areas and this will require mitigation (see **Section 14.5**).

In conclusion, there is no likely significant direct effects on the known cultural heritage resource are predicted to arise during the construction phase of the Wind Farm.

Grid Connection

There are no known cultural heritage constraints located within a 100m corridor centred on the Grid Connection Route from the Site to Tullabrack 110kV Substation which extends along areas previously disturbed by the construction of existing roads. There is one existing

watercourse crossing (Moyasta EPA Code: 27M04) (WC01) along the route which is outlined in **Chapter 9: Hydrology and Hydrogeology (Figure 9.2)**. The cabling at this location will be laid in the modern carriage of the bridge or will be installed using Horizontal Directional Drilling and will require no in-channel works. No effects on any potential underwater archaeological remains that may exist within the watercourse are, therefore, predicted.

The construction of the Grid Connection will, therefore, result in no predicted direct effects on the known cultural heritage resource. An assessment of potential cultural heritage impacts of the construction of an alternative route to Moneypoint is included in **Appendix 3.1** of the EIAR.

In conclusion, no likely significant direct effects on the known cultural heritage resource are predicted to arise during the construction phase of the Grid Connection.

Turbine Delivery Route work areas

There are no known cultural heritage constraints located within a 100m wide corridor centred on the sections of public roads which will require widening of the existing road verges or vertical realignment. These works will not require any disturbance to watercourses and, therefore, will not result in any direct effect effects on potential unrecorded underwater archaeological remains. There are also no recorded cultural heritage constraints located within the Blade Transfer Area or within 100m of its boundary. The works to facilitate the transfer of turbines to the Site will, therefore, result in no predicted direct effects on the known cultural heritage resource.

In conclusion, no likely significant direct effects on the known cultural heritage resource are predicted to arise during the construction phase of the works required to facilitate the Turbine Delivery Route.

14.4.3 Construction Phase – Indirect Effects

Wind Farm Site

The Development will include the upgrading of an existing farm track located 25m from the extant ringfort (CL057-037----) within the Site as a Site Access Track during the construction phase. As detailed in **Section 14.3.2**, this will not result in a direct effect on the ringfort but is predicted to result in a negligible magnitude, short-term, imperceptible, adverse indirect effect on the setting of this archaeological site during the construction phase. There will be no likely significant effects on the setting of the archaeological extant ringfort.

There are no other recorded archaeological sites with existing surface expressions located within 1km of any Development locations within the Site and the construction phase will, therefore, have no predicted indirect effects on the settings of any recorded archaeological monuments.

There are no Protected Structures located within 1.3km of any proposed Development locations and there are no structures listed in the NIAH within the surrounding 2km Study Area. The construction phase of the Development will, therefore, have no indirect effects on the settings of any designated architectural heritage structures.

In conclusion, no significant indirect effects on the known cultural heritage resource are predicted to arise during the construction phase of the Wind Farm.

Grid Connection Route

Given the absence of any recorded cultural heritage constraints within the 100m wide corridor centred on the public roads that form the Grid Connection Route, no indirect effects on the cultural heritage resource are predicted to arise during the construction phase.

In conclusion, no significant indirect effects on the known cultural heritage resource are predicted to arise during the construction phase of the Grid Connection.

Turbine Delivery Route work areas

Given the absence of any recorded cultural heritage constraints within a 100m wide corridor centred on the public roads which will require works, or within 100m of the Blade Transfer Area, no indirect effects on the cultural heritage resource are predicted to arise during the construction phase.

In conclusion, no significant indirect effects on the known cultural heritage resource are predicted to arise during the construction phase of the works required to facilitate the Turbine Delivery Route.

14.4.4 Operational Phase – Direct Effects

Wind Farm

Given the absence of any known cultural heritage constraints within any proposed Development areas, the operational phase of the wind farm will result in no predicted direct effects on the known archaeological, architectural and cultural heritage resources. In addition, the successful implementation of the construction phase mitigation measures

outlined in **Section 14.5** will result in the preservation *in situ* (by avoidance) or the preservation in record (by archaeological excavation) of any unrecorded, sub-surface archaeological sites or features that may exist within proposed Development areas. There will, therefore, be no predicted direct effects on any such potential unrecorded archaeological sites during the operational phase.

In conclusion, no significant direct effects on the known cultural heritage resource are predicted to arise during the operation phase of the Wind Farm.

Grid Connection

The Grid Connection will comprise a buried cable within existing roadways and will, therefore, result in no predicted direct effects on the cultural heritage resource during the operational phase.

In conclusion, no significant direct effects on the known cultural heritage resource are predicted to arise during the operational phase of the Grid Connection.

Turbine Delivery Route

In the event that any turbines are required to be replaced using the same Turbine Delivery Route during the operational phase, no likely direct effects on the cultural resource are predicted.

In conclusion, no significant direct effects on the known cultural heritage resource are predicted to arise from the use of the same Turbine Delivery Route during the operational phase.

14.4.5 Operational Phase – Indirect Effects

Wind Farm

As detailed in **Table 14.6**, the nearest extant archaeological site with above ground surface expression comprises an extant ringfort (CL057-026----) within the Site boundary which is located c.450m from the nearest turbine (T1). The Development will result in a medium magnitude, indirect, long term, moderate adverse effect on the wider setting of this archaeological site during the operation phase.

The turbines will be visible from a range of archaeological sites retaining above ground surface expressions located in private properties within the surrounding landscape. None of these sites are located within 1km of any of the turbines within the Site. Given the distances of these archaeological sites from the Site, the absence of examples with visually

sensitive ritual alignments and the lack of public access to their locations, the Development will have likely negligible to low magnitude effects on their wider settings. The Development will, therefore, result in not significant to moderate, indirect, long term, adverse effects on the wider settings of known cultural heritage constraints with surface expressions located within the surrounding landscape during the operational phase (**Table 14.10**). No indirect effects on the settings of archaeological sites that no longer retain any above ground surface expression are predicted.

The recorded archaeological resource within an area extending for 10km from the Site was reviewed to determine if any known archaeological sites with ritual alignments, such as stone circles, stone rows or megaliths, within the wider landscape have recorded alignments set towards the Site and none were identified. There is one unclassified megalithic structure (CL056-040002-) with an unrecorded alignment located c.9.9km to the west of the Site and this is located within the south-west outskirts of Kilkee town. Given the distance of this constraint from the Site, no likely significant effects on its setting are predicted during the operational phase.

A review of the locations of National Monuments in State Care revealed the presence of one example within 10km of the Site and this comprises a monastic site on Scattery Island (National Monument in State Ownership no.10, CL067-024001-), which is located c.5.15km to the south of the Site (**Figure 14.3**). A review of **Chapter 11: Landscape and Visual Assessment** Zone of Theoretical Visibility mapping was carried out and it was noted that the north facing side of Scattery Island is within the bare ground Zone of Theoretical Visibility for the proposed Development. The landscape and visual specialists were consulted in relation to the potential magnitude of visual effects from the island and concluded that the turbine blade sets will be visible above the intervening ridge in a bare-ground scenario. Once ridgetop screening is accounted for, only partial blade sets are like to be visible giving rise to a low magnitude of visual effect. Given this conclusion, in combination with the distance of Scattery Island from the Site, a long term, indirect, slight adverse effect on the setting of this National Monument is predicted during the operational phase.

There is also one additional archaeological site within 10km of the Site which is subject to a Preservation Order (PO7/1978), and this comprises a ringfort (CL056-044----), containing an internal sub-surface souterrain (CL056-044002-), which is located within private lands on the outskirts of Kilkee town (**Figure 14.3**). This archaeological site, which is not listed as a National Monument in State Ownership or Guardianship, is located c.8.36km to the west of the Site and does not possess any visual alignment attributes. Given the distance

between the Site and this archaeological site, no adverse effects on its setting are predicted during the operational phase.

There is one Protected Structure located within the 2km Study Area and this comprises Moyasta railway station (RPS 324), which is located c.1.3km to the north-west of the Site (**Figure 14.1**). Given the distance between the Site and this railway structure, the Development is predicted to result in a low magnitude, indirect, long term, slight adverse effect on the wider setting of this Protected Structure during the operational phase

In conclusion, no significant indirect effects on known cultural heritage resources are predicted to arise during the operation phase of the Wind Farm.

Grid Connection

As the Grid Connection options will comprise a buried cable within existing roads it will, therefore, result in no predicted indirect effects on the cultural heritage resource during the operational phase.

In conclusion, no significant indirect effects on the known cultural heritage resources are predicted to arise during the operation phase of the Grid Connection.

Turbine Delivery Route

In the event that any turbines are required to be replaced using the same Turbine Delivery Route during the operational phase, no likely indirect effects on the cultural resource are predicted.

In conclusion, no significant indirect effects on the known cultural heritage resources are predicted to arise from the use of the same Turbine Delivery Route during the operational phase.

Table 14.10: Summary of operational phase indirect effects on cultural heritage constraints within 2km of the Site

Designation	Classification	Approx. distance from nearest turbine	Indicative value range	Quality of effect	Magnitude of effect	Duration of Effect	Significance of effect
CL057-023----	Enclosure (levelled)	215m north-east of T1	Medium to High	Neutral	n/a	n/a	None predicted
CL057-024----	Ringfort (extant)	1,175m north-east of T1	Medium to High	Adverse	Negligible	Long term (reversible)	Not Significant to Slight
CL057-037----	Ringfort (extant)	450m south-east of T1	Medium to High	Adverse	Medium	Long term (reversible)	Moderate
CL057-038----	Enclosure (levelled)	1,600m east of T1	Medium to High	Neutral	n/a	n/a	None predicted
CL057-039001-	Burial Ground (modern graveyard at location)	2,160m east of T3	Medium to High	Neutral	n/a	n/a	None predicted
CL057-039002-	Enclosure (modern graveyard at location)	2,160m east of T3	Medium	Neutral	n/a	n/a	None predicted
CL057-040----	Ringfort (Extant)	1,820m south-west of T2	Medium to High	Adverse	Negligible	Long term (reversible)	Not Significant to Slight
CL057-059----	Enclosure (Levelled)	1,530m south of T3	Medium to High	Neutral	n/a	n/a	None predicted
CL057-072----	Redundant record	1,660m east of T3	Low	Neutral	n/a	n/a	None predicted
CL067-004----	Enclosure (levelled)	1,690m south of T3	Medium to High	Neutral	n/a	n/a	None predicted
CL067-071----	Fulacht fia (potential low remains)	1,750m south of T3	Medium to High	Adverse	Not Significant to Slight	Long term (reversible)	Not Significant to Slight
Protected Structure RPS 324	Moyasta Station (extant)	1,320m north-west of T1	Medium	Adverse	Low	Long term (reversible)	Slight

14.4.6 Conclusion

It is concluded that the construction and operational phases of the Project will not result in any significant direct or indirect effects on the known cultural heritage resource.

14.5 MITIGATION MEASURES AND RESIDUAL EFFECTS

14.5.1 Construction Phase

Ground works during the Construction phase of the Development will be subject to archaeological monitoring by a suitably qualified archaeologist under licence by the National Monuments Service. In the event that any archaeological features are identified during monitoring 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 (by archaeological excavation).

The appointed archaeologist will supervise the establishment of a fenced off exclusion zone located 20m from the outer extent of ringfort (CL057-037----). The sub-surface remains of a levelled enclosure (CL057-023----) are located immediately outside the north end of the Site boundary. A fenced off archaeological exclusion area will also be established within the area of the Site to the south of this enclosure which will extend for 20m from its recorded location. There are no guidance criteria for the extent of development exclusion areas around archaeological sites and the extent of these 20m exclusion areas are based on professional judgement which has been informed by the results of desktop studies and field surveys carried out as part of this assessment. The boundary of the spoil retention area within the areas to the north and west of the potential archaeological features will also be fenced off during the construction phase. These fenced off exclusion areas will be clearly signed as 'no entry' locations for the duration of the construction phase and no activities will occur within their confines including, but not limited to, ground works, construction traffic, storage or compounds.

The Development will result in no predicted effects on any architectural or other cultural heritage constraints and, therefore, no mitigation measures for these elements of the cultural heritage resource are required.

14.5.2 Construction Phase Residual Effects – Direct

The mitigation measures presented in **Section 14.5.1** will provide for either the preservation *in situ* of any currently unknown, sub-surface archaeological features within the Site by avoidance or the proper and adequate recording of this resource by full archaeological

excavation. Preservation *in situ* shall allow for a negligible magnitude of effect resulting in a potential not significant/imperceptible significance of effect in the context of residual effect on the unrecorded archaeological resource. Preservation by record shall allow for a high magnitude of effect, albeit ameliorated by the creation of a full and detailed archaeological record, the results of which shall be publicly disseminated. This shall result in a potential slight to moderate range of significance of direct effects in the context of residual effects on the unrecorded archaeological resource.

14.5.3 Construction Phase Residual Effects – Indirect

No residual construction phase indirect effects are predicted following the implementation of the mitigation measures described in **Section 14.5.2**.

14.5.4 Operational Phase

14.5.4.1 Operation Phase Residual Effects - Direct

Following the implementation of the mitigation measures presented in **Section 14.5.1**, the operational phase of the Development will result in no predicted direct residual effects on the archaeological, architectural and cultural heritage resources.

14.5.4.2 Operation Phase Residual Effects - Indirect

The operational phase of the Development will result in long term, not significant to moderate, indirect, adverse residual effects of a visual nature on the wider setting of archaeological sites within the wider landscape. Given the nature of the wind farm turbines, there are no mitigation measures that can ameliorate these indirect residual effects, but it is noted that they will be reversed following the Decommissioning phase. In addition, a review of **Chapter 11: Landscape and Visual Assessment** revealed that no significant residual indirect visual effects on any cultural heritage receptors are predicted in that assessment.

14.5.5 Monitoring of Mitigation Measures

There are a number of obligatory processes to be undertaken as part of archaeological licence applications which will allow for monitoring of the successful implementation of the archaeological mitigation measures. These include the submission of method statements detailing the proposed strategy for all site investigations for the approval of the National Monuments Service as part of the licence application. A report will be compiled on all archaeological site investigations to comply with the licensing process which will clearly present the results in written, drawn and photographic formats and copies will be submitted

to the National Monuments Service, the Planning Authority and the National Museum of Ireland.

14.6 CUMULATIVE EFFECTS

A review of operational, consented and proposed wind farm developments within 20km of the Project was carried out in order to assess potential cumulative effects on the cultural heritage resource (**Table 14.11**). This included a review of information contained in the online planning files published on the Clare, Limerick and Kerry County Councils' planning enquiry systems. Archaeological monitoring of the construction of a number of these wind farms was carried out to comply with planning conditions and a review of the results, as published on the Database of Irish Excavation Reports, was carried out. A review of other developments within 10km of the Project (see **Chapter 2: Project Description; Section 2.3.4**) was also carried out and the results are summarised below.

The 20km radius selected for wind farm developments is considered to be reasonable for cumulative impact assessment for EIAR and consistent with the EPA "Guidelines on the information to be contained in environmental impact assessment reports" (2022). The review of the wind farms in this area was carried out to appraise if any of these high visibility developments have the potential to act in combination with the Development to result in significant cumulative adverse effects on the cultural heritage resource. The 10km radius selected for other developments, other than wind farms, is considered to be reasonable for cumulative impact assessment for EIAR and consistent with the EPA "Guidelines on the information to be contained in environmental impact assessment reports" (2022). The review of other developments in this area was carried out to appraise if any of these lower visibility developments also have the potential to act in combination with the Development to result in significant cumulative adverse effects on the cultural heritage resource.

Table 14.11: Review of wind farm developments within 20km

Wind Farm	Status	No. of Turbines	Approximate Distance to the Site Boundary	Cultural Heritage Review
Ballykett	Proposed	4	c. 0.96km north-east	The Cultural Heritage chapter in the EIAR prepared for this proposed development was reviewed and it does not predict any significant effects on the cultural heritage resource.
Moanmore	Operational	7	c. 1.7km north-west	A review of the online County Clare planning enquiry system revealed that it

Wind Farm	Status	No. of Turbines	Approximate Distance to the Site Boundary	Cultural Heritage Review
				does not contain a cultural heritage impact assessment for this development. The ABP grant of permission for this development (P00-0952) included a condition requiring archaeological monitoring of the construction phase. The Database of Irish Excavation Reports contains an entry describing the results of the monitoring and nothing of archaeological significance was identified. ³⁰
Tullabrack	Operational	6	c. 2.16km east	The Cultural Heritage chapter in the EIS prepared for this development was reviewed on the online County Clare planning enquiry system and does not predict any significant effects on the cultural heritage resource ³¹ . The Clare County Council grant of permission for this development (ref. 10/64) included a condition requiring archaeological monitoring of the construction phase. The Database of Irish Excavation Reports does not contain any entries describing the discovery of archaeological features at this location
Beal Hill	Operational	6	c. 12.97km south-west	A review of the online County Kerry planning enquiry system revealed that it does not contain a cultural heritage assessment report for this development. A review of the Database of Irish Excavation Reports revealed that archaeological monitoring of the construction phase was carried out to comply with a planning condition and uncovered nothing of archaeological significance ³²
Cahermurphy	Operational	4	c. 15.64km north-east	A review of the online County Clare planning enquiry system revealed that it does not contain a cultural heritage impact

³⁰ <https://excavations.ie/report/2004/Clare/0011304/>

³¹ <http://193.178.30.219/iDocsWebDPSS/ViewFiles.aspx?docid=243208&format=jpeg>

³² <https://excavations.ie/report/2000/Kerry/0005244/>

Wind Farm	Status	No. of Turbines	Approximate Distance to the Site Boundary	Cultural Heritage Review
				assessment for this development. A review of the Database of Irish Excavation Reports revealed that archaeological monitoring of construction works, which was carried out to comply with a planning condition, uncovered nothing of archaeological significance ³³
Carrownaweelaun	Operational	2	c. 14.12km west	A review of the online County Clare planning enquiry system revealed that it does not contain a cultural heritage impact assessment for this development. A review of the Database of Irish Excavation Reports revealed that archaeological monitoring of construction works, which was carried out to comply with a planning condition, uncovered nothing of archaeological significance ³⁴
Curraghgerrig	Operational	2	c. 12.74m south-west	A review of the online County Kerry planning enquiry system revealed that it contains a report on the archaeological monitoring of the construction of this development ³⁵ . The report states that nothing of archaeological significance was identified at the location,
Glenmore	Operational	3	c. 18.31km north-east	A review of the online County Clare planning enquiry system revealed that it does not contain a cultural heritage impact assessment for this development. A review of the Database of Irish Excavation Reports revealed that archaeological monitoring of construction works, which was carried out to comply with a planning condition, uncovered nothing of archaeological significance ³⁶
Kiltumper	Operational	2	c. 15.96km north-east	The Cultural Heritage chapter in an EIS prepared for an element of this

³³ <https://excavations.ie/report/2019/Clare/0029148/>

³⁴ <https://excavations.ie/report/2014/Clare/0026547/>

³⁵ <http://193.178.30.14/iDocsWEB/ViewFiles.aspx?docid=376203&format=djvu>

³⁶ <https://excavations.ie/report/2019/Clare/0029151/>

Wind Farm	Status	No. of Turbines	Approximate Distance to the Site Boundary	Cultural Heritage Review
				development was reviewed on the online County Clare planning enquiry system and does not predict any significant effects on the cultural heritage resource ³⁷ The Clare County Council grant of permission for this development (ref. 09/358) included a condition requiring archaeological monitoring of the construction phase. The Database of Irish Excavation Reports does not contain any entries describing the discovery of archaeological features at this location
Lahra	Operational	2	c. 14.22km south	A review of the online County Kerry planning enquiry system revealed that it does not contain a cultural heritage assessment report for this development. The Database of Irish Excavation Reports does not contain any entries describing the discovery of archaeological features at this location
Leanamore	Operational	9	c. 12.71km south-east	The Cultural Heritage chapter in an EIS prepared for this development was reviewed on the online County Kerry planning enquiry system and it does not predict any significant effects on the cultural heritage resource ³⁸ . A review of the Database of Irish Excavation Reports revealed that archaeological monitoring of construction works, which was carried out to comply with a planning condition, uncovered nothing of archaeological significance ³⁹
Moneypoint	Operational	5	c. 7.36km south	A review of the online County Clare planning enquiry system revealed that it does not contain a cultural heritage assessment report for this development. The Database of Irish Excavation Reports

³⁷ <http://193.178.30.219/iDocsWebDPSS/ViewFiles.aspx?docid=215090&format=jpeg>

³⁸ <http://193.178.30.14/iDocsWEB/ViewFiles.aspx?docid=371512&format=djvu>

³⁹ <https://excavations.ie/report/2017/Kerry/0025960/>

Wind Farm	Status	No. of Turbines	Approximate Distance to the Site Boundary	Cultural Heritage Review
				does not contain any entries describing the discovery of archaeological features at this location
Shragh	Proposed	9	c. 3.50km north	A review of the online County Clare online planning enquiry system revealed that it currently does not contain an entry for this proposed development. A review of the townland revealed that it does not contain any recorded archaeological sites or Protected Structures.
Shronowen	Proposed	12	c. 16.46km south	The ABP Inspector's Report for this proposed development includes a review of the Cultural Heritage EIAR chapter. The ABP report concludes that the development would not have any unacceptable cumulative impacts on the cultural heritage of the area ⁴⁰ . The ABP grant of permission for this development (PA08.309156) included a condition requiring archaeological monitoring of the construction phase. The Database of Irish Excavation Reports does not currently contain any entries describing the discovery of archaeological features at this location
Tullahennel South	Operational	9	c. 14.08km south	An Archaeological and Architectural Heritage impact assessment prepared for this development was reviewed on the online County Kerry planning enquiry system and it does not predict any significant effects on the cultural heritage resource, A review of the Database of Irish Excavation Reports revealed that a combined archaeological monitoring project was carried within the boundaries of these two wind farm sites in order to comply with planning conditions and
Tullahennel North	Operational	2	c. 14.28km south	

⁴⁰ <https://www.pleanala.ie/anbordpleanala/media/abp/cases/reports/309/r309156.pdf?r=224948407778>

Wind Farm	Status	No. of Turbines	Approximate Distance to the Site Boundary	Cultural Heritage Review
				uncovered nothing of archaeological significance at their locations ⁴¹

Given the absence of any predicted direct effects on the recorded cultural heritage resource arising from the Project, in combination with the results of the above review of other wind farms within 20km, it is concluded that the Development is not predicted to contribute to any significant direct cumulative effects on the cultural heritage resource of the wider area.

It is noted that, while the Project will result in not significant to moderate, indirect, adverse effects on the settings of cultural heritage constraints within 2km of the Site (**Table 14.10**), none of these are site types which possess visually sensitive attributes such as ritual alignments across the wider landscape. In addition, none of the reviewed wind farm developments are located within the immediate environs of any of the cultural heritage constraints within the 2km study area. Given the distances of the reviewed developments listed in **Table 14.11** from the Development and the absence of known cultural heritage sites with notable visual sensitivities, such as ritual alignments, within the Study Area, it is concluded that they will not act in combination to result in significant indirect cumulative effects on the settings of recorded cultural heritage constraints.

The locations of other developments, including infrastructure, energy supply, sports and agricultural projects, within 10km of the Site were also reviewed (**Chapter 2: Project Description; Section 2.3.3**). None of these developments are located with 2.7km of the Site and will have no likely significant direct or indirect effects on any cultural heritage constraints within the 2km Study Area. The review did not identify any examples that will combine with the Development to result in any likely significant cumulative effects on the cultural heritage resource.

As described in **Section 14.4**, the Grid Connection route and the Turbine Delivery Route work areas are not predicted to result in any likely significant direct or indirect effects on known cultural heritage constraints and, therefore, are not predicted to result in any potential cumulative effects.

⁴¹ <https://excavations.ie/report/2017/Kerry/0027150/>

In conclusion, no significant cumulative effects on the cultural heritage resource are predicted.

14.7 DECOMMISSIONING EFFECTS

No direct effects on known elements of the cultural heritage resource are predicted during the Decommissioning phase as there are no recorded cultural heritage sites located within the footprint of the various elements of the Development that will be subject to Decommissioning. Any previously unrecorded archaeological remains identified during archaeological monitoring of the construction phase will either be preserved by avoidance or preserved by record (excavation) and no Decommissioning effects on such potential features are predicted. The Decommissioning phase will result in the reversal of the long term, not significant to moderate, indirect, adverse visual effects on the setting of cultural heritage constraints located within the surrounding landscape.

14.8 CONCLUSIONS

The Project will not result in any direct adverse effects to any known archaeological sites, designated architectural heritage structures or undesignated cultural heritage constraints. The potential does exist for the presence of unrecorded, sub-surface archaeological features within proposed construction areas. In the event that any sub-surface archaeological remains are identified during archaeological monitoring of the construction phase, they will be cleaned, recorded and left to remain *in situ* within cordoned off areas while the National Monuments Service are notified and consulted in relation to appropriate future mitigation strategies, which may entail preservation *in situ* by avoidance or preservation by record by archaeological excavation.

The Project will result in not significant to moderate, indirect, adverse effects on the settings of cultural heritage constraints located in private properties within the surrounding landscape during the Operational phase. These indirect effects will be long term in duration but will be reversed following the Decommissioning phase.

14.9 DO-NOTHING SCENARIO

A Do-Nothing scenario at the Development site would result in the continued preservation of potential (hitherto) unrecorded sub-surface archaeological remains within design footprint and temporary working areas.

In addition, the Cultural Heritage baseline environment would remain unchanged, including no further detracting of the character and setting associated with the identified Cultural Heritage receptors within the Study Area.

14.10 SUMMARY OF SIGNIFICANT EFFECTS

The Project will result in not significant to moderate, indirect, adverse effects on the settings of cultural heritage constraints within the surrounding landscape during the Operational phase. No predicted significant (direct, indirect or cumulative) effects on the Cultural Heritage resource arising from the Development have been identified.

14.11 STATEMENT OF SIGNIFICANCE

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