

RECEIVED: 07/05/2024

Environmental Impact Assessment Report (EIAR)

Seskin Wind Farm, Co.
Carlow

Chapter 13 – Cultural Heritage



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13.

CULTURAL HERITAGE

13.1

Introduction

This cultural heritage chapter was prepared by Tobar Archaeological Services Ltd. It presents the results of Cultural Heritage impact assessment of the Proposed Project.

The purpose of this chapter is to assess the potential direct and indirect effects of the Proposed Project on the surrounding Cultural Heritage landscape. Cultural Heritage includes the recorded archaeological resource (UNESCO World Heritage Sites (WHS) and those on a Tentative List, National Monuments (State Care/Guardianship), recorded monuments (SMR/RMP), potential unrecorded archaeology, recorded built heritage (Protected Structures and NIAH structures/historic gardens) and items of local cultural heritage merit. The assessment is based on both a desktop review of the available Cultural Heritage data, a field inspection of the Proposed Wind Farm site and EIAR Site Boundary and a windscreen survey of the Proposed Grid Connection Route and Turbine Delivery Route (TDR) accommodation works areas. An assessment of potential effects, including cumulative effects, is presented.

The following terminology is used throughout this chapter in relation to Seskin Wind Farm:

- **‘Proposed Project’** refers all the project components described in detail in Chapter 4 of this EIAR;
- **‘Proposed Project site’** or **‘site’** refers to the primary study area for the EIAR, as delineated by the EIAR Site Boundary in green as shown in Figure 1-1 in Chapter 1;
- **‘Proposed Grid Connection Route’** refers to the underground 38kV electrical cabling and all associated site development works connecting the Proposed Wind Farm site to the existing Kilkenny 110 kV electrical substation;
- **‘Proposed Wind Farm site’** refers to turbines and associated foundations and hard-standing areas, meteorological mast, junction accommodation works, access roads, temporary construction compounds, 38kV electrical substation, internal underground cabling, site drainage, tree felling and all ancillary works.
- **‘Proposed turbines’** refers to the turbine components of the Proposed Project;

13.1.1

Proposed Project

The Proposed Project will comprise 7 No. wind turbines, and associated infrastructure in the townlands of Seskinrea and Ridge and adjacent townlands, in Co. Carlow, and a 38kV on-site substation, battery energy storage system and associated works, including underground 38kV cabling to connect to the national grid at Kilkenny 110kV substation, in the townland of Scart near Kilkenny, Co. Kilkenny. The Proposed Project also includes TDR accommodation works to include carriageway strengthening works at the ‘Black Bridge’ on the L1835 / L3037 and accommodation works along the public road network along the N78 national secondary road and the L1834 local road in the townland of Cloneen, Co. Kilkenny.

A full description of all elements of the Proposed Project is detailed in Chapter 4 of this EIAR.

13.1.2

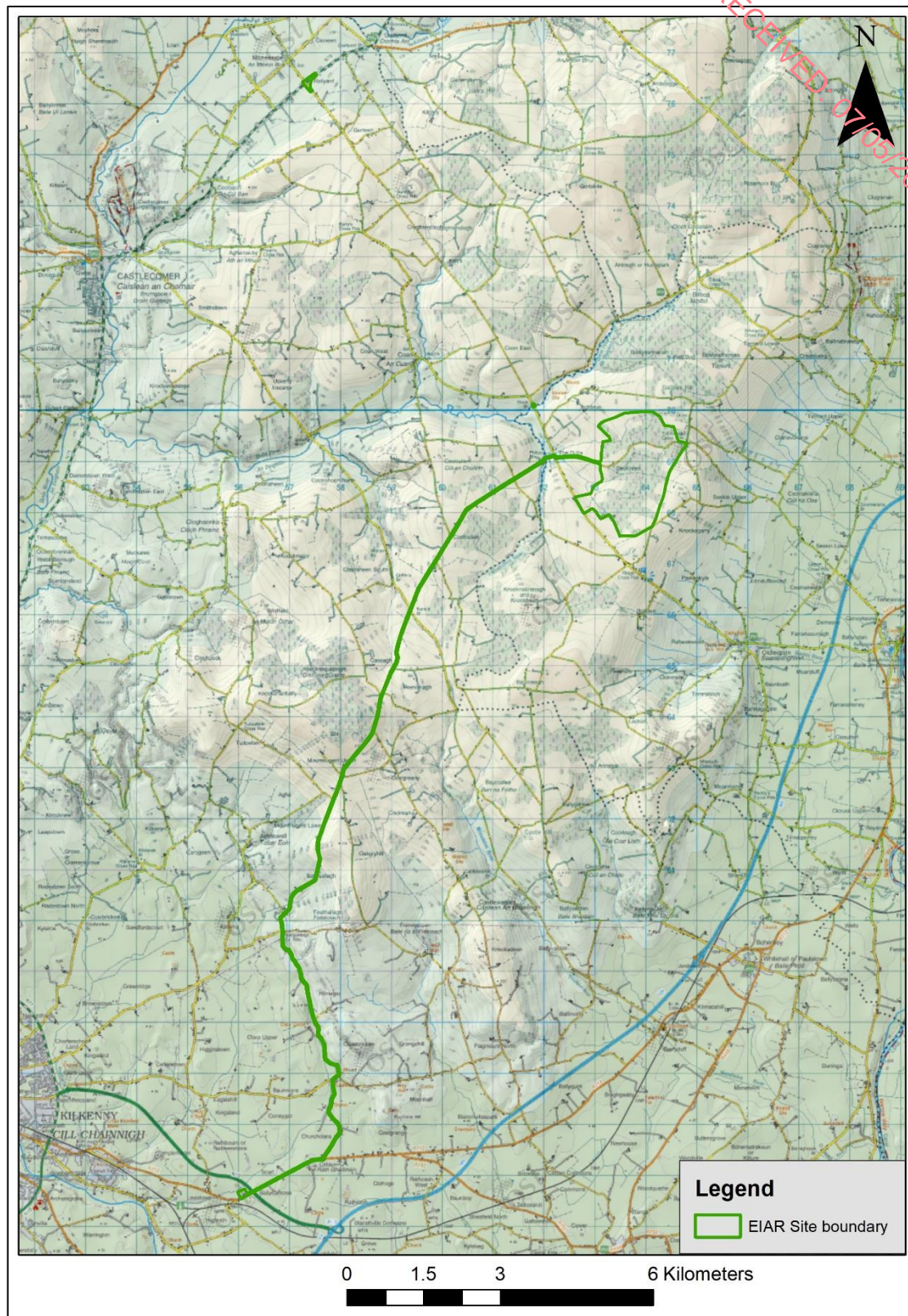
Proposed Project Site Location

The Proposed Wind Farm site is located approximately 3.1 km northwest of the village of Oldleighlin, Co. Carlow, 5km northwest of Leighlinbridge, Co. Carlow, and 9.9 kilometres southeast of Castlecomer, Co. Kilkenny. It is proposed to access the Proposed Wind Farm site via upgrades to an existing agricultural entrance off the L3037 Local Road along the western boundary of the site. The Proposed Project is served by a number of existing public, forestry and agricultural roads and tracks.

The Proposed Grid Connection Route includes for underground 38kV cabling from the proposed onsite 38kV substation, in the townland of Seskinrea, Co. Carlow, to the existing Kilkenny 110kV substation in the townland of Scart, Co. Kilkenny. The Proposed Grid Connection Route to Kilkenny, measuring approximately 20.1 km in length, is primarily located within the public road corridor.

Current land-use on the Proposed Wind Farm site comprises coniferous forestry and agriculture. Current land-use along the Proposed Grid Connection Route comprises of public road corridor, public open space, pastures, coniferous forestry and land principally used by agriculture with significant areas of natural vegetation.

Figure 13-1: Site location map.



13.1.3 Statement of Authority

This chapter of the Environmental Impact Assessment Report (EIAR) has been prepared by Miriam Carroll of Tobar Archaeological Services Ltd. Miriam graduated from University College Cork in 1998 with a Masters degree in Methods and Techniques in Irish Archaeology. She is licensed by the Department of Housing, Local Government and Heritage (DHLGH) to carry out excavations and is a member of the Institute of Archaeologists of Ireland. Miriam has been working in the field of archaeology since 1994 and has undertaken numerous projects for both the private and public sectors including excavations, site assessments (EIAR) and surveys. Miriam Carroll is a director of Tobar Archaeological Services which has been in operation for over 20 years.

13.1.4 Relevant Legislation and Guidance

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.

Both the National Monuments Acts 1930 to 2004 and relevant provisions of the Cultural Institutions Act 1997 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 a number of 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 Record of Monuments and Places (RMP) was established under Section 12 (1) of the National Monuments (Amendment) Act 1994 and consists of a list of known archaeological monuments and accompanying maps. The Record of Monuments and Places affords some protection to the monuments entered therein. Section 12 (3) of the 1994 Amendment Act states that any person proposing to carry out work at or in relation to a recorded monument must give notice in writing to the Minister (Environment, Heritage and Local Government) and shall not commence the work for a period of two months after having given the notice. All proposed works, therefore, within or around any archaeological monument are subject to statutory protection and legislation (National Monuments Acts 1930-2004).

The term 'national monument' as defined in Section 2 of the National Monuments Act 1930 means a monument *'the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto'*. National monuments in State care include those which are in the ownership or guardianship of the Minister for Arts, Heritage and the Gaeltacht. Section 5 of the National Monuments Act (1930) allows owners of other national monuments to appoint the Minister for the Arts, Heritage and the Gaeltacht or the relevant local authority as guardian of such monuments, subject to their consent. This means in effect that while the property of such a monument remains vested in the owner, its maintenance and upkeep are the responsibility of the State. Some monuments are also protected by Preservation Orders and are also regarded as National Monuments. National Monuments also includes (but not so as to limit, extend or otherwise influence the construction of the foregoing general definition) every monument in Saorstát Éireann to which the Ancient Monuments Protection Act, 1882, applied immediately before the passing of this Act, and the said expression shall be construed as including, in addition to the monument itself, the site of the monument and the means of access thereto and also such portion of land adjoining such site as may be required to fence, cover in, or otherwise preserve from injury the monument or to preserve the amenities thereof.

Under the Heritage Act (1995) architectural heritage is defined to include *'all structures, buildings, 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 contents...'* A heritage building is also defined to include *'any building, or part thereof, which is of significance because of its intrinsic architectural or artistic quality or its setting or because of its association with the commercial, cultural, economic, industrial, military, political, social or religious history of the place where it is situated or of the country or generally'*.

13.1.4.1 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;
- 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.

13.1.4.2 Carlow County Development Plan 2022-2028

The Carlow County Development Plan 2022-2028 was adopted by the Council's Elected Members on 23rd May 2022, and came into effect from 4th July 2022. The relevant policies and objectives of Carlow County Council regarding archaeology and built heritage were consulted in the CDP and include the following:

13.1.4.2.1 Built Heritage

'It is the policy of the Council to:

- *BH. P1: Promote the conservation and reuse of early traditional structures, roofscapes of historic centres and the recognition of interrelationships between sites and landscape features in terms of the insertion of new buildings and managing their impact on the historic environment.*

- *BH. P2: Promote the development of heritage-led regeneration, to plan for the reuse and conservation of core-built heritage and archaeological sites within urban centres as an integral part of the evolution of the historic place and its significance.*
- *BH. P3: Promote best conservation practice and to lead by example through the management and safeguarding of historic sites and properties in the ownership of the Local Authority.*
- *BH. P4: Support the development of sustainable infill in town back lands that is appropriate in scale and character to that of the historic centre, that transitions and accommodates surviving structures and retains the historic streetscape form particularly within sensitive areas of built and archaeological importance.*
- *BH. P5: Co-ordinate significant infrastructural projects such as public realm works, flood relief works and new transport routes to the benefit of surviving historic sites in order to improve their enjoyment, presentation and enhanced accessibility.*
- *BH. P6: Promote awareness and the appropriate adaptation of the County's architectural and archaeological heritage to deal with the effects of climate change.'*

13.1.4.2.2 Archaeological Heritage

It is a policy of the Council to:

- *AH. P1: Secure the preservation (either in situ or by record) of all archaeological monuments included in the Record of Monuments and Places (RMP) and their settings, and of all sites and features of significant archaeological or historical interest, including potential and previously unknown sites or features, in consultation with the National Monuments Service in the Department of Housing, Local Government and Heritage.*
- *AH. P2: Protect and conserve underwater archaeological heritage in the inland waters of the County, including potential and previously unknown sites or features, in consultation with the National Monuments Service in the Department of Housing, Local Government and Heritage.*
- *AH. P3: Protect, conserve and enhance the archaeological heritage of the County, and to manage development in a manner that avoids adverse impacts on sites, monuments, features or objects of significant archaeological or historical interest, including areas and sites of archaeological potential. There will be a presumption in favour of the 'preservation in situ' of archaeological heritage in accordance with the 'Framework and Principles for the Protection of Archaeological Heritage (DAGHI 1999) or any superseding national policy document.*
- *AH. P4: Ensure that any development proposal that may, by reason of location, scale, nature, layout or design, have potential implications for archaeological heritage (including areas and sites of archaeological potential), shall be subject to an archaeological assessment. The archaeological assessment will seek to ensure that the development proposal can be sited and designed to avoid impacting on archaeological heritage. Any archaeological excavation shall be carried out in accordance with best practice outlined by the NMS, the National Museum of Ireland and the Institute of Archaeologists of Ireland. In all such cases the Planning Authority shall consult with the National Monuments Service in the Department of Housing, Local Government and Heritage.*
- *AH. P5: Have regard to the Record of Monuments (RMP) and Places, the Urban Archaeology Survey and archaeological sites identified subsequent to the publication of the RMP when assessing planning applications for development. No development shall be permitted in the vicinity of a recorded feature, where it detracts from the setting of the feature or which is injurious to its cultural or educational value.*

- *AH. P6: Protect the Zones of Archaeological Potential (Zones of Archaeological Notification) located within both urban and rural areas as identified in the Record of Monuments and Places (RMP).*
- *AH. P7: Protect and conserve historic burial grounds within the County, including through the avoidance of extensions to them that would have an inappropriate level of impact on sub-surface archaeological remains or on their setting and amenity, and encourage their management and maintenance in accordance with best practice conservation principles, including 'Guidance for the Care, Conservation and Recording of Historic Graveyards' (The Heritage Council 2011) and 'Ireland's Historic Churches and Graveyards' (The Heritage Council), and in consultation with the National Monuments Service in the Department of Housing, Local Government and Heritage.*
- *AH. P8: Promote public awareness of the archaeological heritage of the County, and encourage where appropriate and practicable, the provision of appropriately designed and located signage, interpretative material, and public access (including disabled access) for archaeological sites under the direct ownership, guardianship or control of the Council and/or the state.*
- *AH. P9: Support community initiatives and projects regarding the preservation, presentation and access to archaeological heritage and underwater cultural heritage, provided such are compatible with appropriate conservation policies and standards, having regard to the guidance and advice of the Department of Housing, Local Government and Heritage.*
- *AH. P10: Support the incorporation of recorded monuments into designated open spaces and public amenity spaces, provided this is done in a manner compatible with the protection and proper management and conservation of the monument in question. Accordingly, where such incorporation takes place an appropriate and enforceable permanent management and conservation plan will be required.'*

13.1.4.2.3 Architectural Heritage

It is the policy of the Council to:

- *PS. P1: Ensure the protection of the architectural heritage of County Carlow, through the identification of Protected Structures, the designation of Architectural Conservation Areas, and the recognition of structures and features in the County that make a positive contribution to vernacular and industrial heritage.*
- *PS. P2: Ensure the protection and conservation of the character, setting and special interest of all buildings, structures (or parts of structures) and sites, listed in the Record of Protected Structures, including their curtilage, attendant grounds, and fixtures and fittings.*
- *PS. P3: Ensure that all development proposals that affect a protected structure or a proposed protected structure, including proposals for modifications, alterations, refurbishment or extensions, are sympathetic to and protect, conserve and retain the character, setting and special interest of the protected structure or proposed protected structure, in accordance with the 'Architectural Heritage Protection: Guidelines for Planning Authorities' (Department of Arts, Heritage and the Gaeltacht, 2011).*
- *PS. P4: Require development proposals involving protected structures or proposed protected structures, to be subject to an Architectural Heritage Impact Assessment as described in Appendix B of Department of Arts, Heritage and the Gaeltacht 'Architectural Heritage Protection: Guidelines for Planning Authorities' (2011).*
- *PS. P5: Support and promote the use of expert conservation advice, best conservation practice, and the use of appropriately skilled and experienced contractors and specialists, for any works to protected structures, in accordance with the Department*

of Arts, Heritage and the Gaeltacht 'Architectural Heritage Protection: Guidelines for Planning Authorities' (2011) and their 'Advice Series' on how best to repair and maintain historic buildings.

- PS. P6: Require that development proposals do not obscure views of the principal elevations of protected structures.
- PS. P7: Prevent inappropriate alterations to protected structures, and to prohibit the demolition of any protected structure unless the Council is satisfied that exceptional circumstances exist. The demolition of a protected structure with the retention of its façade will likewise not generally be permitted.
- PS.P 8: Promote the sympathetic maintenance, adaptation and appropriate use and reuse of protected structures, and to actively encourage uses that are compatible with the character of protected structures.
- PS. P9: Retain where practicable a protected structure which has been damaged by fire, and to retain those elements of that structure that have survived (either in whole or in part) and that contribute to its special interest.
- PS. P10: Promote the retention of any original or early building fabric including for example timber sash windows, stonework, brickwork, joinery, ironwork, traditional mortars, render and decorative or weather finishes and slate and vernacular architectural details. Likewise, the Council will encourage the re-instatement of historically correct traditional features.
- PS. P11: Favourably consider the change of use of any structure included on the Record of Protected Structures, provided such a change of use does not adversely impact on the intrinsic character of the structure and is in accordance with the proper planning and sustainable development of the area.
- PS. P12: Ensure that in the event of a planning permission being granted for development within the curtilage of a protected structure, the proposed works to the protected structure should occur, where appropriate, in the first phase of the development to prevent endangerment, abandonment and dereliction of the structure.
- PS. P13: Ensure that measures to up-grade the energy efficiency of protected structures and historic buildings are sensitive to traditional construction methods and materials and do not have a detrimental physical, aesthetic or visual impact on such structures or buildings, in line with the guidance provided in the Department of the Environment, Heritage and Local Government Advice Series 'Energy Efficiency in Traditional Buildings' (2020).

It is an objective of the Council to:

- PS. O1: Review and amend on an ongoing basis the Record of Protected Structures, and make additions, deletions or corrections as appropriate over the period of this Plan.
- PS. O2: Prepare a Buildings at Risk Register to prevent the endangerment of protected structures, historic or vernacular buildings.'

13.1.4.2.4

Country Houses, Demesnes & Gardens

It is a policy of the Council to:

- CH. P1: Encourage the protection, conservation, promotion and enhancement of Country Houses, Demesnes and Gardens in the County and support public awareness, enjoyment of and access to these sites where appropriate and in cooperation with owners and other interested parties, including Government Departments and state agencies.

- CH. P2: Preserve and protect, where appropriate, historic gardens and designed landscapes identified in the National Inventory of Architectural Heritage.
- CH. P3: Discourage development that would lead to a loss of, or cause damage to, the character, the principal components of, or the setting of Country Houses, Demesnes and Gardens.
- CH. P4: Protect and promote heritage and traditional varieties of plants and trees within historic designed landscapes, demesnes and gardens, and to protect, preserve and enhance biodiversity within these places where appropriate.
- CH. P5: Consider the “Guidance Notes for the Appraisal of Historic Gardens, Demesnes, Estates and their Settings” published by Cork County Council 2006, in the appraisal and description of the impacts of development proposals in County Carlow within or in close proximity to country houses and demesnes on historic designed landscapes, demesnes and gardens.

It is an objective of the Council to:

- CH. O1: Assess the demesnes and historic designed garden landscapes and promote the protection and conservation of their special character, both built and natural, while facilitating reuse where appropriate.’

13.1.4.2.5 Industrial and Transport Heritage

It is the policy of the Council to:

- ITH. P1: Protect and conserve buildings, structures and features of industrial and transport heritage, such as historic mills, mill races, weirs, warehouses, bridges, canals and lock gates, railway structures, etc., and to promote their retention, sensitive maintenance, repair, and restoration.
- ITH. P2: Encourage appropriate change of use and reuse of industrial heritage buildings, provided such a change does not seriously impact on the intrinsic heritage character of the buildings and that all works are carried out in accordance with best conservation practice.
- ITH. P3: Seek the retention and appropriate maintenance and repair of the historic bridges of the County, whether protected or not.

It is an objective of the Council to:

- ITH. O1: Prepare a survey, inventory, and record of the County’s industrial and transport heritage during the lifetime of the Plan.’

13.1.4.2.6 Vernacular Architecture

It is the policy of the Council to:

- VA. P1: Promote the protection, retention, public awareness, and appropriate renewal and regeneration of the vernacular architecture of the County, including the heritage-led revitalisation of the historic built fabric of urban areas.
- VA. P2: Protect and conserve vernacular architecture through the use of the RPS, ACAs, and in the normal course of development management, which contributes to the character of areas and/or where it consists of rare or special interest examples of a building or structure type.
- VA. P3: Require development proposals affecting vernacular buildings to be accompanied by a detailed measured survey, photographic record and written report carried out by a professional with appropriate conservation expertise and, preferably, an understanding of vernacular buildings. Early consultation with the planning authority is strongly advised.

- VA. P4: Facilitate appropriate, high-quality design solutions for adaptations of vernacular buildings that carefully consider their vernacular qualities in terms of design, scale, setting and finishes. While new design can be expressed in contemporary architectural language, consideration should be given to exploring the use of appropriate vernacular features, building techniques and materials.
- VA. P5: Ensure proposed extensions to vernacular houses are sympathetic to the design, scale, footprint and materials of the existing building and its setting. Extensions should generally be located to the rear and not obscure the form or layout of the existing building; the substantial removal of walling is not generally recommended, and connecting the existing building and extension should minimize the number of new openings and ideally use existing openings.
- VA. P6: Resist and discourage the demolition of vernacular architecture, and promote the sympathetic renewal, maintenance, adaptation and re-use of historic building stock, and encourage the retention and repair of original fabric such as windows, doors, wall renders, roof coverings, shopfronts, pub fronts and other significant features, whether protected or not.
- VA. P7: Preserve the character and setting of vernacular architecture (e.g. boundaries, fencing, gates, gate piers, courtyards etc.) where deemed appropriate by the Planning Authority.
- VA. P8: Consider the guidance in 'Reusing Farm Buildings, A Kildare Perspective', published by Kildare County Council in assessing planning applications in County Carlow relating to traditional farm buildings.
- VA. P9: Support proposals to retain, repair and refurbish vernacular buildings or structures that are in a rundown or derelict condition, subject to the use of appropriate traditional building materials and methods and provided that proposals for extensions are of an appropriate design and do not detract from the character of the original building or structure.

It is an objective of the Council to:

- VA. O1: Identify and retain good examples of vernacular architecture in the County, including historic street furniture (e.g. gateways, gate piers, cast iron post boxes, milestones, water pumps etc.) and other features of historic and architectural interest.'

13.1.4.3 **Kilkenny City and County Development Plan 2021-2027**

13.1.4.3.1 **Archaeological Heritage including Archaeological Landscapes**

The Kilkenny CCDP identifies a number of archaeological landscapes within the county as follows:

'An archaeological landscape is a natural landscape that has been deliberately modified by a group (or groups) of people during a particular archaeological period (or periods). It provides context and meaning to individual archaeological sites and helps us to understand how our ancestors lived. Such landscapes have the potential to be of cultural, economic, social and/or environmental value.

International best practice, as outlined in the European Convention on the Protection of Archaeological Heritage (Valletta Convention) 1992 and the European Landscape Convention (Florence Convention) 2000 supports a landscape-based approach to archaeological protection.

In 2019 the Council carried out a Preliminary Audit of Archaeological Landscapes in County Kilkenny which identified a number of potential archaeological landscape sites, including 3 sites which were selected as a priority for protection, as follows:

- *Freestone Hill and environs*

- *The Lingaun River Valley - specifically the megalithic monuments within it and the relationships between them*
- *Tory Hill and environs*

These sites in particular each have strong visual interconnectedness or sightlines, which can be sensitive to inappropriate development in the vicinity.

Objectives

9C To protect archaeological sites and monuments (including their setting), underwater archaeology, and archaeological objects, including those that are listed in the Record of Monuments and Places, and in the Urban Archaeological Survey of County Kilkenny or newly discovered sub-surface and underwater archaeological remains.

9D To carry out further research on the eighteen archaeological landscapes as identified in the Preliminary Audit of Archaeological Landscapes in County Kilkenny.

9E To develop an enhanced policy framework for the three priority sites identified in Section 9.3.1.1 above, plus for any additional sites identified through Objective 9D above.'

It also outlines the following:

'Development Management Requirements:

- *To endeavour to preserve in situ all archaeological monuments, whether on land or underwater, listed in the Record of Monuments and Places (RMP), and any newly discovered archaeological sites, features, or objects by requiring that archaeological remains are identified and fully considered at the very earliest stages of the development process and that schemes are designed to avoid impacting on archaeological heritage.*
- *To require archaeological assessment, surveys, test excavation and/or monitoring for planning applications in areas of archaeological importance if a development proposal is likely to impact upon in-situ archaeological monuments, their setting and archaeological remains.*
- *To ensure that development within the vicinity of a Recorded Monument is sited and designed appropriately so that it does not seriously detract from the setting of the feature or its zone of archaeological potential. Where upstanding remains of a Recorded Monument exist a visual impact assessment may be required to fully determine the effect of any proposed development.*
- *To require the retention of surviving medieval plots and street patterns and to facilitate the recording of evidence of ancient boundaries, layouts etc. in the course of development.*
- *To safeguard the importance of significant archaeological landscapes from developments that would unduly sever or disrupt the relationship, connectivity and/or inter-visibility between sites.'*

13.1.4.3.2

Historic Gardens and Designed Landscapes

'Development Management Requirements:

- *To seek the protection and sustainable management of historic gardens, parklands and designed landscapes in the Kilkenny County and City, their setting and their visual amenity.*

- *To request visual impact and/or an architectural heritage impact assessment where development is considered to, have a potential impact on a historic landscape or protected structure.*
- *To protect elements of designed landscapes within the attendant grounds of Protected Structures, including boundary features.'*

13.1.4.3.3

Architectural Heritage

'It is Council policy to ensure the protection of architectural heritage by including all structures considered to be of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest in the Record of Protected Structures.

Objectives

- *9F To provide assistance to owners of protected structures in undertaking essential repairs and maintenance by the provision of relevant information.*
- *9G To respond to the Ministerial recommendation to include in the RPS, structures which have been identified as being of regional, national or international significance in the National Inventory of Architectural Heritage survey and to consider for inclusion those rated as being of local significance.*
- *9H To continue to review the Record of Protected Structures and add or delete structures as appropriate.*
- *9I To ensure all digital mapping for the Record of Protected Structures is up to date and current, and readily accessible to the public.*

Development Management Requirements:

- *To have regard to the Architectural Heritage Protection Guidelines when assessing proposals for development affecting a protected structure and buildings listed in the NIAH.*
- *To encourage the sympathetic retention, reuse and rehabilitation of protected structures and their setting, while ensuring the involvement of suitably qualified professionals*
- *To ensure proposed service upgrades undertake an initial assessment of current services, to ensure the internal environment and fabric is not impacted on by such works. Energy assessments and Architectural Heritage Impact Assessments may be required where energy and service upgrades are proposed.*
- *To ensure the proposed development is within the curtilage or attendant grounds of a protected structure respects the protected structure and its setting,*
- *To require an architectural impact assessment where appropriate for developments within the grounds of country house estates which are Protected Structures.*
- *To promote principles of best practice in conservation in terms of use of appropriate materials, repair techniques, and thermal upgrades by adhering to the guidelines as set out in Department of Housing, Local Government and Heritage's Advice Series publications*
- *To promote best conservation principles and practice when assessing proposals for Kilkenny's architectural heritage*
- *To ensure that energy upgrades for buildings constructed from traditional materials are respectful of architectural features, form, and environmental requirements necessary to maintain breathability in the structure.'*

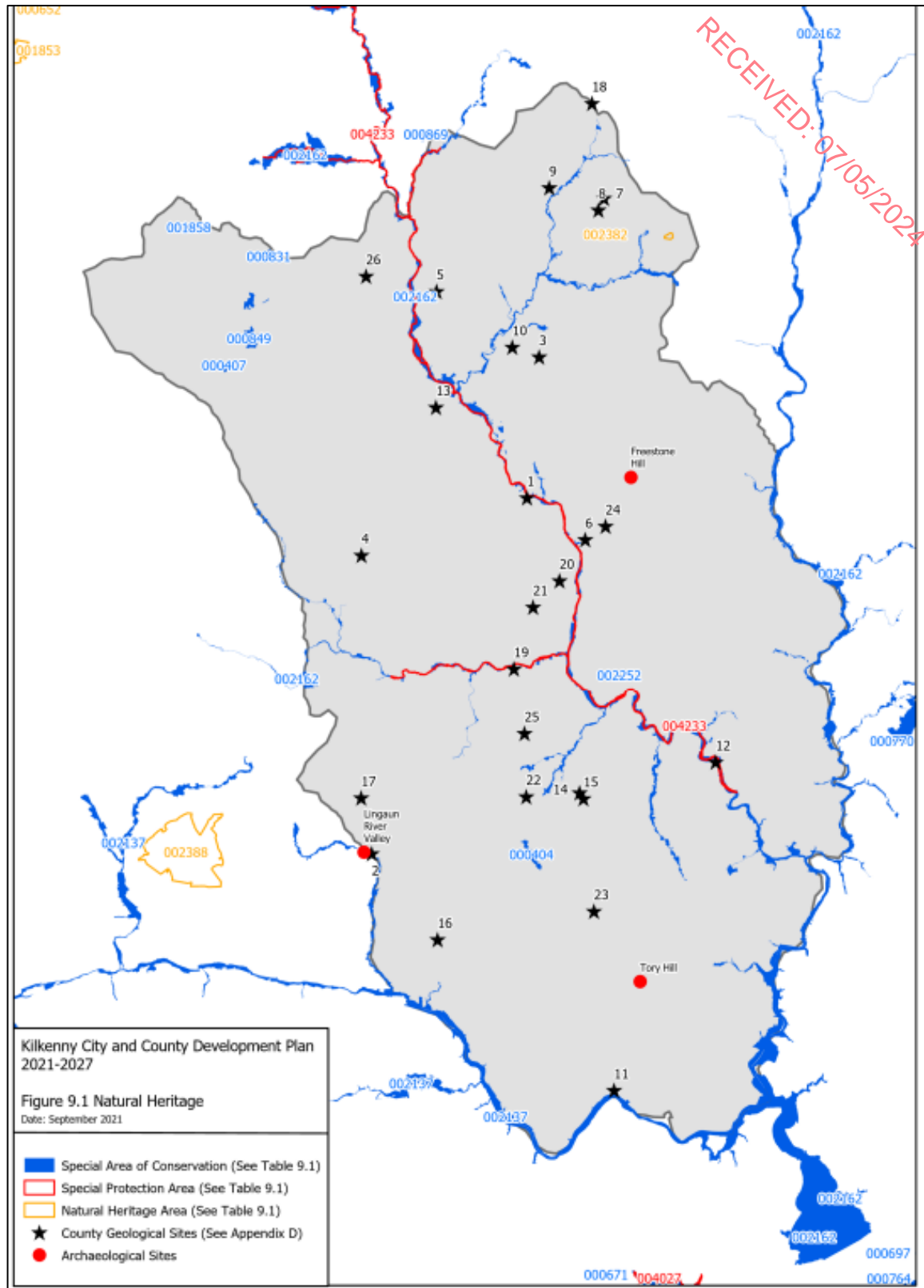


Figure 13-2: Archaeological landscapes identified within the Kilkenny City and County CDP 2021-2027.

13.1.5 Statutory Consultations

13.1.5.1 Carlow County Council

Regarding archaeological heritage the scoping response from Carlow County Council stated the following:

‘There are a number of recorded monuments in the general area it is advisable to consult with the Development Applications Unit, Department of Housing, Local Government and Heritage to determine whether an Archaeological Impact Assessment is required given the proximity to same and the overall large-scale nature of this proposed development site.’

13.1.5.2 Kilkenny City and County Council

No specific Cultural Heritage related response was received from Kilkenny City and County Council; however, the following was noted in the response from the Planning Department of Kilkenny CCC.

‘Having regard to the prominent location of the proposed development site close to an upland scenic area and Protected Views V13 and its location in close proximity of Natura 2000 sites, the Dinin River and built heritage and national monuments/archaeology along the grid connection route, the proposed wind farm development and its grid connection will require a thorough assessment of potential impacts on these sensitive receptors to include the cumulative impacts with other wind farm proposals in the surrounding area, in particular current Strategic Infrastructure Development (SID) application lodged with An Bord Pleanála, reference 315365-22, for 7 no. wind turbines and associated infrastructure and grid connection in County Kilkenny and County Carlow, close to your proposed site at Seskin.’

13.1.5.3 National Monuments Service

No archaeology, architectural or cultural heritage related responses were received from the National Monuments Services /Development Applications Unit of the Department of Housing, Local Government and Heritage (DHLGH).

13.2 Assessment Methodology

The assessment of the Cultural Heritage of the Proposed Project included geographic information system (GIS) mapping, desk-based research and field inspection.

13.2.1 Geographical Information Systems (GIS)

GIS is a computer database which captures, stores, analyses, manages and presents data that is linked to location. GIS is geographic information systems which includes mapping software and its application with remote sensing, land surveying, aerial photography, mathematics, photogrammetry, geography and tools that can be implemented with GIS software. 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 section of the report. This involved the overlaying of the relevant archaeological and architectural datasets on georeferenced aerial photographs and road maps (sourced from ESRI Ireland¹), 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

¹ <https://www.esri-ireland.ie/en-ie/home>

highlighted in order to mitigate the potential negative effects of a development on archaeological, architectural and cultural heritage.

13.2.2 Desktop Assessment

The following sources were consulted as part of the desktop assessment for the Proposed Project:

- UNESCO WHS or those on a Tentative List
- The Record of Monuments and Places (RMP)
- The Sites and Monuments Record (SMR)
- National Monuments in State Care County Carlow
- National Monuments in State Care County Kilkenny
- Monuments Subject to a Preservation Order, County Carlow
- Monuments Subject to a Preservation Order, County Kilkenny
- The Topographical Files of the National Museum of Ireland on www.heritagemaps.ie
- First edition Ordnance Survey maps (Tailte Eireann)
- Second edition Ordnance Survey maps (Tailte Eireann)
- Aerial photographs (copyright of Tailte Eireann)
- Excavations Database
- National Inventory of Architectural Heritage (NIAH)
- Record of Protected Structures, Co. Carlow
- Record of Protected Structures, Co. Kilkenny
- Carlow County Development Plan 2022-2028
- Kilkenny City and County Development Plan 2012-2027

Each of these are discussed in the following sections.

13.2.2.1 Record of Monuments and Places, Sites and Monuments Record and National Monuments

A primary cartographic source and base-line data for the assessment was the consultation of the SMR and RMP for Counties Carlow and Kilkenny. All known recorded archaeological monuments are indicated on 6-inch Ordnance Survey (OS) maps and are listed in these records. The SMR/RMP is not a complete record of all monuments as newly discovered sites may not appear in the list or accompanying maps. In conjunction with the consultation of the SMR and RMP the electronic database of recorded monuments and SMRs which may be accessed at www.maps.archaeology.ie/historicenvironment was also consulted.

A review of all National Monuments in State Care and those subject to Preservation Orders was also undertaken as part of the assessment.

13.2.2.2 Cartographic Sources and Aerial Photography

The 1st (1840s) and 2nd (1900s) edition OS maps for the area were consulted, where available, as was Tailte Eireann aerial photography.

13.2.2.3 Topographical Files - National Museum of Ireland

Details relating to finds of archaeological material and monuments in numerous townlands in the country are contained in the topographical files held in the National Museum of Ireland. In order to establish if any new or previously unrecorded finds had been recovered from the Proposed Project site these files were consulted on Heritage Maps (www.heritagemaps.ie).

13.2.2.4 Archaeological Inventory Series

Further information on archaeological sites may be obtained in the published County Archaeological Inventory series prepared by the DHLGH. The archaeological inventories present summarised information on sites listed in the SMR/RMP and include detail such as the size and location of particular 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 undiscovered at the time of their publication. Many sites have been discovered since the publication of the Inventory Series, which have now been added to the Sites and Monuments Record.

13.2.2.5 Record of Protected Structures

The current County Development Plans for County Carlow and Kilkenny were consulted for the schedule of buildings (Record of Protected Structures, (RPS)) and items of cultural, historical or archaeological interest which may be affected by the Proposed Project. The development plans also outline policies and objectives relating to the protection of the archaeological, historical and architectural heritage landscape of County Carlow and Kilkenny. The datasets for the Carlow and Kilkenny RPS were added to the base mapping for the Proposed Project in order to accurately assess any potential impacts on such structures.

13.2.2.6 Excavations Database

The Excavations Database is an annual account of all excavations carried out under license. The database is available on line at www.excavations.ie and includes excavations from 1985 to 2023. This database was consulted as part of the desktop research for this assessment to establish if any archaeological excavations had been carried out within or near to the site.

13.2.2.7 National Inventory of Architectural Heritage

This source lists some of the architecturally significant buildings and items of cultural heritage and is compiled on a county-by-county basis by the DHLG. The NIAH database was consulted for all townlands within and adjacent to the Proposed Project site. The NIAH survey has been published and the digital dataset was downloaded on to the base mapping for the Proposed Project (www.buildingsofireland.ie). The NIAH is a state initiative under the administration of the DHLGH 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 Department of Culture, Heritage and the Gaeltacht to the planning authorities for the inclusion of particular structures in their RPS.

13.2.2.8 Previous Assessments

No previous assessments were carried out on the Proposed Project site.

13.2.3 Field Inspection

The Proposed Project site was subject to a walk-over survey and windscreen survey in December 2022. A photographic and descriptive record was made of the site and any features of interest therein. The photographic record is included as Appendix 13-1 of this EIAR.

13.2.3.1 Limitations Associated with Fieldwork

No significant limitations were encountered during fieldwork and all areas were accessed. Tree-cover is present in the areas of T04, T05, however, a general visual inspection of these areas was possible.

13.2.4 Assessment of Likely Significant Effects

The likely effects on the existing archaeological, architectural and cultural heritage environment are assessed using the criteria as set out in the *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (EPA, May 2022) and described in Section 1.7.2 of Chapter 1 of this EIAR. The following terminology is used when describing the likely effects of the Proposed Project from a Cultural Heritage perspective.

13.2.4.1 Types of Effect

- Direct effects arise where an archaeological heritage feature or site is physically located within the footprint of the development whereby the removal of part, or all of the feature or site is thus required.
- Indirect effects may arise as a result of subsurface works undertaken outside the footprint of the development, secondary environmental change such as a reduction in water levels and visual impacts.
- Cumulative effects arise when the addition of many impacts create a larger, more significant impact.
- Residual effects are the degree of environmental changes that will occur after the proposed mitigation measures have been implemented.

13.2.4.2 Magnitude of Effects (Significance)

- Profound: Applies where mitigation would be unlikely to remove adverse effects. Reserved for adverse, negative effects only. These effects arise where an archaeological site is completely and irreversibly destroyed.
- Very Significant: An effect which by its character, magnitude, duration or intensity significantly alters most of the sensitive aspect of the environment.
- Significant: An effect which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment. An effect 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 site.
- Moderate: A moderate effect arises where a change to an archaeological site is proposed which though noticeable, is not such that the integrity of the site is compromised, and which is reversible. This arises where an archaeological site can be incorporated into a modern-day development without damage and that all procedures used to facilitate this are reversible.
- Slight: An effect which causes changes in the character of the environment which are not high or very high and do not directly impact or affect an archaeological site.
- Not Significant: An effect which causes noticeable changes in the character of the environment but without significant consequences.
- Imperceptible: An effect on an archaeological site capable of measurement but without noticeable consequences.

Methodology for the assessment of effects on visual setting (indirect effects)

A standardised approach was utilised for the assessment of effects of visual setting (indirect effects) according to types of monuments and cultural heritage assets which may have varying degrees of sensitivity. This assessment does not include visits to each and every site as this is considered to be beyond the scope of this EIAR as they are mainly located on private lands to which the public have no access. The assessment of effects on visual setting was undertaken using both the Zone of Theoretical Visibility (ZTV) map in the Landscape and Visual Impact Assessment (LVIA), as presented in Chapter 14 of this EIAR, as well as photomontage / photowires from specific cultural heritage assets or other general locations. The analysis used in the assessment of potential effects on the visual setting of cultural heritage assets in the wider landscape of 10km and 20km considers the effects of the Proposed turbines only. The tall, vertical nature of the Proposed turbines make them the most prominent elements of the Proposed Project from a visual perspective and have the most potential to give rise to significant, indirect, effects.

The majority of other components of the Proposed Project, i.e. other components of the Proposed Wind Farm and the Proposed Grid Connection Route are not deemed to be as visually prominent as the Proposed turbines.

While direct physical effects to a site or monument can easily be assessed in quantitative terms, the assessment of effects on setting can be subjective and as such is a matter of qualitative, professional judgement and experience. The distances below used in the assessment of effects on setting are regarded as appropriate and are based on professional judgement.

Table 13-1: Distance from the Proposed turbines to cultural heritage assets considered according to sensitivity

Cultural Heritage Asset	Distance Considered from the Proposed turbines
UNESCO World Heritage Sites (including tentative sites)	20km
National Monuments (State Ownership and Preservation Order Sites)	10km
Sites and Monuments and Recorded Monuments, RPS	5km
NIAH structures	5km
Undesignated sites, if relevant	500m

The **potential** visual effects of the turbines on the setting of cultural heritage assets are graded according to two criteria (Table 13-2):

1. **Distance to the nearest Proposed turbine:** Each increment of distance is numbered from 1-5 in severity with 1 being the lowest in severity (i.e. 4-5km from the nearest Proposed turbine and 5 being the most severe (0-1km from the nearest Proposed turbine).
2. **Number of Proposed turbines visible on ZTV.** Each increment is also numbered from 1-3 with 1 being the least severe (i.e. 1-2 turbines visible) and 3 being the most severe (5-7 turbines visible).

The number values are then multiplied to arrive at a potential effect (from Imperceptible to Moderate). Very Significant and Profound are reserved for adverse direct effects which result in the total removal of cultural heritage assets which does not occur from visual effects. The following table is used to ascertain the potential visual effect not assuming any vegetation, existing buildings, and any other screening in the landscape.

Table 13-2: Grading of Potential visual effects according to Distance and No. of Turbines visible from Cultural Heritage Assets

No. of Turbines Visible (ZTV)	1-2 (1)	3-4 (2)	5-7 (3)
Distance of asset to turbine			
4-5km (1)	1	2	
3-4km (2)	2	4	6
2-3km (3)	3	6	9
1-2km (4)	4	8	12
0-1km (5)	5	10	15
Imperceptible (0)	Not Significant (1-5)	Slight (6-10)	Moderate (11-15)

13.3 Existing Environment

13.3.1 Results of Field Inspection

No new previously unrecorded above-ground archaeological monuments or items of cultural heritage merit were noted within the Proposed Wind Farm site during the walk-over survey, including along the TDR. No previously unrecorded monuments were noted on the Proposed Grid Connection Route. A number of bridges are located on the public road along which the Proposed Grid Connection Route extends and are discussed in Section 13.3.4 below. A photographic record of the Proposed Project is presented in Appendix 13-1.

13.3.2 Archaeological, Architectural and Cultural Heritage

Archaeological heritage includes UNESCO World Heritage Sites (WHS) and those on the tentative list, National Monuments in State Care and those which are subject to a preservation order, sites listed in the RMP/SMR and newly discovered archaeological sites. Each of these are addressed in the following sections. Sub-surface archaeology is also addressed in the assessment.

A number of documentary and cartographic sources (as listed in Section 13.2.2 above) were utilised in order to ascertain the potential for the presence of architectural /cultural heritage features on or within the area of the Proposed Project. Section 13.3.3 addresses the Proposed Wind Farm and Section 13.3.4 addresses the Proposed Grid Connection Route. The methodology utilised for the assessment of potential effects on the various Cultural Heritage assets is detailed in Section 13.2 above.

13.3.3 Proposed Wind Farm

13.3.3.1 UNESCO World Heritage Sites and those on Tentative List

No UNESCO WHS or those on the Tentative list are located within 20km of the Proposed turbines. The nearest WHS (Tentative list) comprises the Royal Site of Dun Ailinne which is located c. 42km to the north-east.

13.3.3.2 National Monuments

National Monuments are those recorded monuments which are in the ownership / guardianship of the Minister for Housing, Local Government and Heritage. They are frequently referred to as being in 'State Care'. National Monuments also include those which are subject to a Preservation Order. Two National Monuments in State Care and one monument subject to a Preservation Order are located within 10km of the Proposed turbines and are listed in Table 13-3 and shown on Figure 13-3. All of the monuments are located in County Carlow and are described below.

Table 13-3: National Monuments within 10km of the nearest Proposed turbine

Nat. Mon. No./P O No.	SMR NO.	ITM E	ITM N	CLASS	TOWNLAND	TURBINE ID	DISTANCE TO NEAREST TURBINE (m)
438	CW01 2-070003 -	669031	665480	Castle	Leighlinbridge	T05	5839
352	CW01 2-048003 -	673373	667385	Cross	Nurney	T05	9327
3/1995	CW00 7-033—	669715	673657	Clogrenan Castle	Clogrenan	T02	6981

13.3.3.2.1

National Monument 438 Leighlinbridge Castle

The castle at Leighlinbridge is located c. 5.8km from the nearest Proposed turbine, T05. It is described on the Historic Environment Viewer (HEV) as follows:

CW012-070003 : Castle - tower house: LEIGHLINBRIDGE

Description: The following description is derived from the published 'Archaeological Inventory of County Carlow' (Dublin: Stationery Office, 1993). In certain instances, the entries have been revised and updated in the light of recent research. Date of upload/revision: 17 July 2007 National Monument No. 438. Known as 'Black Castle'. Constructed in 1320 to defend bridge (CW012-070002-) and possibly contemporary in original construction. Present remains appear to be chiefly of sixteenth-century date and consist of rectangular structure (collapsed SE corner) with barrel vault over ground floor and attic, with one floor above, situated on E bank of River Barrow. Entrance in E wall, protected by machicolation and murder hole in window seat, leads to mural staircase giving access to attic floor and spiral staircase above vault. Two small chambers in curtains of vault. Bawn at N and W. Wall walks are covered on N and S walls, and open with crenellations on E and W walls, with corbelled chamber over stair turret at NE angle. Narrow opes with window seats in N, S and W walls. (Bradley 1989, 36-8).



Plate 13-1: Leighlinbridge Castle CW012-070003- (photo courtesy of www.irishantiquities.bravehost.com).

The ZTV indicates that the castle at Leighlinbridge is located in an area where all Proposed turbines will theoretically be visible (Figure 13-4). A photowire (VP15) of the Proposed turbines taken from the east end of the bridge in Leighlinbridge and a short distance from Leighlinbridge Castle (Nat. Mon. No. 438) shows that existing buildings will screen the Proposed turbines from view (Plate 13-2)



Plate 13-2 Extract from VPI5 showing screening by existing buildings as identified in Appendix 14-5 of this EIAR: Photowire Visualisation Booklet.

13.3.3.2.2 **National Monument 352 Cross**

This high cross is located just over 9km to the east of Proposed turbine T05 and is described in the HEV as follows:

CW012-048003 : Cross – High cross : NURNEY

Description: National Monument No. 352. To N of present graveyard is well-preserved solid-wheeled cross with central boss and rope mouldings on each face (H 1.88m; Wth across arms 1.1m; Wth of bottom of shaft 0.32m). It is placed in a pyramidal base (H0.6m; L 1.25m; Wth 1.1m). (Harbison 1992, 158 (entry 186)). Compiled by: Claire Breen. Date of upload: 19 August 2011.

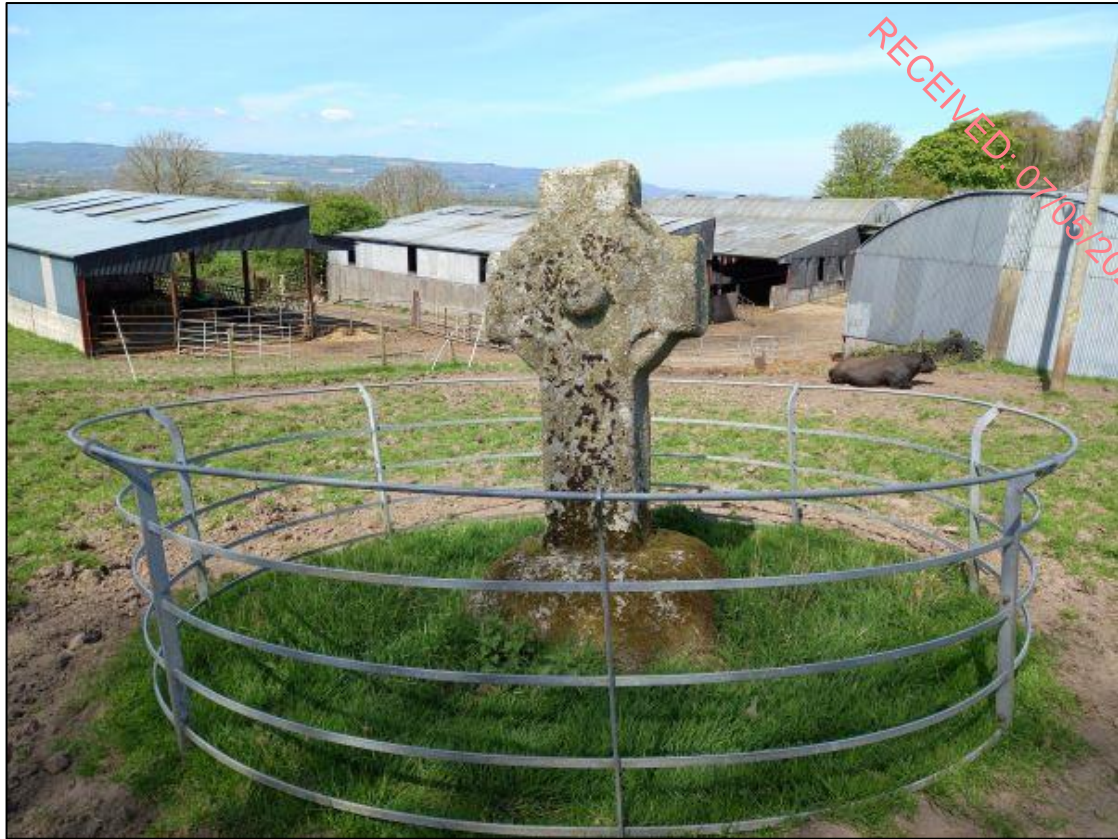


Plate 13-3: Nurney High Cross, Nat. Mon. No. 352 (photo courtesy of www.carlowadvisor.com).

The ZTV indicates that the monument is located in an area in which 5-7 turbines will theoretically be visible. Given the distance of the cross from the Proposed turbines, a change to its immediate setting will not occur, however, a change to the wider setting in which the monument is located is acknowledged.

Effects and mitigation are addressed below in Section 13.4.4.

13.3.3.2.3 **PO No. 3/1995 Clogrenan Castle**

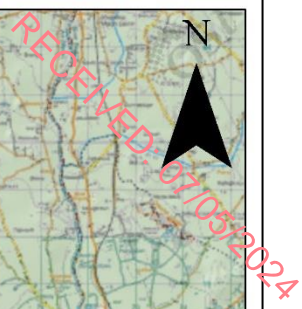
Clogrenan Castle is located c. 6.9km north-east of the nearest Proposed turbine, T02. It is described on the HEV as follows:

CW007-033—: Castle - tower house : CLOGRENAN

Description: Sited at a former important crossing point of River Barrow. According to the OS Letters (1837-40, 128-9), 'the castle 'was built sometime in the 15th century by the Butlers, Earl of Ormond, and whose descendant, Richard Butler, during the Irish Rebellion, kept here a garrison for the King, which being on the point of being besieged by the Irish was relieved by James, 12th Earl of Ormond, and Duke; and whose son, Richard Butler, was in 1662 created Baron Butler of Clogrennan and afterwards Earl of Arran. The Castle came in subsequent periods into the possession of the Rochfort family, who built a house in the modern style, not far from the old mansion, which was suffered to decay, there being only at present two or three apartments tenantable, but which are pleasantly situated on the River, commanding an extensive view of the distant country' (O'Flanagan ed. 1934, 34-5). There is a contemporary account of the attack on, and taking of, the castle by Sir Peter Carew in 1589 (Maclean 1857, 92-3). A sketch by Thomas Dinely (1680) shows a large house of four storeys with an attic level, three decorative gables at front, crenellated parapet at sides and two substantial chimney stacks and a lower building, at least four-bays long to the N. Another sketch drawn a century later (Grose 1791, vol. 2, 10-11, plate 79), c. 1790 shows a ruinous three or four storey square tower S of the gate and

projecting forward of it. The lower portion, with a large window with grille in the E face, may still have been habitable as according to Grose (ibid.), the castle, 'is now a beautiful and romantic ruin...covered with ivy, and part is fitted up for a porter's lodge'. The upper portion has partially collapsed, only the battlemented W wall surviving to full height. There is another large window opening in the E face over the lower window and separated from it by a string-course, however, this level appears to be ruinous. Also visible on this sketch is another tower to the NW, obscured by vegetation but which was square in plan, surmounted by a circular battlemented turret. In 1806 work commenced on Clogrenan House, located 600m to the SW, and the former 'castle' was transformed into an entrance way to the demesne. Grose's sketch appears to be fairly accurate, being similar to a photograph taken in 1870. It was described in some detail in 1911 as consisting of, 'a main tower probably some 60ft. high on the south connected by a high screen wall (in which the pointed arch gateway occurs) with the northern angle. This angle is finished on top by a machicolated turret. The buildings are roofless and little more than a shell forming the entrance to the ground of the square modern house which stands about ¼ mile away up the avenue. The main tower abuts on the public road in an obstructive manner at S.E. angle. ...The walls are about 4 ft. [1.2m] thick, built of limestone plastered with mortar the cutstone being granite. There are traces of brick strings thus [a sketch shows a protruding string with hollow moulding]. Most of the opes have been built up, those not so treated being chiefly in front and having sharp pointed arches with traces of square Tudor label mouldings over; which appear to indicate that the present opes are not those originally formed. The cut stone details are poor, the window in Tower (marked [on plan] 13 ft. [c. 4m] up) has been filled in with early tracery as sketch. There is a similar ope over it but blank. The gateway is surmounted by a similar pointed arch with a very coarse bead all round. This gate is of open timber work the tympanum being filled in with gothic tracery in timber in a defective state. The jambs of the traceried window inside have been studded out with lath and plaster and an enriched pattern thus has been put round and the remains of a similar plaster fringe without the panel enrichment is to be seen on the adjoining walls. Serious cracks occur in the masonry, particularly in the high walls of the Tower that on north side of same extending nearly from top to bottom and the masonry at the top is very loose. The masonry is in bad condition and requires extensive repair to render it secure. The interior is ruinous there are large trees inside the premises and the roofless building may be described as a mere shell' (OPW topographical files, 22 September 1911). The accompanying plan shows the two towers (S tower ext. dims. c. 7.9m N-S; c. 6.8m E-W; int. dims. c. 16.3m N-S; c. 5.5m E-W; N tower ext. dims. c. 6.8m N-S; c. 9m E-W; no wall thicknesses given) with a wall (L c. 11.4m), presumably a bawn wall, extending westward from the SW angle with only a short length (L c. 1.5m; T c. 1.2m) of the returning N-S wall surviving. Part of the castle collapsed in a storm in 1931 and having become unsafe was further demolished by the County Council (OPW topographical files; Fitzmaurice 1966, vol. 15, 18). The pointed gateway (With 3m; H c. 4.5m) with granite roll-moulded surround, which is likely to be contemporary with the house built in 1806, still survives within a roughly coursed limestone rubble wall which survives for a short length on either side (L 4m to S; 7m to N; wall T 1.42-1.5m; max. H c. 5.5m). The wall is surmounted by a projecting limestone string-course, which on a photograph taken in the 1950s (Anon. 1984-5, vol. 2, 11), had the remains of further walling on top, possibly battlemented. There is a base-batter (H 1.26m; With 0.3m) on the external N face which may be a remnant of the medieval castle. A moat may also have formed part of the castle's defences. This appears on the 1st (1839) ed. OS 6-inch map as an L-shaped ditch and on subsequent editions as a curving ditch (L c. 40m) running northward from the NW angle of the N tower and curving north-eastward towards the River Barrow, terminating in a bridge at the road. Preservation Order number: 3/1995. See attached photographs: CW007-033—_01 Exterior from ECW007-033—_02 Detail of roll-moulding N side of gateway CW007-033—_03 Interior from NWCW007-033—_04 Interior from NNWCW007-033—_05 Detail of soffit. Compiled by: Jean Farrelly. Date of upload: 3 December 2018 This monument is subject to a preservation order made under the National Monuments Acts 1930 to 2014 (PO no. 3/1995).

The ZTV indicates that the tower house is located in an area where none of the Proposed turbines will theoretically be visible (Figure 13-4).



13-25

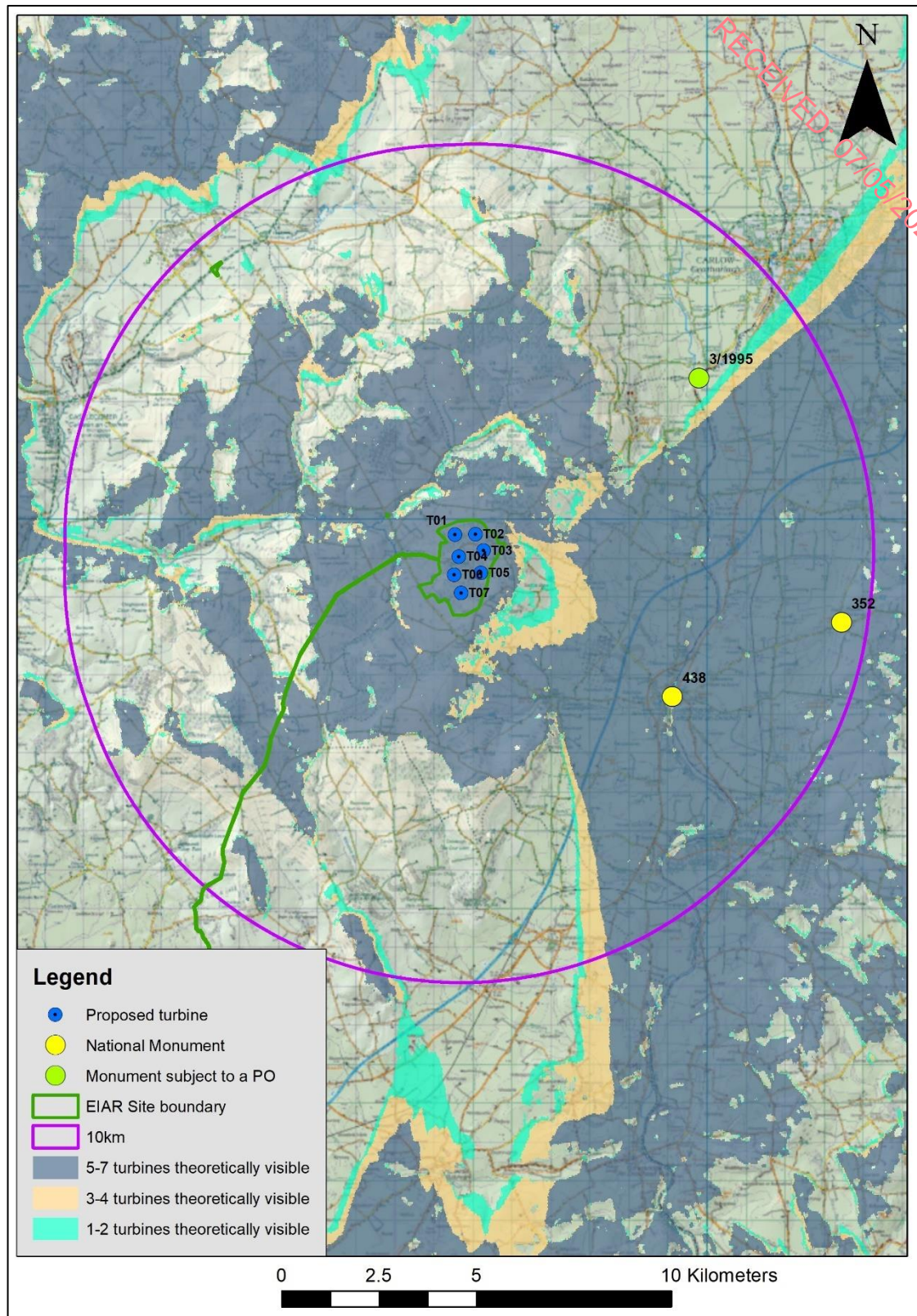


Figure 13-4: National Monuments and those subject to a Preservation Order with ZTV.

13.3.3.3 Recorded Monuments

No recorded monuments are located within Proposed Wind Farm site. Recorded monuments along the Proposed Grid Connection Route are discussed in Section 13.3.4 below.

A total of sixty-eight (68) recorded monuments are located within 5km of the Proposed turbines. The majority of the monuments (58) are located in county Carlow, with ten located in county Kilkenny. The monument locations are shown on Figure 13-5 and listed in Table 13-4. The ZTV shows that 58 of the 68 monuments are located in areas where 5-7 turbines will theoretically be visible (Figure 13-6). Seven monuments are located in areas where 3-4 turbines will theoretically be visible, and three monuments are located in areas where none of the Proposed turbines will theoretically be visible. A wide variety of monument types from different periods of the archaeological record are represented within the 5km study area and are discussed below.

Table 13-4: Recorded monuments within 5km of the Proposed turbine.

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
1	CW0 11-006— -	RIDGE	662915	667605	Enclosure	T07	892
2	CW0 11-005— -	RIDGE	662107	668281	Redundant record	T06	1383
3	CW0 11-002— -	AGHARUE	662378	670515	Barrow - ditch barrow	T01	1399
4	CW0 11-001— -	AGHARUE	662092	670453	Moated site	T01	1599
5	CW0 11-003— -	AGHARUE	661747	669851	Earthwork	T01	1733
6	CW0 11-015— -	RAHEN (Idrone West By.)	664017	665970	Ringfort - rath	T07	2208
7	CW0 11-009— -	JOHN DUFFS WOOD	665836	667071	Redundant record	T05	2329
8	CW0 11-004— -	CRANAVONANE	667101	669744	Earthwork	T03	2941
9	CW0 11-	JOHN DUFFS WOOD	666526	666491	Earthwork	T05	3230

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
	012— -						
10	CW0 11- 0160 04-	OLDLE IGHLI N	665592	665447	Ritual site - holy well	T07	3337
11	CW0 11- 0160 03-	OLDLE IGHLI N	665592	665436	Cross - High cross	T07	3346
12	CW0 11- 022— -	COOL NAKIS HA	667511	668459	Enclosure	T05	3383
13	CW0 11- 0160 06-	OLDLE IGHLI N	665804	665443	Font (present location)	T07	3469
14	CW0 11- 0160 07-	OLDLE IGHLI N	665804	665443	Font	T07	3469
15	CW0 11- 0160 08-	OLDLE IGHLI N	665804	665443	Memorial stone	T07	3469
16	CW0 11- 0160 05-	OLDLE IGHLI N	665804	665443	Cathedral	T07	3469
17	CW0 11- 0200 01-	COOL NAKIS HA	667477	667699	Enclosure	T05	3479
18	CW0 11- 0200 02-	COOL NAKIS HA	667468	667658	Enclosure	T05	3482
19	CW0 11- 016— -	MOAN DUFF, OLDLE IGHLI N,RAH EENW OOD (Idrone West By.)	665826	665441	Historic town	T07	3484
20	CW0 11-	OLDLE IGHLI N	665884	665458	Cross	T07	3508

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
	016002-						
21	CW011-007-	COOL NAKIS HA	667609	668006	Earthwork	T05	3536
22	CW011-014-	COOL NAKE ERAN	666829	666267	Enclosure	T05	3605
23	CW011-017-	COOL NAKIS HA	667747	668236	Enclosure	T05	3638
24	CW011-013-	COOL NAKE ERAN	667194	666621	Ringfort - rath	T05	3678
25	CW011-019-	COOL NAKIS HA	667816	668101	Enclosure	T05	3724
26	KK011-011-	COAN EAST	660146	671403	Fulacht fia	T01	3761
27	KK011-010-	COAN EAST	660162	671505	Fulacht fia	T01	3796
28	CW011-018-	COOL NAKIS HA	667926	668191	Enclosure	T05	3821
29	CW011-010-	SESKI N LOWE R	667666	667081	Enclosure	T05	3869
30	CW012-020-	CRAN AVON ANE	668146	669161	Ringfort - rath	T03	3942
31	CW011-011-	SESKI N LOWE R	667906	667211	Fulacht fia	T05	4041
32	CW011-008-	COOL NAKIS HA	668124	667795	Metalwor king site	T05	4083

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
33	KK0 11-009— -	COAN WEST	659460	670552	Fulacht fia	T01	4119
34	KK0 11-0080 01-	COAN WEST	659553	671124	Church	T01	4187
35	KK0 11-0080 02-	COAN WEST	659553	671124	Graveyard	T01	4187
36	CW0 15-002— -	BANN AGAG OLE	665867	664603	Quarry	T07	4190
37	CW0 11-021— -	COOL NAKIS HA	668116	667335	Structure	T05	4197
38	KK0 11-007— -	COAN WEST	659483	671020	Fulacht fia	T01	4217
39	CW0 12-171— -	COOL NAKIS HA	668242	667600	Cremation pit	T05	4243
40	CW0 12-006— -	CRAA NLUSKY	668246	670610	Enclosure	T03	4270
41	KK0 11-013— -	COOL CULLEN	659144	668667	Children's burial ground	T06	4306
42	CW0 12-083— -	CRAN AVON ANE	668396	667961	Enclosure	T05	4319
43	KK0 11-0060 01-	COAN WEST	659334	671023	Castle - unclassified	T01	4359
44	KK0 11-0060 02-	COAN WEST	659329	671023	Bawn	T01	4364
45	CW0 12-	COOL NAKIS HA	668336	667408	Enclosure	T05	4385

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
	108— -						
46	CW0 06- 001— -	CLOG RENA N	667531	672329	Ringfort - rath	T02	4434
47	CW0 12- 139— -	TOMA RD LOWE R	668735	669292	Ring-ditch	T03	4530
48	CW0 12- 140— -	TOMA RD LOWE R	668743	669318	Ring-ditch	T03	4539
49	CW0 12- 0220 01-	TOMA RD LOWE R (3 Detach ed portions)	668782	669045	Church	T03	4581
50	CW0 12- 0220 02-	TOMA RD LOWE R (3 Detach ed portions)	668785	669041	Font	T03	4584
51	CW0 12- 0220 03-	TOMA RD LOWE R (3 Detach ed portions)	668785	669041	Graveyar d	T03	4584
52	CW0 15- 001— -	TOMN ASOC K	664243	663592	Moated site	T07	4593
53	CW0 12- 098— -	TOMA RD LOWE R	668810	669177	Ring-ditch	T03	4605
54	CW0 12- 138— -	TOMA RD LOWE R	668830	669309	Ring-ditch	T03	4626

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
55	CW0 12-099— -	TOMARD LOWER	668842	669188	Ring-ditch	T03	4637
56	CW0 12-061— -	COOLNAKISHA	668526	667131	Earthwork	T05	4651
57	CW0 12-169— -	CRANAVONANE	668765	668195	Burnt mound	T05	4654
58	CW0 12-021— -	CRAANLUSKY	668785	670060	Metalworking site	T03	4655
59	CW0 12-067— -	TOMARD LOWER (3 Detached portions)	668955	669071	Ritual site - holy well	T03	4753
60	CW0 12-100— -	BALLINABRANAGH	668806	670484	Enclosure	T03	4769
61	CW0 12-040— -	RATHORNAN	668855	667601	Redundant record	T05	4839
62	CW0 12-007— -	BALLINABRANAGH	668785	670790	Enclosure	T03	4839
63	CW0 12-039— -	RATHORNAN	668950	667876	Earthwork	T05	4880
64	KK0 06-009— -	COANWEST	659054	671763	Fulacht fia	T01	4898
65	CW0 15-028— -	MOANDUFF	667451	665021	Fulacht fia	T05	4925
66	CW0 12-	CRANAVONANE	669061	668398	Kiln - corn-drying	T03	4927

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
	168— -						
67	CW0 12- 008— -	BALLI NABR ANAG H	668925	670670	Excavatio n - miscellane ous	T03	4935
68	CW0 12- 0820 02-	CONE YKEA RE	668306	665913	Ring-ditch	T05	4996

13.3.3.3.1 *The Prehistoric Period*

The prehistoric period is represented by at least 19 monuments including a barrow (1), burnt mound (1), fulacht fia (7), ring-ditch (6), a cremation pit and two metal working sites.

The barrow located within the 5km study area comprises a ditch barrow. Ditch barrows consist of a circular or oval level or slightly raised area (less than 1m above the external ground level) defined by a fosse; generally, less than 20m in diameter. They are often found in clusters or in association with other barrow types. They are funerary monuments that may date to the Neolithic (c. 4000-2400 BC) but more usually date to the Bronze/Iron Ages (c. 2400 BC - AD 400).

Ring ditches comprise a circular or near circular fosse, usually less than 20m in diameter and visible as cropmarks/soilmarks on aerial photographs. The function of these monuments is unknown as ring-ditches may be the remains of ploughed out barrows, round houses or other modern features and, in consequence, may date to any period from prehistory onwards.

Fulacht fia generally comprise a horseshoe-shaped or kidney-shaped mound consisting of fire-cracked stone and charcoal-enriched soil built up around a sunken trough located near or adjacent to a water supply, such as a stream or spring, or in wet marshy areas. The first recorded use of the Irish term 'fulacht fiadh/fia' (cooking pit of the deer or of the wild) as relating to ancient cooking sites was in the 17th century. These are generally interpreted to have been associated with cooking and date primarily to the Bronze Age (c. 2400-500 BC).

The nearest of these monuments is the ditch barrow which is located c. 1.3km from the nearest proposed turbine, T01.

13.3.3.3.2 *The Early Medieval Period*

The Early Medieval period is mainly represented by enclosures and ringforts and souterrains which account for 18 of the 68 monuments within 5km of the Proposed turbines. Enclosures consist of an area defined by an enclosing element (e.g. bank, wall, fosse, scarp), or indicated as such cartographically, and occurring in a variety of shapes and sizes, possessing no diagnostic features which would allow classification within another monument category. These may date to any period from prehistory onwards. Enclosures with a diameter greater than 70m should be classed as Large Enclosure. Ringforts are a roughly circular or oval area surrounded by an earthen bank with an external fosse. Some examples have two (bivallate) or three (trivallate) banks and fosses, but these are less common and have been equated with higher status sites belonging to upper grades of society. They functioned as residences and/or farmsteads and broadly date from 500 to 1000 AD.

13.3.3.3.3 **Medieval Period**

At least six monuments within 5km of the Proposed turbines may be attributed to the medieval period. They comprise an unclassified castle, a bawn, two moated sites, an historic town which is a deserted medieval borough c. 3km west of Leighlinbridge and a memorial stone.

Moated sites comprise a square, rectangular or occasionally circular area, sometimes raised above the ground, enclosed by a wide, often water-filled, fosse, with or without an outer bank and with a wide causewayed entrance. They date to the late 13th/early 14th centuries and were primarily fortified residences/farmsteads of Anglo-Norman settlers though they were also built by Gaelic lords.

Unclassified castles, as the name suggests, comprise a castle that cannot be more precisely classified. They can date from the late 12th to the 16th century AD. A bawn comprises a courtyard of a medieval house, tower house or fortified house (12th - 17th centuries AD). There are some instances where the bawn survives but the building it was constructed to defend does not.

Memorial stones consist of a stone on which is carved an inscription, a person's initials or other letters commemorating a person or event. If accompanied by a coat of arms it is classified as an 'armorial plaque'. This term is not used for memorials of the dead found in churches. They date from the later medieval period (12th-16th centuries AD) onwards.

The nearest of these monuments to the Proposed turbines comprises a moated site located c. 1.5km from the nearest Proposed turbine location, T01.

13.3.3.3.4 **Monuments with Religious Associations**

Thirteen monuments within 5km of the Proposed turbines have religious associations and may date to a number of time periods. The monuments comprise churches, graveyards, a cathedral, a children's burial ground, holy wells, fonts and crosses. Some of these monuments are found near to or in association with each other.

Holy wells comprise a well or spring, though in some unusual cases a natural rock basin, which usually bears a saint's name and is often reputed to possess miraculous healing properties. These may have their origins in prehistory but are associated with devotions from the medieval period (5th-16th centuries AD) onwards. Holy trees are often found in association with holy wells. They comprise a named tree or bush, sometimes associated with a particular saint, often considered to have miraculous properties. They are generally found in close proximity to holy wells and formed part of the associated patterns or rounds performed on certain days. They are known in Irish as 'bile', which translates as sacred tree, sometimes corrupted into the English words 'bell' or 'bellow'. These may have their origins in prehistory but are associated with devotions from the medieval period (5th-16th centuries AD) onwards.

Two churches and two graveyards are located within 5km of the Proposed turbines. In some cases, the churches and graveyards are found in association with each other. They can be of any date from c. 500 AD onwards. Children's burial grounds comprise an area of unconsecrated ground for the interment of unbaptised or stillborn children, often known under various Irish names: Cillín, Caldragh, Ceallúnach or Calluragh. The graves were generally marked by simple, low, upright stones or slabs almost invariably without any inscription or other carving. This burial practice may be medieval in origin and continued in Ireland until the 1960s.

The nearest of these monuments is located over 3km from the nearest Proposed turbine, T07.

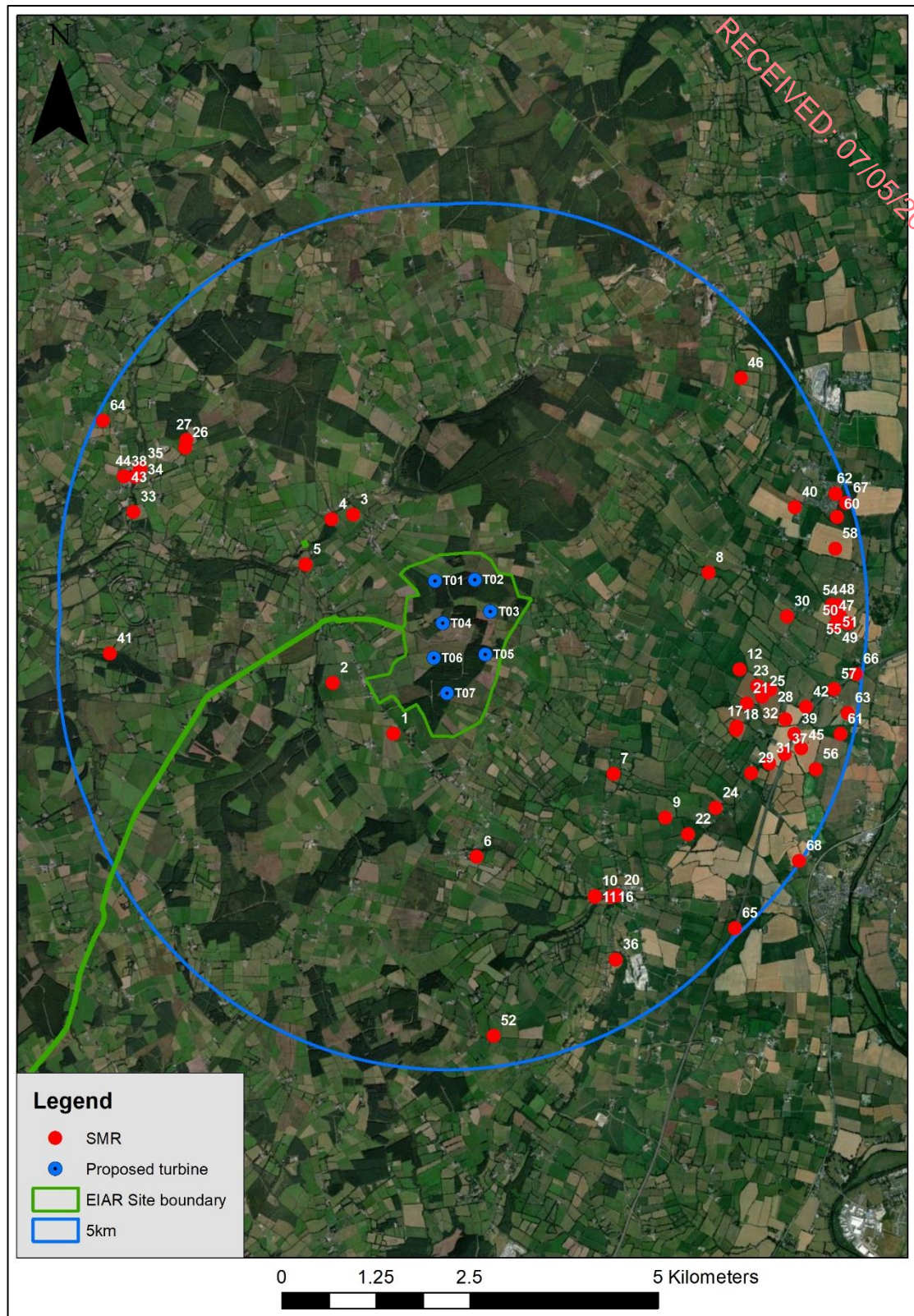


Figure 13-5: Recorded monuments within 5km of the Proposed turbine.

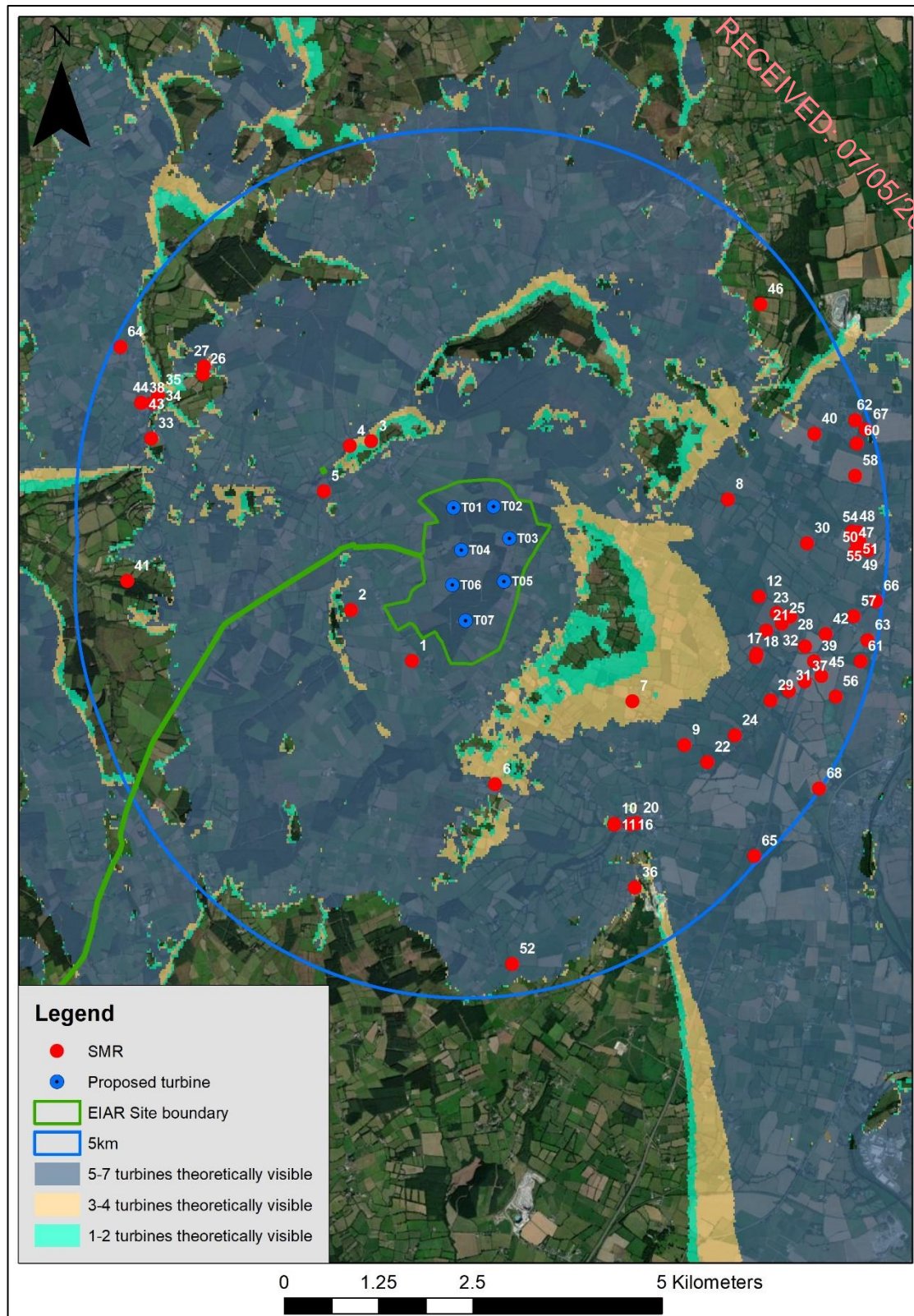


Figure 13-6: Recorded monuments within 5km of the Proposed turbines and ZTV.

13.3.3.4 Excavations Database

The database of excavations carried out in Ireland (www.excavations.ie) was consulted for any such licensed work which took place on or adjacent to the Proposed Wind Farm site. Two entries were returned for the townlands of Coolnakisha and were associated with excavations which took place as part of the N9/N10 Kilcullen to Waterford road scheme c. 4km south-east of the Proposed Wind Farm site. The entries as provided on www.excavations.ie are reproduced below.

2007:102 - AR139, Coolnakisha, Carlow

County: Carlow Site name: AR139, Coolnakisha

Sites and Monuments Record No.: N/A Licence number: A032/128; E3768

Author: Ellen O'Carroll, Irish Archaeological Consultancy Ltd, 120B Greenpark Road, Bray, Wicklow.

Site type: Possible structure

Period/Dating: —

ITM: E 666703m, N 668524m

This site was located within the N9/N10 Kilcullen to Waterford road scheme along Contract 2, Phase 4B, Knocktopher to Powerstown. Five post-holes (averaging 0.27m by 0.24m by 0.14m) were aligned in an equally spaced row. One of these contained the remains of a burnt post (0.07m by 0.07m by 0.08m). To the north-west of this post-hole alignment were various pits and possible post-holes, perhaps forming a parallel alignment, filled with silty clay. To the north-west again was another cluster of archaeological features including a possible cremation pit (0.39m by 0.36m by 0.13m) containing occasional charcoal and burnt-bone fragments in a silty sand matrix. To the north-east of this area of activity was a second possible cremation pit (0.94m by 0.74m by 0.23m).

2007:103 - AR140, Coolnakisha, Carlow

County: Carlow; Site name: AR140, Coolnakisha

Sites and Monuments Record No.: N/A Licence number: A032/129; E3767

Author: Ellen O'Carroll, Irish Archaeological Consultancy Ltd, 120B Greenpark Road, Bray, Wicklow.

Site type: Possible cremation pits

Period/Dating: —

ITM: E 668241m, N 667599m

This site was located within the N9/N10 Kilcullen to Waterford road scheme along Contract 2, Phase 4B, Knocktopher to Powerstown. A complex of eighteen pits (averaging 0.55m by 0.29m by 0.11m; ranging 0.21–1.14m by 0.15–1.1m by 0.7–0.19m) was identified. Five of these pits contained occasional fragments of burnt bone and may represent token cremation pits. It is not yet known if the bone is animal or human. Charcoal and stones, including burnt stones, were found in the majority of the pit fills.

13.3.3.5 Topographical Files of the National Museum of Ireland

The topographical files of the National Museum of Ireland on www.heritagemaps.ie were consulted for archaeological finds from the townlands within or adjacent to the Proposed Wind Farm site. It should be noted that the dataset as shown on www.heritagemaps.ie has been designed to visually represent the distribution of archaeological artefact finds, based on the Irish Antiquities Division's Collections

Database, at local and national coverage where possible. Find locations shown on the Heritage Map Viewer are not an accurate representation of the actual find spot. In some cases, the location symbol may only represent the townland within which the find was located. No find spots are recorded for the Proposed Wind Farm site in County Carlow.

13.3.3.6 Sub-Surface Archaeological Potential

Due to the extent of groundworks associated with the construction phase of the Proposed Wind Farm and the greenfield nature of some portions of the Proposed Wind Farm site, it is possible that previously unrecorded sub-surface archaeological finds, features or deposits are located within the Proposed Wind Farm site. The potential therefore exists that sub-surface archaeological sites or features, if present within the Proposed Wind Farm site, may be directly impacted by construction phase activities. Mitigation measures to ameliorate this potential impact are detailed in Section 13.4.3.4 below.

13.3.3.7 Archaeological Landscapes

No archaeological landscapes are identified in the Carlow CDP. The Kilkenny CCDP identifies a number of archaeological landscapes within the county as follows:

- Freestone Hill and environs
- The Lingaun River Valley - specifically the megalithic monuments within it and the relationships between them
- Tory Hill and environs

The nearest of these to the Proposed Wind Farm comprises Freestone Hill which is located over 12km south-west of the nearest Proposed turbine, T07.

13.3.3.8 Protected Structures within 5km of the Proposed turbine

No Protected Structures are located within the Proposed Wind Farm site. Protected Structures along the Proposed Grid Connection Route are dealt with in Section 13.3.4.3 below.

Nine protected structures are located within 5km of the Proposed turbine, seven of which are located in County Carlow and two of which are in County Kilkenny. Many of the structures are also included in the NIAH. They are shown on Figure 13-7 and listed in Table 13-5. The ZTV shows that eight structures are located in areas where 5-7 turbines will theoretically be visible (Figure 13-8) with one structure (Ref. CW268) located in an area where none of the Proposed turbines will theoretically be visible. Potential impacts and mitigation are addressed below in Section 13.4.

The nearest structures are those in county Kilkenny and comprise a mill (Ref. D83) and Black Bridge (Ref. D84). The mill is located c. 1.5km from the nearest Proposed turbine, T06, while Black Bridge is located c. 1.8km from the nearest Proposed turbine, T01. Black Bridge is also discussed in relation to the proposed TDR in Section 13.3.3.12 below.

Table 13-5: RPS structures within 5km of the Proposed turbines.

RPS ID	NIAH REG.	STRUCTURE	LOCATION	ITM E	ITM N	TURBIN E	DISTAN CE TO TURBINE (m)
D83	N/A	Mill	Coolcullen	661912.99 95	669005.00 05	T06	1587
D84	124011 11	Bridge	Coan East	661730.99 84	670131.99 91	T01	1805
CW26 8	103006 11	Church Of Ireland	Bilboa	664725	672364	T02	2807

RPS ID	NIAH REG.	STRUCTURE	LOCATION	ITM E	ITM N	TURBINE	DISTANCE TO TURBINE (m)
CW071	10301101	St. Lazerian's Cathedral	Old Leighlin	665813	665442	T07	3476
CW376	10301103	Old Leighlin House	Old Leighlin	666591	665399	T07	4039
CW266		Craan House	Ballinabrannagh	668783	668001	T05	4696
CW002	10301202	Catholic Church	Ballinabrannagh	668627	670923	T03	4736
CW102		Old School Building	Ballinabrannagh	668661	670942	T03	4774
CW101	10301201	Ballinabrannagh House	Ballinabrannagh	668702	671293	T03	4948



Figure 13-7: RPS structures located within 5km of the Proposed turbines.

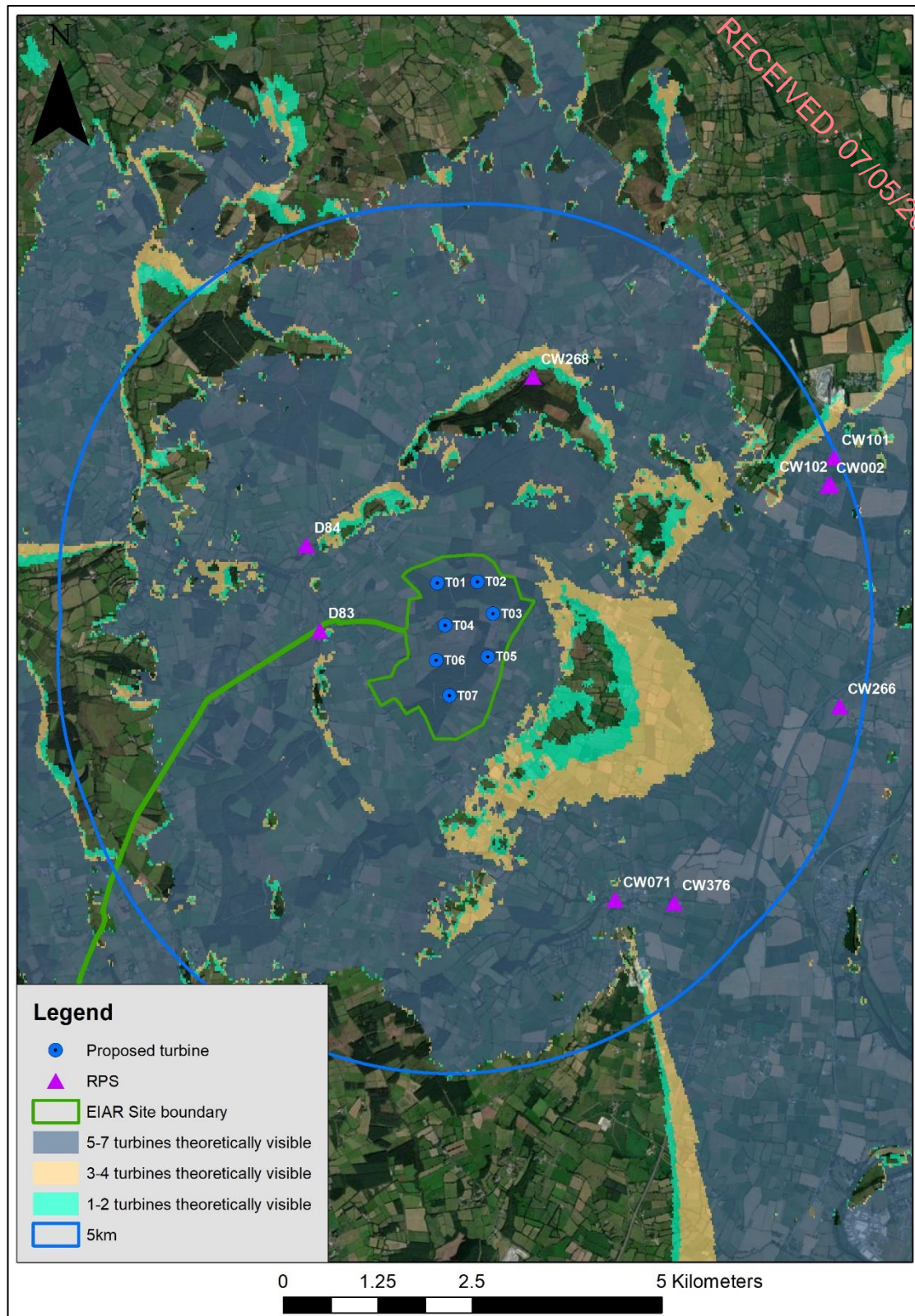


Figure 13-8: RPS structures within 5km of the Proposed turbines with ZTV.

13.3.3.9 NIAH Structures and Historic Gardens within 5km of the Proposed turbines

No NIAH structures or historic gardens are located within the Proposed Wind Farm site. NIAH structures located along the Proposed Grid Connection Route are dealt with in Section 13.3.4 below.

Sixteen structures listed in the NIAH are located within 5km of the nearest Proposed turbine and are listed in Table 13-6 and shown in Figure 13-9 below. The nearest structures comprise a mill (Reg. 12401109) and an adjacent miller's house (Reg. 12401110) which are situated c. 1.5km from the nearest Proposed turbine, T06. The ZTV demonstrates theoretical visibility 5-7 turbines from 10 of the NIAH structures, theoretical visibility of 3-4 turbines from one structure, and theoretical visibility of 1-2 turbines from one structure. Four structures are located in area where none of the Proposed turbines will theoretically be visible (Figure 13-10). Potential impacts on this aspect of the built heritage resource are addressed below in Section 13.4.

One historic garden is located within 5km of the Proposed turbines (Table 13-7, Figure 13-9). It is associated with Glebe House (Reg. 12401107) listed in Table 13-6 and is situated c. 4km west of the nearest Proposed turbine, T01.

Table 13-6: NIAH sites within 5km of the Proposed turbines.

NIAH Reg.	Date	Structure]	Townland	ITM E	ITM N	Turbine No.	Distance To Turbine (m)
12401109	1790 - 1810	Millfall House	COOLCULLEN	661932	668989	T06	1565
12401110	1790 - 1810	Millfall House	COOLCULLEN	661932	669017	T06	1572
12401111	1865 - 1885	Black Bridge	COAN EAST	661734	670132	T01	1802
12400611	1790 - 1810	Three Counties Bridge	CROGHTENCLOGH	663395	671839	T01	2203
10300601	1845 - 1850	Holy Trinity Church (Tullowcree n)	CRAANLUSKY	664730	672366	T02	2811
10301101	1150 - 1900	Saint Laserian's Cathedral	OLDLEIGHLIN	665806	665442	T07	3471
12401114	1790 - 1810	House	COOLCULLEN	659715	668942	T06	3750
12401108	1800 -	Coolcullen Church (Mothell)	COOLCULLEN	659699	668922	T06	3764

NIAH Reg.	Date	Structure]	Townland	ITM E	ITM N	Turbine No.	Distance To Turbine (m)
	1820						
10301103	1830 - 1850	Oldleighlin House	MOANDUFF	666592	665404	T07	4038
12401107	1805 - 1810	Glebe House	COOLCULLEN	659399	669504	T01	4070
12401113	1880 - 1890	Burn's Bridge	COAN EAST, COAN WEST	659547	671046	T01	4166
12401112	1845 - 1850	Saint Brigid's Catholic Church	COAN EAST	659383	670988	T01	4302
10301202	1820 - 1830	Saint Fintan's Catholic Church	BALLINABRANAGH	668626	670920	T03	4734
12401105	1790 - 1810	Kane's Bridge	COOLCULLEN, REEVANAGH	659302	666088	T07	4787
12401104	1815 - 1835	Griffin's Bridge	COOLCULLEN, COOLRAHEEN SOUTH	658974	666677	T06	4876
10301201	1905 - 1915	Ballinabrana House	BALLINABRANAGH	668702	671291	T03	4947

Table 13-7: Historic garden located within 5km of the Proposed turbines.

Site Name	ITM E	ITM N	Turbine No.	Distance To Turbine (m)
Glebe House, Mothell	659437	669540	T01	4031

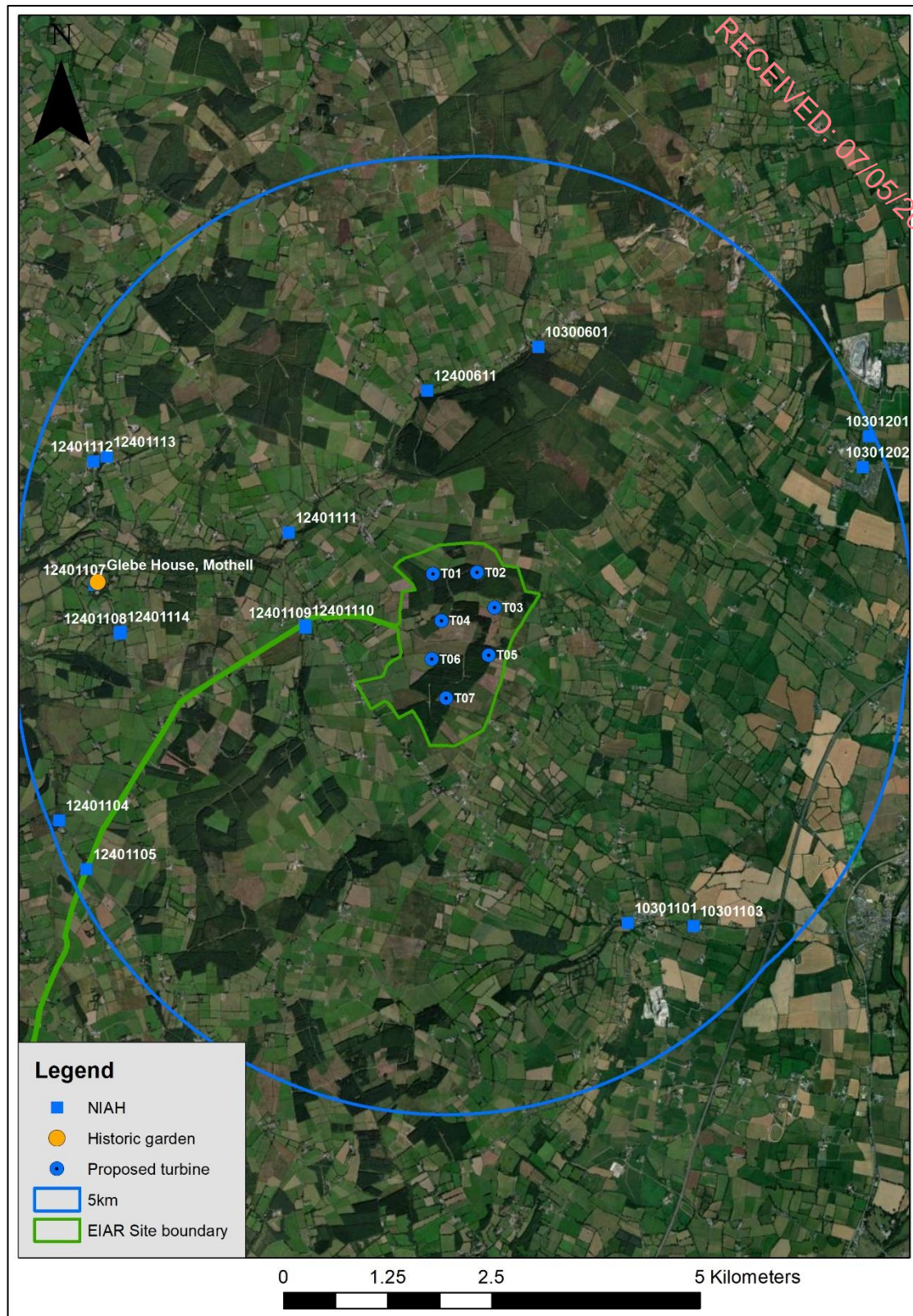


Figure 13-9: NIAH structures and historic gardens within 5km of the Proposed turbines.

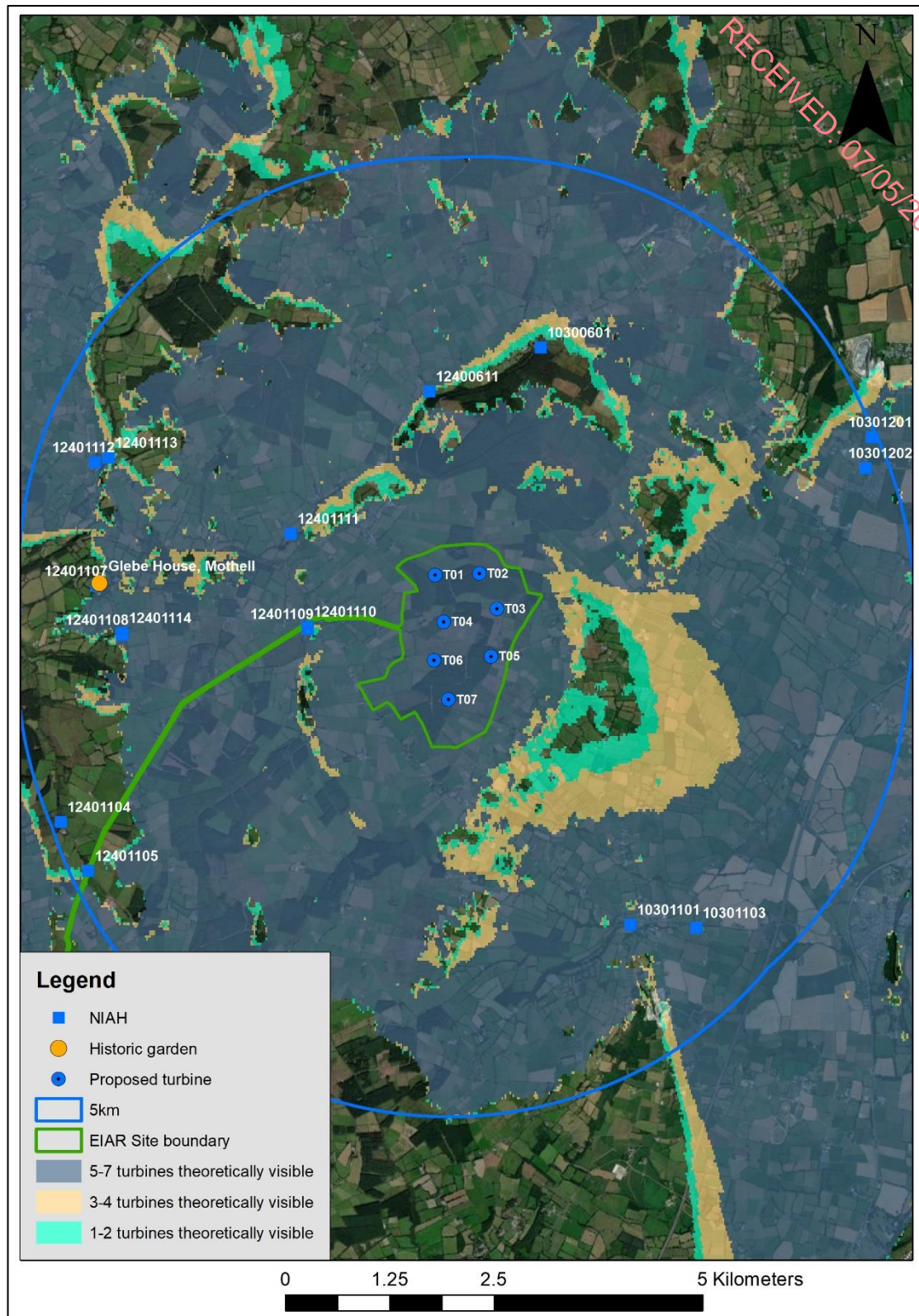


Figure 13-10: NIAH structures and historic gardens within 5km of the Proposed turbines with ZTV showing theoretical visibility.

13.3.3.10 Cartographic Evidence and Local Cultural Heritage

The available historic Ordnance Survey maps were consulted for any items of cultural heritage merit that may be located within the Proposed Wind Farm site. Field survey also assisted in determining if any local cultural heritage features were located within the Proposed Wind Farm site.

The Ordnance Survey came to Ireland in 1824 in order to carry-out a precise admeasurement of the country's 60,000 or so townlands as a preliminary to the larger task of reforming Ireland's local taxation system. The townland boundaries were demarcated by a Boundary Commission, and the Ordnance Survey had the task of measuring them. In addition to boundaries the maps are truly topographical in content. Drawn at the large scale of six inches-to-one-mile (1:10,560) it was important to mark all buildings, roads, streams, placenames, etc, that were required for valuation purposes. Ultimately the maps were used as a basis for the rateable valuation of land and buildings in what became known as Griffith's Valuation. Working from north to south, the survey began in Antrim and Derry in 1829 and was completed in Kerry in 1842. It was published as thirty-two county maps between 1832 and 1846, the number of sheets per county varied from 153 for County Cork to 28 for Dublin, each of the 1,994 sheets in the series depicting an area 21,000 by 32,000 feet on the ground. Each county was projected on a different central meridian and so the maps of adjacent counties do not fit neatly together at the edges. Map content stops at the county lines.

The early Ordnance Survey maps are an unrivalled source for the period immediately before the Great Irish Famine (1847-50) when the population was at the highest level ever recorded in Ireland. The first edition map (1829-41) for the area of the Proposed Wind Farm shows much of the site divided into fields for agricultural purposes with more open marginal land towards the centre of same. Associated with the field enclosures are some small structures which would have been occupied by the landowners or lessors at the time. None of the structures are located in areas where infrastructure is proposed.

The later second edition OS map depicts the Proposed Wind Farm site in a similar manner, being subdivided into fields for agricultural purposes. A small complex of structures is shown at the road to T01 and T02 proposed for upgrade (Figure 13-11). No visible trace of the structures was apparent at the time of field survey carried out for this assessment and a forestry track extends through this area.

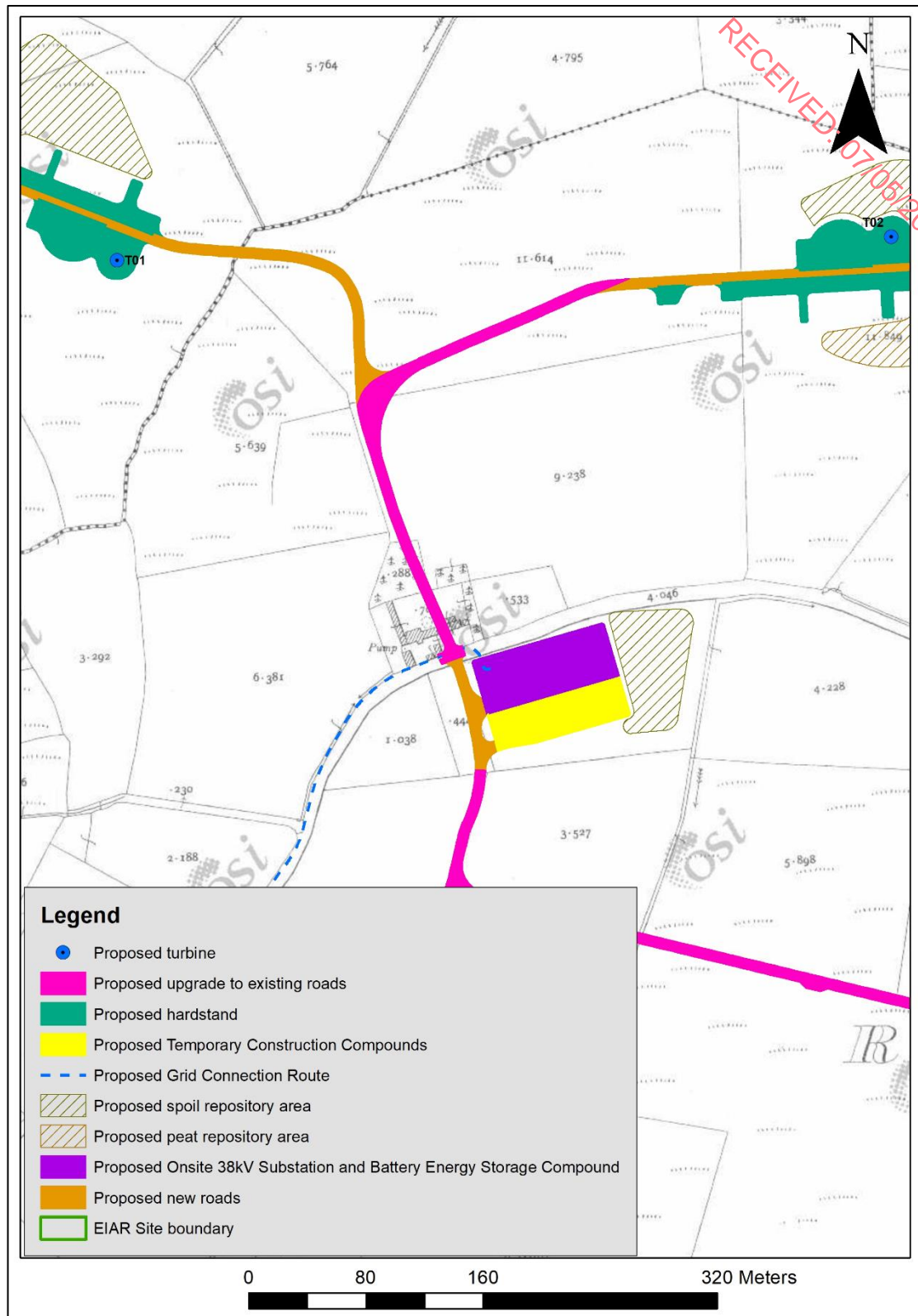


Figure 13-11: Buildings indicated on second edition 25-inch OS map in area of road (due for upgrade) to T01 and T02.

13.3.3.11 Townlands and administrative boundaries

Townlands and administrative boundaries may indicate the presence of archaeological features within a development site. Administrative counties are subdivisions of pre-established counties which were formed for administrative purposes in the nineteenth and twentieth centuries. Baronies are administrative units larger than civil parishes and originally established as the primary subdivision of counties by the British administration in Ireland. Irish baronies which were formed at the time of the Norman conquest were usually named either after Irish territories, or from places which had been of importance in pre-Norman times. Irish baronies came into existence at different periods. The division of Ireland into counties and baronies was a process which continued down to the reign of James I. The original baronies in Ireland were the domains of the Norman barons; in the final stage of development they were divisions of counties created merely for greater convenience of administration. The word barony is of feudal origin, and was applied to a tenure of a baron, that is, of one who held his land by military service, either directly from the king, or from a superior feudal lord who exercised royal privileges. The origin of the Irish barony (a division of land corresponding to the English hundred) is to be found in the grants of lands which were made to the barons of Leinster and the barons of Meath (Liam Price, 'Ráith Oinn', Éigse VII, lch. 186-7). Civil parishes are administrative units larger than townlands and based on medieval ecclesiastical parishes. Civil parishes, modern Catholic parishes and Church of Ireland parishes may differ in extent and in nomenclature. Counties are administrative units larger than baronies and originally established by the British administration in Ireland between the twelfth and the seventeenth centuries. Some of these were subsequently subdivided into smaller administrative county units.

Townlands are the smallest land units which were determined and established in the Irish administrative system in the first half of the nineteenth century. Many of the townlands were in existence prior to that. As a number of townlands are located within the Proposed Wind Farm site, townland boundaries between some are also present. Proposed infrastructure crosses the townland boundaries in a number of places. For example, the proposed new road to T01 crosses the boundary between Seskinrea and Agharue, and the existing road due for upgrade between T05 and T06 crosses the boundary between Ridge and Seskinrea. In some instances, the boundaries may comprise upstanding field boundaries, while others may comprise streams or drains.

Townland names are a valuable source of information, not only on the topography, land ownership and land use within the landscape, but also on its history, archaeological monuments and folklore. Logainm.ie was utilised to ascertain the origin of the townland names within the Proposed Wind Farm site (Table 13-8).

Table 13-8: Townlands within the Proposed Wind Farm site and their meanings.

Townland	Logainm Meaning
AGHARUE (An tÁth Rua)	The red field
SESKINREA (An Seisceann Riabhach)	Grey marsh or sedgy marsh of the fort
RIDGE (An Droim)	Wood, or the ridge of Old Leighlin
COOLNAKISHA (Cúil na Cise)	Back of the Kesh or wicker bridge

13.3.3.12 Proposed Turbine Delivery Route

It is envisaged that large wind turbine components will be delivered to the Proposed Wind Farm site, from Waterford Port, via the N29, N25, N9, M9, N78 and L1834/L1835/L3037. Accommodation works will be required along the public road network on the N78 national secondary road and the L1834 local road in the townland of Cloneen, Co. Kilkenny to facilitate the delivery of turbine components and other abnormal loads. Carriageway strengthening works will also be required at 'Black Bridge' on the L1835 / L3037 (within Co. Carlow and Co. Kilkenny).

A windscreen survey of the proposed accommodation works areas on the TDR was carried out as part of this assessment. The works areas represent areas where there will be temporary works put in place to facilitate delivery (i.e., the stoning out of a grassy verge or portion of a roundabout/junction).

13.3.3.12.1 Accommodation works Area Clooneen

No Cultural Heritage items (National Monuments, recorded monuments, RPS or NIAH structures or items of local cultural heritage merit) are located at the proposed accommodation works area at Clooneen, Co. Kilkenny.

13.3.3.12.2 Carriageway Strengthening Works Black Bridge

Black Bridge is included in the RPS and NIAH for County Kilkenny (RPS Ref. D84, NIAH Reg. 12401111) (Figure 13-12). It comprises a 19th century stone road bridge which is described in the NIAH as follows:

Description

Single-arch rubble limestone road bridge over river, c.1875, on site of earlier bridge, pre-1840. Irregular coursed squared rubble limestone walls with battered piers having rock-faced dressed limestone quoins, cut-limestone stringcourse supporting parapet having cut-stone date stone/plaque, and part ivy-clad cut-limestone coping. Single segmental arch with rock-faced cut-limestone voussoirs, and tooled limestone ashlar soffits. Sited spanning Dinin River with overgrown grass banks to river.

Appraisal

Representing an important element of the mid to late nineteenth-century civil engineering legacy of County Kilkenny a small-scale low-slung bridge reminiscent of contemporary railway bridges displaying a traditional construction in unrefined locally-sourced stone makes a picturesque, if subtle impression in the rural landscape.



Plate 13-4: Black Bridge on the TDR, looking SE.



Plate 13-5: Black bridge (photo courtesy of www.buildingsofireland.ie).

It is proposed to undertake carriageway strengthening works at the bridge to facilitate the delivery of turbine components and other abnormal loads. A structural assessment of the bridge was carried out (Jennings O'Donovan & Partners Ltd, Dec 2023) which found that '*despite the overall good condition for the structure, the arch is not capable of supporting the maximum axial load applied by movement of standard wind farm delivery vehicles..... In order to achieve a modified axle loading in excess of 12 tonnes, the average depth of fill above key stone would need to be increased by 200mm, thus providing an overall depth of 450mm over the span of the arch*'. It is proposed that a 175mm thick concrete slab will be placed over the existing road surface in order to achieve the required loading. Works to the parapet walls are also proposed which will consist of raising the wall height to a minimum of 1250mm (current wall height is 1200mm).



Figure 13-12: Proposed upgrade to Black Bridge (RPSD84, NIAH 1240111) on the TDR.

13.3.4 Proposed Grid Connection Route

The Proposed Grid Connection Route includes for underground 38kV cabling from the proposed onsite 38kV substation, in the townland of Seskinrea, Co. Carlow, to the existing Kilkenny 110kV substation in the townland of Scart, Co. Kilkenny. The Proposed Grid Connection Route to Kilkenny, measuring approximately 20.1km in length, is primarily located within the public road corridor.

Cultural heritage assets within 100m of either side of the Proposed Grid Connection Route are included in the assessment in order to ascertain any potential effects and any required mitigation measures to alleviate or minimise such effects if identified. The 100m study area is considered adequate given the localised nature of the proposed works which will largely occur within the public road network. A photographic record of the Proposed Grid Connection Route is presented in Appendix 13-1.

13.3.4.1 National Monuments

No National Monuments in State Care or those subject to a Preservation Order are located within 100m of the Proposed Grid Connection Route. The nearest National Monument comprises Clara Castle (Nat. Mon. No. 274) in the townland of Clara Upper, which is situated c. 160m to the south-west of the L2627 local road along which the Proposed Grid Connection Route extends.

13.3.4.2 Recorded Monuments

A total of fourteen (14) recorded monuments are located within 100m of the Proposed Grid Connection Route, all of which are in County Kilkenny. The monuments are listed in Table 13-9 below and shown on Figure 13-13. Ten of the fourteen monuments are located in the townland of Churchclara, with eight of the ten located in the immediate vicinity of the church and graveyard. The Proposed Grid Connection Route will be placed within the public road to the west of the church, graveyard and associated monuments and extends through the Zone of Notification (ZoN) for the group of eight monuments (KK020-017—, KK020-017001-, KK020-017002-, KK020-017003-, KK020-017004-, KK020-017005-, KK020-017008- and KK020-017010-) and for KK020-017009- bullaun stone which is located in the roadside field boundary.

The Proposed Grid Connection Route also extends past enclosure KK020-005—, through its associated ZoN, and through the ZoN for motte KK020-015-.

The monuments are described on the HEV as follows:

KK020-017—

Class: Redundant record

Townland: CHURCHCLARA

Scheduled for inclusion in the next revision of the RMP: No

Description: This record was listed as 'Ecclesiastical Remains' in the RMP (1996). This is an obsolete broad or group term that is not currently used by the Archaeological Survey of Ireland. See KK020-017001- to KK020-017010-.

Compiled by: Mary Tunney

Date of upload: 22 November 2011

KK020-017001-

Class: Church

Townland: CHURCHCLARA

Scheduled for inclusion in the next revision of the RMP: Yes

Description: On the lower reaches of a hill with good views to the E-SE, centrally placed within a roughly rectangular graveyard (KK020-017002-). The church is indicated on the Down Survey (1655-6) barony map of Gowran and on the parish map of Churchclara (Hibernia Regnum, courtesy of Trinity College Dublin; NLI MS720). The terrier accompanying the parish map describes, 'There stands on Church Claragh the walls of a decayed Church' (NLI MS720). The church, dedicated to St Colmán Cláraig (died 749), later became the chancel of a larger parish church (Ó Carragáin 2010, 307). According to Carrigan (1905, vol. 3, 353), 'In the year 1230 half of the rectory or church of Clara was granted to the Canons Regular of St. John's Abbey, Kilkenny, by Peter, Bishop of Ossory; the vicariate of the parish was granted to the same Canons by William, also Bishop of Ossory, in 1315'.

The church consists of a nave (int. dims. 11.5m E-W x 7.2m N-S) and chancel (int. dims. 6.1m E-W x 4.3m N-S). The chancel is constructed of coursed blocks of limestone while the nave is of roughly coursed limestone rubble. The chancel is an early pre-Romanesque church with E gable in antae. It has a square aumbry, at the E end of the S wall. Two red sandstone ogham stones have been incorporated into the church, one (KK020-017003-), was reused as the sill when the chamfered round-headed E window was inserted in the late 12th/early 13th century, replacing the original window (Ó Carragáin 2010, 158, fig. 166). Carrigan (ibid. 354) noted a partially broken out chamfered window (With c. 0.26m; H c.1m) in the S wall of the chancel.

The other ogham stone (KK020-017010-) was built into the base of the N wall of the nave, immediately E of the centrally placed N doorway. This chamfered doorway (H 1.35m) is partially broken out, though an arch-stone and E jambstones survive. Carrigan (ibid. 353) mentions a breach in the opposite wall which may also have contained a doorway. The W gable has two large cracks running down the wall and only a portion of the apex survives. Carrigan (ibid.) noted four corbels at the W end of the nave which would have supported a gallery. Masonry at the W end of the both the N and S walls of the nave has been robbed, with a breach in the latter wall. Traces of a cross-wall (H 0.5m; T 0.9m), dividing the nave and chancel, are visible projecting from the inner face of the N wall.

Modern buttresses have been added to the external faces of the N and S walls, including at the junction of the nave and chancel on the S side. Within the interior there is a lot of collapsed masonry, including some architectural fragments. There are also several 19th-century memorials including headstones and an altar tomb. Within the graveyard is portion of a shaft from a font (KK020-017004-). Also associated with this church are a 13th/14th-century graveslab (KK020-017005-) and two bullaun stones (KK020-017007-; KK020-017009-). A holy well (KK020-017006-) is located c. 65m to the NW.

Compiled by: Jean Farrelly

Date of upload: 18 November 2020

KK020-017002-

Class: Graveyard

Townland: CHURCHCLARA

Scheduled for inclusion in the next revision of the RMP: Yes

Description: On the lower reaches of a hill with good views to the E-SE, enclosing a centrally placed medieval church (KK020-017001-). A public road runs N-S along the W side of the graveyard. The 1st (1839) ed. OS 6-inch map shows an irregular dashed line surrounding the church which suggests that the graveyard was not enclosed at this stage. By the 1900 revision of the OS 6-inch map the graveyard wall has been built and remains as it is today, with the entrance from the road on the W side consisting of an iron gate between stone piers and a stile immediately to the N. A rectangular area (dims. 50m E-W x 31m N-S) enclosed by a stone wall with roughly cut, slightly projecting, coping stones.

On top of the S boundary wall is an architectural fragment (dims. 0.5m x 0.27m) chamfered and smoothly dressed on two faces. All gravestones date from the 18th-century and later, with several architectural fragments employed as grave-markers. In the SW corner of the graveyard there is portion of a shaft from a font (KK020-017004). Also, at the W end of the church there is a 13th/14th-century graveslab (KK020-017005).

Compiled by: Jean Farrelly

Date of upload: 18 November 2020

KK020-017003-

Scope note

Class: Ogham stone

Townland: CHURCHCLARA

Scheduled for inclusion in the next revision of the RMP: Yes

Description: Within a pre-Romanesque church (KK020-017001-), which was later extended westward, the original church becoming the chancel. This ogham stone, first noted in 1869 (Anon. 1868-9, 281-2; Macalister 1945, 33-4, no. 28), was reused as a sill for a round-headed window which was inserted in the E gable in the late 12th/early 13th century, replacing the original window (Ó Carragáin 2010, 158, fig. 166). It is a long rectangular block of red sandstone (dims. 1.55m x 0.22m) with seven closely set incised strokes visible on its lower edge at S end. Macalister (ibid.) read the inscription as TASEGAGNI [MAQ]I MUCOI MACORBO. McManus (1997, 67) could only be certain of ...MUC... MAC... . A second ogham stone (KK020-017010-) was discovered in the 1970s, built into the base of the N wall of the nave (Manning and Moore 1997, 370-372).

Compiled by: Jean Farrelly and Nora White

Date of revised upload: 18 November 2020

KK020-017004-

Class: Font

Townland: CHURCHCLARA

Scheduled for inclusion in the next revision of the RMP: Yes

Description: In the SW portion of the graveyard (KK020-017002-) enclosing the medieval church of Clara (KK020-017001-), close to the S boundary wall. A portion of the shaft of a font consisting of a large block of polished limestone (H 0.35m, diam. 0.4m) subcircular in plan with semi-circular roll-mollings at each of its four corners. There has been some damage to these mouldings. A drainage hole (diam. 0.11m) runs through its centre of the shaft.

Compiled by: Jean Farrelly

Date of upload: 18 November 2020

KK020-017005-

Class: Graveslab

Townland: CHURCHCLARA

Scheduled for inclusion in the next revision of the RMP: Yes

Description: Within Clara church (KK020-017001-) or graveyard (KK020-017002-). According to Carrigan (1905, vol.1 3, 355), 'At the west end of the church is a fragment, 4 ft. long, of a small coffin-shaped slab with incised cross. The narrow end is missing, as well as the upper corner at the right side of the cross. There are two incised Lombardic inscriptions along the sides, one beginning at the top, and continued along under the right arm of the cross; the other commencing at the foot and continued along under the left arm. Of the former inscription all that remains is: HIC JACET THMS SCOR. Translation – Here lies Thomas Scor[thals]. The other inscription is: [HIC JACE]T THMS SERTHALS FI. SIMOND. Translation – Here lies Thomas fitz Simon Serthals. These are the oldest Shortall inscriptions we have. They date from the 13th century and may be presumed to commemorate members of the Shortall family of Upper Clara'.

Compiled by: Jean Farrelly

Date of upload: 17 November 2020

~~KK020-017006-~~

Class: Ritual site - holy well

Townland: CHURCHCLARA

Scheduled for inclusion in the next revision of the RMP: Yes

Description: In a marshy hollow, c. 33m E of stream running roughly N-S. Clara church (KK020-017001-) and graveyard (KK020-017002-) are located c. 65m to the SE. Described by Carrigan (1905, vol. 3, 356) as, 'a fine holy well, known as "St. Colman's Well"'. The nearby church was also dedicated to St Colman whose feast day is on the 16th of October.

A spring enclosed on three sides by stone walls (H 0.75m) and covered by a large flagstone (T 0.1m). Enclosing walls (area 1.2m x 0.95m) were repaired in the 1950s. Formerly dedicated to St. Colman and venerated on the 16th of October. When visited in 1994 the well, which was overgrown with vegetation, was being used for domestic purposes.

Compiled by: Jean Farrelly

Date of upload: 18 November 2020

~~KK020-017008-~~

Class: Architectural fragment

Townland: CHURCHCLARA

Scheduled for inclusion in the next revision of the RMP: Yes

Description: A graveyard (KK020-017002-) enclosing the medieval church of Clara (KK020-017001-). An architectural fragment (dims. 0.55m x 0.27m), chamfered on two edges, rests on the graveyard wall.

Compiled by: Jean Farrelly

Date of upload: 18 November 2020

~~KK020-017009-~~

Class: Bullaun stone

Townland: CHURCHCLARA

Scheduled for inclusion in the next revision of the RMP: Yes

Description: Located c. 70m N of Clara church (KK020-017001-) and graveyard (KK020-017002-). Incorporated into the lower courses of a field boundary with external stone facing, on the E side of road. An irregularly shaped limestone block (max. dims. 0.4m x 0.35m; max. H 0.25m) with shallow, circular basin (diam. 0.16m). Another bullaun (KK020-017007-) from the graveyard is currently located in the grounds of the farmhouse to the SW. In 1893 it was noted that, 'In the ditch of the roadway may been seen the heel-stones of the gateway of the former entrance to the church precincts, one of them still in situ' (Anon. 1893, 233). This may refer to a spudstone and could be the stone with the depression in the field boundary which was more recently interpreted as a bullaun.

Compiled by: Jean Farrelly

Date of upload: 18 November 2020

KK020-017010-

Class: Ogham stone

Townland: CHURCHCLARA

Scheduled for inclusion in the next revision of the RMP: Yes

Description: One of two red sandstone ogham stones incorporated into the fabric of Clara medieval church (KK020-017001-). The first of these (KK020-017003-) functions as an inserted sill of the window in the E gable. This second stone (dims. 1.14m x 0.23m), discovered in the 1970s (Manning and Moore 1997, 370-372), is situated just above present ground level in the external face of the N wall of the nave, immediately E of the N doorway and in a horizontal position. The inscription was read by Manning and Moore (ibid) as G[E]LAGN[I] [A]V[I].

Compiled by: Nora White

Date of upload: 28 April 2016

KK020-016-

Class: House - fortified house

Townland: CLARABRICKEN

Scheduled for inclusion in the next revision of the RMP: Yes

Description: On the brow of a W-facing slope, surrounded by farm buildings. The Down Survey (1655-6) barony map of Gowran depicts a castle in 'Brickinclaragh' townland, in the parish of Churchclara (Hibernia Regnum, courtesy of Trinity College Dublin). The castle is also depicted on the Down Survey (1655-6) parish map of 'Churchclaragh' and the accompanying terrier describes it as 'on Brickinclaragh a ffaire Castle in repaire' and Henry Archer is listed as the proprietor in 1640 (NLI MS720). According to Carrigan (1905, vol. 3, 357), 'In 1659 it was occupied by a Cromwellian named Jacob Cornock. Richard Boyle paid 10s. hearth money for the house or castle of Bricken Claragh, in 1664. A considerable fragment of the castle still remains standing to a height of 30 ft. [c. 9m]. The walls are 5 ft. [1.5m] thick'.

A very ruined rectangular tower house (ext. dims. 17.27m N-S x 11.6m E-W; wall T c. 1m), presently standing to first-floor level. Built of roughly coursed limestone rubble with some large quoins visible at the SW angle. Most of the N wall is upstanding, breached at its E end, and a very short length of the W end of the S wall, and the N end of the W wall (H c. 4m). The entrance doorway was apparently located at the N end of the N wall but neither this entrance, nor any windows survive in situ. There is a projection at the N end of the W wall which contains a garderobe chute. There is no indication of the location of the staircase. The interior is filled with collapsed masonry and debris. There is some loose

cut-stone masonry in the farmyard, including a window fragment. There is a shed built up against the W wall.

The dimensions of this castle suggest that this is not a typical tower house but, being more rectangular than square, it may be 'a long, low stronghouse' or fortified house (Salter 2004, 65).

Compiled by: Jean Farrelly

Date of upload: 17 November 2020

KK020-015—

Class: Castle - motte

Townland: CLARABRICKEN

Scheduled for inclusion in the next revision of the RMP: Yes

Description: On the S end of a natural hillock, with another larger hillock to the SE, in pasture. A public road runs N-S along the base of the hillock on the W side. A quarry, now disused, encroaches into the N portion of the hillock on which the monument is located. Indicated as a large mound (overall diam. c. 43m N-S; c. 40m E-W) on the 1st (1839) OS 6-inch map and 1900 revision. Clarabricken Castle (KK020-016—) is located c. 185m to the SW. It is described as, 'a large mound or tumulus about 15' [c. 4.5m] tall and at a height of over 30' [c. 9m] above the road. What may have been a slightly sunken fence, with a circuit of about 110 paces surrounds the base of the mound, which is oval shaped at the top and about 18 paces in greatest length and 7 paces at greatest breadth [top diam. c. 18m x 7m]. It is regarded locally as a "wicked druid's grave" and is obviously an important burial mound or tumulus' (Irish Tourist Association Survey 1945, in OPW topographical files). The defensive position of this monument, as well as its morphology, suggest that this is a motte.

Compiled by: Jean Farrelly

Date of upload: 17 November 2020

KK020-005—

Class: Enclosure

Townland: CLARA UPPER

Scheduled for inclusion in the next revision of the RMP: Yes

Description: Immediately W of a public road. Named 'Knockaunteemeade' and indicated on the 1st (1839) ed. OS 6-inch map and on the 1900 revision as a trapezoidal area (diam. c. 56m N-S. c. 31m E-W at the N, tapering to c. 12m at S) defined by scarp. Visible on Digitalglobe satellite imagery (viewed 9 November 2020) as being overgrown with trees and scrub. There is a large enclosure (KK020-004—) c. 200m to the NE and another one (KK020-006—) c. 300m to the ENE. A mineral spa well is indicated on the OS maps c. 75m to the SW.

Compiled by: Jean Farrelly

Date of upload: 9 November 2020

KK015-080—

Class: House - 18th/19th century

Townland: FEATHALLAGH

Scheduled for inclusion in the next revision of the RMP: No

Description: On a slightly raised area W of small stream with good views to N, S and W. Listed in the RMP (1996) as 'Dwelling possible' this complex is essentially late 18th or early 19th century in date. It has been modified and rebuilt several times. There is no evidence to suggest this house is earlier than the 18th/19th century in date.

Compiled by: Jean Farrelly

Date of upload: 11 April 2017

Enclosure KK020-005- is indicated on both the first and second edition OS maps as a hachured area to the west of the L2627 local road along which the Proposed Grid Connection Route extends. This would suggest that the enclosing elements of the monument are situated to the west of the road and are not truncated by same.

The church, graveyard and associated recorded monuments at Churchclara are located immediately east of the L2627 local road along which the Proposed Grid Connection Route extends. They are depicted on both the first and second edition OS maps, the graveyard being indicated as a rectangular area denoted by a dashed line on the earlier edition and a solid line on the later edition. There is no suggestion from the historic mapping or the surrounding field boundaries that a larger enclosure was associated with the church and graveyard.

Table 13-9: Recorded monuments within 100m of the Proposed Grid Connection Route.

SMR NO.	ITM E	ITM N	CLASS	Townland	Distance to Proposed Grid Connection Route (m)	Comments
KK020-017009-	657774	656442	Bullaun stone	CHURCHCLARA	8	Within Zone of Notification
KK020-017008-	657754	656374	Architectural fragment	CHURCHCLARA	12	Within Zone of Notification
KK020-005—	657619	657577	Enclosure	CLARA UPPER	16	Within Zone of Notification
KK020-017004-	657758	656358	Font	CHURCHCLARA	22	Within Zone of Notification
KK020-017010-	657773	656375	Ogham stone	CHURCHCLARA	29	Within Zone of Notification
KK020-017006-	657726	656420	Ritual site - holy well	CHURCHCLARA	32	Not within ZoN
KK020-017001-	657776	656371	Church	CHURCHCLARA	34	Within Zone of Notification
KK020-017002-	657774	656365	Graveyard	CHURCHCLARA	34	Within Zone of Notification
KK020-017—	657778	656370	Redundant record	CHURCHCLARA	36	N/A
KK020-017005-	657778	656370	Graveslab	CHURCHCLARA	36	Within Zone of Notification

SMR NO.	ITM E	ITM N	CLASS	Townland	Distance to Proposed Grid Connection Route (m)	Comments
KK020-017003-	657786	656371	Ogham stone	CHURCHCLARA	43	Within Zone of Notification
KK015-080—	656936	659368	House - 18th/19th century	FEATHALLAGH	44	No associated ZoN
KK020-015—	657967	657049	Castle - motte	CLARABRICKEN	45	Within Zone of Notification
KK020-016—	657865	656888	House - fortified house	CLARABRICKEN	71	Not within ZoN



Figure 13-13: Overview of recorded monuments within 100m of the Proposed Grid Connection Route.



Figure 13-14: Proposed Grid Connection Route in relation to ZoN for KK020-005—, KK020-015- and KK020-016-.

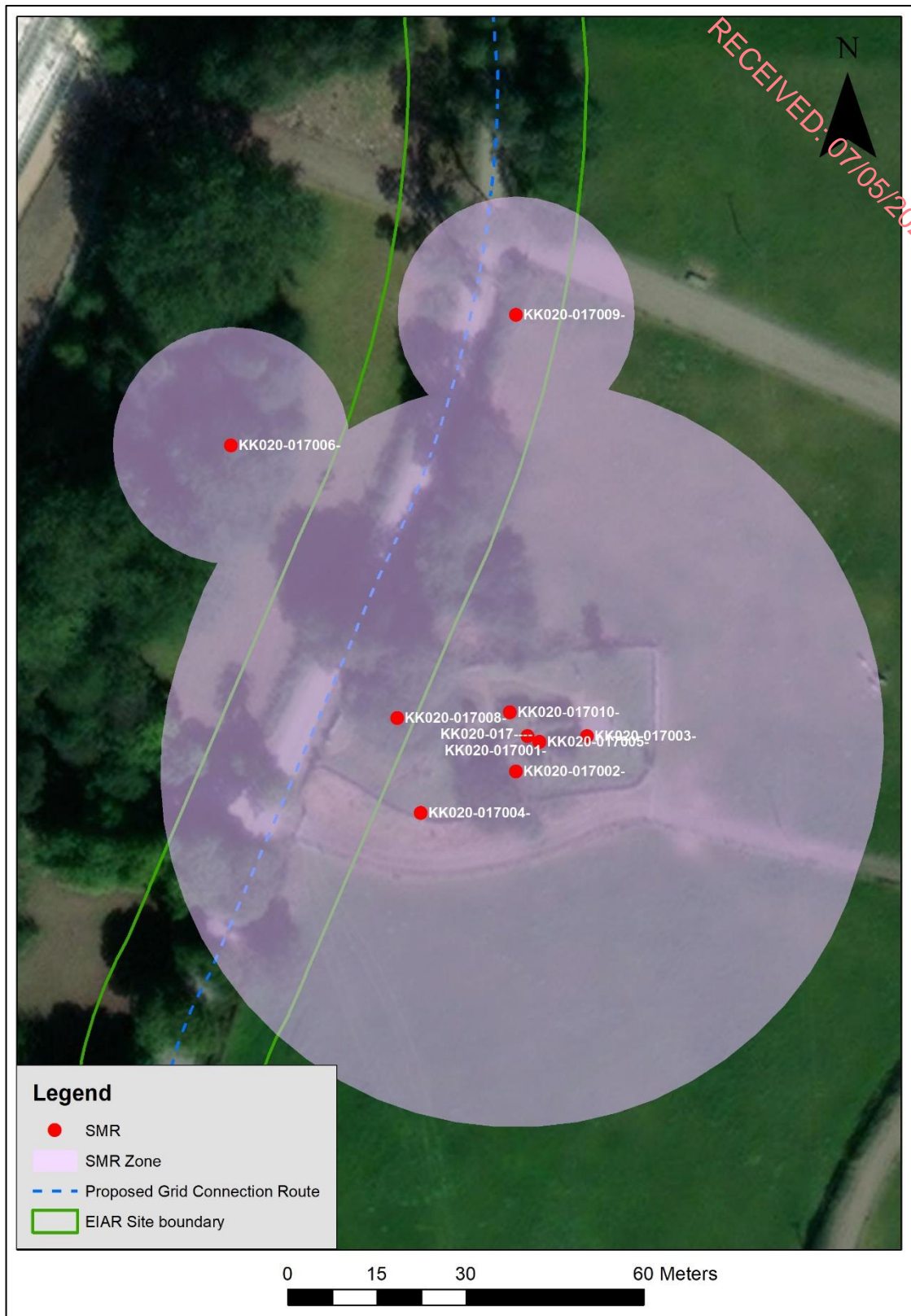


Figure 13-15: Proposed Grid Connection Route in relation to ZoN around monuments at Churchclara.

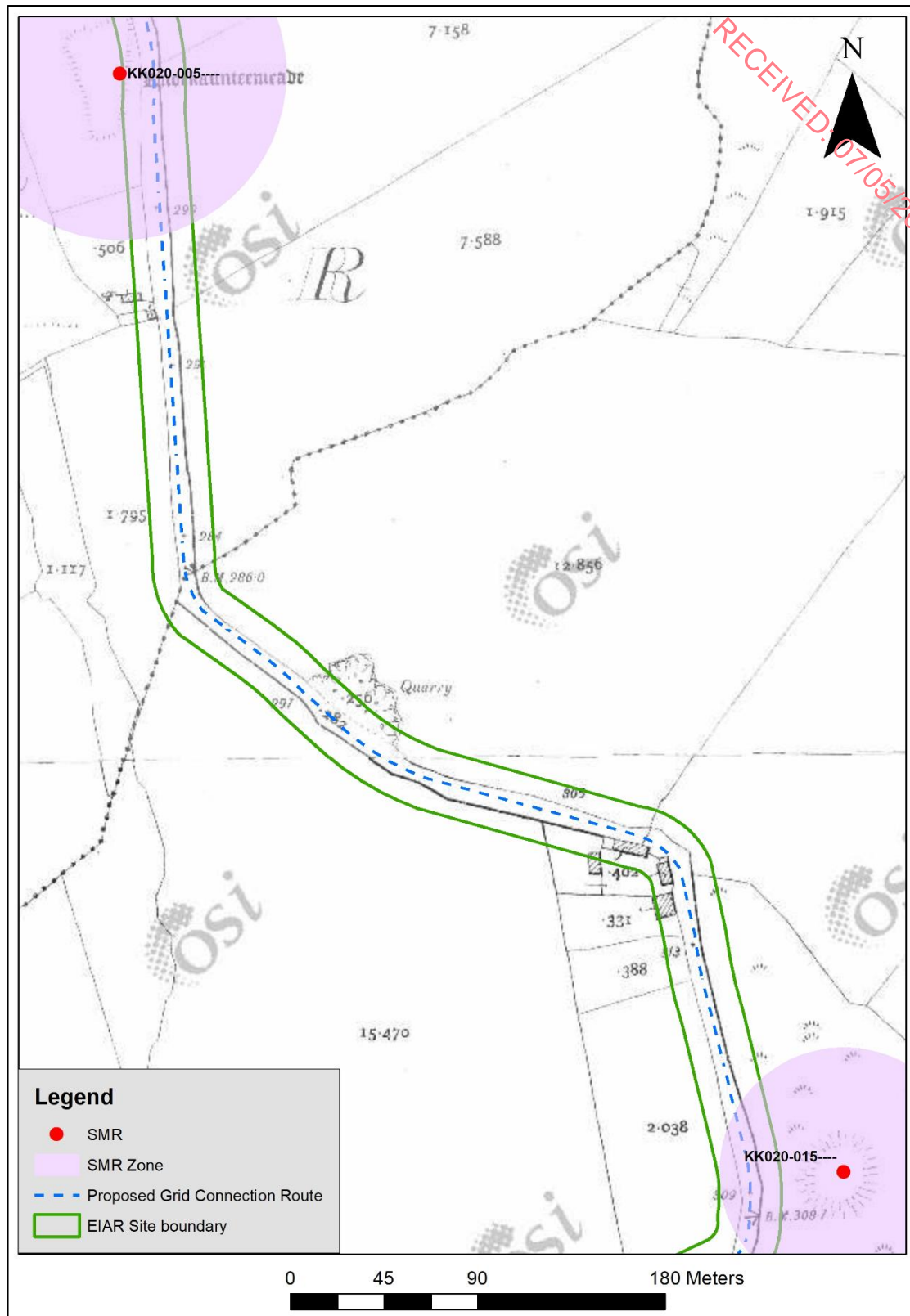


Figure 13-16: Enclosure KK020-005 and motte KK020-015- as depicted on second edition OS mapping.

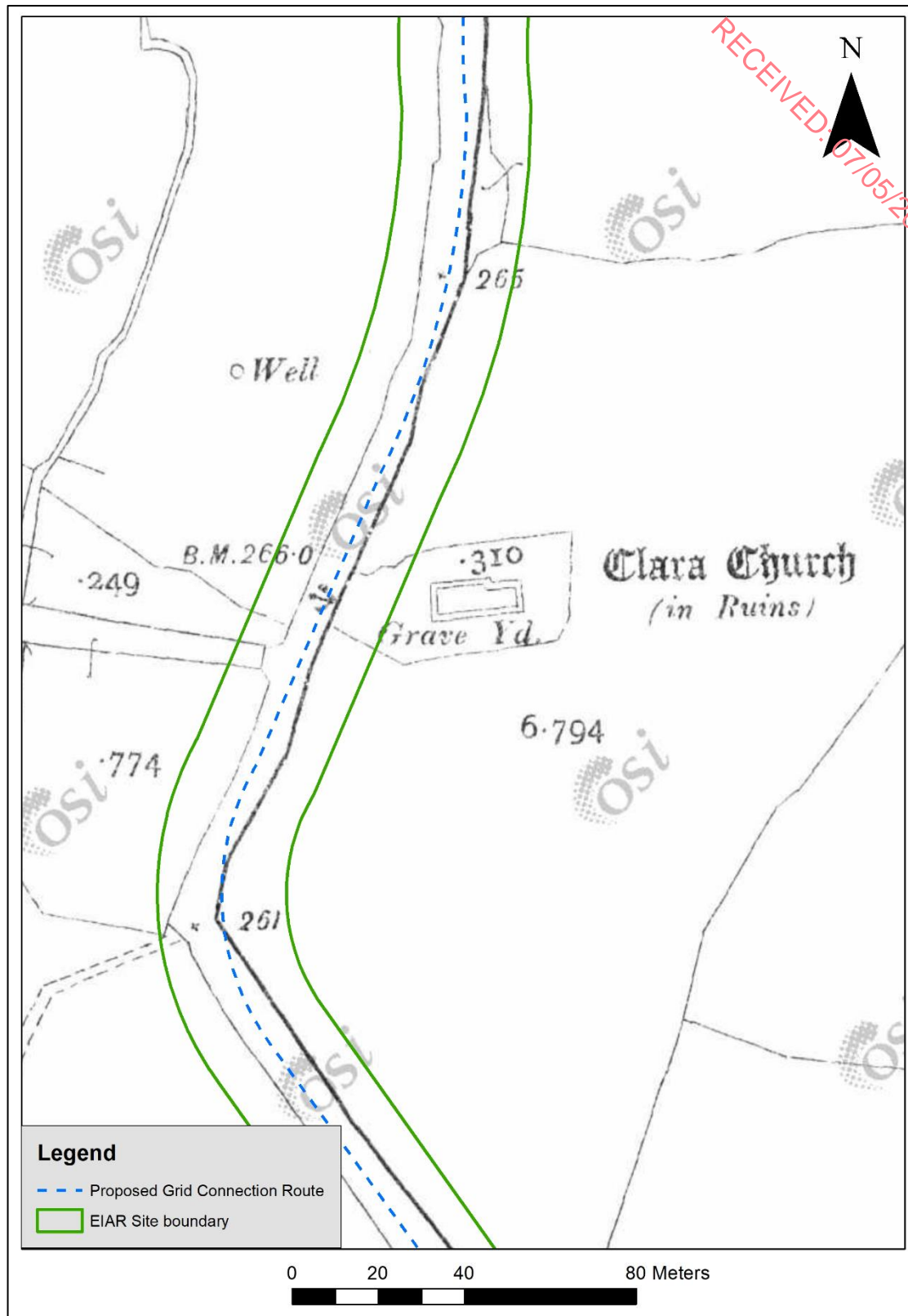


Figure 13-17: Church and graveyard at Churchclara as depicted on second edition OS map.

13.3.4.3 Protected Structures

One Protected Structure (RPS Ref. D83) is located within 100m of the Proposed Grid Connection Route (Table 13-10 and Figure 13-18). The structure comprises a now gutted two storey mill formerly linked to Millfall grain mill.

Table 13-10: RPS within 100m of the Proposed Grid Connection Route

RPS NO.	NIAH REF	Structure	ITM E	ITM N	Distance to Proposed Grid Connection Route	Comments
D83	N/A	Mill	661912	669005	31	On Private Property



Figure 13-18: RPS and NIAH structures within 100m of the Proposed Grid Connection Route.

13.3.4.4 **NIAH**

Three structures listed in the NIAH are located within 100m of the Proposed Grid Connection Route (Table 13-11, Figure 13-18). Only one structure is located on the Proposed Grid Connection Route and comprises a bridge, Kane's Bridge (Reg. 12401105.) Directional drilling will be utilised at all bridge crossings along the Proposed Grid Connection Route therefore potential direct effects to the bridge structures will not occur.

Table 13-11: NIAH structures located within 100m of the Proposed Grid Connection Route.

NIAH REF	Type	Date	Townland	ITM E	ITM N	Distance to Proposed Grid Connection Route
12401105	bridge	1790 – 1810	COOLCULLEN, REEVANAGH	659302	666088	3
12401109	mill (water)	1790 - 1810	COOLCULLEN	661932	668989	55
12401110	millers' house	1790 - 1810	COOLCULLEN	661932	669017	31

The following descriptions are taken from www.buildingsofireland.ie.

13.3.4.4.1 **NIAH Reg. 12401105 Kane's Bridge***Description:*

Single-arch rubble limestone road bridge over stream, c.1825. Random squared rubble limestone walls with squared limestone coping to parapets. Single round arch with tooled cut-limestone voussoirs, and rubble stone soffits having traces of render over. Sited spanning tributary of Dinin River with overgrown grass banks to stream.

Appraisal:

A small-scale bridge representing an element of the early nineteenth-century transport heritage of the locality. Displaying a traditional construction in locally-sourced stone with dressed limestone accents displaying good quality craftsmanship the bridge makes a pleasing visual impression in a rural setting.



Plate 13-6: Kane's Bridge (NIAH Reg. 12401105) on the Proposed Grid Connection Route.

13.3.4.4.2 **NIAH Reg. 12401110 Millfall House**

Description:

Detached four-bay two-storey mill owner's house with dormer attic, c.1800, with single-bay single-storey gabled projecting porch, and single-bay single-storey end bay to left. Extensively renovated. Now in private residential use. Pitched slate roofs (gabled to porch) with clay ridge tiles, rendered chimney stacks, rooflights, decorative bargeboards to porch, and replacement uPVC rainwater goods on overhanging eaves. Random rubble stone walls originally rendered with render removed having painted replacement roughcast to side (east) elevations. Square-headed window openings in bipartite arrangement (some in single arrangement) with cut-stone sills, rubble stone voussoirs, and replacement four-over-four timber sash windows retaining some six-over-six timber sash windows (some two-over-two timber sash windows throughout). Square-headed door opening approached by five limestone flagged steps with rubble stone voussoirs, and replacement glazed timber panelled door having sidelights. Interior with timber panelled reveals/shutters to window openings. Set back from road in own grounds.

(ii) Detached two-bay two-storey outbuilding with attic, c.1800, to west originally with elliptical-headed carriageway to right ground floor. Renovated, c.1900, with carriageway remodelled. Now disused. Pitched slate roof with clay ridge tiles, and no rainwater goods surviving on overhanging rendered eaves. Random rubble stone walls. Square-headed window openings with no sills, lintels, and remains of timber fittings. Elliptical-headed carriageway to right ground floor remodelled, c.1900, forming square-headed door opening with timber lintel, timber boarded door, and red brick voussoirs forming elliptical relieving arch over. Square-headed (loading) door opening to first floor side elevation with shared timber lintel, and timber boarded door.

Appraisal:

A well-composed middle-size house representing an important element of the industrial legacy of County Kilkenny having originally formed an integral component of a self-contained corn mill complex with an adjacent range (12401109/KK-11-09). Despite having undergone an extensive renovation programme most of the distinctive characteristics prevail including the bipartite arrangement to the openings enhancing the architectural design value of the composition: replacement fittings alluding to the historic models on site further maintain some of the integrity of the composition. Although in poor repair an attendant outbuilding contributes pleasantly to the group and setting values of the site.



Plate 13-7: Millfall House (NIAH Reg. 12401110) (photo courtesy of www.buildingsofireland.ie).

13.3.4.4.3 **NIAH Reg. 12401109 Mill (water)**

Description:

Detached four-bay two-storey corn mill with attic, c.1800. In use, 1902. Reroofed. Now in use as outbuilding. Pitched roof with replacement corrugated-iron, iron ridge, and remains of iron rainwater goods on squared rubble stone eaves. Random rubble stone walls. Square-headed window openings (slit-style to ground floor) with no sills, timber lintels, and no fittings. Square-headed door openings with cut-stone lintels, and timber boarded doors. Set back from road in shared grounds with mill race to site having random rubble stone retaining walls.

Appraisal:

Although long decommissioned a middle-size range displaying a traditional construction in unrefined local stone represents an important element of the industrial legacy of County Kilkenny having historically supported much of the local agricultural economy from the late eighteenth or early nineteenth century: associated artefacts including the mill race together with a mill stone further identify the importance of the site. Having been retained to accommodate an alternative function the building survives as an integral component of a self-contained industrial complex with the associated mill owner's house (12401110/KK-11-10).



Plate 13-8: Mill (NIAH Reg. 12401109) at Millfall House (photo courtesy of www.buildingsofireland.ie).

13.3.4.5 Cartographic Evidence and Local Cultural Heritage

The available historic OS maps were consulted for any items of cultural heritage merit that may be located along the Proposed Grid Connection Route other than those already included in the RPS or the NIAH. This was also assisted by field survey of the Proposed Grid Connection Route which identified features of cultural heritage merit on or immediately adjacent to same.

Six items of cultural heritage merit were noted along the Proposed Grid Connection Route and comprise four bridges, demesne walls associated with Fethallagh House and a roadside memorial. They are listed in Table 13-12 and shown on Figure 13-19. As horizontal directional drilling will be utilised at all bridge crossings no potential direct effects to these structures will occur. Also, direct effects to the demesne walls of Fethallagh House will not occur as the Proposed Grid Connection Route will be placed in the public road network. The roadside memorial is likely to be a modern feature.

Table 13-12: CH features along Proposed Grid Connection Route.

CH No.	Type	Name	ITM E	ITM N	Distance to Proposed Grid Connection Route
1	Demesne walls	Fethallagh House	656978	659364	9
2	Bridge	N/A	656830	660150	0
3	Bridge	N/A	656963	660389	0
4	Bridge	N/A	657094	660620	0
5	Bridge	Kane's Bridge	659304	666091	0
6	Roadside memorial	N/A	661136	668539	13
7	Bridge	N/A	661960	669090	0
8	Bridge	N/A	662261	669116	0

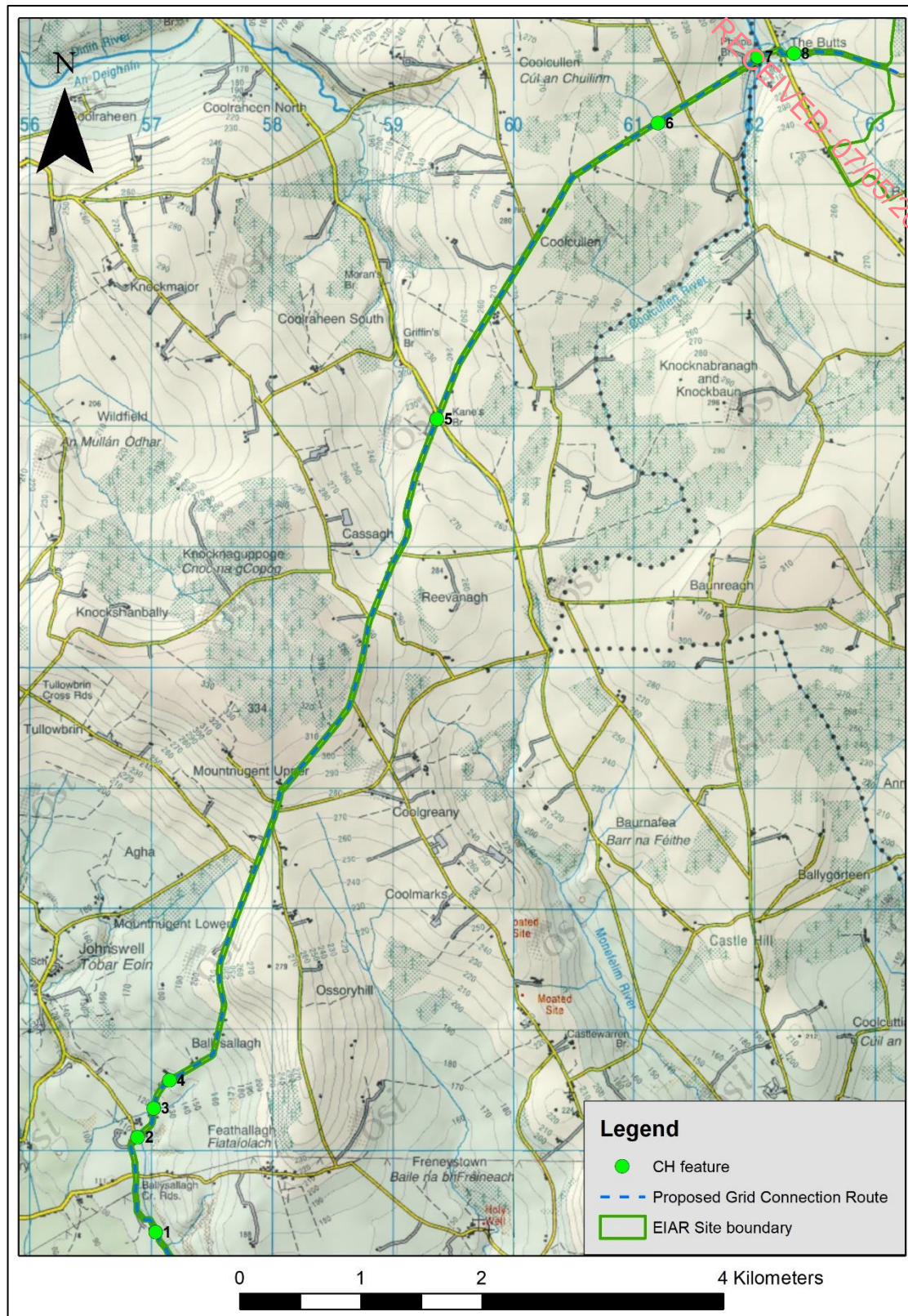


Figure 13-19: CH features along Proposed Grid Connection Route.

13.4 Likely Effects and Associated Mitigation Measures

13.4.1 Do Nothing Scenario

If the Proposed Project were not to proceed, no changes would be made to the current land-use practice of low intensity agriculture and commercial forestry. It is not anticipated that the Do-Nothing Scenario would have any negative effects on the existing environment in terms of Cultural Heritage. Land use would continue without the need for mitigation measures.

If the Proposed Project were not to proceed, the existing use of small-scale agriculture would continue. The opportunity to harness the wind energy resource of County Carlow would be lost, as would the opportunity to contribute to meeting Government and EU targets for the production and consumption of electricity from renewable resources and the reduction of greenhouse gas emissions. The opportunity to generate local employment and investment would also be lost.

13.4.2 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 impacts on visual setting of any cultural heritage assets in the wider landscape. Since these effects are only possible once development is operational, they are considered operational effects and are therefore discussed in Section 13.4.4 below. No indirect effects were identified which would occur at the construction stage.

13.4.3 Construction Phase Potential Effects (Direct)

Direct effects refer to a 'physical impact' on a monument or site. The construction phase of a development may consist of earthmoving activities such as topsoil removal and excavation works as part of the construction phase. This may have a number of potential negative effects on the known and potential archaeological heritage. These are outlined below with suggested appropriate mitigation measures.

13.4.3.1 UNESCO World Heritage Sites and those on Tentative List

No UNESCO WHS of those on the Tentative list are located within 20km of the Proposed turbines. No direct effects to such assets are therefore identified.

13.4.3.2 National Monuments

No National Monuments in State Care or those subject to a Preservation Order are located within the Proposed Wind Farm site, in the proposed accommodation works areas along the TDR, or along the Proposed Grid Connection Route. In this regard, no direct effects to this aspect of the archaeological resource are identified.

13.4.3.3 Recorded Monuments

No recorded monuments are located within the Proposed Wind Farm site therefore direct effects to the same as a result of the Proposed Project infrastructure therein are not identified. A total of sixty-eight (68) recorded monuments are located within 5km of the Proposed turbines. Since the majority of these monuments are located at a sufficient distance from the Proposed Wind Farm site, no direct effects to the monuments will occur. Operational effects are addressed in Section 13.4.4.3 below.

No recorded monuments are located within the proposed accommodation works areas on the TDR therefore direct effects to this aspect of the Cultural Heritage resource will not occur.

A total of fourteen (14) recorded monuments are located within 100m of the Proposed Grid Connection Route, all of which are in County Kilkenny. Ten of the fourteen monuments are located in the townland of Churchclara, with eight of the ten located in the immediate vicinity of the church and graveyard. The Proposed Grid Connection Route will be placed within the public road to the west of the church, graveyard and associated monuments and extends through the Zone of Notification (ZoN) for the group of eight monuments (KK020-017—, KK020-017001-, KK020-017002-, KK020-017003-, KK020-017004-, KK020-017005-, KK020-017008- and KK020-017010-) and for KK020-017009- bullaun stone which is located in the roadside field boundary. The Proposed Grid Connection Route also extends past enclosure KK020-005—, through its associated ZoN, and through the ZoN for motte KK020-015-.

Potential direct effects to the monuments as a result of the installation of the Proposed Grid Connection Route are not identified, however, in order to ensure accidental damage as a result of movement of machinery, etc does not occur some mitigation measures are recommended. Similarly, there are a number of instances where the Proposed Grid Connection Route intersects the ZoN for some recorded monuments (as outlined above) and therefore mitigation measures will be implemented during construction works in order to avoid any negative effects arising during construction.

Proposed Mitigation Measures

- The Proposed Grid Connection Route should be placed at the west side of the public road at Churchclara where it extends through the ZoN for recorded monuments KK020-017—, KK020-017001-, KK020-017002-, KK020-017003-, KK020-017004-, KK020-017005-, KK020-017008-, KK020-017010- and KK020-017009-.
- Protective fencing should be erected on the roadside boundary where bullaun stone KK020-017009- is located. The fencing will be put in place in advance of construction works and be remain in place for the duration of the works in this area.
- Archaeological monitoring of all ground works associated with the Proposed Grid Connection Route where it extends through the ZoN for the following recorded monuments - KK020-017—, KK020-017001-, KK020-017002-, KK020-017003-, KK020-017004-, KK020-017005-, KK020-017008-, KK020-017009-, KK020-017010-, KK020-015— and KK020-005—.
- A report on the monitoring will be compiled on completion of the work and submitted to the NMS and the Planning Authority.
- Further mitigation such as preservation in situ (avoidance), preservation by record (excavation) may be required depending on the results of the monitoring.

Residual Effect

Any archaeological sites/features, if detected, during monitoring will be preserved by record (archaeologically excavated) or preserved in-situ (avoidance) and therefore a full record made of same. In this regard, the residual effect after the implementation of the mitigation measures is likely to be Not Significant.

Significance of Effects

The overall significance of effects will be Not Significant.

13.4.3.4 Sub-surface Archaeological Potential

Due to the extent of groundworks associated with the construction phase of the Proposed Project it is possible that previously unrecorded sub-surface archaeological finds, features or deposits are located within the Proposed Project site. The potential therefore exists that sub-surface archaeological sites or features, if present within the Proposed Project site, may be directly affected by construction phase activities.

The potential effects on sub-surface archaeological finds and features, should they exist, as a result of ground works associated with the construction stage of the Proposed Project are likely to be direct, negative and permanent in the absence of appropriate mitigation measures.

Proposed Mitigation Measures

- Pre-construction archaeological testing of the proposed turbine bases, hardstands, proposed roads, compounds, onsite substation, and any other proposed infrastructure within the Proposed Wind Farm site will be carried out under licence from the National Monuments Service. This is in order to identify any archaeological features at the earliest stage possible in the project to allow time to deal with any requirements such as preservation in situ (redesign / avoidance) or preservation by record (archaeological excavation). Testing within forested areas may only be possible once clear-felling has taken place.
- A report on the testing will be compiled on completion of the work and submitted to the NMS and the relevant Planning Authority.
- Further mitigation such as preservation in situ (avoidance), preservation by record (excavation), buffer zones may be required depending on the results of the testing.
- Archaeological monitoring of all groundworks during the construction stage of the Proposed Project by a licensed archaeologist.
- A report on the monitoring will be compiled on completion of the work and submitted to the NMS and the relevant Planning Authority.
- Further mitigation such as preservation in situ (avoidance), preservation by record (excavation), buffer zones may be required depending on the results of the monitoring.

Residual Effect

Any archaeological sites/features, if detected, during testing and/or monitoring will be preserved by record (archaeologically excavated) or preserved in-situ (avoidance) and therefore a full record made of same. In this regard, the residual effect after the implementation of the mitigation measures is likely to be Not Significant.

Significance of Effects

The overall significance of effects will be Not Significant.

13.4.3.5 Protected Structures

No Protected Structures subject to statutory protection are located within the Proposed Wind Farm site therefore direct effects to the same as a result of the Proposed Project infrastructure therein are not identified. Nine protected structures are located within 5km of the Proposed turbines, seven of which are located in County Carlow and two in County Kilkenny. Since these structures are located at a sufficient distance from the Proposed Wind Farm site, no direct effects to the structures will occur.

One Protected Structure (RPS D84), Black Bridge, is located on the proposed TDR where permanent carriageway strengthening works are proposed. The upgrade works will involve the placing of a 175mm thick concrete slab on the road carriageway/bridge deck, over the existing road surface. The proposals also involve raising the parapet walls from c. 1200mm to 1250mm. Alterations to the structure including the addition of concrete rubbing strips immediately adjacent to the base of each parapet wall have already taken place. The proposed carriageway strengthening works at Black Bridge, including the raising of the parapet walls, will result in a permanent, direct, Slight effect to the structure.

One Protected Structure (RPS Ref. D83) is located within 100m of the Proposed Grid Connection Route. The structure comprises a now gutted two storey mill formerly linked to Millfall grain mill. As it is not located directly on the Proposed Grid Connection Route (31m away at its closest point) no direct effects to the structure will occur.

Proposed Mitigation Measures

- The raising of the parapet walls will be carried out in consultation with the Planning Authority, specifically with regard to the use of appropriate materials and finishes which should be in keeping with the character and appearance of the Protected Structure D84, Black Bridge.
- A comprehensive parapet wall construction works plan (to be prepared by a suitably qualified historic building consultant or conservation architect) will be undertaken and will detail construction methodologies to be followed, materials to be utilised and finishes to be applied to ensure consistency and conformity with the existing parapet walls.

Residual Effect

The potential residual effect after the implementation of the mitigation measures is likely to be Not Significant.

Significance of Effects

The overall significance of effects will be Not Significant.

13.4.3.6 NIAH structures

No structures listed in the NIAH are located within the Proposed Wind Farm site therefore direct effects to this resource are not identified. Sixteen structures listed in the NIAH are located within 5km of the Proposed turbines. Since these structures are located at a sufficient distance from the Proposed Wind Farm site, no direct effects to the structures will occur.

No NIAH structures are located within the proposed accommodation works areas on the TDR therefore direct effects are not identified.

Three structures listed in the NIAH are located within 100m of the Proposed Grid Connection Route. Only one structure is located on the Proposed Grid Connection Route and comprises a bridge, Kane's Bridge (Reg. 12401105). Horizontal directional drilling will be utilised at all bridge crossings along the Proposed Grid Connection Route therefore potential direct effects to the bridge structure will not occur.

13.4.3.7 Features of Local Cultural Heritage Merit

No extant features of local cultural heritage merit are located within the Proposed Wind Farm site therefore direct effects to same are not identified.

Six items of cultural heritage merit (CH1-6) were noted along the Proposed Grid Connection Route and comprise four bridges, demesne walls associated with Fethallagh House and a roadside memorial. Horizontal directional drilling will be utilised at all bridge crossings along the Proposed Grid Connection Route therefore potential direct effects to the bridge structures will not occur. Direct effects to the demesne walls and the roadside memorial are also not identified as the Proposed Grid Connection Route is primarily located within the public road network.

13.4.4 Operational Phase Potential Effects (Indirect)

Indirect effects are where a feature or site of archaeological, architectural heritage merit or their setting is located in close proximity to a proposed development. Indirect effects here are mainly concerned with effects on setting of cultural heritage sites.

Effects on settings of sites may arise when a development is proposed immediately adjacent to a recorded monument or cluster of monuments. While the Proposed Project may not physically affect a site, it may alter the setting of a monument or group of monuments. There is no standardised industry-wide approach for assessing the degree of effects on the setting of a monument. For purposes of assessing visual effects on setting, the uniqueness of the monuments, the potential interrelationships of monuments, the inter-visibility of monuments, visual dominance and whether a setting is altered or unaltered can be used to assess effects. The nature and dominance of the Proposed Project is also taken into consideration and the topography within which the Proposed Project is located. Operational effects are considered largely as a result of the Proposed turbines rather than for other proposed onsite infrastructure, for example the proposed temporary construction compounds or the Proposed Grid Connection Route, which would not be dominant in the wider landscape setting in general. The assessment of effects on visual setting was undertaken using both the ZTV map in the Landscape and Visual Impact Assessment (LVIA), as presented in Chapter 14 of this EIAR, along with a photomontage / wireline technology from specific cultural heritage assets or other Viewpoints. The ZTV is a bare-ground model which does not take screening vegetation into account.

13.4.4.1 UNESCO World Heritage Sites and those on Tentative List

No UNESCO WHS of those on the Tentative list are located within 20km of the Proposed turbines. No potential effects to the setting of such sites as a result of the Proposed Project are therefore identified.

13.4.4.2 National Monuments

Two National Monuments in State Care and one monument subject to a Preservation Order are located within 10km of the Proposed turbines. The closest of these comprises the castle at Leighlinbridge (Nat. Mon. No. 438) which is located c. 5.8km from the nearest Proposed turbine, T05.

13.4.4.2.1 National Monument 438 Leighlinbridge Castle

The ZTV indicates that the castle at Leighlinbridge is located in an area where 5-7 turbines will theoretically be visible. A photowire (VP15) of the Proposed turbines taken from the east end of the bridge in Leighlinbridge and a short distance from Leighlinbridge Castle (Nat. Mon. No. 438) shows that existing buildings will screen the Proposed turbines from view. In this regard no potential visual effect to the wider setting of the tower house as a result of the Proposed Wind Farm is identified.

13.4.4.2.2 National Monument 352 Cross

This high cross is located just over 9km to the east of T5. The ZTV indicates that the monument is located in an area in which 5-7 turbines will theoretically be visible. Given the distance of the cross from the Proposed turbines a change to its immediate setting will not occur, however, a change to the wider setting in which the monument is located is acknowledged. In this regard the potential effect to the wider setting of this monument is regarded as Not Significant.

Proposed Mitigation Measures

The distance of the National Monuments and those subject to a preservation order from the Proposed turbines in addition to the low-visibility nature of some of the monuments will mitigate potential visual effects. It is also noted that natural screening, boundaries, buildings and vegetation are not taken into account in the ZTV model and therefore potential visual effects may in reality be less severe.

Residual Effect

Taking into account the above, the potential residual effects on National Monuments will be Not Significant.

Significance of Effects

The overall significance of effects will be Not Significant.

13.4.4.2.3 PO No. 3/1995 Clogrenan Castle

Clogrenan Castle is located c. 6.9km north-east of the nearest Proposed turbine, T02. The ZTV indicates that the tower house is located in an area where none of the Proposed turbines will theoretically be visible. In this regard potential visual effects to the monument as a result of the Proposed turbines will not occur.

Table 13-13: Table of potential effects on National Monuments and those subject to a Preservation Order within 10km of the nearest Proposed turbine.

Nat. Mon. No./PO No.	SMR NO.	CLASS	TOWNLAND	TURBINE ID	DISTANCE TO NEAREST TURBINE (m)	Potential Effect	Significance of Effect
438	CW012-070003-	Castle	Leighlinbridge	T05	5839	Indirect visual	N/A
352	CW012-048003-	Cross	Nurney	T05	9327	Indirect visual	Not Significant
3/1995	CW007-033—	Clogrenan Castle	CLOGRENAN	T02	6981	Indirect visual	N/A

13.4.4.3 Recorded Monuments

No recorded monuments are located within Proposed Wind Farm site. A total of sixty-eight (68) recorded monuments are located within 5km of the Proposed turbine. The majority of the monuments (58) are located in county Carlow with ten located in county Kilkenny. The ZTV shows that 58 of the 68 monuments are located in areas where 5-7 turbines will theoretically be visible. Seven monuments are located in areas where 3-4 turbines will theoretically be visible, and three monuments are located in areas where none of the Proposed turbines will theoretically be visible.

The monuments within the 5km study area were overlaid on the ZTV to ascertain what number of turbines may be visible from their locations. The ZTV shows that 58 of the 68 monuments are located in areas where 5-7 turbines will theoretically be visible. Seven monuments are located in areas where 3-

4 turbines will theoretically be visible, and three monuments are located in areas where none of the Proposed turbines will theoretically be visible.

Both the distance to the nearest Proposed turbine and the number of turbines visible from each asset are used to arrive a level of potential effect on setting. Potential effects on setting as detailed in Table 13-14 below are based on a precautionary scenario in that natural screening, boundaries, buildings and vegetation are not taken into account in the ZTV model. In reality the effect will be reduced since the ZTV model does not take natural screening and buildings into consideration which will alleviate if not remove the effect on setting altogether. Furthermore, many of these monuments may not be readily discernible in the landscape which further ameliorates effects on setting. The physical status of those monuments within 1-3km of the Proposed turbines (Map ID 1-8) was checked on the HEV and where no surface trace of the monuments survives no potential visual effect is concluded. The same is concluded for redundant records. The theoretical significance of effects for such monuments (both redundant records and those with no surface trace) is graded as N/A in Table 13-14 below while an Imperceptible significance of effects is concluded for monuments located where no turbines will theoretically be visible.

Table 13-14: Table of potential effects on setting of recorded monuments within 5km of the Proposed turbine.

MAP ID	SM R	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically visible	Theoretical Significance of Effect
1	CW 011-006-	667605	Enclosure	T07	892	5-7	N/A
2	CW 011-005-	668281	Redundant record	T06	1383	5-7	N/A
3	CW 011-002-	670515	Barrow - ditch barrow	T01	1399	3-4	Slight
4	CW 011-001-	670453	Moated site	T01	1599	3-4	Slight
5	CW 011-003-	669851	Earthwork	T01	1733	5-7	N/A
6	CW 011-015-	665970	Ringfort - rath	T07	2208	5-7	Slight
7	CW 011-009-	667071	Redundant record	T05	2329	3-4	N/A
8	CW 011-004-	669744	Earthwork	T03	2941	5-7	Slight

MAP ID	SM R	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically visible	Theoretical Significance of Effect
9	CW 011-012-	666491	Earthwork	T05	3230	5-7	Slight
10	CW 011-0160 04-	665447	Ritual site - holy well	T07	3337	5-7	Slight
11	CW 011-0160 03-	665436	Cross - High cross	T07	3346	5-7	Slight
12	CW 011-022-	668459	Enclosure	T05	3383	5-7	Slight
13	CW 011-0160 06-	665443	Font (present location)	T07	3469	5-7	Slight
14	CW 011-0160 07-	665443	Font	T07	3469	5-7	Slight
15	CW 011-0160 08-	665443	Memorial stone	T07	3469	5-7	Slight
16	CW 011-0160 05-	665443	Cathedral	T07	3469	5-7	Slight
17	CW 011-0200 01-	667699	Enclosure	T05	3479	5-7	Slight
18	CW 011-0200 02-	667658	Enclosure	T05	3482	5-7	Slight
19	CW 011-016-	665441	Historic town	T07	3484	5-7	Slight
20	CW 011-0160 02-	665458	Cross	T07	3508	5-7	Slight
21	CW 011-	668006	Earthwork	T05	3536	5-7	Slight

MAP ID	SM R	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically visible	Theoretical Significance of Effect
	007- -						
22	CW 011- 014- -	666267	Enclosure	T05	3605	5-7	Slight
23	CW 011- 017- -	668236	Enclosure	T05	3638	5-7	Slight
24	CW 011- 013- -	666621	Ringfort - rath	T05	3678	5-7	Slight
25	CW 011- 019- -	668101	Enclosure	T05	3724	5-7	Slight
26	KK0 11- 011- -	671403	Fulacht fia	T01	3761	0	Imperceptible
27	KK0 11- 010- -	671505	Fulacht fia	T01	3796	3-4	Not Significant
28	CW 011- 018- -	668191	Enclosure	T05	3821	5-7	Slight
29	CW 011- 010- -	667081	Enclosure	T05	3869	5-7	Slight
30	CW 012- 020- -	669161	Ringfort - rath	T03	3942	5-7	Slight
31	CW 011- 011- -	667211	Fulacht fia	T05	4041	5-7	Not Significant
32	CW 011- 008- -	667795	Metalworkin g site	T05	4083	5-7	Not Significant
33	KK0 11- 009- -	670552	Fulacht fia	T01	4110	3-4	Not Significant

MAP ID	SM R	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically visible	Theoretical Significance of Effect
34	KK011-008001-	671124	Church	T01	4187	3-4	Not Significant
35	KK011-008002-	671124	Graveyard	T01	4187	3-4	Not Significant
36	CW015-002--	664603	Quarry	T07	4190	5-7	Not Significant
37	CW011-021--	667335	Structure	T05	4197	5-7	Not Significant
38	KK011-007--	671020	Fulacht fia	T01	4217	5-7	Not Significant
39	CW012-171--	667600	Cremation pit	T05	4243	5-7	Not Significant
40	CW012-006--	670610	Enclosure	T03	4270	5-7	Not Significant
41	KK011-013--	668667	Children's burial ground	T06	4306	0	Imperceptible
42	CW012-083--	667961	Enclosure	T05	4319	5-7	Not Significant
43	KK011-006001-	671023	Castle - unclassified	T01	4359	5-7	Not Significant
44	KK011-006002-	671023	Bawn	T01	4364	5-7	Not Significant
45	CW012-108--	667408	Enclosure	T05	4385	5-7	Not Significant
46	CW006-	672329	Ringfort - rath	T02	4434	0	Imperceptible

MAP ID	SM R	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically visible	Theoretical Significance of Effect
	001- -						
47	CW 012-139- -	669292	Ring-ditch	T03	4530	5-7	Not Significant
48	CW 012-140- -	669318	Ring-ditch	T03	4539	5-7	Not Significant
49	CW 012-0220 01-	669045	Church	T03	4581	5-7	Not Significant
50	CW 012-0220 02-	669041	Font	T03	4584	5-7	Not Significant
51	CW 012-0220 03-	669041	Graveyard	T03	4584	5-7	Not Significant
52	CW 015-001- -	663592	Moated site	T07	4593	5-7	Not Significant
53	CW 012-098- -	669177	Ring-ditch	T03	4605	5-7	Not Significant
54	CW 012-138- -	669309	Ring-ditch	T03	4626	5-7	Not Significant
55	CW 012-099- -	669188	Ring-ditch	T03	4637	5-7	Not Significant
56	CW 012-061- -	667131	Earthwork	T05	4651	5-7	Not Significant
57	CW 012-169- -	668195	Burnt mound	T05	4654	5-7	Not Significant
58	CW 012-021- -	670060	Metalworking site	T03	4655	5-7	Not Significant

MAP ID	SM R	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically visible	Theoretical Significance of Effect
59	CW 012-067- -	669071	Ritual site - holy well	T03	4753	5-7	Not Significant
60	CW 012-100- -	670484	Enclosure	T03	4769	5-7	Not Significant
61	CW 012-040- -	667601	Redundant record	T05	4839	5-7	N/A
62	CW 012-007- -	670790	Enclosure	T03	4839	5-7	Not Significant
63	CW 012-039- -	667876	Earthwork	T05	4880	5-7	Not Significant
64	KK0 06-009- -	671763	Fulacht fia	T01	4898	5-7	Not Significant
65	CW 015-028- -	665021	Fulacht fia	T05	4925	5-7	Not Significant
66	CW 012-168- -	668398	Kiln - corn-drying	T03	4927	5-7	Not Significant
67	CW 012-008- -	670670	Excavation - miscellaneous	T03	4935	5-7	Not Significant
68	CW 012-0820- 02-	665913	Ring-ditch	T05	4996	5-7	Not Significant

Mitigation Measures

The distance of recorded monuments from the Proposed turbines, in addition to the low-visibility /sub-surface nature of some of the monuments, will mitigate potential visual effects. It is also noted that natural screening, boundaries, buildings and vegetation not taken into consideration in the ZTV will potentially screen some visual effects.

Residual Effect

Taking into account the above, the potential residual effects on Recorded Monuments will be Imperceptible-Slight.

Significance of Effects

The overall significance of effects will be Imperceptible-Slight. In reality the effect will be less severe since the ZTV model does not take natural screening and buildings into consideration which will alleviate if not remove the effect on setting altogether. Furthermore, some monuments may not be readily visible in the landscape which further ameliorates potential effects on setting. Additionally, many of these monuments are located on private land which are not formally accessible to the public.

13.4.4.4 Protected Structures

No Protected Structures subject to statutory protection are located within the Proposed Wind Farm site. Nine protected structures are located within 5km of the Proposed turbines, seven of which are located in County Carlow and two in County Kilkenny. Many of the structures are also included in the NIAH. The ZTV shows that eight structures are located in areas where 5-7 turbines will theoretically be visible with one structure (Ref. CW268) located in an area where none of the Proposed turbines will theoretically be visible.

Both the distance to the nearest turbine and the number of turbines visible from each asset are used to arrive a level of potential effect on setting. Potential effects on setting, as detailed in Table 13-15 below, are based on a theoretical model and precautionary conditions, i.e., natural screening, boundaries, buildings and vegetation are not taken into account in the ZTV model, therefore, the potential effect is likely to be less than that identified.

Table 13-15: Potential visual effects on RPS structures within 5km of the Proposed turbines.

RPS ID	NIAH REG.	STRUCTURE	LOCATION	TURBINE	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of effect
D83	N/A	Mill	Coolcullen	T06	1587	5-7	Moderate
D84	1240111	Bridge	Coan East	T01	1805	5-7	Moderate
CW268	10300611	Church Of Ireland	Bilboa	T02	2807	0	Imperceptible
CW071	10301101	St. Lazerian's Cathedral	Old Leighlin	T07	3476	5-7	Slight
CW376	10301103	Old Leighlin House	Old Leighlin	T07	4039	5-7	Not Significant
CW266		Craan House	Ballinabrannagh	T05	4696	5-7	Not Significant
CW002	10301202	Catholic Church	Ballinabrannagh	T03	4736	5-7	Not Significant
CW102		Old School Building	Ballinabrannagh	T03	4774	5-7	Not Significant
CW101	10301201	Ballinabrannagh House	Ballinabrannagh	T03	4948	5-7	Not Significant

Mitigation Measures

It is noted that natural screening, boundaries, buildings and vegetation will potentially screen visual effects.

Residual Effect

Taking into account the above, the potential residual effects on Protected Structure will be Imperceptible - Moderate.

Significance of Effects

The overall significance of effects will be Imperceptible - Moderate. In reality the effect will be less severe as the ZTV model does not take natural screening and buildings into consideration which will alleviate visual effects if not remove the effect on setting altogether.

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13.4.4.5 Protected Structures on the Proposed Transport Delivery Route

Black Bridge is included in the RPS and NIAH for County Kilkenny (RPS Ref. D84, NIAH Reg. 12401111). It comprises a 19th century stone road bridge. The carriageway strengthening works will involve the placing of a 175mm thick concrete slab on the road carriageway/bridge deck, over the existing road surface. The proposals also involve raising the parapet walls from c. 1200mm to 1250mm. Alterations to the structure including the addition of concrete rubbing strips immediately adjacent to the base of each parapet wall have already taken place.

The proposed upgrade works to Black Bridge included the raising of the parapet walls which will alter the appearance of the bridge and consequently is likely to have a visual effect on the structure. Works to the bridge in the form of concrete rubbing strips at the base of the parapet walls has already taken place. The potential visual effect to the structure as a result of the raising of the parapet walls is regarded as Slight.

Proposed Mitigation Measures

- The raising of the parapet walls will be carried out in consultation with the relevant Planning Authority, specifically with regard to the use of appropriate materials and finishes which should be in keeping with the character and appearance of the Protected Structure D84, Black Bridge.
- A comprehensive parapet wall construction works plan (to be prepared by a suitably qualified historic building consultant or conservation architect) will be undertaken and will detail construction methodologies to be followed, materials to be utilised and finishes to be applied to ensure consistency and conformity with the existing parapet walls.

Residual Effect

The potential residual effect after the implementation of the mitigation measures is likely to be Not Significant.

Significance of Effects

The overall significance of effects will be Not Significant.

13.4.4.6 NIAH Structures and Historic Gardens

No NIAH structures or historic gardens are located within the Proposed Wind Farm site. Sixteen structures listed in the NIAH are located within 5km of the Proposed turbines. The nearest structures comprise a mill (Reg. 12401109) and an adjacent miller's house (Reg. 12401110) which are situated c.

1.5km from the nearest Proposed turbine, T06. One historic garden is located within 5km of the Proposed turbines. It is associated with Glebe House (Reg. 12401107) and is situated c. 4km west of the nearest Proposed turbine, T01.

The NIAH structures and garden locations within the 5km study area were overlaid on the ZTV to ascertain what number of turbines may be visible from their locations. The ZTV demonstrates theoretical visibility 5-7 turbines from 10 of the NIAH structures, theoretical visibility of 3-4 turbines from one structure, and theoretical visibility of 1-2 turbines from one structure. Four structures are located in area where none of the Proposed turbines will theoretically be visible. Both the distance to the nearest turbine and the number of turbines visible from each NIAH structure are used to arrive at a level of potential effect on setting (Table 13-16 and Table 13-17). Potential effects on setting as detailed in the tables below are based on theoretical precautionary conditions in that natural screening, boundaries, buildings and vegetation are not taken into account in the ZTV model and in reality, the potential effect is likely to be less than that identified.

Table 13-16: Potential visual effects on NIAH structures within 5km of the Proposed turbines.

NIAH Reg.	Date	Structure	Townland	Turbine No.	Distance To Turbine (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effect
12401109	1790 - 1810	Millfall House	COOLCULLEN	T06	1565	5-7	Moderate
12401110	1790 - 1810	Millfall House	COOLCULLEN	T06	1572	5-7	Moderate
12401111	1865 - 1885	Black Bridge	COAN EAST	T01	1802	5-7	Moderate
12400611	1790 - 1810	Three Counties Bridge	CROGHTENCLOGH	T01	2203	0	Imperceptible
10300601	1845 - 1850	Holy Trinity Church (Tullowreen)	CRAANLUSKY	T02	2811	0	Imperceptible
10301101	1150 - 1900	Saint Lasarian's Cathedral	OLDLEIGHLIN	T07	3471	5-7	Slight
12401114	1790 - 1810	House	COOLCULLEN	T06	3750	5-7	Slight
12401108	1800 - 1820	Coolcullen Church (Mothell)	COOLCULLEN	T06	3764	5-7	Slight
10301103	1830 - 1850	Oldleighlin House	MOANDUFF	T07	4038	5-7	Not Significant
12401107	1805 - 1810	Glebe House	COOLCULLEN	T01	4070	1-2	Not Significant

NIAH Reg.	Date	Structure	Townland	Turbine No.	Distance To Turbine (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effect
12401113	1880 - 1890	Burn's Bridge	COAN EAST, COAN WEST	T01	4166	3-4	Not Significant
12401112	1845 - 1850	Saint Brigid's Catholic Church	COAN EAST	T01	4302	5-7	Not Significant
10301202	1820 - 1830	Saint Fintan's Catholic Church	BALLINABRANAGH	T03	4734	5-7	Not Significant
12401105	1790 - 1810	Kane's Bridge	COOLCULLEN, REE VANAGH	T07	4787	0	Imperceptible
12401104	1815 - 1835	Griffin's Bridge	COOLCULLEN, COOLRAHEEN SOUTH	T06	4876	0	Imperceptible
10301201	1905 - 1915	Ballinabranagh House	BALLINABRANAGH	T03	4947	5-7	Not Significant

Table 13-17: Potential visual effects on historic gardens within 5km of the Proposed turbines.

Site Name	Turbine No.	Distance To Turbine (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effects
Glebe House, Mothell	T01	4031	3-4	Not Significant

Mitigation Measures

No mitigation measures are provided. It is noted that natural screening, boundaries, buildings and vegetation will potentially screen visual effects.

Residual Effect

Since no mitigation measures are being proposed the residual effect will range from Imperceptible - Moderate.

Significance of Effects

The overall significance of effects will range from Imperceptible - Moderate. In reality the effect will be less severe since the ZTV model does not take natural screening and buildings into consideration which will alleviate if not remove the effect on setting altogether.

13.4.4.7 Features of Local Cultural Heritage Merit

No extant features of cultural heritage merit are located within the Proposed Wind Farm site. No potential visual effects to this aspect of the Cultural Heritage resource are therefore identified.

13.5

Cumulative Effects

Cumulative effects are defined as ‘The addition of many small impacts to create one larger, more significant, impact’ (EPA 2022). Cumulative effects encompass the combined effects of multiple developments or activities on a range of receptors. In this case, the receptors are the archaeological monuments and architectural/cultural heritage sites in the vicinity of the Proposed Project. The potential cumulative effects between and the Proposed Project the other projects described in Chapter 2 of the EIAR, hereafter referred to as ‘the other projects’, have been considered in terms of effects on Cultural Heritage.

The potential cumulative impact of the Proposed Project and other relevant developments has been carried out with the purpose of identifying what influence the Proposed Project will have on the surrounding environment when considered cumulatively and in combination with relevant existing permitted or proposed projects and plans in the area, in the vicinity of the Proposed Project site, as set out in Section 2.9 in Chapter 2 of this EIAR. The projects considered in relation to the potential for in combination effects arising from construction, operational and decommissioning phases of the Proposed Project and for which all relevant data was reviewed include those listed below.

13.5.1

All extant planning applications within 20km

A list of all extant planning applications within 20km of the Proposed Project was considered in terms of cumulative effects. The majority of these applications comprise agricultural and residential developments such as single dwelling houses, and agricultural buildings. Other more large-scale developments within 20km of the Proposed Project include solar farms and larger scale residential developments. Such developments if located in proximity to archaeological monuments or other cultural heritage assets may have the potential to have a direct or indirect effect on such features. It is considered, however, that the relevant Planning Authority would have regard to the protection of any known or unknown cultural heritage sites through the requirement for assessments or implementation of appropriate mitigation measures through the planning process or the discharge of conditions attached to a grant of planning permission, where relevant.

Many of the extant applications are relatively small and localised in nature.

13.5.2

Other Wind Farms

A number of other existing, permitted or proposed wind farms are located within 20km of the Proposed Wind Farm. These wind farms are located as separate clusters to the north (Gortahile – existing), north-east (Bilboa – permitted), south-west (White Hill – permitted and Freneystown – proposed) and north-west (Pinewood – permitted and Coolglass – proposed) of the Proposed Wind Farm site. Individual turbines are also located to the south-east (Kilcarrig – existing, Jerry Bolger – permitted, Joe Hughes – proposed, Kildreenagh - proposed and Ballon meats – existing). The other existing, permitted and proposed wind farms were considered cumulatively with the Proposed Wind Farm and in particular with regard to potential cumulative visual effects.

Table 13-18: Wind farms within 20km of the Proposed Wind Farm.

Pl. Ref.	Wind Farm	Status	No. of Turbines
20180 and 11/154, PL 01.240245, 2118	Bilboa	Permitted	5
PC01.312229	Whitehills	Permitted	7
PL Ref. 04/935	Gortahile	Existing	8
N/A	Freneystown	Proposed	8
PL Ref. 2046	Jerry Bolger	Permitted	1

Pl. Ref.	Wind Farm	Status	No. of Turbines
PL Ref. 20/46 and Ref. No. PL01.243964 (13/322)	Kilcarrig	Existing	1
PL Ref. 13256	Ballon Meats	Existing	1
22507, PL11.248518	Pinewood	Permitted	11
ABP: PC11.313375	Coolglass	Proposed	6
PL. Ref: 21254, ABP 314517-22	Kildreenagh	Proposed	1

13.5.3 Cumulative Effects (Direct Effects – Construction stage)

The addition of other projects to the Proposed Project was considered in order to assess Cumulative effects. These included all other wind farms within 20km of the Proposed Wind Farm as well as other projects within the vicinity of the Proposed Project. Direct effects for the Proposed Project are considered to be confined to within the site and relate to construction effects.

13.5.3.1 Cumulative effects (direct) considering other wind farms within 20km

13.5.3.1.1 Cumulative effects to UNESCO World Heritage sites (tentative) National Monuments in State Care, Recorded Monuments, NIAH and RPS

No UNESCO WHS, National Monuments in State Care, RPS structures or NIAH sites are located within the Proposed Project site and therefore no direct effects to this resource were identified when considering the Proposed Project alone. When the Proposed Projects is added to other projects therefore, it does not result in direct cumulative effects since none were identified in the first place. The aforementioned cultural heritage assets are located at sufficient distance away from the site and therefore are not capable of being directly affected by the Proposed Project. No cumulative effects will therefore occur.

One Protected Structure (RPS D84), Black Bridge, is located on the proposed TDR where carriageway strengthening works are proposed. The proposed works will involve the placing of a 175mm thick concrete slab on the road carriageway/bridge deck, over the existing road surface. The proposals also involve raising the parapet walls from c. 1200mm to 1250mm. Black Bridge is also located on the proposed TDR for the permitted White Hill Wind Farm with the same upgrade works proposed for the Protected Structure as part of that permitted development. The implementation of the appropriate mitigation measures regarding the proposed works to the structure will ensure that the overall significance of effects as a result of the Proposed Project will be Not Significant. Given that the same mitigation will be implemented for the permitted White Hill Wind Farm, no potential cumulative effects to the Black Bridge are identified.

13.5.3.1.2 Cumulative effects to Recorded Monuments

No recorded monuments are located within the Proposed Wind Farm site therefore direct effects to the same as a result of proposed infrastructure therein are not identified. A total of sixty-eight (68) recorded monuments are located within 5km of the Proposed turbines. Since the majority of these monuments are located at a sufficient distance from the Proposed Wind Farm site, no direct effects to the monuments will occur.

A total of fourteen (14) recorded monuments are located within 100m of the Proposed Grid Connection Route. Direct effects to the monuments as a result of the installation of the Proposed Grid Connection

Route are not identified, however, in order to ensure accidental damage, i.e., resulting from the movement of machinery, does not occur some mitigation measures are recommended (13.4.3.3). The implementation of such mitigation measures will ensure no direct effects to recorded monuments will occur.

Cumulative direct effects could potentially occur when all the other projects are considered together, however due to effective mitigation measures being implemented, cumulative effects are not anticipated.

13.5.3.1.3 **Cumulative effects on potential sub-surface archaeology**

Potential direct effects identified at the construction stage of the Proposed Project are those which may occur to hitherto unknown sub-surface archaeological finds, features or deposits. This potential effect was identified as being direct, permanent and negative. After mitigation measures are implemented, however, these potential effects will be Not Significant. The overall significance of effects is therefore Not Significant.

The same potential construction stage effect could be identified for the other wind farm projects since groundworks could impact on hitherto unknown archaeological, finds, features or deposits or other cultural heritage assets. In this regard there could potentially be a cumulative effect when the Proposed Project is added to the other wind farm sites. Mitigation measures seek to alleviate such negative effects, if not remove the effect altogether, and therefore there will be no significant cumulative effects on sub-surface remains.

If the mitigation measures prescribed in this EIAR are implemented then cumulative direct effects to unknown sub-surface archaeology will not occur, regardless of the other projects within 20km of the Proposed Project.

13.5.4 **Cumulative Effects (Indirect Effects on Setting)**

Indirect effects on setting occur at the operational stage of the development (when the Proposed Wind Farm is operational). In order to assess overall cumulative effects on archaeology and cultural heritage, the Proposed Project is considered in the context of the existing, permitted and proposed wind farms within 20km.

13.5.4.1 **UNESCO World Heritage sites (tentative)**

No UNESCO WHS or those on the Tentative list are located within 20km of the Proposed turbines. No potential effects to the setting of such sites as a result of the Proposed Project are therefore identified. No potential cumulative effects will therefore occur to this aspect of the Cultural Heritage resource when considering the Proposed Project with the other existing, permitted and proposed wind farms within 20km.

13.5.4.2 **National Monuments in State Care**

Two National Monuments in State Care and one monument subject to a Preservation Order are located within 10km of the Proposed turbines. The ZTV demonstrates theoretical visibility of the Proposed turbines from Leighlinbridge castle (Nat. Mon. No. 432) and the high cross at Nurney (Nat. Mon. No. 352) with no theoretical visibility of Proposed turbines from Clogrenan Castle (PO No. 3/1995). A photowire taken from a short distance from Leighlinbrige castle, however, demonstrates screening of the Proposed turbines by existing buildings. No potential effects to the setting of Leighlinbridge castle or Clogrenan Castle are therefore identified with a Not Significant effect on the wider setting of the cross at Nurney acknowledged.

When considered cumulatively with other wind farms within 20km the ZTV demonstrates theoretical visibility of the Proposed turbines and permitted Bilboa Wind Farm, permitted White Hill Wind Farm, the existing Gortahile Wind Farm, the permitted Pinewood Wind Farm, the proposed Coolglass Wind Farm, and the existing single turbines to the south-east. In this regard there is potential for cumulative effects to the wider setting of the cross at Nurney, however, the proposed Coolglass Wind Farm and permitted Pinewood Wind Farm are at a considerable distance to the north-west (between c. 15km-17km from the Proposed Wind Farm site). The permitted Bilboa Wind Farm permitted White Hill Wind Farm and the existing Gortahile Wind Farm are closer to the Proposed Wind Farm site at distances of c. 1.2km, 2.1km and 3.1km, respectively. A photomontage (VP 12) taken less than 1km north of Nurney shows visibility of the Proposed turbines, the permitted White Hill Wind Farm turbines and the permitted Bilboa Wind Farm turbines along the skyline. A potential increase of the visual effects to the wider setting of the cross at Nurney may therefore occur increasing from Not Significant to Not Significant-Slight. Given the distance of the Proposed turbines and those considered cumulatively, however, no cumulative effects to the immediate setting of the monument are identified.

13.5.4.3 Recorded Monuments (5km)

A total of sixty-eight (68) recorded monuments are located within 5km of the Proposed turbines. The majority of the monuments (58) are located in County Carlow with ten located in county Kilkenny. The ZTV shows that 58 of the 68 monuments are located in areas where 5-7 turbines will theoretically be visible. Seven monuments are located in areas where 3-4 turbines will theoretically be visible, and three monuments are located in areas where none of the Proposed turbines will theoretically be visible. The overall significance of effects on recorded monuments within 5km will be Imperceptible-Slight (Table 13-14). In reality the effect will be less severe since the ZTV model does not take natural screening and buildings into consideration which will alleviate if not remove the effect on setting altogether. Furthermore, some monuments may not be readily visible in the landscape which further ameliorates potential effects on setting. When considered cumulatively with the other existing, permitted and proposed wind farms it should be noted that only the permitted White Hill Wind Farm, permitted Bilboa Wind Farm, and the existing Gortahile Wind Farm are within the 5km study area. The ZTV demonstrates that these turbines may all be theoretically visible in addition to the Proposed turbines. In this regard there is potential for cumulative visual effects to the wider setting of recorded monuments within 5km, potentially increasing from Imperceptible-Slight to Imperceptible-Moderate. No potential cumulative effects to the immediate setting of such monuments will occur, however.

13.5.4.4 Protected Structures and NIAH (5km)

Nine protected structures are located within 5km of the Proposed turbines, seven of which are located in County Carlow and two in County Kilkenny. Many of the structures are also included in the NIAH. The ZTV shows that eight structures are located in areas where 5-7 turbines will theoretically be visible with one structure (Ref. CW268) located in an area where none of the Proposed turbines will theoretically be visible. The overall significance of effects on those protected structures will be Imperceptible - Moderate. In reality the effect will be less severe since the ZTV model does not take natural screening and buildings into consideration which will alleviate if not remove the effect on setting altogether.

Sixteen structures listed in the NIAH are located within 5km of the Proposed turbines. The ZTV demonstrates theoretical visibility 5-7 turbines from 10 of the NIAH structures, theoretical visibility of 3-4 turbines from one structure, and theoretical visibility of 1-2 turbines from one structure. Four structures are located in area where none of the Proposed turbines will theoretically be visible. The overall significance of effects on NIAH structures within 5km will be Imperceptible - Moderate. In reality the effect will be less severe since the ZTV model does not take natural screening and buildings into consideration which will alleviate if not remove the effect on setting altogether.

When considered cumulatively with the other existing, permitted and proposed wind farms it should be noted that only the permitted White Hill Wind Farm, permitted Bilboa Wind Farm, and the existing Gortahile Wind Farm are within the 5km study area. The ZTV demonstrates that these turbines may all be theoretically visible in addition to the Proposed turbines. In this regard there is potential for cumulative effects to the wider setting of some Protected Structures and NIAH structures within 5km, however, no significant effects are identified and no potential cumulative effects to the immediate setting of such monuments will occur given the distance of the Proposed turbines and those considered cumulatively from same.

The proposed carriageway strengthening works to Black Bridge (RPS Ref. D84) on the TDR include the raising of the parapet walls from c. 1200mm in height to 1250mm. This will alter the appearance of the bridge and consequently is likely to have a visual effect on the structure. Works to the Black Bridge in the form of concrete rubbing strips at the base of the parapet walls has already taken place. The potential visual effect to the structure as a result of the raising of the parapet walls is regarded as Slight. After the implementation of mitigation measures, however, the potential residual effect is likely to be Not Significant. Black Bridge is also located on the proposed TDR for the permitted White Hill Wind Farm with the same upgrade works proposed for the Protected Structure as part of that development. The implementation of the appropriate mitigation measures regarding the proposed works to the structure will ensure that the overall significance of effects as a result of the Proposed Project will be Not Significant. Given that the same mitigation will be implemented for the permitted White Hill Wind Farm no potential cumulative effects to the Black Bridge are identified.

13.6

Decommissioning Phase

There will be no significant potential effects on the Cultural Heritage environment during the decommissioning of the Proposed Project. Any potential direct effects will already have been resolved through mitigation measures during the construction phase.

13.7

Conclusion

This Cultural Heritage chapter was prepared by Tobar Archaeological Services Ltd. It presents the results of an archaeological, architectural and cultural heritage impact assessment of the Proposed Project. The assessment was based on desktop research, field surveys, GIS based mapping, ZTV and was also assisted by photowire/Photomontage images from certain assets/locations. A detailed examination of the available baseline data was undertaken in addition to a comprehensive site inspection. The latter comprised a walk-over survey of the Proposed Wind Farm site and any proposed infrastructure therein, along with a windscreen survey of the Proposed Grid Connection Route and accommodation/upgrade works along the proposed turbine delivery route (TDR).

No direct effects to the recorded archaeological resource are identified. Where potential effects have been identified, such as to sub-surface archaeology, appropriate mitigation measures have been recommended in order to minimise any such effects. Recommended mitigation includes pre-development archaeological testing of the proposed infrastructure (i.e., turbine bases, hardstands, temporary construction compounds, new roads, etc) and archaeological monitoring during the construction stage of the Proposed Project. Potential direct and indirect effects to Black Bridge (RPS Ref. D84) on the proposed TDR are also effectively dealt with through appropriate mitigation measures.

Potential indirect effects on the setting of any UNESCO WHS and those on a Tentative List within 20km, National Monuments within 10km, recorded monuments within 5km and RPS/NIAH structures within 5km were included in order to assess potential effects on setting in the wider landscape. No UNESCO WHS or those on a Tentative List are located within 20km of the Proposed turbines. The ZTV demonstrates theoretical visibility of 5-7 turbines from the majority of cultural heritage assets

within 5km and from some National Monuments within 10km. Both the distance to the nearest turbine and the number of turbines visible from each cultural heritage asset were used to arrive a level of potential effect on setting. Potential effects on setting are based on a precautionary scenario in that natural screening, boundaries, buildings and vegetation are not taken into account in the ZTV model and in reality, the potential effect is likely to be less. Furthermore, many of these monuments may not be readily discernible in the landscape which further ameliorates effects on setting.

All cultural heritage assets within 100m of either side of the Proposed Grid Connection Route were assessed for potential effects to same. No direct effects to the recorded archaeological resource as a result of the Proposed Grid Connection Route have been identified. Mitigation measures are recommended where deemed appropriate and include archaeological monitoring of ground works in specified areas along the Proposed Grid Connection Route. An assessment of potential effects as a result of accommodation/upgrade works along the proposed TDR was also carried out. Mitigation measures have been recommended where appropriate, in particular with reference to proposed works to Black Bridge (RPS Ref. D84).

An assessment of potential cumulative effects was also undertaken taking into consideration other extant planning applications and existing, permitted and proposed wind farms within 20km. While some potential cumulative visual effects to the wider setting of cultural heritage assets is possible when considered with the existing, permitted and proposed wind farms, no significant cumulative impacts have been identified and no cumulative effects to the immediate setting of cultural heritage assets will occur.