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15 ARCHAEOLOGY, ARCHITECTURAL, AND CULTURAL HERITAGE

15.1 Introduction

This archaeological and cultural heritage chapter was prepared by RSK ADAS Limited. It presents the results of an archaeological and cultural heritage impact assessment for a proposed wind farm at Oatfield, in County Clare (hereafter referred to as the Proposed Development).

The purpose of this chapter is to assess the potential effects of the Proposed Development on the surrounding archaeological, architectural, and cultural heritage landscape. The assessment is based on both a desktop review of the available cultural heritage and archaeological data and a comprehensive programme of field walking of the study area to identify areas of archaeological/architectural/cultural significance or potential which are likely to be directly or indirectly affected by each stage of the Proposed Development. An assessment of significance of effects, including cumulative effects, is presented, and mitigation measures are recommended where appropriate.

The Proposed Development comprises an 11-turbine wind farm on a site located within forested and agricultural lands. It also comprises a Grid Connection Route (GCR) for connection to the national grid, and temporary accommodating works along a Turbine Delivery Route (TDR) to the wind farm, to facilitate the delivery of large components from the port of delivery. The GCR and TDR are both assessed in this EIAR and form part of the planning application.

The key components that are described throughout the EIAR are listed below:

- The wind farm which consists of 11 wind turbines (4 turbines across the Eastern Development Area (Eastern DA) and 7 turbines across the Western Development Area (Western DA));
- The grid connection route and underground cables (also referred to as GCR and UGC); and,
- The turbine delivery route (TDR).

The term 'Proposed Development' collectively describes the above three components. Further information about the Proposed Development is presented in EIAR Chapter 5: Project Description. A full description of the Proposed Development can be found in EIAR **Chapter 5 Description of the Proposed Development**.

15.2 Statement of Authority

This chapter was prepared by Dr Diarmuid O'Seaneachain BA PhD MCIfA Associate Director and Greg Bowen BA (Hons.) MA PCIfA, Archaeology Consultant with RSK ADAS Limited. Dr Diarmuid O'Seaneachain leads the ADAS Archaeology and Historic Buildings Team. He is a licensed eligible archaeologist with over 17 years' experience. He is a Member of the Chartered Institute of Archaeologists. ADAS is a Registered Organisation with the Chartered Institute of Archaeologists and is a member of the Institute for Historic

Building Conservation (IHBC). Dr O'Seaneachain has previously worked on several large-scale infrastructure schemes in Ireland including the N8 Fermoy/Mitchelstown road scheme, the N18 Gort/Crusheen road scheme and the A4/A5 Dungannon/Ballygawley road project in Northern Ireland. In 2008/2009 Diarmuid worked as a heritage consultant on the route determination and cultural heritage assessment of the EIA for the A5 Derry to/Ballygawley motorway scheme. Dr O'Seaneachain has produced dozens of historic environment desk-based assessments, heritage statements and cultural heritage chapters for Environmental Statements and EIA reports for wind energy developments across the UK, including large-scale wind farm developments at Llangurig and Hendy Bank in Wales and multiple turbine developments (between 1-5 turbines in size) across England and Scotland.

Greg Bowen, Archaeology Consultant from ADAS assisted with the preparation of this EIAR chapter, including conduction of desktop research for the baseline data and preparing figures for this chapter. Greg has a Bachelor of Arts (Hons) in Ancient Greek & Roman Studies from Trent University (2016) and Master of Arts in Archaeology of the Ancient Mediterranean from Sheffield University (2018). He has produced numerous desk-based assessments for renewable energy projects and grid connection schemes, including Tullacondra wind farm, Dublin Airport Solar Park, and Portarlington Flood Relief Scheme (FRS).

15.3 Consultations

Discussion of key consultations are provided in **Chapter 3: Scoping, Consultations, Community Engagement, and Key Issues**. Clare County Council was contacted via email sent on 22.11.23 during the preparation of this chapter with the outline mitigation strategy but no response has been received to date.

15.4 Methodology

This section presents the methodology used in assessing the baseline cultural heritage environment. The scope and methodology for the baseline assessment has been devised in consideration of the legislation, planning policy and guidelines discussed in 15.4.1 below.

15.4.1 Planning and Legislation Background

A summary of the key legislation, planning policies and guidance relevant to cultural heritage is provided below.

15.4.1.1 Legislation and Guidelines

This chapter has been prepared in compliance with all relevant EIA legislation (National Monuments Act 2023, Cultural Institutions Act 1997 (as amended), Register of Historic Monuments (1997 Act), Section 12 (1) and Section 12 (3) of the National Monuments (Amendment Act 1993) (as amended), and the Heritage Act 1995 (as amended) and guidance. Full details of the Legislative and Planning Policy Context can be found in the Planning Report (RSK, 2023) Chapters 4 and 5.

15.4.1.2 Current Guidelines

The scope and methodology for the baseline assessment has been devised in consideration of the following guidelines:

- Guidelines on the information to be contained in Environmental Impact Assessment Reports (Environmental Protection Agency 2022);
- Places for People, National Policy on Architecture (Department of Housing, Local Government and Heritage, 2022)
- Department of Arts, Heritage, Gaeltacht and the Island (DAHGI) (1999) 'Frameworks and Principles for the Protection of the Archaeological Heritage';
- Department of the Environment, Heritage and Local Government (2004) 'Architectural Heritage Guidelines'
- National Road Authority (2005) 'Guidelines for the Assessment of Architectural Heritage Impacts of National Road Schemes';
- National Road Authority (2005) 'Guidelines for the Assessment of Archaeological Heritage Impacts of National Road Schemes'; and
- Eirgrid (2015) 'Cultural Heritage Guidelines for Electricity Transmission Projects. A standard approach to archaeological, architectural and cultural heritage impact assessment of high voltage transmission projects'

15.4.1.3 Current Legislation

Archaeological monuments are safeguarded through national and international policy, which is designed to secure the protection of the cultural heritage resource. This is undertaken in accordance with the provisions of the European Convention on the Protection of the Archaeological Heritage (Valletta Convention). This was ratified by Ireland in 1997. Current legislation protecting the archaeological resource is detailed in **Appendix 15.3**.

The National Monuments Act 2023 and relevant provisions of the Cultural Institutions Act 1997 (as amended) are the primary means of ensuring protection of archaeological monuments, the latter of which includes all man-made structures of whatever form or date. There are several provisions under the National Monuments Acts which ensure protection of the archaeological resource. These include the Register of Historic Monuments (1997 Act) which means that any interference to a monument is illegal under that Act. All registered monuments are included on the Record of Monuments and Places (RMP).

The RMP was established under Section 12 (1) of the National Monuments (Amendment) Act 1994 (as amended) which consists of a list of known archaeological monuments and accompanying maps. The RMP affords some protection to the monuments entered therein. The National Monuments Act 2023 repeals the 1930 and 2004 Acts but keeps their protections in place.

Under the Heritage Act (1995) (as amended) architectural heritage is defined to include:

“all structures, building, traditional, and designed, and groups of buildings including street scapes and urban vistas, which are of historical, archaeological,

artistic, engineering, scientific, social or technical interest, together with their setting, attendant grounds, fixtures, fittings, and contexts...”

The Architectural Heritage section of the Planning and Development Act 2000 (as amended) commonly known as Part IV, makes provision for protected structures and Architectural Conservation Areas (ACAs) in Ireland, as follows:

In relation to protected structures, the P&D Act 2000 states that:

“For the purpose of protecting structures, or parts of structures, which form part of the architectural heritage and which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, every development plan shall include a record of protected structures, and shall include in that record every structure which is, in the opinion of the planning authority, of such interest within its functional area”.

“For the purpose of protecting structures, or parts of structures, which form part of the architectural heritage and which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, every development plan shall include a record of protected structures, and shall include in that record every structure which is, in the opinion of the planning authority, of such interest within its functional area”.

15.4.1.4 National Planning Framework (NPF)

The project Ireland 2040 National Planning Framework (February 2018) is a spatial planning framework to guide development and investment in Ireland over the coming years. It does not provide detail for every part of the country, but it empowers each region to lead in the planning and development of their communities, containing a set of national policy objectives (NPOs) and key principles from which more detailed and refined development plans will follow. The NPOs in this framework, which are most relevant to archaeology, architectural, and cultural heritage are as follows:

- *National Policy Objective 17: Enhance, integrate, and protect the special physical, social, economic, and cultural value of built heritage assets through appropriate and sensitive use now and for future generations;*
- *National Policy Objective 23: Facilitate the development of the rural economy support a sustainable and economically efficient agricultural and food sector, together with forestry, fishing and aquaculture, energy and extractive industries, the bio-economy and diversification into alternative on-farm and off-farm activities, while at the same time noting the importance of maintaining and protecting the natural landscape and built heritage which are vital to rural tourism; and*
- National Policy Objective 60: Conserve and enhance the rich qualities of natural and cultural heritage of Ireland in a manner appropriate to their significance.

15.4.1.5 Heritage Ireland 2030

The current national heritage plan for the country which was introduced by the Minister for Heritage. It has three key themes: Communities and Heritage; Leadership and Heritage; and Heritage Partnerships. For full Themes and Objectives see **Appendix 15.3**.

15.4.1.6 Granada Convention

The Council of Europe, in Article 2 of the 1985 Convention for the Protection of the Architectural Heritage of Europe (Granada Convention), states that 'for the purpose of precise identification of the monuments, groups of structures and sites to be protected, each member State will undertake to maintain inventories of that architectural heritage'. The Granada Convention emphasises the importance of inventories in underpinning conservation policies.

The National Inventory of Architectural Heritage (NIAH) was established in 1990 to fulfil Ireland's obligations under the Granada Convention, through the establishment and maintenance of a central record, documenting and evaluating the architectural heritage of Ireland. Article 1 of the Granada Convention establishes the parameters of this work by defining 'architectural heritage' under three broad categories of Monument, Groups of Buildings, and Sites:

- *Monument*: all buildings and structures of conspicuous historical, archaeological, artistic, scientific, social or technical interest, including their fixtures and fittings;
- *Group of buildings*: homogeneous groups of urban or rural buildings conspicuous for their historical, archaeological, artistic, scientific, social or technical interest, which are sufficiently coherent to form topographically definable units; and
- *Sites*: the combined works of man and nature, being areas which are partially built upon and sufficiently distinctive and homogenous to be topographically definable, and are of conspicuous historical, archaeological, artistic, scientific, social or technical interest.

The Council of Europe's definition of architectural heritage allows for the inclusion of structures, groups of structures and sites which are considered to be of significance in their own right, or which are of significance in their local context and environment. The NIAH believes it is important to consider the architectural heritage as encompassing a wide variety of structures and sites as diverse as post boxes, grand country houses, mill complexes and vernacular farmhouses.

15.4.1.7 Clare County Development Plan 2023-2029

The Clare Development Plan 2023-2029 (Clare County Council, 2023) recognises the statutory protection afforded to archaeological sites included within the Record of Monuments and Places and seeks to protect those monuments, including their setting, access, views, and prospects. The sites are described in detail in Table 15.7 and shown on Figure 15.3 (**EIAR Volume III, Chapter 15, Appendix 15.5, Figure 15.3**).

Clare County Council recognises the value and significance of the county's archaeological heritage, and the importance of fostering a greater public appreciation of this heritage. Through policies contained in this Development Plan, they seek to ensure the effective protection, conservation, and enhancement of archaeological sites, monuments, and their settings (Full details of the Clare Development Plans' Objectives in relation to archaeology, architecture, and cultural heritage are provided in **Appendix 15.3**).

The responsibility of Local Authorities in relation to the care and protection of heritage is also identified in the National Heritage Plan. Key actions in these plans include the requirement of Local Authorities to prepare and implement Local Heritage Plans in

partnership with the main stakeholders in the area. The Clare County Council Heritage Plan is current out dated and a new one has not yet been implemented.

The most relevant policies are shown below, and included in the Planning Report, Chapters 4 and 5.

Chapter 16 of the County Development Plan sets out the strategic aims relating to the conservation and management of the architectural, archaeological, and cultural heritage of the county and are based on the following strategic aims:

- To protect and enhance the character of the built environment by means of the Record of Protected Structures and Architectural Conservation Areas;
- To enhance present and future environments by protecting the architectural heritage of the county and successfully integrating new development;
- To protect the archaeology resource in the county for both its intrinsic and tourism value;
- To promote and support cultural activities, facilities and services in County Clare; and
- To protect and enhance the vernacular-built environment across the county.

Key policy objectives that are relevant to the wind farm proposal include:

Objective CDP16.1: 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 and architectural heritage of the county is not damaged either through direct destruction or by unsympathetic developments; and

c) to support and promote architectural vernacular skills training and facilities in the county.'

Objective CDP16.5: Architectural Conservation Areas (ACAs): *'It is an objective of Clare County Council:*

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

b) To protect from demolition or removal and non-sympathetic alterations, existing buildings, structures, groups of structures, sites, landscapes and features such as street furniture and paving which are considered to be intrinsic elements of the special character of the ACA;

c) To ensure that all new signage, lighting, advertising and utilities to buildings within an ACA are designed, constructed and located in a manner that does not detract from and is complementary to the character of the ACA; and

d) To ensure that external colour schemes in ACAs enhance the character and amenities of the area and reflect traditional colour schemes.'

buildings of architectural and cultural value and enhancement of villagescapes in Co. Clare.

Objective CDP16.11: 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).*

The proposed wind farm development supports the conservation and management of architectural, archaeological and cultural heritage and a detailed Archaeological, Architectural and Cultural Heritage assessment has informed the overall design and site layout for the proposed wind farm.

15.4.2 Baseline surveys / Data Gathering

15.4.2.1 Zone of Influence or Study Areas

The study areas for the assessment of direct effects were defined based on professional opinion and are in accordance with EPA guidelines for assessment. The size of the study areas used in this assessment were development based on all the likely direct and indirect effects that the various elements of a wind farm development may have on the historic environment. The size of the study areas were also determined based on the type of heritage asset and its level of legal protection combined with their determined significance (sensitivity). The sizes of the Study Areas considered for assessment were also sent to Clare County Council for comment during the scoping stage of the assessment.

It is considered that any potential for significant adverse direct effects will be confined to historic environment assets recorded within the EIAR site boundary and within 1km of the EIAR site boundary.

A 100m Study Area is considered adequate for the assessment of direct effects of the 'Grid Connection Route Loop In' based on our professional opinion. Construction works associated with the Grid Connection Route are predominantly confined to either the existing public road network or land immediately adjacent to the existing public road for these elements of the Proposed Development.

It is understood that minimal accommodation works will be required for the 'Turbine Delivery Route 3a' (see EIAR **Chapter 16 Traffic and Transport**), apart from around the junction of the R463 and the R471. Therefore, assessment of heritage assets is generally limited to within the edge of the existing public road, except around the junction of the R463 and the R471, where a 50m buffer has been assessed.

Table 15.1: Study Areas for direct effects on Archaeological, Architectural, and Cultural Heritage Assets Considered according to sensitivity

Cultural Heritage Asset	Area/Distance Considered
UNESCO World Heritage Sites (including tentative sites, if relevant), National Monuments, Recorded Monuments, RPS, Architectural Conservation Areas, NIAH and previously unregistered archaeological sites, upstanding historic structures and earthworks	Within the EIAR Site boundary and within 1km of the Site boundary
UNESCO World Heritage Sites (including tentative sites, if relevant), National Monuments, Recorded Monuments, RPS, Architectural Conservation Areas, NIAH and previously unregistered archaeological sites, upstanding historic structures and earthworks	Within 100m of the Grid Connection cable Route
UNESCO World Heritage Sites (including tentative sites, if relevant), National Monuments, Recorded Monuments, RPS, Architectural Conservation Areas, NIAH and previously unregistered archaeological sites, upstanding historic structures and earthworks	To the edge of public road along the proposed Turbine Delivery Route and within 50m of the groundworks proposed on the junction of the R463 and the R471

The study areas for the assessment of indirect effects were defined based on professional opinion and are in accordance with EPA guidelines for assessment. The sizes of the Study Areas considered for assessment were also sent to Clare County Council for comment during the scoping stage of the assessment. As Bunratty Castle National Monument, Sixmilebridge Architectural Conservation Area, Kilkishen Castle (RPS No. 285) and Kilkishen House (RPS No. 87) are located just outside the edges of the 10km and 5km Study Areas, these heritage assets have also been included in the scope of the setting assessment.

Table 15.2: Study Areas for the assessment of indirect effects on the setting of Archaeological, Architectural, and Cultural Heritage Assets Considered according to sensitivity

Cultural Heritage Asset	Sensitivity	Study Area/Distance Considered based on professional expertise
UNESCO World Heritage Sites (including tentative sites, if relevant)	Very High	20km from the nearest proposed turbine
National Monuments	High	10km from the nearest proposed turbine
Record of Protected Structures, Architectural Conservation Areas	High	5km from the nearest proposed turbine
Recorded Monuments and NIAH buildings, parks and gardens	Medium	1km from the nearest proposed turbine
Unregistered cultural heritage sites (built heritage and buried archaeology)	Low	Within 100m of the Proposed Development application boundary.
Unregistered cultural heritage sites for which there are no extant remains and where there is little or no potential for associated subsurface evidence	Negligible	Within 100m of the Proposed Development application boundary

15.4.2.2 Assessment of Likely Significant Effects

The likely effects on the existing archaeological and cultural heritage environment are assessed using the criteria as set out in the EPA guidelines (2022).

15.4.2.3 Describing of Types of Effects

The following table lists the type of effects that a proposed development may have on the cultural heritage resource, based on the latest EPA guidelines (2022).

Table 15.3: Types of Effects

Types of Effect	Definition
Direct Effects (physical effects)	Direct effects or impacts arise where an archaeological, architectural and/or cultural heritage feature or site is physically located within the footprint of the proposed development, or its associated physical impact zone, whereby the removal of part, or all of the feature or site is required.
Indirect Effects (off -site effects)	Effects on the historic environment, which are not a direct result of the project. These arise when an archaeological, architectural or cultural heritage feature is not located within the footprint of the proposed development or its associated impact zone, and is therefore not impacted directly. Such an effect could include effects on setting or effects on the zone of archaeological potential of a site.
Cumulative Effects	In addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.
'Do-nothing Effects'	The historic environment as it would be in the future should the subject 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
Synergistic Effects	Where the resultant effect is of greater significance than the sum of its constituents

15.4.2.4 Methodology used for assessing baseline value of archaeological and cultural heritage sites

In order to categorise the baseline environment in a systemized manner 'baseline values' have been assigned to each identified site of cultural heritage significance and/or potential within the study areas. The baseline value of a site is determined with reference to the 'significance' and 'sensitivity' of the site (as set out in **Table 15.2**).

In accordance with NRA (now Transport for Ireland) Guidelines, the significance of a site is determined based on the following criteria: legal status, condition, historical associations, amenity value, ritual value, specimen value, group value and rarity. The

sensitivity of a site is determined based on its susceptibility to direct (physical) impact (effect), as well as susceptibility to indirect impact (effect) on setting.

The National Monuments Act 2023 does not differentiate between recorded archaeological sites on the basis of relative importance or sensitivity. In addition, the Planning and Development Act 2000 (as amended) does not differentiate between Protected Structures or Areas of Architectural Conservation on the basis of relative importance or sensitivity either as there is no national portal for ACAs in Ireland. Consequently, professional judgement has been exercised to rate these heritage assets based on their perceived significance and sensitivity in relation to both direct effects and indirect effects on setting.

15.4.2.5 Magnitude of Change

The magnitude of change is a product of the scale, extent or degree of change that is likely to be experienced as a result of the proposed development. **Table 15.4** outlines criteria used to inform this judgement.

Table 15.4: Criteria used for Rating Magnitude of Change

Magnitude of Change	Criteria
Very High	<p>Applies where mitigation would be unlikely to remove adverse effects. Reserved for adverse effects only. These effects arise where an archaeology site is completely and irreversibly destroyed.</p> <p>A magnitude of change that obliterates the architectural heritage of a structure or feature of national or international importance. These effects arise where an architectural structure or feature is completely and irreversibly destroyed by the proposed development. Mitigation is unlikely to remove adverse effects.</p>
High	<p>A change which, by its magnitude, duration or intensity, alters an important aspect of the environment. A magnitude of change like this would be where part of a site would be permanently impacted upon, leading to a loss of character, integrity and data about an archaeological feature/site.</p> <p>A change that by its magnitude, duration or intensity alters the character and/or the setting of the architectural heritage. These effects arise where an aspect or aspects of the architectural heritage is/are permanently impacted upon leading to a loss of character and integrity in the architectural structure or feature. Appropriate mitigate is likely to reduce the impact</p> <p>A beneficial or positive effect that permanently enhances or restores the</p>

Magnitude of Change	Criteria
Medium	<p>character and/or setting of a feature of archaeological or cultural heritage significance in a clearly noticeable manner.</p> <p>A medium magnitude of change arises where a change to a site/monument is proposed which though noticeable, is not such that the archaeological integrity of the site is compromised and which is reversible. This arises where an archaeological feature can be incorporated into a modern-day development without damage and that all procedures used to facilitate this are reversible.</p> <p>A medium magnitude of change to a site/monument may also arise when a site is fully or partly excavated under license and all recovered data is preserved by record.</p> <p>A magnitude of change to the architectural heritage which, although noticeable is not such that alters the integrity of the heritage asset. The change is likely to be consistent with existing and emerging trends. Effects are probably reversible and may be of relatively short duration. Appropriate mitigation is very likely to reduce the effect.</p> <p>A beneficial or positive change that results in partial or temporary enhancement of the character and/or setting of a feature of archaeological or cultural heritage significance in a clearly noticeable manner.</p>
Low	<p>A magnitude of change in the character of the environment, such as visual impact, which are not high and do not directly affect an archaeological feature or monument.</p> <p>A magnitude of change that causes some minor change in the character of architectural heritage of local or regional importance without affecting its integrity or sensitivities. Although noticeable, the effects do not directly impact on the architectural structure or feature. Impacts are reversible and of relatively short duration. Appropriate mitigation will reduce the impact.</p> <p>A beneficial or positive effect that causes some minor or temporary enhancement of the character of an architectural heritage</p>

Magnitude of Change	Criteria
	significance which, although positive, is unlikely to be readily noticeable.
Negligible	<p>A magnitude of change on archaeological features or monuments capable of measurement but without noticeable consequences.</p> <p>A magnitude of change on architectural heritage of local importance that is capable of measure merit but without noticeable consequences.</p> <p>A beneficial or positive effect on architectural heritage of local importance that is capable of measurement but without noticeable consequences.</p>
No Change	No likely change to the existing historic environment

15.4.2.6 Significance of Effects

Sensitivity, in relation to the historic environment, is a subjective term, which describes the potential for a heritage asset to absorb change. It reflects the current setting of an asset and the extent to which changes to that setting would affect the significance of the asset. The criteria to describe the Quality of Effects and the Significance of Effects is presented in **Table 15.5**.

Table 15.5: Criteria used for describing Significance of Effects

Types of Effects	Definition
<p>Quality of Effects</p> <p>It is important to inform the non-specialist reader whether an effect is positive, adverse or neutral</p>	<p>Positive Effects : A change which improves the quality of the historic environment.</p> <p>Neutral Effects: No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.</p> <p>Adverse Effects: A change which reduces the quality of the heritage asset or historic environment</p>
<p>Describing the Significance of Effects</p>	<p>'Significance' is a concept that can have different meanings for different topics. For this assessment, the following terminology is applied based on a combination of EPA and Transport Infrastructure Ireland (NRA) guidance. The Effects described below can be positive, neutral or adverse.</p>

Types of Effects	Definition
Neutral	No change to elements, parcels or components of the historic environment; no visual or audible changes, no changes arising from amenity or community factors
Imperceptible	An effect on an archaeological feature, monument or architectural heritage site which is capable of measurement but without significant consequences.
Not significant	An effect which causes noticeable changes in the character of the historic environment, on archaeological features or monuments or on architectural heritage but without significant consequences.
Slight Effects	An effect which causes noticeable changes in the character of the historic environment without affecting its sensitivities.
Moderate Effects	An effect that alters the character of the historic environment in a manner that is consistent with existing and emerging baseline trends.
Significant Effects	An effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the historic environment.
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the historic environment.
Profound Effects	An effect which obliterates sensitive characteristics. Changes to most or all key archaeological materials, such as the resource is totally altered. Comprehensive changes to setting.

15.4.2.6.1 Setting Assessment

There is no standardized industry-wide approach for the assessment of setting impacts (indirect effects) in Ireland. While direct physical effects to a site or monument can be assessed in quantitative terms, the assessment of indirect effects on setting can be subjective and as such is a matter of qualitative, professional judgement and experience. The criteria used in the assessment of effects on setting are based on professional judgement and on the methodology for comparing the character of the predicted effect to the sensitivity of the receiving environment in order to determine the significance of the effect shown in EPA Guidelines (2022, Figure 3.4). The assessment criteria also takes into consideration approaches used in major road schemes contained in the National Roads Authority (now Transport Infrastructure Ireland) Guidelines for the Assessment of Archaeological Heritage Impacts of National Road Schemes and Guidelines for the Assessment of Architectural Heritage Impacts of National Road Schemes.

Setting Assessment is not simply the visual envelope of the heritage asset in question. It is instead those parts of the asset's surroundings that are relevant to the significance of the asset and the public's appreciation of an asset.

In most instances setting will relate to the historical value of the asset, where an appreciable relationship between the asset and an element of its surroundings helps the visitor understand and appreciate the asset. This may be in terms of a physical relationship, such as between a castle and the natural rise that it occupies, or a more distant visual relationship, such as a designed vista or the view from, for example, one ringfort to another. The former is referred to as immediate setting and the latter as landscape setting. Many assets will only have an immediate setting. Some assets will have aesthetic value that relates to the surrounding landscape, such as in the case of a designed view incorporating a distant hill, or that relates to the contribution the asset makes to the local landscape, for example a church spire providing a focal point in a view down a valley. These are broad factors which have been taken into consideration when assessing the significance of effect on the setting of heritage assets.

The setting assessment carried out for this chapter does not include visits to each and every site outside the EIAR site boundary as some monuments/buildings are located in private lands and have no public access. However, the site visits for the purpose of assessing indirect setting effects were undertaken of the key receptors (Monuments, Protected Structures and NIAH structures) identified from desk-based analysis of likely setting effects. The assessment of effects on visual setting was undertaken with the aid of the Zone of Theoretical Visibility (ZTV) map in the Landscape and Visual Impact Assessment (LVIA). Draft wireframes produced for the heritage assessment were also used to inform the results of the setting assessment, along with analysis of the wireframes and photomontages produced for the Landscape and Visual Impact Assessment.

15.4.2.6.2 Methodology used for assessing Significance of Effects.

The significance of effect a heritage asset is assessed by combining the magnitude of change and the baseline value of the heritage asset. The matrix provides a guide to decision-making, but it is not a substitute for professional judgement and interpretation, particularly where the baseline value or magnitude of change levels are not clear or are borderline between categories. The permanence of the effects are also taken into account, with irreversible effects being more significant while temporary or reversible changes are likely to be less significant.

Table 15.6: Matrix used for assessing magnitude of change and resulting significance of effects in relation to significance/sensitivity

Significance/Sensitivity	Very High	Neutral	Imperceptible to Slight	Moderate to Very Significant	Very Significant to Profound	Profound
	High	Neutral	Imperceptible to Slight	Slight to Moderate	Moderate to Very Significant	Very Significant to Profound
	Medium	Neutral	Imperceptible to Not Significant	Not Significant	Moderate to Significant	Significant to Profound
	Low	Neutral	Imperceptible to Not Significant	Imperceptible -Not significant	Slight to Moderate	Moderate to Profound
	Negligible	Neutral	Imperceptible	Imperceptible -Not Significant	Imperceptible -Not Significant	Slight to Profound
		No change	Negligible	Low	Medium	High- Very High
Magnitude of Change						

15.4.2.7 Desktop Study

The assessment of the archaeological, architectural and cultural heritage potential of the study areas around the Proposed Development is based on a number of documentary and cartographic sources. All known recorded archaeological monuments are indicated on 6-inch Ordnance Survey Ireland (OSI) maps and are listed in the aforementioned records. The 1st (1842) and 2nd (1897) edition OSI maps for the area were also consulted (**Volume III, Chapter 15, Appendix 15.5, Figures 15.8 and 15.9**). The Pelham Map of 1787 was also assessed for this assessment (**Volume III, Chapter 15, Appendix 15.5, Figure 15.7**). Wireframes and Photomontages, a Zone of Theoretical Visibility (ZTV), and LiDAR flyover and aerial imagery data produced for the Proposed Development were also used to inform the assessment.

The following main sources were consulted for this assessment report:

- The Record of Monuments and Places (RMP)
- The Sites and Monuments Record (SMR)
- National Monuments in County Clare
- The Topographical Files of the National Museum of Ireland
- First Edition Ordnance Survey Ireland maps (OSI)
- Second edition Ordnance Survey Ireland maps (OSI)
- Third edition Ordnance Survey Ireland Map (Record of Monuments and Places)
- Down Survey maps (www.downsurvey.tcd.ie)
- Aerial photographs (copyright of Ordnance Survey Ireland (OSI))
- Excavations Database

- Clare County Development Plan 2023-2029, Clare County Council
- National Inventory of Architectural Heritage (NIAH)
- Record of Protected Structures (Clare and Limerick)
- HeritageMaps.ie
- LiDAR flyover and aerial imagery data captured for the Proposed Development
- Zone of Theoretical Visibility
- Wireframes and Photomontages

15.4.2.7.1 Geographic Information Systems (GIS)

GIS is a system that creates, manages, analyses and maps all types of data. A geographic information system (GIS) was used to manage the datasets relevant to the archaeological and architectural heritage assessment and for the creation of all the maps in this chapter of the EIAR report. This involved the overlaying of the relevant archaeological and architectural datasets on georeferenced aerial photographs and road maps (ESRI), where available. The integration of this spatial information allows for the accurate measurement of distances of a proposed development from archaeological and cultural heritage sites and the extraction of information on 'monument types' from the datasets. Areas of archaeological or architectural sensitivity may then be highlighted to mitigate the potential adverse effects of a development on archaeological, architectural and cultural heritage.

15.4.2.7.2 Zone of Theoretical Visibility

Setting Assessment carried out for this Chapter includes analysis of the Zone of Theoretical Visibility (ZTV). A ZTV is based off the topography but does not take vegetation or existing structures into consideration. The ZTV determines which areas are visible from specified observer points (the observer points being the monuments). Visibility settings are used to set the height of the observer (1.75m standard), the height, for example of the observed features (e.g., turbines), and the maximum viewing distance of the observer. This tool was utilised to ascertain the potential/theoretical visual effects on Cultural Heritage Assets (in other words, what could potentially be seen from specific monuments). The results show the worst-case scenario since the model does not take trees or vegetation into consideration. The results are mapped on Figures 15.2 and 15.3 (**Volume III, Chapter 15, Appendix 15.5, Figures 15.2 and 15.3**) and outlined in **Section 15.6**.

15.4.2.7.3 Wireframes and Photomontages

Wireframes and photomontages were also produced and assessed as part of the setting assessment for the Proposed Development. Analysis of wireframe and photomontage views to assess setting effects was carried out along with visual assessment of sightlines from key receptors towards the Proposed Development in the field and desk-based analysis of sightlines using Google Earth. The photomontages used in this assessment can be found in EIAR **Volume IV. Photomontages**.

15.4.2.7.4 Record of Monuments & Places and Sites & Monuments Record

This is a list of archaeological sites known to the National Monuments Sections, which are afforded legal protection under the 2023 National Monuments Act and are published as record. It holds documentary evidence and field inspections of all known archaeological sites and monuments. Some information is also held about archaeological sites and monuments whose precise location is not known e.g., only a site type and townland are recorded. These are known to the National Monuments Section as 'un-located sites' and cannot be afforded legal protection due to lack of locational information. As a result, these are omitted from the Record of Monuments and Places. SMR sites are also listed on a website maintained by the Department of Housing, Local Government and Heritage – www.archaeology.ie.

15.4.2.7.5 Cartographic Sources and Aerial Photography

Cartographic sources are important in tracing land use 'time-depth' evolution within the site area as well as providing important topographical information on areas of archaeological potential and the development of buildings. Cartographic analysis of all relevant maps has been made to identify any topographical anomalies or structures that no longer remain within the landscape, utilising the following sources;

- Down Survey Map of the Bunratty, c. 1659
- John Rocque's Map of the County of Clare, 1790
- Ordnance Survey Maps of Ireland 1829-1995

15.4.2.7.6 Topographical Files of the National Museum of Ireland

National Archives of all known finds recorded by the National Museum. This archive relates primarily to artefacts but also includes references to monuments and unique records of previous excavations. The find spots of artefacts are important sources of information on the discovery of sites of archaeological significance. The database of topographical files was consulted on www.heritagemaps.ie.

15.4.2.7.7 Archaeological Inventory Series

Further information on archaeological sites may be obtained in the published County Archaeological Inventory series prepared by the Department of Housing, Local Government and Heritage. The archaeological inventories present summarised information on sites listed in the SMR/RMP and include detail such as the size and location of monuments as well as any associated folklore or local information pertaining to each site. The inventories, however, do not account for all sites or items of cultural heritage interest, which are yet undiscovered.

15.4.2.7.8 Clare County Development Plan 2023-2029

The County Development Plan contains a catalogue of all the Protected Structures and archaeological sites within the county at large. The Clare County Development Plan 2023-2029 was consulted to obtain information on cultural heritage sites in and within the immediate vicinity of the Proposed Development.

15.4.2.7.9 Excavation Database

A summary publication that has been produced every year since 1970. This summarises every archaeological excavation that has taken place in Ireland during that year up until 2010 and since 1987 has been edited by Isabel Bennet. This information is vital when examining the archaeological content of any area, which may not have been recorded under the SMR and RMP files. This information is also available online (www.excavations.ie) from 1970-2022.

15.4.2.7.10 National Inventory of Architectural Heritage (NIAH)

This source lists some of the architectural significant buildings and items of cultural heritage and was compiled on a county-by-county basis by the Department of Culture, Heritage, and the Gaeltacht. The NIAH database was consulted for all townlands within and adjacent to the 5 km Study Area. The NIAH survey for Clare has been published and was downloaded on to the base mapping for the Proposed Development (www.buildingsofireland.ie). The NIAH is a state initiative under the administration of the Department of Culture, Heritage and the Gaeltacht and established on a statutory basis under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999.

The purpose of the NIAH is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. NIAH surveys provide the basis for the recommendations of the Minister for the Environment, Heritage and Local Government to the planning authorities for the inclusion of structures in their Record of Protected Structures (RPS). The published surveys are a source of information on the selected structures for relevant planning authorities. They are also a research and educational resource. It is hoped that the work of the NIAH will increase public awareness and appreciation of Ireland's architectural heritage.

15.4.2.8 Field Assessment

Field inspection is necessary to determine the extent and nature of archaeological and historical remains and can also lead to the identification of previously unrecorded or suspected sites and portable finds through topographical observation and local information.

The archaeological field inspection, which was carried out on the 28th and 29th of September 2023 in wet and windy weather conditions, entailed:

- Walking the Proposed Development and the proposed grid connection route and their immediate environs;
- Driving along the proposed turbine delivery route;
- Noting and recording the terrain type and land usage;
- Noting and recording the presence of features of archaeological or historical significance;
- Verifying the extent and condition of any recorded sites;
- Visually investigating and suspect landscape anomalies to determine the possibility of their being anthropogenic in origin; and

- Carrying out a setting impact assessment of likely effects of the Proposed Development in the surrounding landscape.

A representative selection of photos showing the various parts of the site and the key heritage constraints along the site and grid connection route options are provided in EIAR **Volume III, Chapter 15, Appendix 15.4**.

15.5 Receiving Environment

15.5.1 Location and Topography

The Proposed Development is located in the townlands of Oatfield, Crag, Cloontra West, Derrvinnaan, Cloontra, Cloonsheerea, Mountrice, Cloghera, Drumsillagh (Merritt), Drumsillagh (Parker), Kyle, and Gortacullin, County Clare. Any heritage assets will be referred to as a map number (e.g., 1, 2, 3) throughout the text with their relevant figure referenced (e.g., Fig. 15.1, 15.2, 15.3).

The Sliabh Bernagh Uplands comprise an area of upland hills, with broad slopes, underlain by Old Red Sandstone and Lower Palaeozoic siltstone and shale. The broad slopes occasionally rise to limited narrow ridges and some rocky outcrops are evident on higher slopes. Glacial processes can be seen, with a significant amount of this area covered very thinly with soil, and bedrock within one metre of the surface. This is combined with shale and sandstone derived till, and peat deposits. Along the Broadford gap (a probable glacial valley) there are deposits of gravel. The Sliabh Bernagh Uplands are extensively planted with coniferous plantations in parts. The open upper slopes are largely blanket bog and wet heathy landcover with some turbury evident. On the lower slopes there is an increase in pasture and more enclosure generally by hedgerows and hedgebanks along narrow roads (Clare LCA, ERM Ireland Ltd, 2004 for the Heritage Council).

15.5.2 UNESCO World Heritage Sites and those on the tentative list within 20 km of the Site Boundary

No UNESCO sites are located within 20km of the Site Boundary.

15.5.3 National Monuments

A review of all National Monuments within 10km of the Site Boundary was undertaken as part of the assessment in order to ascertain any potential effects on their setting as a result of the Proposed Development. There are no National Monuments within the Site Boundary. There are no National Monuments located within the 10km Study Area (NMS, 2023).

There are four National Monuments recorded immediately outside of the 10km Study Area. Bunratty Castle (CL062-001004-) is recorded 10.8km southwest of the Site Boundary, and King John's Castle (in Ruins) (LI005-017014-) is recorded 10.6km southeast of the Site Boundary, Fanning's Castle (LI005-017014- is recorded 11km southeast of the Site Boundary, and Kilrush Church (LI005-009) is recorded 11.1km south of the Site Boundary in Limerick (**Volume III, Chapter 15, Appendix 15.5, Figure 15.2; NAM, 2023**).

15.5.4 Recorded Monuments within the Site Boundary

No monuments subject to statutory protection, as defined in the Record of Monuments and Places or Sites and Monuments Record, are located within the Site Boundary.

15.5.5 Site and Monument Records within 1km of the Site Boundary

There are no monuments recorded by the Sites and Monuments Record within the Site Boundary. There is a Megalithic wedge tomb (32) recorded immediately outside of the Site Boundary and 286m east of T9. There are nine other recorded monuments within 1km of the Site Boundary. The nearest of these is the St. Vincent de Paul's Church (28), which is also a Protected Structure (14). This is located 38m south of the Site boundary and adjacent to the Grid Connection Route. All of the SMRs located within 1km of the Site Boundary are listed in **Table 15.7** below.

Table 15.7: SMRs within 1km of the Site Boundary

Map Id	SMR	ITM E	ITM N	Type	Townland	WTG ID
25	CL052-039----	552858	667700	Megalithic tomb - wedge tomb	CLOGHOOlia	CL05670
26	CL052-040----	553138	667570	Enclosure	OATFIELD	CL05671
27	CL052-041----	553238	667767	Enclosure	OATFIELD	CL05672
28	CL052-043----	554247	667282	Church	OATFIELD	CL05674
29	CL044-036----	555883	671286	Enclosure	HURDLESTON	CL05023
30	CL044-038----	556708	671321	Enclosure	GORTACULLIN	CL05025
31	CL044-040----	557251	671314	Enclosure	GORTACULLIN	CL05027
32	CL044-041----	557289	670692	Megalithic tomb - wedge tomb	GORTACULLIN	CL05028
33	CL044-042----	557440	671438	Ritual site - holy well	GORTACULLIN	CL05029
34	CL044-089----	555424	671539	Standing Stone	HURDLESTON	CL08288

15.5.6 Protected Structures within 5km of the Site Boundary

There is one Protected Structures (14) recorded within 1km of the Site Boundary. This is St. Vincent de Paul's Church (14). There are fifteen other Protected Structures within the 5km Study Area (**Volume III, Chapter 15, Appendix 15.5, Figure 15.3 and Table 15.8** below).

Table 15.8: RPS within the 5km Study Area

RPS Number	Name	Structure Type	Map Number
102	Church of the Mother of God	Church	1
427	Glenmora House	House	2
99	St Mary's Church	Church	3
86	Hurdlestown House	House	4
429	The Old Barracks	House	5
428	Glebe House	House	6

RPS Number	Name	Structure Type	Map Number
347	Annalay Gate Lodge	House	7
125	Kilkishen Cultural Centre	Church	8
352	Kilkishen House Entrance Gate and Piers	House	9
497	Murphy's	House	10
76	Belvoir House	House	11
591	Mountcashel Castle	Towerhouse	12
88	Mount levers	House	13
665	St. Vincent de Paul's Church Oatfield	Church	14
188	Kilbane Bridge	Bridge	15

15.5.7 NIAH within 5km of the Site Boundary

There are eight buildings or structures recorded on the National Inventory of Architectural Heritage (NIAH) within the 5km Study Area, listed in **Table 15.9** below.

Table 15.9: NIAH within 5km of the Site Boundary

NIAH Reg. No.	Name	Structure Type	Map Number
20300912	Mount levers Court	country house	17
20404304	Kilkishen Church	church/chapel	18
20404306	Kilkishen House	demesne walls/gates/railings	19
20404401	Saint Mary's Catholic Church	church/chapel	20
20404406	Hurdlestown House	house	21
20405305	Catholic Church of Mary the Mother of God	church/chapel	22
20404312	Belvoir House	country house	23
20404407	Kilbane Bridge	bridge	24

15.5.8 Grid Connection Route

The Grid Connection Route travels from the Proposed Development and will be connected into either the existing Ardancrusha to Ennis 110kV Overhead Line (Option A) or the existing Ardnarusha to Drumline 110kV Overhead Line, (Option B), via a loop in 110kV double circuit underground cable to Loop-in masts at Ballycar North. Both options are included for planning purposes and have been assessed in the EIAR. The details of the Grid Connection Route can be found in **Chapter 5 Description of the Proposed Development**.

15.5.9 UNESCO World Heritage Sites and those on the tentative list within 100m of the Grid Connection Route

No UNESCO sites are located within 100m of the Grid Connection Route.

15.5.10 National Monuments within 100m of the Grid Connection Route

No National Monuments are recorded within 100m of the Grid Connection Route.

15.5.11 Protected Structures within 100m of the Grid Connection Route

There is one Protected Structure recorded within 100m of the Grid Connection Route. This is the 'St. Vincent de Paul's Church' (14). This is shown in **Table 15.10** below.

Table 15.10: RPS within 100m of the Grid Connection Route

RPS Number	Name	Structure Type	Map Number
665	St. Vincent de Paul's Church	Church	14

15.5.12 NIAH Structures within 100m of the Grid Connection Route

There are no NIAH structures recorded within 100m of the Grid Connection Route.

15.5.13 Site and Monument Records within 100m of the Grid Connection Route

There is one SMR within 100m of the Grid Connection Route (28). This is the St. Vincent de Paul's Church (28).

Table 15.11: SMR within 100m of the Grid Connection Route

SMR Number	Name	Structure Type	Map Number
CL052-043----	St. Vincent de Paul's Church	Church	28

15.5.14 Turbine Delivery Route

The Turbine Delivery Route, 3a, is detailed in EIAR **Chapter 5 Description of the Proposed Development**. It leads from Foynes Port, the N69, M7, N18, Grangewood, Coolderry, Cloonlara, Killaloe Bypass, and on to the Site. The Killaloe Bypass is currently under construction and is due to be completed in 2025.

15.5.15 UNESCO World Heritage Sites and those on the tentative list within the Turbine Delivery Route Study Area

No UNESCO sites are located within the Turbine Delivery Route Study Area.

15.5.16 National Monuments within the Turbine Delivery Route Study Area

No National Monuments are recorded within the Turbine Delivery Route Study Area.

15.5.17 Protected Structures and Architectural Conservation Areas within the Turbine Delivery Route Study Area

There are four Protected Structures recorded within the Turbine Delivery Route Study Area. Two of these are bridges (35 and 37), one is a tavern (36), and a house (38). There is one Architectural Conservation Area (ACA), which the route will pass through. This is Friary Precinct Architectural Conservation Area (ACA) (39). These heritage assets are detailed in **Table 15.12** below.

Table 15.12: RPS within the Turbine Delivery Route Study Area

RPS No.	Name	Structure Type	Map Number
1644	Ballinacurra Bridge	Bridge	35
6255	Ferrybridge Tavern	Tavern	36
6257	Ferry Bridge	Bridge	37
304	Hollypark House	House	38
-	Friary Precinct	ACA	39

15.5.18 NIAH Structures within the Turbine Delivery Route Study Area

There are five NIAH structures recorded within the Turbine Delivery Route Study Area. There are two public houses (41 and 43), walls/gate (40), a post box (42) and a bridge (44), which the TDR passes over. These are detailed in **Table 15.13** below.

Table 15.13: NIAH within the Turbine Delivery Route Study Area

NIAH No.	Name	Structure Type	Map Number
21901123	Hollypark House	gates/railings/walls	40
21901216	M. O'Kelly	public house	41
21901218	Post Box	post box	42
21901219	Public House	public house	43
21901217	Ferry Bridge	bridge	44

15.5.19 Site and Monument Records within the Turbine Delivery Route Study Area

There are five SMRs within the Turbine Delivery Route Study Area. One is a bridge (45), which the TDR passes over, and the other four are fulacht fia's (46-49). These are detailed in **Table 15.14** below.

Table 15.14: SMRs within the Turbine Delivery Route Study Area

SMR No.	Name	Monument Type	Map Number
LI013-012----	BALLINACURRA (Hart),BALLINACURRA (Weston),DOORADOYLE	Bridge	45
LI013-175----	RATHBANE SOUTH	Fulacht fia	46
LI006-101----	GORTNALAHAGH	Fulacht fia	47
LI006-102----	SALLYMOUNT	Fulacht fia	48
LI006-107002-	RICH HILL	Fulacht fia	49

15.5.20 Archaeological and Cultural Background

The following sections discuss the archaeological and cultural heritage potential of the Site and the surrounding landscape.

15.5.21 Prehistoric Period

Mesolithic Period (6000-4000 BC)

Although recent discoveries may push back the date of human activity by a number of millennia (Dowd and Carden, 2016), the earliest widespread evidence suggests that Ireland was first occupied in the Mesolithic period by communities that subsisted on hunting, fishing, and foraging. The most common evidence indicative of Mesolithic activity at a site comprises of scatters of worked flint material; a by-product from the production of flint implements or rubbish middens consisting of largely shells. The latter are commonly discovered in coastal regions or at the edge of lakes (Anderson, 2019).

In the wider landscape around the wind farm Site, a slate spearhead was identified at 9.0 km southeast of the Site boundary at O'Briens Bridge, representing a group of hunter-gatherers (Greene, 2004). Rescue excavations carried out from 2009 to 2014 on two shell middens (CL001-019 and CL001-021) at Fanore More produced some intriguing finds from the first known Mesolithic sites in Clare (Lynch, 2017).

Neolithic Period (4000-2500 BC)

There are two monuments dating to the Neolithic Period recorded within 1km of the Site Boundary that are described as wedge tombs (25 and 32), the nearest of which (32) is recorded 85m south of the Site Boundary and 286m east of T9. The wedge tomb immediately adjacent to site is situated on high slopes of Knockaphunta between Sruffaunnageerah and Mountrice rivers, giving views to the Slieve Bernagh mountains to the north-east, Keeper Hill to the east, and the Galty mountains to the south-east. The chamber is well preserved and may be encircled by an outer wall. The chamber is roughly

3m long and between 1.05m and 0.95m wide with a maximum height of 1.17 m (Valera and Nulláin, 1961; NMS, 2023).

During the Neolithic period communities became less mobile and their economy became based on rearing of stock and cereal cultivation. This transition was accompanied by major social change. Agriculture demanded an altering of the physical landscape, forests were rapidly cleared, and field boundaries constructed. There was a greater concern for territory, which contributed to the construction of large communal ritual monuments called megalithic tombs, which are characteristic of the period. Evidence for settlement dating to this period is hard to identify as the land has been so intensively farmed that the majority of sites have no above surface expression (Anderson, 2019).

In the wider landscape around the Site, the earliest evidence for settlement dates to this period at Roughan Hill, Kilnaboy. Polished stone axes are some of the most common archaeological finds associated with this period, of which there have been at least ten found within the county. Megalithic structures began to appear during this time, one of the most famous of which is from Poul nabrone, County Clare. A settlement at Roughan Hill suggests that it was contemporary with the wedge tombs nearby (Clare Library, 2004).

Bronze Age (2500-800 BC)

One monument dating to the Bronze Age is recorded within the 1km Study Area that is described as a standing stone (34) which is 830m northwest of the Site Boundary (NMS, 2023). Standing stones were popular monuments during this age which were potentially erected to serve as boundary markers, ceremonial, ritual and/or burial purposes (O'Hara, 2015).

The Bronze Age was marked by the widespread use of metal for the first time in Ireland. As with the transition from Mesolithic to Neolithic, the transition into the early Bronze Age accompanied by changes in society. The megalithic tomb tradition declined and ended with the burial of the individual becoming typical. Cremated or inhumed bones were often placed in a cist, which is a small stone box set into the ground or a stone-lined grave. These were often accompanied by pottery. Burials were sometimes accompanied by barrows (mounds of earth set over the burial), or stone cairns. Often these types of burials are found on high ground and may have acted as a marker for ritual or burial space to the surrounding populations (Anderson, 2019).

The most common Bronze Age site within the archaeological record is the burnt mound or *fulacht fia*. Over 4500 *fulachtaí fia* have been recorded in the country making them the most common prehistoric monument in Ireland (Waddell, 1998). Although burnt mounds of heat-affected stone occur as a result of various activities that have been practiced from the Mesolithic to the present day, those noted in close proximity to a trough are generally interpreted as Bronze Age sites. *Fulacht fia* generally consist of a low mound of burnt stone, commonly in horseshoe shape, and are found in low lying marshy area or close streams or rivers. Often these sites have been ploughed out and survive as a spread of heat-shattered stones in charcoal rich soil with no surface expression and in close proximity to a trough. Much debate exists as to the function of these monuments and suggestions include cooking sites (O'Kelly, 1954), bathing sites (Eogan and Shee Twohig, 2012), or textile dyeing sites and brewing sites (Quinn and Moore, 2009; Anderson, 2019). These monuments make up the most common prehistoric monument in the Irish landscape with over 6,000 recorded in Ireland (O'Hara, 2015).

Mooghuan hillfort, located 15km north-west of the Site was the focal site of an important sub-regional territory of the Bronze Age in south-east Clare. There are 25 other hillforts also identified within the larger research area. There are around 2,000 fortified enclosures throughout the county (Discovery Programme, 2023; Britannica, 2023).

A bronze socketed spearhead was found within the barony at River Shannon, Killaloe. One of the biggest Bronze Age Hillforts in Ireland is located at Newmarket-on-Fergus. Saddle querns have been recorded at Kilmacreehy, which is evidence of settlement and cereal cultivation in the locality. A stone spindle whorl was recorded in Commanage. This type of object would have been commonly used in domestic dwellings during the Bronze Age (Greene, 2008; Discover Ireland, 2023; Clare Library, 2023).

Iron Age (800 BC – AD500)

The Iron Age was traditionally seen as a period for which there was little evidence in comparison to the preceding Bronze Age and the succeeding early medieval period. However, development-led excavation in recent decades and projects such as the Late Iron Age and Roman Project have added significantly to our knowledge of the Irish Iron Age. In Europe, there are two stages to the Iron Age, the earlier Hallstatt and followed by the La Tene phase. While in Ireland, evidence of a Hallstatt phase is rare, and the La Tene phase is reflected strongly in the style of metalwork of this period. It is clear there was significant contact and interaction between the Continental Europe, Britain, and Ireland at this time (Anderson, 2019).

Dating from the Bronze Age and Iron Ages, *fulachta fiadh* or 'burnt mounds' are one of the most numerous field monuments in Ireland. They are visible as low horseshoe shaped or crescentic grass-covered mounds which beneath the surface consist of a sunken wooden or stone trough surrounded by a mound of fire-heated and cracked stones. While it is agreed that their primary function was for heating water, their specific purpose remains uncertain. The most popular theory regarding their use is that they were ancient cooking places, other possibilities are that they were sites for bathing or for craft and industrial activities such as dyeing, metalworking, tanning, or soap and fat production (Greene, 2008).

In the wider landscape, around the Site, an Iron Age wooden bowl was recovered from Killow (Clare Library, 2008). The nearest focal point for Iron Age settlement and land-use to the Site is likely to be Formoyle Beg/Cloonyconry More (SMR Ref No: CL044-085), 3.3km east of T7. An excavation at this prehistoric hillfort revealed evidence for a wooden fence with a single bank-and-ditch surrounding the inner and middle enclosures, suggesting that the original hillfort was bivallate (excavation.ie).

Current research indicates that the majority of Iron Age domestic structures were circular, with at least six known from enclosed settlements (generally post-built) and a further eight known from unenclosed sites (generally with foundation trenches) – in both cases the structures varied in size from c. 3.3m up to 14.5m in diameter (Becker, O'Neill and O'Flynn, 2008). While the numbers of known Iron Age structures are still relatively low, important evidence for Iron Age settlement in Clare was identified during excavations carried out at 'Rathwilladoon 3', 'Rathwilladoon 5' and 'Derrygarraff 5' (Lyne, 2009).

15.5.22 Early Medieval Period (AD 500-1100)

Ireland was primarily rural in nature in the early medieval period, with c. 150 kings across the country each ruling over his own *tuath* (Bryne, 1973). A *tuath*, according to most recent estimates would have comprised 1,700 to 3,000 subjects (Stout, 2017), many of which would have lived within defended farmsteads known as ringforts. Ringforts, (also known as *rath*, *lios*, *caiseal*, *cathair*, and *dun*) are a type of defended homestead comprising of a central site enclosed by a number of circular banks and ditches. The number of ditches can vary from one (univallate) to two or three (bivallate or multi-vallate) and is thought to reflect the status and affluence of the inhabitants (Edwards, 1996).

Another morphological variation consists of the platform or raised rath – the former resulting from the construction of the rath on a naturally raised area. Ringforts are most commonly located at sites with commanding viewing of the surrounding environs which provided an element of security. While raths, for the most part, avoid the extreme low and uplands, they also show a preference for the most productive soils (Stout, 1997; Anderson, 2019).

An Early Medieval comb was found at Doolin, as well as nearby cashels. There are no cashels recorded within the Study Area but numerous examples are found throughout Clare County (Greene, 2008). Trial trenching at Clonlea (SMR Record No: CL043-027001 and CL043-002) which was carried out 4.5km north of T1 uncovered ditches, pits, and post-holes that were thought to represent enclosed medieval ecclesiastical occupation (excavation.ie). This site is likely to have been a focal point of settlement during the Early Medieval period in the landscape around the Site.

Clonea, Kilseily and part of O'Brien's Bridge (Trugh) used to comprise the territory of Ui Floinn, the land of the O'Flynns. There is mention in MacGrath's Wars of Thomond of the battle of Magh Duine around 953 AD in which Lachtna, uncle of Brian Boroimhe, slew three of the O'Flynns (Frost, 1893).

15.5.23 Medieval Period (AD 1100-1600)

Norman involvement in Ireland began in 1169, when Richard de Clare ("Strongbow") and his followers landed in Wexford to support Diarmait MacMurchadha, deposed King of Leinster, in his bid to regain the Kingdom of Leinster. By the end of the 12th century the Normans had succeeded in overthrowing the previous ruling elites in much of the country (Anderson, 2019).

The 15th century Ballycullen Castle is recorded 1.6km west of the site boundary, situated on a hillside north-east of Sixmilebridge. It is in poor condition, largely in ruins, built of red sandstone. It was built around 1430 by Donnachadh, son of Domhanall MacNamara (Cróinín and Breen, 2014). It is likely to have continued to be the main high-status dwelling in the landscape around the site until the sixteenth century, as it is referenced in the 1580 College List (Curry, 1839).

Ui Floinn is often mentioned in MacGrath's Wars of Tlioffiond as a sub-division of the country of Ui Bloid, and its extent can be ascertained from MacNamara's Rental. It comprised the parishes of Clonlea, Kilseily and part of O'Brien's Bridge. The parish of Clonlea contains the medieval castles of Kilkishen, which in 1580 belonged to Rory, son of Mahone MacNamara. Enagh Castle was held by his brother John and Montallon was

held by the son of John MacNamera (Frost, 1893). Together these represented the main centres of power during the medieval period.

15.5.24 Post-Medieval Period (AD 1600-1800)

The 18th century saw a dramatic rise in the establishment of large residential houses around the country. This was largely due to the fact that after the turbulence of the preceding centuries, the success of the Protestant cause and effective removal of any political opposition, the country was at peace. The large country house was only a small part of the overall estate of a large landowner and provided a base to manage often large area of land that could be dispersed nationally. During the latter part of the 18th century, the establishment of a parkland context (or demesnes) for large houses was the fashion.

Although the creation of a parkland landscape involved working with nature, rather than against it, considerable constructional effort went into their creation. Earth was moved, field boundaries disappeared, streams were diverted to form lakes and quite often roads were completely diverted to avoid travelling anywhere near the main house or across the estate. Major topographical features like rivers and mountains were desirable features for inclusion into, and as a setting, for the large house and parkland. This was achieved at all scales, from a modest Rectory Glebe to demesne landscapes that covered thousands of acres (Anderson, 2019).

In the landscape around the wind farm Site, large stately homes and associated demesnes were created at Mount Ievers (13) to the south-west on the outskirts of Sixmilebridge. An extensive 'designed landscape' was created around Belvoir House (11) to the north-west of the site. To the north-east of the site, Hurdlestown House (4) was at the heart of the most extensive estate/demesne around Broadford.

15.5.25 19th Century to Modern (AD 1800-present)

According to Lewis during the 19th century Oatfield was within the area of Clonlea, a parish in the barony of Tullagh, County Clare. It comprised large quantities of mountain and bog as well as 5,355 statute acres. The parish contained about 3,749 inhabitants in 1841 and there were 579 houses in the parish. The land was primarily under tillage and Lewis noted abundant limestone with 60 limekilns recorded within the district. Two fairs were held annually and the principal seats were located at Belvoir House (11), the residence of D. Wilson, Esq.; Glenwood, of Basil Davoren, Esq.; Mount Bayley of H. Bayley, Esq.; and Sion Ville, the property of T. Studdert Esq (Lewis, 1837).

Lewis noted that in the Roman Catholic divisions the parish was the head of a union or district, called Kilkishen, comprising the parishes of Clonlea and Killuran. There were three chapels, situated respectively at Kilkishen, at Oatfield, and Callaghan's Mills in the parish of Killuran. Lewis mentions that a new school-house had lately been erected at Belvoir, to which was attached a model farm. There were also five other schools in the parish, one of which at Kilkishen was under the patronage of the parish priest. At Scart Lewis mentions a chalybeate spring (Lewis, 1837).

On the south-west bank of Clonlea lake there were the ruins of the old parish church and the burial-ground. In 2017 a previously unrecorded mass rock and altar stone were discovered on the south west shore of the lake (the Clare Herald, 2018).

Lewis describes the old ruins of Stackpoole, formerly the seat of a family of that name, which was beautifully situated in this parish, overlooking the lakes of Pollagh and Mount Cashel. In 1837 it was the property of the Early of Limerick, on whom it confers the title of Baron Foxford (Lewis, 1837).

In the early 19th century, there was a Royal Irish Constabulary (RIC) Barracks attached to the tower house of Ballycullen Castle (NMS No. CL043-106----). The policeman may also have used part of the site for a store (Curry, 1839).

15.5.26 Undated

There are five undated enclosures, structures, and monuments recorded within the 1 km Study Area (26-27, 30, 31, and 33) see **Table 15.6** above.

One undated enclosure (30) is recorded within 1km of the Site Boundary. It is a single ditched enclosure which is depicted as circular, with a small opening to the east and a section which is double ditched to the southwest. On the Last Edition OS map, it is depicted as an entirely enclosed, single ditched-rectangular earthwork. There are no records of the enclosure being investigated (OSi, 2023 and NMS, 2023).

Two enclosures (26-27) are recorded between 447 m and 645 m south-west of the Site Boundary as circular enclosures on the Ordnance Survey (OS) 25-inch map of 1888 (NMS, 2023).

An undated holy well (33) is recorded 560 m northeast of the Site Boundary. The holy well sits at the base of the nearby hilltop enclosure/fort (31) (NMS, 2023).

15.5.27 Excavation Index

There are twenty NMI burial excavations recorded within the 10 km Study Area. These are summarised below:

An excavation in leverstown/Cappagh Lodge/Sixmilebridge/Mount levers/Ballyliddan West (1997:027; Licence: 97E0298) was carried out 5.6km west of the Site Boundary revealed post-medieval deposits (excavations.ie, 2023).

A trial trenching evaluation at Sixmilebridge (1999:069) was carried out 5.5km west of the Site boundary which revealed post-medieval features, modern debris, and a burnt spread (excavations.ie, 2023).

Archaeological monitoring in Clonlea (2000:060; Licence: 00E0670) was carried out 4.6km north of the Site boundary revealed the remains of a water channel and wheelhouse of a horizontal mill constructed of oak timbers (excavations.ie, 2023).

Archaeological monitoring in Kilkishen (2001:069; Licence: 00E0551) was carried out 4.9km north of the Site Boundary and revealed peat overlying subsoil with two areas of probable fulacht fiadh identified (excavations.ie, 2023).

A pit was excavated (2002:0176; Licence: 02E1643) 3.3km north of the Site Boundary which contained an inhumation 1m below surface level. There was possible evidence for a burial mound which extended 7m past the burial (excavations.ie, 2023).

Archaeological testing in Clonlea (2008:115) was carried out 4.5km north of the Site Boundary revealed ditches, pits, and post-holes that were thought to represent enclosed medieval ecclesiastical occupation (excavations.ie, 2023).

Trial trenching in Ballyliddan West (2008:105; Licence: 07E1164) was carried out 5.3km west of the Site Boundary revealed two burnt spreads which were interpreted as the levelled remains of fulachta fiadhs (excavations.ie, 2023).

An archaeological excavation in Teeronea (2008:146; Licence: 08R0232) was carried out 5.8km east of the Site Boundary revealed spreads of burnt stone (excavations.ie, 2023).

An archaeological excavation at Formyle Beg/Clooneyconry More (2012:082) was carried out 3.3km east of the Site Boundary at a prehistoric hillfort (SMR Ref No: CL044-085). The excavation revealed evidence of a wooden fence with a single bank-and-ditch surrounding the inner and middle enclosures, suggesting that the original hillfort was bivallate (excavations.ie, 2023).

Trial trenching in Mountievers and Sixmilebridge (2018:331; Licence: 18E0446) was carried out 4.8km west of the Site Boundary and revealed an undated burnt stone spread (excavations.ie, 2023).

The remaining archaeological investigations which have taken place within the Study Area revealed nothing of archaeological significance (1992:011, 1998:026, 1998:054, 1999:068, 2001:079, 2000:0058, 2002:0085, 2003:0075, 2003:0116, 2004:0133, 2004:0155, 2006:248, 2007:1088, 2008:119, 2008:141, 2008:142, 2014:237, 2016:355, and 2022:527).

15.5.28 Cartographic Evidence

Down Survey Map of the Barony of Bunratty, c. 1659

The proposed site is not shown on the map of Bunratty.

John Rocque's Map of the County of Clare, 1790

The wind farm site is not shown in detail within John Rocque's map of the County of Clare of 1790. The general area of the site, the grid connection route options, and the turbine delivery route are shown but lack sufficient detail to provide specific information on the land-use of these areas during the 18th century. The general area is shown as partially mountainous, partially trees, and partially as unmarked space (Rocque, 1790).

Ordnance Survey Historical Mapping 1829-1995

The First Edition 6 Inch Ordnance Survey map of the area (1829-1942) shows the wind farm site in detail for the first time. The Site is depicted as enclosed agricultural fields with scattered agricultural buildings and forested areas. The wedge tomb (32) is depicted on the map marked as 'cromlech' (**Volume III, Chapter 15, Appendix 15.5, Figure 15.8**) (Ordnance Survey Ireland GeoHive Map Viewer, 2023).

Possible 19th century domestic and/or agricultural structures are depicted in the Western DA between Turbines T2, T3, T5, T6, T7, T4, and the access track. There are two additional structures shown in the Eastern DA south of T9. There are structures depicted on 19th century Ordnance Survey maps between Turbines T2, T5, and T4, all of which are located near structures and field boundaries.

The Last Edition 6 Inch Ordnance Survey map of the Area (1897-1913) shows relatively little change to the overall field boundary arrangement and land use depicted on the earlier First Edition 6 Inch Ordnance Survey map. Some of the land parcels, particularly at the western end of the Western DA, had been divided in half by that time. There are

additional trackways shown snaking across the parcels, and a few additional structures throughout, but in no specific concentrations (Ordnance Survey Ireland GeoHive Map Viewer, 2023).

15.5.29 Aerial Photographic Analysis

Inspection of aerial photographic coverage of the proposed wind farm development area held by the Ordnance Survey (1995, 2005-2012, 2013-2018) and Google Earth (2005-2023) was carried out. Aerial photographs of the Site from 1995 shows no discernible changes to the current field boundary arrangement that were in place by that time with interspersed areas of forestry plantations largely to the Western DA and Eastern DA. Most of the structures in these areas have also been removed to make way for the plantations. The area of the wedge tomb (32) is visible as an open grassy area within the forestry plantation (Ordnance Survey Ireland GeoHive Map Viewer, 2023).

Aerial and satellite images of the Site taken between 2005 and 2012 appear to show relatively little change to the field boundary arrangement or land-use within the Site boundary during this period. Some potential agricultural structures are visible on these aerial images on the Site (Ordnance Survey Ireland GeoHive Map Viewer, 2023).

15.5.30 Place-name and Folklore Analysis

Placenames, including townland names, are a rich source of information for the land use, history, and folklore of an area and can provide information on families, topographical features, and historical events and figures. In terms of the built environment many names reference churches, fords, castles, raths, graveyards, roads, and passes. The names of townlands in the Proposed Development area and their Irish translations are presented in **Table 15.15**.

Table 15.15: Analysis of townland names in the Proposed Development area

Townland	Genitive	Translation/Interpretation
Ballykelly	Baile Uí Chaollaí	Uí town
Clonlea	Chluain Lao	Calf meadow/pasture
Cloontra East	Cluain Treá Thoir	Treá Thoir meadow/pasture
Crag	Chraig an Tí Móir	Rock/Crag
Gortacullin	Gort an Chuilinn	Holly field
Hurdleston	Bailen a gCliath	Hurdle/wattle town
Kilseily	Cill tSíle	tSíle Church
Knockshanvo	Cnoc Seanbhoithe	Seanbhoithe Hill
Oatfield	Gort an Choirce	Hill of oats
Snaty (Cooper)	Inis Snáite	Cooper river meadow

15.5.31 Clare Historic Landscape Characterisation (HLC)

The Proposed Development is located within the Sliabh Bernagh Uplands Landscape Character Area (LCA) defined by the Landscape Charter Assessment of County Clare (ERM Ireland Ltd, 2004 for the Heritage Council). The key characteristics of this landscape are defined as:

- Area of gentle rolling hills reaching 530 m at Sliabh Bernagh
- Settlement is scattered, confined to lower fringes
- Hedgerows create a wooded feel and are often planted with fuchsia around dwellings
- Historically little settlement other than ritual, as evidenced by a number of cairns, barrows and standing stones identified on the eastern slopes. Broadford Gap is an important Bronze Age passing route.
- Remote and isolated with panoramic views afforded to Lough Derg, lower drumlin farmland and Shannon estuary
- Vegetation dominated by heather moorland with plantation forests and semi-natural deciduous woodland on lower slopes and along water courses.

Sliabh Bernagh remains a prominent feature south of Lough Derg with deeply incised corries unfavourable to settlement. Consequently, it is defined as open rough ground and is largely devoid of monuments. Peat harvesting may have had a considerable history.

Megalithic tombs occupy the bluffs overlooking the Glenomra River, indicating that there was a prehistoric population living nearby. The valley is filled with the general mixture of fields. It is possible that recent alluvium in the valley has covered earlier landscape features (Clare LCA, ERM Ireland Ltd, 2004).

The upper slopes are generally remote. However, several communications masts on the summit of Woodcok Hill interrupt this sense of isolation. These slopes are rarely enclosed, though post and wire fences commonly enclose forestry plantations (Clare LCA, ERM Ireland Ltd, 2004 for the Heritage Council).

Settlement is scattered along the upper perimeter slopes with isolated farmhouses. These include traditional style cottages or two storey dwellings and red corrugated outbuildings, frequently accessed by narrow lanes. Hedgerows create a wooded feel and are often planted with fuchsia around dwellings. Travelling down to the lower slopes there is an increase in settlements, accompanied by an increase in pasture and hedgerow enclosure, post and wire and small remnants of stone walls. There are several solid two storey farmhouses or cottages around the townland of Sallybank. These are increasingly replaced by modern bungalows less reflective of vernacular styles as one descends. There are a considerable number of abandoned and derelict dwellings within this area. Broadford is the only village, providing a number of services to the surrounding areas (ERM Ireland Ltd, 2004).

The Historic Landscape Character report set out the following principles for landscape management and future development in this character area.

- Careful consideration must be given to siting and planting regime of new forestry plantations, in small-scale irregular plantations with a good proportion of deciduous tree. Irregular edges following the landform and varied age structure will help prevent creation of large uniform blocks.
- Clear felling regimes need to be carefully managed so not to impact overwhelmingly
- on the landscape
- Conserve open character of remaining areas
- Stronger coordination is required for masts
- Direct new development to lower slopes reflecting existing pattern of development
- and using shelter provided from existing vegetation and landform; guidance should be provided on siting, location and style of new houses
- Encourage restoration of derelict houses
- Promote REP (Rural Environment Protection) uptake
- Promote proactive management of windfarms

15.6 Potential Effects of the Proposed Development

15.6.1 'Do Nothing' Scenario

The 'Do-Nothing' scenario seeks to describe the consequences that are reasonably likely to occur without the Proposed Development. If the Proposed Development were not to proceed, the site would continue to be managed as existing arable and pasture farmland and forestry land. Potential effects to sub-surface archaeology (if present) and historic structures on the site could continue to occur if any groundworks took place as part of the management of the farmland and forestry land on the site. Indirect effects on Archaeological, Architectural and Cultural Heritage in the wider landscape setting would not occur.

Potential direct effects to sub-surface archaeology (if present) and historic structures along the grid connection route (GCR) and turbine delivery route (TDR) could continue

to occur if any groundworks took place as part of the management of existing public roads, roadway verges and agricultural fields adjacent to the GCR and TDR. Indirect effects on Archaeological, Architectural and Cultural Heritage in the wider landscape setting would not occur.

15.6.2 Construction Phase

15.6.2.1 Construction Phase Potential Effects - Indirect

Indirect effects, in terms of archaeology, architectural and cultural heritage are considered to be those effects which happen away from 'the site.' This includes effects on visual setting of any cultural heritage asset in the wider landscape. Since these effects are only possible once the proposed wind turbines are constructed, they are considered operational effects and are therefore discussed further below.

No indirect effects were identified which will occur at the construction stage.

15.6.2.2 Construction Phase Potential Effects - Direct

Direct effects refer to a 'physical impact' or 'effect' on a monument or site. The construction phase of the development consists largely of earthmoving activities such as topsoil and subsoil removal and possibly the removal of some existing structures on the site such as field boundaries. The potential effects on the known and potential archaeological, architectural and cultural heritage of the area are outlined below with the suggested mitigation measures. The effects are described according to each constraint, National Monuments, Recorded Monuments etc. that were identified in the existing environment.

15.6.2.3 Direct Effect (pre-mitigation) on archaeological and architectural heritage – Site and Site Access Track

There are no World Heritage Sites, National Monuments, Architectural Conservation Areas (ACAs), Protected Structures, NIAH Structures, or monuments recorded on the wind farm site (i.e., wind turbine locations, spoil storage areas, compound areas, substation areas) or site access track.

Therefore, the construction of the Site and Site access track will have a No Change direct effect on these types of heritage assets. In relation to direct effects, the significance of effect on these types of heritage assets will be neutral.

There is one recorded monument immediately adjacent to the Site Boundary. A Megalithic wedge tomb (32) is recorded 286 m east of T9 and 106 m south of the nearest internal access track. The wedge tomb on site is situated on high slopes of Knockaphunta between Sruffaunnageerah and Mountrice rivers, giving views to the Slieve Bernagh mountains to the north-east, Keeper Hill to the east, and the Galty mountains to the south-east.

According to the National Monument Service (NMS) the chamber is well preserved and may be encircled by an outer wall. The chamber is roughly 3.00m long and between 1.05m and 0.95m wide with a maximum height of 1.17m (Valera and Nulláin, 1961; NMS, 2023). Embedded mitigation has been carried out in the design phase of the development to ensure that no groundworks are required in the vicinity of this recorded monument.

In addition, a buffer zone of 50m around this monument has been put in place. No groundworks, construction vehicle movements or storage of spoil or material is to be permitted within this buffer zone.

It is considered that the Proposed Development will have a No Change direct effect on this recorded monument. No other direct effects on any other recorded monuments within 1km of the site are predicted. The significance of effect on both the Megalithic Wedge tomb (32) and on all other recorded monuments will likely be neutral.

Analysis of 19th century mapping, combined with field survey indicates that there are no extant unregistered historical structures shown in any parts of the site or along the internal access tracks that are likely to be truncated or removed by the Proposed Development (**Volume III, Chapter 15, Appendix 15.5, Figures 15.8 and 15.9**). The nearest unregistered historical structures to the parts of the Proposed Development are a cluster of 19th century building (in ruins) representing a small farmstead located to the north of T4, to the south of the new access track and to the south-east of a spoil storage area (**Volume III, Chapter 15, Appendix 15.5, Figure 15.8**). A single small building shown on 19th century Ordnance Survey maps is also located immediately to the south of T7.

The direct effect on currently unregistered extant structures of historical and/or architectural interest in the site is assessed as No change to Low. The significance of this effect on currently unregistered extant structures of historical and/or architectural interest will be at worst Not Significant (An effect which causes noticeable changes in the character of the historic environment, on archaeological features or monuments or on architectural heritage but without significant consequences).

The construction of all the wind turbine locations, the on-site 110kV substation, the compound areas, the spoil storage areas and the internal access tracks will result in the loss of sections of field boundary that are depicted on 19th and early 20th century Ordnance Survey maps of the area. Field inspection has indicated that upstanding remains (linear earthworks and/or surviving sections of stonewalls) of the majority of these field boundaries survive, even in the parts of the site that have been subsequently planted by forestry in the late 20th century.

The potential direct effect of the Proposed Development on upstanding field boundaries is assessed as Low. The significance of this effect on currently unregistered field boundaries of potential historic interest will be at worst Not Significant (An effect which causes noticeable changes in the character of the historic environment, on archaeological features or monuments or on architectural heritage but without significant consequences).

The construction of the internal access roads will result in the widening of the existing access road in the western part of the site. Parts of this existing access track area flanked by high sided field banks, suggesting its historical use as a cattle droveway. The widening of this part of the access track will likely result in the loss of these features.

The potential direct effect of the Proposed Development on this feature is assessed as Low. The significance of this effect this feature will be at worst Not Significant (An effect which causes noticeable changes in the character of the historic environment, on archaeological features or monuments or on architectural heritage but without significant consequences).

The construction of the 110kV substation will remove two features, which have been interpreted as relatively modern stone clearance cairns in this location. These features are therefore not considered to be archaeologically significant and the potential direct effect of the Proposed Development on these features is assessed as Negligible. The significance of this effect these features will be at worst Not Significant (An effect which causes noticeable changes in the character of the historic environment, on archaeological features or monuments or on architectural heritage but without significant consequences).

Groundworks for the construction of all of the wind turbine locations, the 110kV substation, the compound areas and the internal access tracks will also result in the potential truncation or removal of any currently unknown buried archaeological deposits and artefacts in these areas.

The plantation of forestry and the creation of associated drainage channels in the late 20th century has caused significant ground disturbance in the areas of Turbines T1, T2, T6 and T7 and in the areas of Turbines T8-T10. The forestry plantation has also caused significant ground disturbance in the areas of the new access road to T2 and the access road from T5 to T7. The forestry plantation has caused significant ground disturbance in the areas of the compound and spoil storage location and across most of the internal access roads in the eastern part of the site. This disturbance will have reduced the potential for currently unknown buried archaeological remains to be preserved in situ in these parts of the site.

As the proposed groundworks will be carried out in areas where no known buried archaeological features have been identified, and due to the previous ground disturbance resulting from 20th century forestry plantation over large parts of the site, the potential direct effect of the Proposed Development on currently unknown buried archaeology without mitigation is assessed as Negligible to Very High. The significance of this effect on currently unknown buried archaeology on the Site and along the Site access track could range from Imperceptible (An effect on an archaeological feature, monument or architectural heritage site which is capable of measurement but without significant consequences) to Profound (An effect which obliterates sensitive characteristics. Changes to most or all key archaeological materials, such as the resource is totally altered. Comprehensive changes to setting).

15.6.2.4 Direct Effect (pre-mitigation) on archaeological and architectural heritage – Grid Connection Route (GCR)

There are no World Heritage Sites, National Monuments, Recorded Monuments, Protected Structures or Architectural Conservation Areas (ACAs) recorded along the Grid Connection Route or within 100m of the Grid Connection Route.

Therefore, there will be a No Change direct effect on these types of heritage assets. In relation to direct effects, the significance of effect on these types of heritage assets will be neutral.

The St Vincent de Paul's Church Protected Structure (14) and Recorded Monument (28) is located within 100m of the Grid Connection Route. The Grid Connection Route will be dug through the existing public road adjacent to this Protected Structure and archaeological monument. There will be no direct effect on the building or monument during the construction phase. However, there is potential for currently unknown buried

archaeological remains associated with the St Vincent de Paul's Church to be present within the public road outside of the modern curtilage of the church and churchyard which could be truncated and removed by groundworks for the cable trench at this location.

This potential direct effect on currently unknown buried archaeology at this location is likely to be No Change – Low. Due to the likely limited potential of currently unknown archaeological remains within the existing public road at this location the significance of this effect these features will likely be at worst Not Significant (An effect which causes noticeable changes in the character of the historic environment, on archaeological features or monuments or on architectural heritage but without significant consequences).

The proposed grid connection route passes over an unregistered stone bridge of historic interest immediately to the south-west of the St Vincent de Paul's Church. The construction of the cable trench across this bridge has the potential to truncate or remove architectural fabric of historic interest associated with this bridge structure.

As the construction of the cable trench will most likely involve limited trenching groundworks along the top of the bridge this potential direct effect is likely to be Negligible to Low. Due to the likely limited potential impact of groundworks within the existing public road at this location the significance of this effect on this bridge will likely be at worst Not Significant (An effect which causes noticeable changes in the character of the historic environment, on archaeological features or monuments or on architectural heritage but without significant consequences).

Short sections of the Grid Connection Route divert off the existing public road through adjacent fields. This will potentially involve the removal of short sections of some field boundaries, which appear on 19th century historic maps. As the construction of the cable trench will go through fields where no archaeological features or architectural features have been identified, and as only short sections of existing field boundaries will need to be removed, this potential direct effect on currently unknown buried archaeology and existing field boundaries is likely to be Negligible to Low. The significance of this effect on currently unknown buried archaeology and on existing field boundaries will likely be at worst Not Significant (An effect which causes noticeable changes in the character of the historic environment, on archaeological features or monuments or on architectural heritage but without significant consequences).

Elsewhere, the archaeological and architectural potential of the existing public road is low and the construction of the cable route through the existing public road will have a likely No Change direct effect on currently unknown buried archaeology. The significance of effect on buried archaeology and architectural heritage will likely be neutral.

15.6.2.5 Direct Effect (pre-mitigation) on archaeological and architectural heritage – Turbine Delivery Route (TDR)

There are no World Heritage Sites or National Monuments recorded along the Turbine Delivery Route. Therefore, there will be no direct effect on these types of heritage assets. There is one Architectural Conservation Area (ACA) (Friary Precinct) and four Protected Structures (35-38) located along the Turbine Delivery Route. As there are no groundworks proposed in the Transport Chapter at any on these locations the predicted direct effect will likely be No Change. In relation to direct effects, the significance of effect on these types of heritage assets will be neutral.

There are five recorded monuments (45-49) and five NIAH Structures (40-44) located within the Study Area for the Turbine Delivery Route. However, there are no groundworks proposed in the Transport Chapter at any of these locations. Therefore, the predicted direct effect on these heritage assets will likely be No Change. In relation to direct effects, the significance of effect on these types of heritage assets will be neutral.

As the only area where groundworks are proposed along the Turbine Delivery Route is at the junction of the R463 and R471 there will be no predicted effect to buried archaeology or unregistered architectural heritage elsewhere along the Turbine Delivery Route. There is no buildings or structures of architectural interest within the area of proposed groundworks at the junction of the R463 and R471. There is also no evidence of unregistered earthworks or buried archaeology at this location. However, there may be potential for currently unknown buried archaeology to be present in the fields around this junction. Groundworks for the construction of a temporary access road or widening of this junction could truncate or remove any buried archaeology present.

As any groundworks required will go through fields where no archaeological features or architectural features have been identified, and as only short sections of existing field boundaries will need to be removed, this potential effect is likely to be Negligible to Low. The significance of this effect on currently unknown buried archaeology and on existing field boundaries will likely be at worst Not Significant (An effect which causes noticeable changes in the character of the historic environment, on archaeological features or monuments or on architectural heritage but without significant consequences).

15.6.3 Operational Phase Assessment of Effects

15.6.3.1 Operational Phase Potential Effects

Indirect effects can occur where a feature or site of archaeological, architectural heritage merit or their setting is near a proposed development. Indirect effects for the operational phase of the wind farm are mainly concerned with effects on the setting of cultural heritage assets and the historic landscape. Effects on settings of sites may arise when a development is proposed immediately adjacent to a recorded monument or cluster of monuments or any cultural heritage asset. While the development may not physically affect a cultural heritage asset, it may alter the setting of a historic structure, monument or group of monuments. There is no standardised industry-wide approach for assessing the degree of effect to the setting of a monument. This assessment is based on professional judgement, experience and several software analysis tools.

Potential effects to the visual amenity of a site or area and the significance of same is dependent on several factors regarding the sensitivity of the location or 'receptor' and the scale or magnitude of the proposed development. Similarly, the extent of the development and its duration and reversibility should all be considered (EPA, 2022). Potential operational effects are discussed below per cultural heritage assets, i.e., National monuments, Recorded Monuments, Architectural Conservation Areas (ACAs), RPS, NIAH etc.

15.6.3.2 Effect on the Setting of National Monuments

A review of all National Monuments within 10km of the site boundary was undertaken as part of the assessment in order to ascertain any potential effects on their setting as a

result of the Proposed Development. No National Monuments are located within or adjacent to the EIAR site boundary, along the grid connection routes or along the turbine delivery routes.

15.6.3.2.1 *Bunratty Castle*

The nearest National Monument (in State Guardianship) to the Proposed Development Area is located outside of the 10km study area. This is Bunratty Castle, which is described as a 'Castle-hall-house', and is located 10.5 km southwest of the nearest turbine (**Volume III, Chapter 15, Appendix 15.5, Figure 15.2**). It is described as the most complete and authentic castle in Ireland, built by the MacNamara around 1424, but taken over by O'Briens by 1475 (Bunratty Castle, 2023). The current setting of the Castle is within an area of mature trees in the village of Bunratty. The N18 is located to the south of the castle.

Analysis of wireframe and photomontage views produced as part of this assessment indicate that there will be possible long range views of the wind turbines from Bunratty Castle and its immediate setting. Visual assessment from the site and desk-based analysis of sightlines using Google Earth indicates that the presence of mature trees and other existing modern buildings to the north of the castle will effectively screen all significant views of the wind turbines from ground level around the Castle and from the lower floor levels. The wind turbines will not likely appear in any significant third point views of the castle from the Old Bunratty Road looking north, which is how most members of the public will view the castle. This is because of the distance of the wind turbines from the Castle and because of the presence of mature trees between the Castle and the modern carpark to the north. There may be long range views of the wind turbines from the upper stories of the Castle looking north-east. However, in these views the wind turbines will be visible alongside other modern structures in the skyline to the northeast, and will not change how the Castle is understood and appreciated in its landscape setting. The proposed changes to the views looking northeast from Bunratty Castle will not likely affect any key historic views or sightlines that contribute to the significance of the setting of the Castle. The visual change can also be reversed once the wind farm is decommissioned.

For these reasons it is assessed the wind farm will likely have a long term (during the operational phase) negligible indirect effect on the setting of this National Monument. It will likely have an adverse indirect effect on the significance of this National Monument. However, the significance of this effect will be at worst slight (An effect which causes noticeable changes in the character of the historic environment without affecting its sensitivities).

15.6.3.3 *Effect on the Setting of Architectural Conservation Areas*

A review of all Architectural Conservation Areas (ACAs) within 10km of the site boundary was undertaken as part of the assessment, in order to ascertain any potential effects on their setting as a result of the Proposed Development.

Kilkishen ACA

Kilkishen Architectural Conservation Area (ACA) is located over 4.8km to the north-west of the Proposed Development Area (**Volume III, Chapter 15, Appendix 15.5, Figure 15.3**). The village core is designated as an ACA, recognizing the historical importance of

the town and the architectural importance of the townscape and layout of the core, most of which remains intact. There are, however, a number of derelict sites within this area which detract from the overall character of the streetscape (Clare County Development Plan 2017-2023).

Kilkishen ACA is also associated with two Protected Structures. These are the Kilkishen Cultural Centre and Church (8) and vernacular house known as Murphy's (10).

Analysis of wireframe and photomontage views produced as part of this assessment indicate that there will be possible long range views (over 5km) of the wind turbines from Kilkishen ACA and its immediate setting. However, Visual assessment from the site and desk-based analysis of sightlines using Google Earth indicates that the presence of mature trees and other existing modern buildings on the eastern and south-eastern side of the village will effectively screen all significant views of the wind turbines from ground level from the Kilkishen Cultural Centre (8) and from Murphys (10) Protected Structures.

The turbines will not appear in any significant third point views of the ACA looking from the R4622 looking north, or looking south and south-west along the R4622, which is how most members of the public will view the ACA and appreciate and understand its setting. There will also be, at worst, very restricted long-range views of the wind turbines looking south-east on clear days from the south-east edge of the Conservation Area.

The proposed changes to the views looking southeast from Kilkishen will not likely affect any key historic views or sightlines that contribute to the significance of the setting of the ACA. The visual change can also be reversed once the wind farm is decommissioned.

For these reasons it is assessed the wind farm may have a long term (during the operational phase) low effect on the setting of this Architectural Conservation Area and its associated Protected Structures. It will likely have an adverse indirect effect on the significance of this ACA. However, the significance of this effect will be at worst not significant (An effect which causes noticeable changes in the character of the historic environment, on archaeological features or monuments or on architectural heritage but without significant consequences).

Sixmilebridge ACA

Sixmilebridge Architectural Conservation Area (ACA) is located immediately adjacent, but just outside of, the 5km Study Area. It is situated 5.1km to the south-west of the Proposed Development Area. The town core is designated as an ACA, recognising the historical importance of the town as an early industrial settlement on the O'Garney river and the architectural importance of the townscape and layout of the core area which reflects the past (Clare County Development Plan 2017-2023). The majority of the Conservation Area is located set around the low-lying banks of the O'Garney river along the R470, the R462 and the R471 roads. The ground level in the Conservation Area rises as one travels westwards along the R471 to St Finnachta's Catholic Church at the western end of the ACA. Mature tree vegetation along the O'Garney River and around Mount Ivers, as well as modern industrial buildings and residential development along the R462 and the R471 restricts views from the historic core looking to the east and northeast in the direction of the Proposed Development.

The ACA is also associated with nine Protected Structures. These comprise the Little Church of Cratloe (RPS No. 128), the Old House Bar (RPS No. 470), Leverstown House (RPS No. 469), Kilfinaghty Public House (RPS No. 123), Saints Mary and Finaghta's

Church (RPS No. 110), Credit Union (RPS No. 468), Waterside Medical Centre (RPS No. 494), the Riverside Inn (RPS No. 471) and Kilbane Bridge (15).

Analysis of wireframe and photomontage views produced as part of this assessment indicate that there will be possible long range views (5km) of the wind turbines from certain parts of Sixmilebridge ACA and its immediate setting. However, visual assessment from the ground and desk-based analysis of sightlines using Google Earth indicates that the presence of mature trees and other existing modern buildings on the eastern side of the small town will effectively screen all significant views of the wind turbines from ground level from the majority of the Architectural Conservation Area and the associated Protected Structures within the ACA.

There will unlikely be any significant views of the wind turbines at all from the Little Church of Cratloe (RPS No. 128), the Old House Bar (RPS No. 470), Leverstown House (RPS No. 469), Kilfinaghty Public House (RPS No. 123), Credit Union (RPS No. 468), Waterside Medical Centre (RPS No. 494), the Riverside Inn (RPS No 471), and Kilbane Bridge (15).

The wind turbines will not appear in any significant third point views of the ACA looking along the R462 and R4570 Roads or looking westwards along the R471. There will also unlikely be any significant views of the wind turbines in most views within the ACA looking westwards along the R471 due to the topography and the presence of intervening buildings and mature trees on the eastern side of the town. These are the key views in which the general public normally view and appreciate the Conservation Area and the Protected Structures within the Conservation Area.

There may be long range views of the wind turbines looking eastwards from the western edge of the ACA, and in particular from the areas of Church View and Lodge Road. In these views the turbine will may appear on the eastern skyline behind the Saints Mary and Finaghta's Church (RPS No. 110) on clear days from certain viewpoints on this side of the ACA.

The proposed changes to the views looking northeast from Sixmilebridge will not likely affect any key historic views or sightlines that contribute to the significance of the setting of the ACA. The visual change can also be reversed once the wind farm is decommissioned.

For these reasons it is assessed the wind farm may have a long term (during the operational phase) low effect on the setting of this Architectural Conservation Area and its associated Protected Structures. It will likely have an adverse indirect effect on the significance of this ACA. However, the significance of this effect will be at worst not significant (An effect which causes noticeable changes in the character of the historic environment, on archaeological features or monuments or on architectural heritage but without significant consequences).

15.6.3.4 Effect on the Setting of Protected Structures Outside of Architectural Conservation Areas

A review of all Protected Structures within 5km of the site boundary was undertaken as part of the assessment in order to ascertain any potential effects on their setting as a result of the proposed development. No Protected Structures are located within or adjacent to the EIAR site boundary. The Protected Structures located within the two

Architectural Conservation Areas (Kilkishen and Sixmilebridge) are assessed as part of these Architectural Conservation Areas.

15.6.3.4.1 Church of the Mother of God (1); Glenmora House (2); St Marys Church (3); Glebe House (6); and Mount levers House (15).

Analysis of wireframe and photomontage views produced as part of this assessment, visual assessment of views from publicly accessible roads adjacent to each Protected Structure and their curtilages, and desk-based analysis of sightlines using Google Earth indicates that there will likely be no views or extremely limited views of the wind turbines from the following Protected Structures: Church of the Mother of God (1); Glenmora House and Grounds (2); St Marys Church (3); Glebe House (6); and Mount levers House and Grounds (15).

In each case views of the windfarm will likely be blocked by the presence of mature tree vegetation which form part of the immediate setting of each of these Protected Structures. Intervening landform between these Protected Structures and the windfarm will also screen views of the wind turbines. No other setting effects are predicted due to the distances between these Protected Structures and the turbines.

For these reasons it is assessed the wind farm may have long term (during the operational phase) negligible effect on the setting of these Protected Structures. It will likely have an adverse indirect effect on the significance of these Protected Structures. However, the significance of this effect will be at worst imperceptible (an effect capable of measurement but without significant consequences).

15.6.3.4.2 Kilkishen Castle (RPS No. 285) and Kilkishen House (RPS No. 87)

Kilkishen Castle comprises an upstanding towerhouse castle of medieval date in a ruinous condition. It is set within a platform demarcating the original rectangular bawn in fields to the west of the modern R462 road. Its wider setting is the post-medieval Kilkishen Demesne. The 19th century gate piers at the entrance to this demesne (RPS No. 87) are also a Protected Structure.

Analysis of wireframe and photomontage views produced as part of this assessment, visual assessment of views from publicly accessible roads adjacent to each Protected Structure and their curtilages, and desk-based analysis of sightlines using Google Earth indicates that the upper portions of the wind turbines will be visible in medium range views looking east from Kilkishen Castle (RPS No. 285). A belt of mature trees to the south-east of the Castle may screen some views of the wind turbines in this direction.

Kilkishen Castle is also currently derelict and located in private property. Therefore, it is viewed and experienced mainly from the R462 road. Modern changes to the immediate setting of the 19th century designed landscape of Kilkishen Demesne (such as the dereliction of original 19th century designed parkland, gardens and designed views) have reduced the sensitivity of this Protected Structure to visual changes in the wider landscape. It is similarly assessed that changes to views in the skyline looking south-west from the gate piers of Kilkishen House (RPS No. 87) will have a very limited potential effect on the setting or significance of this Protected Structure.

The wind turbines will not be visible in views looking west from this public road to either Kilkishen Castle (RPS No. 285) or to the gate piers of Kilkishen House (RPS No. 87). Therefore, the Proposed Development will not change the way these two Protected

Structures are normally viewed and understood in their historic landscape setting. The proposed changes to the views looking east from these two Protected Structures will not likely affect any key historic views or sightlines that contribute to the significance of the setting of these structures within the former 19th century Kilkishen Demesne. The visual change can also be reversed once the wind farm is decommissioned.

For these reasons it is assessed the wind farm may have a long term (during the operational phase) low effect on the setting of these two Protected Structures. It will likely have an adverse indirect effect on the significance of these Protected Structures. However, the significance of this effect will be at worst slight adverse (An effect which causes noticeable changes in the character of the historic environment without affecting its sensitivities).

15.6.3.4.3 *Hurdlestown House (4)*

Hurdlestown House (4) comprises a detached T-plan four-bay, two-storey house dated 1871 (NIAH, 2023). It is set within private grounds in a secluded, semi-wooded location to the south of the village of Broadfield, to the north-east of the proposed windfarm. It is currently occupied and in good condition. The front of the house faces southwards overlooking grassed gardens and fields beyond although a belt of mature trees restricts some longer-range views in this direction. Nevertheless, views looking south and south-west towards the uplands of Gortacullin likely make a contribution to the wider historic landscape setting of this Protected Structure and how it is experienced and understood in its landscape setting.

Analysis of wireframe and photomontage views produced as part of this assessment, visual assessment of views from publicly accessible roads adjacent to this Protected Structure and desk-based analysis of sightlines using Google Earth indicates that the upper portions of the wind turbines will be visible in medium range views looking south and south-west from the front of the house and from the garden area immediately in front of the house. This visual change will have a potential adverse effect on the wider historic landscape setting of this Protected Structure and its grounds. The visual change can be reversed once the wind farm is decommissioned.

For these reasons it is assessed the windfarm may have a long term (during the operational phase) medium effect on the setting of this Protected Structure. It will likely have an adverse indirect effect on the significance of this Protected Structure. However, the significance of this effect will be at worst moderate adverse (an effect which alters the character of the environment in a manner that is consistent with existing and emerging baseline trends).

15.6.3.4.3.1 *Belvoir House (11)*

Belvoir House (11) comprises a detached five-bay, two-storey over basement Gothic Revival house with dormer attic. It was built c. 1820, burnt in 1880 and is currently in ruins. Its setting is 19th century extent of the Belvoir Demesne. This demesne contains several other historic buildings in the curtilage of the main house, including the Lady's Chapel, which was built in 1862-1863; a group of detached buildings set around the courtyard which were built c. 1840; and the gateway which was also built c. 1840 and comprises four cut-stone piers with cornices and pyramidal cappings set in curved walls (NIAH, 2023).

These buildings are all located within private grounds in a secluded wooded location to the north-west of the proposed windfarm. The front of the house (in ruins) faces south-east and was originally likely designed to give views over landscaped parkland immediately to the south-east and longer-range views looking over the 12'O'Clock Hills and the uplands of Belvoir to the south-west. These views likely make a contribution to the setting of this Protected Structure and how it is experienced and understood in its wider historic landscape setting.

Analysis of wireframe and photomontage views produced as part of this assessment, visual assessment of views from publicly accessible roads adjacent to this Protected Structure and desk-based analysis of sightlines using Google Earth indicates that the upper portions of the turbines will be visible in medium range views looking south-east from the front of the Belvoir House and from the open area of pasture immediately in front of the house. Modern tree plantation within the historic area of Belvoir Demesne may screen views of the windfarm in this direction.

This visual change will have a potential adverse effect on the wider landscape setting of this Protected Structure and its historic demesne. However, Belvoir House is currently derelict and modern changes to the immediate setting of the 19th century designed landscape around house (such as the dereliction of original 19th century designed parkland, gardens and designed views and the introduction of modern forestry plantations) have reduced the sensitivity of this Protected Structure to visual changes in the wider landscape. The visual change of the introduction of the wind turbines on the skyline to the southwest can be reversed once the wind farm is decommissioned.

For these reasons it is assessed the windfarm may have a long term (during the operational phase) medium effect on the setting of this Protected Structure. It will likely have an adverse indirect effect on the significance of this Protected Structure. However, the significance of this effect will be at worst moderate adverse (an effect which alters the character of the environment in a manner that is consistent with existing and emerging baseline trends).

15.6.3.4.4 Mountcashel Castle (12)

Mountcashel Castle (12) is a 15th century McNamara towerhouse. It is five storeys in height, vaulted over the ground and second floor. Its immediate setting is a rocky outcrop which gives it an elevated position on the surrounding landscape. It was restored and inhabited in the 1960s (Clare County Development Plan 2023-2029 Record of Protected Structures) but is currently derelict. The towerhouse has commanding views in all directions, but its location along the modern R462 road suggests it was likely constructed to control the historic routeway between Kilmurry to the north and Sixmilebridge to the south. Views from the towerhouse (in particular views looking north and south) likely make a contribution to the setting of this Protected Structure and how it is experienced and understood in its wider historic landscape setting.

Analysis of wireframe and photomontage views produced as part of this assessment, visual assessment of views from publicly accessible roads adjacent to this Protected Structure and desk-based analysis of sightlines using Google Earth indicates that the upper portions of the wind turbines will be visible in medium range views looking east along the skyline towards the upland areas of Crag and Snaty (Wilson).

However, wind turbines will not be visible in views looking west, south-west or north-west from the modern R462 public road to Mountcashel Castle. Therefore, the Proposed Development will not change the way this Protected Structure is normally viewed and understood in its setting. The proposed changes to the views looking east from the Castle will not likely affect any significant historic views or sightlines that contribute to the significance of the setting of the Castle. The visual change can also be reversed once the wind farm is decommissioned.

For these reasons it is assessed the windfarm may have a long term (during the operational phase) medium effect on the setting of this Protected Structure and its curtilage. It will likely have an adverse indirect effect on the significance this Protected Structure and its curtilage. However, the significance of this effect will be at worst moderate adverse (an effect which alters the character of the environment in a manner that is consistent with existing and emerging baseline trends).

15.6.3.4.5 *St Vincent de Paul Church Oatfield (14)*

St Vincent de Paul's Church (14) is a single storey, five-bay T-shaped chapel. Originally built in an L-shape c. 1655, two transepts were added, possibly in the early 1840s. There is a bellcote over the central gable. It was formerly known as St Peter's Church and it was restored in 2013 (Clare County Development Plan 2023-2029 Record of Protected Structures).

The church is set in gentle sloping north-south hillside at the cross roads between the modern R471, the minor road heading northwards toward Oatfield and the minor road heading southwards towards Derrynaveagh. To the south of the Church the ground falls away to a small stream.

Analysis of wireframe and photomontage views produced as part of this assessment, visual assessment of views from publicly accessible roads adjacent to this Protected Structure and desk-based analysis of sightlines using Google Earth indicates that the upper portions of the turbines will be visible along the skyline in close range views from the Church carpark looking north towards the upland areas of Crag and Snaty (Wilson). The steepness of the slope of the hillside to the north of the Church, the presence of a modern house and associated structures and the presence of mature trees immediately to the north of the R471 will block some views of the wind turbines along the skyline behind the Church from this location.

The wind turbines will not be visible in views looking south and south-west from the modern R471 public road to Church. The turbines will not be visible in views from the entrance of the church looking westwards or in views looking from the Derrynaveagh road directly east towards the entrance of the Church. Therefore, the Proposed Development will not change the way this Protected Structure is normally viewed and understood in its setting.

The proposed changes to the views looking north from the Church and its immediate setting (the carpark) will not likely affect any significant historic views or sightlines that contribute to the significance of the setting of the Church. The visual change can also be reversed once the wind farm is decommissioned.

For these reasons it is assessed the windfarm may have a long term (during the operational phase) medium effect on the setting of this Protected Structure and its

curtilage. It will likely have an adverse indirect effect on the significance this Protected Structure and its curtilage. However, the significance of this effect will be at worst moderate adverse (an effect which alters the character of the environment in a manner that is consistent with existing and emerging baseline trends).

15.6.3.5 *Effect on the Setting of NIAH Structures (excluding Protected Structures)*

There are eight buildings or structures recorded on the National Inventory of Architectural Heritage (NIAH) within a 5km Study Area around the Site (NIAH, 2023). These are described in **Table 15.8** and are shown on Figure 15.3 (**Volume III, Chapter 15, Appendix 15.5, Figure 15.3**). The majority of these are also recorded as Protected Structures and are therefore assessed primarily as Protected Structures in this Chapter.

There are no NIAH structures recorded within 1km of the Site Boundary.

Desk-based analysis of the ZTV (Volume III, show that all eight of the NIAH structures within 5km of the nearest proposed turbine may have some potential visibility of turbines. This is a worst-case scenario as the ZTV model does not take the presence of intervening modern buildings, vegetation or natural screening into consideration. Due to the distance from the Proposed Development and the presence of intervening landform, vegetation and modern buildings, desk-based and field-based visual analysis indicates that the potential likely indirect effects on NIAH heritage assets between 1km and 5km from the site may comprise some visual changes.

It is assessed that the windfarm is likely to have long term Negligible to Low effect on the settings of NIAH Structures (excluding Protected Structures) and their curtilages. It will likely have an adverse indirect effect on the significance these NIAH Structures. The significance of this effects will range from imperceptible (an effect capable of measurement but without significant consequences) to moderate (an effect that alters the character of the historic environment in a manner that is consistent with existing and emerging baseline trends).

15.7 Mitigation Measures

The mitigation strategies outlined in this section detail the techniques to be adopted in order to ameliorate the effects that the Proposed Development may have on features of archaeological, architectural and / or cultural heritage within the study area during both the construction and operation phases of the Proposed Development. The decommissioning phase would see a reversal of any negative effects on setting.

The residual effects that will remain once these mitigation measures have been implemented are set out in **Table 15.16**.

15.7.1 'Do-Nothing' Scenario

No mitigation measures would be required in the event of a 'do-nothing' scenario. Potential effects to sub-surface archaeology (if present) and historic structures on the site could continue to occur if any groundworks took place as part of the management of the farmland and forestry land on the site. Indirect effects on Archaeological, Architectural and Cultural Heritage in the wider landscape setting would not occur.

15.7.2 Construction Phase

15.7.2.1 Site and Access Tracks

No groundworks, construction vehicle movements or storage of materials will be carried out within the 50m buffer zones around the recorded monument and the unregistered historic buildings closest to the areas of groundworks identified on the site. A visual barrier will be placed around the buffer zones of the monuments and historic buildings closest to the site during the construction phase.

The ruins of the historic farm buildings and 19th century structures identified within and closest to the site boundary will be preserved in situ.

Upstanding historic field boundaries within the site will be preserved in situ wherever possible. If a section of a historic field boundary must be removed to facilitate the construction then:

- A representative cross-section of the boundary will be investigated and recorded by a suitably qualified archaeologist prior to removal.

All major sub-surface groundworks associated with the Proposed Development construction works (wind turbine, 110kV substation location, compound locations, spoil storage areas and construction of new sections of access track) will be subject to a programme of archaeological monitoring.

- This will be carried out by a suitably qualified archaeologist under license and in accordance with the provisions of the National Monuments Acts 2023.
- If significant archaeological material is encountered during the course of archaeological monitoring, then resolution of any such significant material will be determined in consultation with the National Monuments Service (DHLGH) and Clare County Council.
- Where possible, every reasonable effort will be made to preserve in situ or reduce the effect on any identified archaeological material. Where preservation in situ cannot be achieved, either in whole or in part, then a programme of full archaeological excavation will be implemented to ensure the preservation by record of the portion of the wind farm site that will be directly impacted upon. This work will be carried out by a suitably qualified archaeologist under license and in accordance with the provisions of the National Monuments Acts 2023.
- A written report will be prepared detailing the results of all archaeological work undertaken and submitted to the National Monument Service (DHLGH) and Clare County Council.

15.7.2.2 Grid Connection Route

Licensed archaeological monitoring would likely be required of any open cut trenching for the Grid Connection Route that is required outside of the existing modern public road and along the public road adjacent to the St Vincent de Paul Church.

Field boundaries that appear on historic 19th century maps should be preserved in situ where possible and the cable trench for off road sections should be aligned through existing gaps of field boundaries to minimize loss of field boundaries.

15.7.2.3 Turbine Delivery Route

Licensed archaeological monitoring would likely be required of any groundworks required outside of the existing modern public road at the junction of the R463 and the R471. Field boundaries that appear on historic 19th century maps should also be preserved in situ where possible. It is also recommended that the Transport Consultants for the Proposed Development confirm that historic bridges located at Ballincurra Bridge (35) and Ferry Bridge (44) will be able to take the vehicle loads proposed to carry the parts of the Turbine to the Proposed Development.

15.7.2.4 National Monuments, Architectural Conservation Areas, Protected Structures, and National Inventory of Architectural Heritage

Embedded design mitigation measures have been set out in the Landscape and Visual Impact Assessment Chapter (**EIAR Chapter 14 – Landscape and Visual**). Economic and community benefits of the wind farm are set out in the **Planning Report, Section 8: Planning Report and Community Report**.

15.7.3 Operational Phase

Embedded design mitigation is discussed in section 14.6 of the Landscape and Visual Impact Assessment (**EIAR Chapter 14 Landscape and Visual**) for the Proposed Development.

15.7.4 Decommissioning Phase

Embedded design mitigation is discussed in section 14.6 of the Landscape and Visual Impact Assessment (**EIAR Chapter 14 Landscape and Visual**) for the Proposed Development.

15.8 Residual Effects

15.8.1 ‘Do-Nothing’ Scenario

There would be no residual effects as a result of a ‘do-nothing’ scenario. Potential effects to sub-surface archaeology (if present) and historic structures on the site could continue to occur if any groundworks took place as part of the management of the farmland and forestry land on the site. Indirect effects on Archaeological, Architectural and Cultural Heritage in the wider landscape setting would not occur.

15.8.2 Construction Phase

15.8.2.1 Site and Access Tracks, Grid Connection Route, and Turbine Delivery Route

With the implementation of the proposed archaeological mitigation, it is anticipated that all potential direct and indirect effects on buried archaeology, upstanding earthworks and upstanding structures of historic and architectural interest will be either mitigated or avoided.

Significance of Effects – **No significant effects (not significant adverse)**.

15.8.3 Operational Phase

15.8.3.1 National Monuments

The residual indirect effect on the significance of all National Monuments is assessed as imperceptible to slight adverse.

Significance of Effects – **No significant effects (imperceptible to slight adverse).**

15.8.3.2 Architectural Conservation Areas

The residual indirect effect on the significance of all Architectural Conservation Areas is assessed as not significant.

Significance of Effects – **No significant effects (not significant).**

15.8.3.3 Protected Structures

The residual indirect effect on the significance of all Protected Structures is assessed as imperceptible to moderate adverse.

Significance of Effects – **No significant effects (imperceptible to moderate adverse).**

15.8.3.4 National Inventory of Architectural Heritage Structures

The residual indirect effect on the significance of all NIAH Structures is assessed as imperceptible to moderate adverse.

Significance of effect – **No significant effect (imperceptible to moderate adverse).**

15.8.4 Decommissioning Phase

The potential direct effects on the archaeological, architectural and cultural heritage environment during the decommissioning of the development will be no change (neutral). Any potential direct effects will already have been resolved through mitigation measures and the established access tracks will be used for the removal of the built features of the wind farm. Once the wind farm is decommissioned all indirect visual effects on the settings of National Monuments, Protected Structures and other heritage sites in the surrounding landscape will be reversed.

15.9 Summary of Mitigation and Monitoring Measures

The following proposed mitigation measures are subject to approval from Clare County Council and the National Monuments Service of DHLGH and include an integrated, coordinated approach to ameliorate the potential direct and indirect effects of the Proposed Development.

No groundworks, construction vehicle movements or storage of materials will be carried out within the buffer zones around the recorded monuments identified on the site. A visual barrier will be placed around the buffer zones of the monuments on the site during the construction phase.

The ruins of the historic farm buildings and 19th century structures identified within the site boundary and immediately adjacent to the site boundary will be preserved in situ.

Upstanding historic field boundaries within the site will be preserved in situ, wherever possible. If a section of a historic field boundary must be removed to facilitate the construction then:

- A representative cross-section of the boundary will be investigated and recorded by a suitably qualified archaeologist prior to removal.

All major sub-surface groundworks associated with the proposed construction works (wind turbine locations, 110kV substation location, site tracks through the site and off-road open-cut trenching along the chosen grid connection route option and any off-road groundworks required to widen the turbine delivery route) will be subject to a programme of archaeological monitoring.

- This will be carried out by a suitably qualified archaeologist under license and in accordance with the provisions of the National Monuments Acts 2023.
- If significant archaeological material is encountered during the course of archaeological monitoring, then resolution of any such significant material will be determined in consultation with the National Monuments Service (DHLGH) and Clare County Council.
- Where possible, every reasonable effort will be made to preserve in situ or reduce the effect on any identified archaeological material. Where preservation in situ cannot be achieved, either in whole or in part, then a programme of full archaeological excavation will be implemented to ensure the preservation by record of the portion of the site that will be directly impacted upon. This work will be carried out by a suitably qualified archaeologist under license and in accordance with the provisions of the National Monuments Acts 2023.
- A written report will be prepared detailing the results of all archaeological work undertaken and submitted to the National Monuments Service and Clare County Council.

15.10 Cumulative Effects

Cumulative effects on setting are more likely to occur at the operational stage of the development (i.e., post-construction). In this regard in order to assess overall cumulative effects on archaeology and cultural heritage, the Proposed Development is considered in the context of other developments, including other permitted and proposed wind farms. Other developments consist mainly of one-off housing and agricultural buildings. One-off housing and buildings are not considered to be detrimental to the setting of archaeological monuments and will not arise in cumulative effects occurring.

An assessment of cumulative effects on views in the landscape around the Proposed Development is presented in **EIAR Chapter 14 – Landscape and Visual** for this development. The assessment of cumulative effects on archaeology and architectural heritage in this chapter is based on this assessment.

15.10.1 ‘Do-Nothing’ Scenario

There are two single turbine developments, one consented wind farm, one proposed wind farm (under appeal) and three wind farms at pre-planning stage contained within 20km of the Proposed Development. These are set out in **Table 15.16** below:

Table 15.16: Cumulative Wind Farms within 20km of the Proposed Development

Wind Farm Name	Number of turbines	Distance and Direction from proposed turbine to the nearest cumulative turbine	Status
Knockshanvo Wind Farm	9	Immediately adjacent	Pre-planning
Ballycar Wind Farm	c. 12	c. 3km south	Pre-planning
Carrownagowan Wind Farm	19	c. 4km north	Consented
Lackareagh Wind Farm	c. 6	c.5.5km east	Pre-planning
Fahy Beg Wind Farm	8	c. 5.8km east	Refused (Appealed to ABP)
Parteen Single Turbine	1	c.9km southeast	Existing
Vision Care Single Turbine	1	c.14km southeast	Existing

The appraisal of cumulative effects with other wind energy developments is based on the cumulative ZTV maps and wireframes provided in EIAR **Chapter 14 Landscape and Visual**.

15.10.1.1 *Other Developments within 20km of the Proposed Development*

In respect of cumulative effects with other forms of development, there are no other large-scale developments within the vicinity of the site. The only other notable land use in relation to the proposed wind farm is forestry, a key component of which is harvesting, which has the potential to result in clearer views of the proposed turbines and the surrounding site access tracks. Nonetheless, it is not expected that the underlying sloping lands will ever be harvested entirely. Instead, they will be harvested in sections, which will subsequently be replanted once harvesting activities have concluded. It is not considered that the more exposed views of turbines as a result of potential harvesting activities will result in significant cumulative visual effects.

15.10.1.2 *Existing Baseline Scenario*

Based on the analysis contained in EIAR **Chapter 14 Landscape and Visual**, there will be no additional cumulative indirect effect on the setting of World Heritage Sites or National Monuments.

Based on the likely magnitude of change presented in EIAR **Chapter 14 Landscape and Visual**, the overall likely cumulative significance of effect on the settings of all Architectural Conservation Areas, Protected Structures and National Inventory of Architectural Heritage Sites is likely to be moderate adverse (an effect that alters the character of the historic environment in a manner that is consistent with existing and

emerging baseline trends. The overall likely cumulative Significance of effect on Recorded Monuments will be neutral. The overall likely cumulative significance of effect on unregistered buildings, earthworks and field boundaries of heritage interest will be - slight adverse (an effect which causes noticeable changes in the character of the historic environment without affecting its sensitivities).

15.10.1.3 *Potential Future Baseline Scenario*

The potential future baseline scenario relates to all existing, consented, proposed and developments at the pre-planning stage. In this instance, Knockshanvo Wind Farm is located immediately adjacent to the Proposed Development and is at the pre-planning stage, Ballycar Wind Farm (pre-planning) is proposed to be located some 3km south of the site, whilst the proposed Fahy Beg Wind Farm development (refused - under appeal to ABP) is located some c. 5.8km east of the site.

As per the cumulative ZTV for the potential future baseline scenario (refer to EIAR **Chapter 14 Landscape and Visual**), one of the most notable differences is the clear reduction in the potential for isolated views of the proposed Oatfield Wind Farm to be afforded.

Overall, the LVIA assessment (EIAR **Chapter 14 Landscape and Visual**) considers that there will be a notable sense of wind farm proliferation within the central study area and in the wider eastern half of the study area. Wind farm development will become one of the more prominent built developments within the surrounding landscape, albeit these perceptual effects are slightly diminished as a result of the siting of the Knockshanvo development immediately adjacent to the Proposed Development. This results in the combined development being perceived as one larger consolidated array of turbines.

Based on the likely magnitude of change presented in EIAR **Chapter 14 Landscape and Visual**, The overall likely cumulative significance of effect on the settings of all Architectural Conservation Areas (ACAs), Protected Structures and National Inventory of Architectural Heritage Sites is likely to be - Significant (an effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the historic environment).

The overall likely cumulative Significance of effect on Recorded Monuments will be neutral. The overall likely cumulative significance of effect on unregistered buildings, earthworks and field boundaries of heritage interest will be - slight adverse (an effect which causes noticeable changes in the character of the historic environment without affecting its sensitivities).

15.10.2 **Construction Phase**

There will be a potential negligible to high cumulative magnitude of change on the GCR during the construction phase as the Carrownagowan Wind Farm Project's GCR will intersect the Proposed Development's GCR for an approximately 150m section along the R471. However, to the limited archaeology potential of this section of existing road the significance of effect of these grid connection groundworks on currently unknown buried archaeology is likely to be neutral to not significant.

15.10.3 Operational Phase

Based on the analysis contained in the Landscape and Visual Impact Assessment Chapter of this EIAR, there will be no additional cumulative indirect effect on the setting of World Heritage Sites or National Monuments.

The overall likely cumulative significance of effect on the settings of all Architectural Conservation Areas (ACAs), Protected Structures and National Inventory of Architectural Heritage Sites is likely to be - Significant (an effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the historic environment).

The overall likely cumulative significance of effect on Recorded Monuments will likely remain neutral. The overall likely cumulative significance of effect on unregistered buildings, earthworks and field boundaries of heritage interest will likely be - moderate adverse (an effect that alters the character of the historic environment in a manner that is consistent with existing and emerging baseline trends). This will primarily be due to potential cumulative loss of unregistered upland field boundaries, trackways and currently unknown buried archaeology in the locations of the windfarm developments. There is limited potential that currently unknown buried archaeology may be truncated or removed by the groundworks for the grid connection routes of both this development and the Carrownagowan Wind Farm along the R471.

15.10.4 Decommissioning Phase

Any indirect effects on the setting and significance of heritage assets would be reversed by the decommissioning of the Proposed Development.

15.11 Summary of effects

The mitigation strategies outlined in **Table 15.17** detail the techniques to be adopted in order to ameliorate the effects that the Proposed Development may have on features of archaeological, architectural and / or cultural heritage during the construction, operational and decommissioning phases of the Proposed Development. The decommissioning phase would see a reversal of any adverse indirect effects on the setting of heritage assets.

The residual effects that will remain once these mitigation measures have been implemented are set out in **Table 15.17**.

Table 15.17: Summary of Assessment of Effects- Archaeology and Cultural Heritage

Description of Potential Effect and Magnitude of Effect	Beneficial / Adverse / Neutral	Extent (Site / Local / National / Transboundary)	Short term/ Long term	Direct / Indirect	Permanent / Temporary	Reversible / Irreversible	Significance of Effects (according to defined criteria)	Proposed Mitigation	Residual Effects (according to defined criteria)
Construction Phase									
Megalithic Wedge Tomb (32). Recorded Monument located 286m east of T9 – Possible accidental impact during construction phase to vehicle movements or inappropriate storage of material. Otherwise No Change.	Adverse	Site	Long term	Direct	Permanent	Irreversible	No Significant Effects (Neutral)	50m Buffer around the monument and a visual barrier to be erected demarcating the extent of the buffer zone on the ground during the construction phase	No Significant Effects - (Neutral)
Unregistered historic 19 th century buildings north of T4 – Possible accidental damage during construction phase to vehicle movements or inappropriate storage of material. Otherwise No Change to Low.	Adverse	Site	Long term	Direct	Permanent	Irreversible	No Significant Effects – (Not Significant)	Preservation in situ. Buffer to be placed around these historic buildings and visual barrier to be erected demarcating the extent of the buffer zone on the ground during construction	No Significant Effects – (Neutral)
Unregistered historic 19 th century structure south of T7 – Possible accidental damage during construction phase to	Adverse	Site	Long term	Direct	Permanent	Irreversible	No Significant Effects (Not Significant)	Preservation in situ. Buffer to be placed around these historic buildings and visual barrier to be erected	No Significant Effects – (Neutral)

Description of Potential Effect and Magnitude of Effect	Beneficial / Adverse / Neutral	Extent (Site / Local / National / Transboundary)	Short term/ Long term	Direct / Indirect	Permanent / Temporary	Reversible / Irreversible	Significance of Effects (according to defined criteria)	Proposed Mitigation	Residual Effects (according to defined criteria)
vehicle movements or inappropriate storage of material. Otherwise No Change to Low.								demarcating the extent of the buffer zone on the ground during construction	
Possible unregistered historic cattle droveway in western part of the site – Truncation/removal of field boundaries associated with historical use of this feature due to widening of internal access tracks. High to Very High.	Adverse	Site	Long term	Direct	Permanent	Irreversible	No Significant Effects (Not Significant)	Photographic and written recording of this feature prior to removal	No Significant Effects- (Neutral to Not significant)
Two possible modern clearance cairns in substation area – Truncation/removal of these features. Negligible.	Neutral	Site	Long term	Direct	Permanent	Irreversible	No Significant Effects (Not Significant)	Photographic and written recording of these feature prior to removal	No Significant Effects – (Neutral to Not significant)
Truncation/removal of currently unknown buried archaeology (Site) – Truncation and/or removal of currently known buried archaeological deposits and artefacts	Adverse	Site/Local	Long term	Direct	Permanent	Irreversible	No Significant Effects (Imperceptible to Profound)	See mitigation recommended in section 15.14	No Significant Effects – (Neutral to Not Significant)

Description of Potential Effect and Magnitude of Effect	Beneficial / Adverse / Neutral	Extent (Site / Local / National / Transboundary)	Short term/ Long term	Direct / Indirect	Permanent / Temporary	Reversible / Irreversible	Significance of Effects (according to defined criteria)	Proposed Mitigation	Residual Effects (according to defined criteria)
on the site by groundworks for the construction of the Turbines, Substation, compound areas, spoil storage areas and new internal access road. Negligible to Very High.									
Truncation/removal of currently unknown buried archaeology (Grid Connection Route) – Truncation and/or removal of currently known buried archaeological deposits and artefacts by cable trench. No Change to Low.	Adverse	Site	Long term	Direct	Permanent	Irreversible	No Significant Effects (Not Significant)	Licensed archaeological monitoring of any open cut trenching outside of the existing modern public road and also along the section of the public road adjacent to the St Vincent de Paul Church recorded monument. Field boundaries should be preserved in situ where possible and the cable trench for off road sections should be aligned through existing gaps of field boundaries to	No Significant Effects – (Neutral to Not Significant)

Description of Potential Effect and Magnitude of Effect	Beneficial / Adverse / Neutral	Extent (Site / Local / National / Transboundary)	Short term/ Long term	Direct / Indirect	Permanent / Temporary	Reversible / Irreversible	Significance of Effects (according to defined criteria)	Proposed Mitigation	Residual Effects (according to defined criteria)
								minimize loss of field boundaries	
<p>Unregistered stone bridge south-west of the St Vincent De Paul Church –</p> <p>The construction of the cable trench across this bridge has the potential to truncate or remove architectural fabric of historic interest associated with this bridge structure. As the construction of the cable trench will most likely involve limited trenching groundworks along the top of the bridge this potential effect is likely to be not significant. Negligible to Low.</p>	Adverse	Site	Long term	Direct	Permanent	Irreversible	No Significant Effects (Not Significant)	<p>Preservation in situ of historic bridge.</p> <p>Licensed archaeological monitoring of groundworks across this bridge</p>	No Significant Effects- (Neutral to Not Significant)
<p>Truncation/removal of currently unknown buried archaeology (Turbine Delivery Route) –</p>	Adverse	Site	Long term	Direct	Permanent	Irreversible	No Significant Effects (Not Significant)	<p>Licensed archaeological monitoring of any groundworks outside of the existing modern public road. Field</p>	No Significant Effects - (Neutral to Not Significant)

Description of Potential Effect and Magnitude of Effect	Beneficial / Adverse / Neutral	Extent (Site / Local / National / Transboundary)	Short term/ Long term	Direct / Indirect	Permanent / Temporary	Reversible / Irreversible	Significance of Effects (according to defined criteria)	Proposed Mitigation	Residual Effects (according to defined criteria)
Truncation and/or removal of currently known buried archaeological deposits and artefacts by groundworks around junction of R463 and R471. Negligible to Low.								boundaries should be preserved in situ where possible.	
Operational Phase									
Kilkishen ACA and associated Protected Structures: Kilkishen Cultural Centre and Church (8) and Murphys house (10) – Potential adverse visual effect on setting. Low.	Adverse	Local/Transboundary	Long term	Indirect	Permanent	Reversible	No Significant Effects (Not Significant)	N/A	No Significant Effects - (Not Significant)
Sixmilebridge ACA and associated Protected Structures: Little Church of Cratloe (RPS No. 128), the Old House Bar (RPS No. 470), Leverstown House (RPS No. 469), Kilfinaghty Public House (RPS No. 123), Saints Mary	Adverse	Local/Transboundary	Long term	Indirect	Permanent	Reversible	No Significant Effects (Not Significant)	N/A	No Significant Effects - (Not Significant)

Description of Potential Effect and Magnitude of Effect	Beneficial / Adverse / Neutral	Extent (Site / Local / National / Transboundary)	Short term/ Long term	Direct / Indirect	Permanent / Temporary	Reversible / Irreversible	Significance of Effects (according to defined criteria)	Proposed Mitigation	Residual Effects (according to defined criteria)
and Finaghta's Church (RPS No. 110), Credit Union (RPS No. 468), Waterside Medical Centre (RPS No. 49426), the Riverside Inn (RPS No. 471) Kilbane Bridge (15). – Potential adverse visual effect on setting. Low.									
Protected Structures: Church of the Mother of God (1); Glenmora House (2); St Marys Church (3); Glebe House (6); and Mount levers House (13). – Potential adverse visual effect on setting. Negligible.	Adverse	Local/Transboundary	Long term	Indirect	Permanent	Reversible	No Significant Effects (Imperceptible adverse)	N/A	No Significant Effects - (Not Significant)
Protected Structures Kilkishen Castle (RPS No. 285) and Kilkishen House (RPS No. 87) – Potential adverse visual effect on setting. Low.	Adverse	Local/Transboundary	Long term	Indirect	Permanent	Reversible	No Significant Effects (Slight adverse)	N/A	No Significant Effects - (Not Significant)

Description of Potential Effect and Magnitude of Effect	Beneficial / Adverse / Neutral	Extent (Site / Local / National / Transboundary)	Short term/ Long term	Direct / Indirect	Permanent / Temporary	Reversible / Irreversible	Significance of Effects (according to defined criteria)	Proposed Mitigation	Residual Effects (according to defined criteria)
Hurdlestown House (4) – Potential adverse visual effect on setting. Medium.	Adverse	Local/Transboundary	Long term	Indirect	Permanent	Reversible	No Significant Effects (Moderate adverse)	N/A	No Significant Effects - (Not Significant)
Belvoir House (11) – Potential adverse visual effect on setting. Medium.	Adverse	Local/Transboundary	Long term	Indirect	Permanent	Reversible	No Significant Effects (Moderate adverse)	N/A	No Significant Effects - (Not Significant)
Mountcashel Castle (12) – Potential adverse visual effect on setting. Medium.	Adverse	Local/Transboundary	Long term	Indirect	Permanent	Reversible	No Significant Effects (Moderate adverse)	N/A	No Significant Effects - (Not Significant)
St Vincent de Paul Church Oatfield (14) – Potential adverse visual effect on setting. Medium.	Adverse	Local/Transboundary	Long term	Indirect	Permanent	Reversible	No Significant Effects (Moderate adverse)	N/A	No Significant Effects - (Not Significant)
Bunratty Castle National Monument – Potential adverse visual effect on setting. Negligible.	Adverse	Local/Transboundary	Long term	Indirect	Permanent	Reversible	No Significant Effects (Imperceptible to slight adverse)	N/A	No Significant Effects - (Not Significant)

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