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Environmental Impact Assessment Report (EIAR)

Lackareagh Wind Farm, Co.
Clare

Chapter 14 – Cultural Heritage



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14. CULTURAL HERITAGE

14.1 Introduction

This cultural heritage chapter was prepared by Tobar Archaeological Services Ltd. It presents the results of Cultural Heritage impact assessment of the proposed Lackareagh Wind Farm.

The purpose of this chapter is to assess the potential direct and indirect effects of the proposed Lackareagh Wind Farm 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 windscreens 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 the proposed Lackareagh Wind Farm:

- Where the 'Proposed Project' is referred to this encompasses the entirety of the project for the purposes of this EIA in accordance with the EIA Directive. The Proposed Project is described in detail in Chapter 4 of this EIAR.
- Where the 'Proposed Wind Farm' is referred to, this refers to turbines and associated foundations and hardstanding areas, including access roads, underground cabling, permanent meteorological mast, temporary construction compounds, carriageway strengthening works, junction accommodation works, peat and spoil management, tree felling, site drainage, operational stage signage, battery energy storage system, proposed onsite 38kV substation, and all ancillary works and apparatus. The Proposed Wind Farm is described in detail in Chapter 4 of this EIAR.
- Where the 'Proposed Grid Connection Route' is referred to, this refers to underground 38kV cabling connecting to the existing Ardnacrusha 110kV substation, and all ancillary works and apparatus. The Proposed Grid Connection Route is described in detail in Chapter 4 of this EIAR.
- Where 'the site' is referred to, this relates to the primary study area for the EIAR, as delineated by the EIAR Site Boundary in green as shown on Figure 1-1 of Chapter 1. In the interest of clarity, the Proposed Project is a combination of the Proposed Wind Farm, the TDR and the Proposed Grid Connection Route.

The Proposed Project will comprise 7 No. wind turbines, and associated infrastructure in the townlands of Lackareagh, Killeagy (Goonan), Killeagy (Stritch), Killeagy (Ryan), Magherareagh, Lackareagh Beg, Shannaknock, Ballymoloney, in Co. Clare, and a 38kV onsite substation, battery energy storage system and associated works. The Proposed Project also includes TDR accommodation works and underground 38kV cabling from the proposed onsite 38kV substation to the national grid at Ardnacrusha 110kV substation.

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

14.1.1 Proposed Project Site Location

The Proposed Wind Farm is located immediately east of the village of Kilbane, Co. Clare and 6km west of Killaloe, Co. Clare. It is proposed to access the Proposed Wind Farm via upgrades to the Gap

Road (L7080 Local Road) which bisects the Proposed Wind Farm site, with proposed infrastructure located both north and south of the Local Road. The Proposed Wind Farm 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 Killeagy (Goonan), to the existing Ardnacrusha 110kV substation in the townlands of Ballykeelaun and Castlebank. The Proposed Grid Connection Route to Ardnacrusha, measuring approximately 14.7km 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, mixed forestry and land principally used by agriculture with significant areas of natural vegetation, as well as discontinuous urban fabric. Land-use in the wider landscape of the site comprises a mix of agriculture, quarrying, low density residential and commercial forestry.

The site location of the Proposed Project is detailed in Figure 14-1 below.

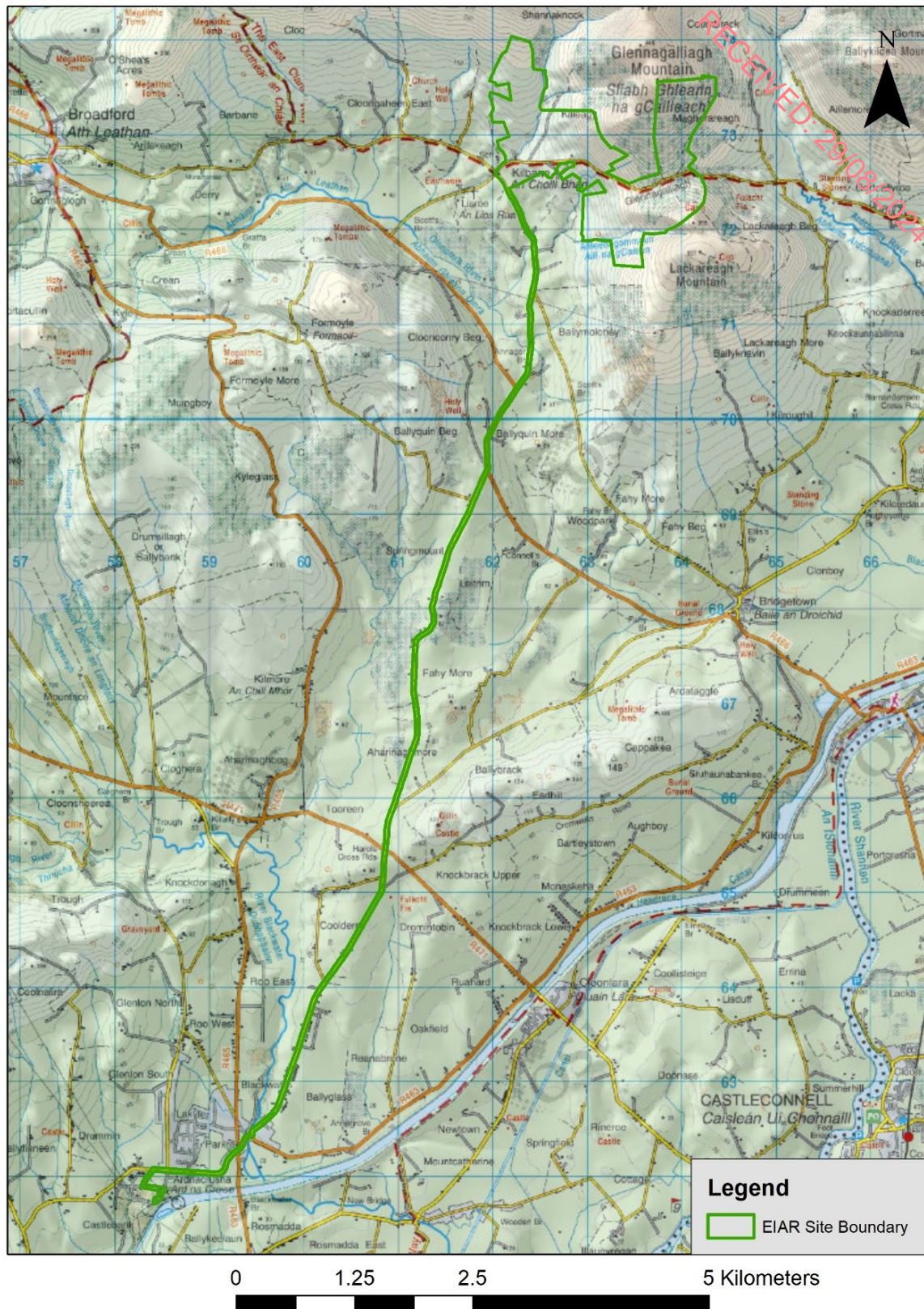


Figure 14-1: Site location map.

14.1.2 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.

14.1.3 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'.

14.1.3.1 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.

14.1.3.2 Clare County Development Plan 2023-2029

The Clare County Development Plan 2023-2029 (CCDP) was adopted by the Elected Members of Clare County Council at a Special Meeting on 9th March 2023. The CCDP came into effect 6 weeks from the date of adoption, on 20th April 2023. The relevant policies and objectives of Clare County Council regarding archaeology and built heritage were consulted in the CCDP and include the following:

14.1.3.2.1 Architectural heritage including Industrial and Vernacular Heritage

'CDP16.1 It is an objective of Clare County Council: a) To ensure the protection of the architectural heritage of County Clare through the identification of Protected Structures, the designation of Architectural Conservation Areas, the safeguarding of historic gardens, and the recognition of structures and elements that contribute positively to the vernacular and industrial heritage of the county; and b) To ensure that the archaeological and architectural heritage of the county is not damaged either through direct destruction or by unsympathetic developments. c) To support and promote architectural vernacular skills training and facilities in the county.'

Protected Structures

‘CDP16.2 It is an objective of Clare County Council: a) To protect, as set out in the Record of Protected Structures, all structures, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social, or technical interest; and b) To review the Record of Protected Structures periodically and add structures of special interest as appropriate, including significant elements of industrial, maritime or vernacular heritage and any twentieth century structures of merit.’

Industrial Heritage

‘CDP16.3 It is an objective of Clare County Council: To protect and preserve buildings and features of industrial heritage such as mills, bridges, lighthouses and harbours, amongst others. Proposals for refurbishment works to, or redevelopment/conversion of, these sites will be subject to a full architectural and archaeological assessment together with an ecological assessment with respect to the presence of protected species.’

Vernacular Heritage

‘CDP16.4 It is an objective of Clare County Council: a) To seek the retention, appreciation and appropriate revitalisation of the vernacular heritage of County Clare, in towns, villages and rural areas, by discouraging the replacement of good quality vernacular buildings with modern structures and by protecting vernacular buildings where they contribute to the character of an area or settlement and/or where they are rare examples of a structure type; b) To support proposals to refurbish vernacular structures that are in a sub-standard or derelict condition, provided that: I. Appropriate traditional building materials and methods are used to carry out repairs to the historic fabric; II. Proposals for extensions to vernacular structures are reflective and proportionate to the existing building and do not erode the setting and design qualities of the original structure which make it attractive III. Direction for the design is taken from the historic building stock of the area, though it can be expressed in contemporary architectural language; and (c) To ensure that visitor pressures from tourism associated with built and cultural heritage do not impact negatively on the capacity of local services (including water, waste water) or facilities such as car parking.’

Architectural Conservation Areas (ACAs)

‘CDP16.5 It is an objective of Clare County Council: a) To ensure that new developments within or adjacent to an ACA respect the established character context of the area and contribute positively to the ACA in terms of design, scale, setting and material finishes; b) To protect from demolition or removal and nonsympathetic alterations, existing buildings, structures, groups of structures, sites, landscapes and features such as street furniture and paving, which are considered to be intrinsic elements of the special character of the ACA; c) To ensure that all new signage, lighting, advertising and utilities to buildings within an ACA are designed, constructed and located in a manner that does not detract from and is complementary to the character of the ACA; and d) To ensure that external colour schemes in ACAs enhance the character and amenities of the area and reflect traditional colour schemes.’

Supporting the Improvement of Architectural Heritage

‘CDP16.7 It is an objective of Clare County Council: a) To advocate for greater financial assistance, including the Built Heritage Investment Scheme and the Historic Structures Fund, for the maintenance and improvement of architectural heritage in County Clare; b) To support community initiatives and projects regarding 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 c) To provide advice and guidance to community groups, owners and occupiers with regards

to the maintenance and repair of buildings and structures of architectural heritage importance and to promote initiatives by the Council, the Heritage Council, local communities, heritage property owners and other stakeholders pursuing the maintenance and improvement of the architectural heritage; and d) To undertake a risk assessment of the Archaeological and Architectural Heritage and Cultural Assets in the county to assess the vulnerability and the risk to the historical environment from the impacts of climate change and to help build resilience to these important assets.'

14.1.3.2.2 Archaeological Heritage

'CDP16.8 It is an objective of Clare County Council: a) To safeguard sites, features and objects of archaeological interest generally; b) To secure the preservation (i.e. preservation in situ or in exceptional cases preservation by record) of all archaeological monuments included in the Record of Monuments and Places as established under Section 12 of the National Monuments (Amendment) Act, 1994, and of sites, features and objects of archaeological and historical interest generally; c) In securing such preservation, to have regard to the advice and recommendations of the Department of the Culture, Heritage and the Gaeltacht; d) To have regard to the government publication Framework and Principles for the Protection of the Archaeological Heritage 1999 in relation to protecting sites, features and objects of archaeological interest; and e) To advocate for greater financial assistance for the maintenance and improvement of features of archaeological interests in County Clare.'

'CDP16.9 It is an objective of Clare County Council: To protect and preserve archaeological sites discovered since the publication of the Record of Monuments and Places.'

'CDP16.10 It is an objective of Clare County Council: To protect the Zones of Archaeological Potential located within both urban and rural areas as identified in the Record of Monuments and Places.'

'CDP16.11 It is an objective of Clare County Council: To ensure that decisions relating to development (including infrastructure associated with broadband, telecommunications, renewable energy, major road/ rail infrastructure, flood relief schemes and other services) which may have implications for Recorded Archaeological Monuments/Sites, Zones of Archaeological Potential or undiscovered archaeology, are informed by an appropriate level of archaeological investigation undertaken by qualified persons and the case of flood relief schemes have regard to archaeological Guidelines for Flood Relief Schemes (DHLGH and OPW2022).'

'CDP16.12 It is an objective of Clare County Council: To support the Climate Change Sectoral Adaptation Plan for Built and Archaeological Heritage 2019, as published by the Department of Culture, Heritage and the Gaeltacht and any subsequent guidance or plans for dealing with climate change and archaeological heritage. The Council shall seek to: a) Promote awareness and the appropriate adaptation of Ireland's built and archaeological heritage to deal with the effects of climate change; b) Identify the built and archaeological heritage in Local Authority ownership and areas at risk from climate change including, but not necessarily restricted to, the Record of Monuments and Places, Protected Structures and architectural conservation areas designated in the Development Plan; c) Undertake climate change vulnerability assessments for the historic structures and sites in its area, subject to resources and funding; d) Develop disaster risk reduction policies addressing direct and indirect risks to the built and archaeological heritage in its area; e) Develop resilience and adaptation strategies for the built and archaeological heritage in its area; f) Develop the skills capacity within the Local Authority to address adaptation/mitigation/emergency management issues affecting historic structures and sites in order to avoid inadvertent loss or damage in the course of climate change adaptation or mitigation works.'

'CDP16.12 It is an objective of Clare County Council: a) To raise awareness of and improve practice in relation to archaeology in County Clare; and b) To promote the care and conservation of historic graveyards throughout the county. Within the lifetime of the Plan it is an objective to prepare conservation plans for a number of historical church and graveyard sites, with the objective of identifying necessary works required to address the decay of the fabric of the sites.'

Underwater Archaeology

'CDP16.13 It is an objective of Clare County Council a) To protect, preserve and promote the archaeological value of underwater archaeological sites in rivers, lakes, coastal, marine, intertidal and sub tidal environments; and b) To support the further exploration of the underwater archaeology of County Clare, including the San Marcos project, and any subsequent projects that may arise during the lifetime of this Plan.'

14.1.3.2.3 Cultural Heritage

'CDP16.14 It is an objective of Clare County Council: (a) To conserve and enhance its cultural identity and enable access to both culturally-distinct areas and facilities for cultural experiences; (b) To advocate for investment in infrastructure and initiatives that develop the role of arts, heritage and culture and employment opportunities in these sectors in County Clare including funding streams outlined in 'Project Ireland 2040 Investing in our Culture, Language and Heritage 2018- 2027'; (c) To assist in the delivery of actions under arts, heritage and cultural strategies in the county; (d) To ensure that decisions relating to investment in arts, cultural and heritage infrastructure/facilities are informed by an appropriate level of environmental assessment; and (e) To develop a vibrant cultural and creative sector in County Clare as a key enabler of enterprise growth, innovation, regeneration, place-making and community development, health and wellbeing and support measures under Culture 2025, Creative Ireland Strategy 2017-2022 and the Action Plan for Rural Development.'

Museums, Heritage and Cultural Centres

'CDP16.15 It is an objective of Clare County Council a) To facilitate further development of and extensions to museum, heritage centres and archives across the county; b) To ensure that the County Museum's collections and associated information are accessible to the public; c) To promote a wider appreciation and understanding of the unique natural, cultural and archaeological heritage of the County; d) To recognise and support the role of private and community facilities in making heritage artefacts and information available to the public; and (e) To support the development of a network of community arts and cultural hubs.'

Oidhreacht Theanga: Linguistic Heritage

'CDP16.17 It is an objective of Clare County Council: a) To provide for the linguistic and cultural heritage of the county through the provision of support for organisations involved in the continued promotion and preservation of the Irish language and culture and the normalising of the use of Irish; b) To work in a positive and encouraging way to create and maintain a bilingual environment in the county, and to ensure the availability of opportunities for the use of spoken and written Irish. (c) To support the implementation of the Language Plan for the Irish Language Network in Ennis.'

CDP16.18 It is an objective of Clare County Council To support and facilitate the gathering, recording, preservation and promotion of folklore and oral cultural heritage in the county and to work closely with groups such as Cuimhneamh an Chláir to realise their objectives.'

The undertaking of this Cultural Heritage assessment of the Proposed Project is in accordance with Clare County Council's aforementioned policies and objectives on archaeological, architectural and cultural heritage.

14.1.4 Statutory Consultations

14.1.4.1 Clare County Council

No Cultural Heritage related response was received from Clare County Council.

14.1.4.2 National Monuments Service

No Cultural Heritage related response was received from the National Monuments Services /Development Applications Unit of the Department of Housing, Local Government and Heritage (DHLGH).

14.2 Assessment Methodology

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

14.2.1 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 the Environmental Systems Research Institute (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 highlighted in order to mitigate the potential negative effects of a development on archaeological, architectural and cultural heritage.

14.2.2 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 Clare
- Monuments Subject to a Preservation Order, County Clare
- 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. Clare
- Clare County Development Plan 2023-2029

Each of these are discussed in the following sections.

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

14.2.2.1 **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 County Clare. 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.

14.2.2.2 **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.

14.2.2.3 **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).

14.2.2.4 **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.

14.2.2.5 **Record of Protected Structures**

The current County Development Plan for County Clare was 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 plan also outlines policies and objectives relating to the protection of the archaeological, historical and architectural heritage landscape of County Clare. The dataset for the Clare RPS was added to the base mapping for the Proposed Project in order to accurately assess any potential effects on such structures.

14.2.2.6 **Excavations Database**

The Excavations Database is an annual account of all excavations carried out under license. The database is available online at www.excavations.ie and includes excavations from 1985 to 2024. 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.

14.2.2.7 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.

14.2.2.8 Previous Assessments

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

14.2.3 Field Inspection

The Proposed Project site was subject to a walk-over survey and windscreen survey in March 2023 and March 2024. A photographic and descriptive record was made of the site and any features of interest therein. The photographic record is included as Appendix 14-1 of this EIAR.

14.2.3.1 Limitations Associated with Fieldwork

No significant limitations were encountered during fieldwork and all areas were accessed. Tree-cover is present in the areas of T03, T04 and T05, however, a general visual inspection of these areas was possible.

14.2.4 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.

14.2.4.1 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 effects.
- Cumulative effects arise when the addition of many impacts create a larger, more significant effect.
- Residual effects are the degree of environmental changes that will occur after the proposed mitigation measures have been implemented.

14.2.4.2 Magnitude of Effects (Significance)

The magnitude of effects statements used throughout this assessment are detailed below:

- 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.

14.2.5 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 13 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 provided below in Table 14-1 are used in the assessment of effects on setting are regarded as appropriate and are based on professional judgement.

Table 14-1: 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 14-2):

- Distance to the nearest Proposed turbine:** Each increment of distance is numbered from 1-5 in severity with 1 representing the lowest possibility of an indirect effect (i.e. 4-5km from the nearest Proposed turbine and 5 representing the highest likelihood of an indirect effect (0-1km from the nearest Proposed turbine).
- 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. Table 14-2 below is used to ascertain the potential visual effect not assuming any vegetation, existing buildings, and any other screening in the landscape.

Table 14-2: 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
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)

14.3 Existing Environment

14.3.1 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 (carried out in March 2023 and March 2024), 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 14.3.4 below. A photographic record of the Proposed Project is presented in Appendix 14-1.

14.3.2 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 14.2.2 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 14.3.3 addresses the Proposed Wind Farm and Section 14.3.4 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 14.2 above.

14.3.3 Proposed Wind Farm

14.3.3.1 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 Cashel which is located c. 53km to the south-east of the Proposed Project.

14.3.3.2 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. Three National Monuments in State Care, one of which is also subject to a Preservation Order, are located within 10km of the proposed turbines and are listed in Table 14-3 and shown on Figure 14-2. Three of the monuments are located in County Clare, with Derry Castle (PO 4/2001) located in County Tipperary.

Table 14-3: National Monuments within 10km of the nearest proposed turbine

Nat. Mon. No./PO No.	SMR No.	ITM E	ITM N	Name	Class	Townland	Turbine ID	Distance to nearest turbine (m)
591	CL045-031—	569561	674311	Brian Boru's Fort	Ringfort	Ballyvally	T03	5637
24/1976	CL045-031; CL045-031002-; CL045-031003-	569561	674311	Brian Boru's Fort	Ringfort	Ballyvally	T03	5637
279	CL045-033015-	570039	672985	St. Molua's Church	Church	Killaloe	T03	6032

Nat. Mon. No./PO No.	SMR No.	ITM E	ITM N	Name	Class	Townland	Turbine ID	Distance to nearest turbine (m)
6	CL045-033003-	570377	672930	St. Flannan's Church	Church	Shantraud	T03	6373
4/2001	TN019-034001-; TN019-034002-; TN019-034003-; TN019-034004-; TN019-034005-	570686	677600	Derry Castle	Castle - tower house, Bawn, Crannog, Causeway, Ringfort - cashel	Derry Demesne	T03	7934

14.3.3.2.1

National Monument No. 591, Preservation Order 24/1976

The ringfort at Ballyvally is a National Monument (Nat. Mon. No. 591) and is also subject to a Preservation Order (24/1976). It is located c. 5.6km from the nearest Proposed turbine, T03 and is described on the Historic Environment Viewer (HEV) as follows. The ZTV indicates no theoretical visibility of the proposed turbines from this area.

CL045-031— : Ringfort - rath : BALLYVALLY

Description: Situated on a steep-sided spur of gravel on the County Clare bank of the River Shannon in a strategic location where Lough Derg narrows into the river c. 1.3km N of Killaloe town. Known as 'Brian Boru's Fort' or 'Beal Boru', this monument has long been identified, though without certainty, as the seat of Brian Boru, High King of Ireland from AD 1002 until his death at the Battle of Clontarf in AD 1014. According to Gem (2006, 94-5, note 71) the site clearly formed part of the wider Kincora complex. Excavated in 1961 by M.J. O'Kelly, the site was found to have originally been a ringfort with an internal house (CL045-031002). During excavation it was found that a turf layer had formed over the ringfort following abandonment. It was revealed that the primary ringfort bank (H c. 1.1-2m; Wth 4.8-5.7m) was stone faced internally and was held in place externally by a closely set wooden palisade. A portion of the original fosse (Wth 4.5m; D 2.5m) was found fully preserved close to the present entrance. Coins found during the excavation allowed the internal house to be dated to the 11th century and a reference in the Annals of the Four Masters tells us that it was raided and demolished in AD 1116 (Harbison 1992, 55). The site was later reused but was unfinished and uninhabited and the present high bank, deep fosse and raised centre with sunken interior may represent an attempt by the Normans to build a ringwork (CL045-031003-) in the early 13th century. Beal Boru is a National Monument in state care, no. 591. (O'Kelly 1962, 1-27). Compiled by: Mary Tunney. Date of upload: 16 January 2018.

This monument is subject to a preservation order made under the National Monuments Acts 1930 to 2014 (PO no. 24/1976).

14.3.3.2.2

National Monument No. 279 St. Molua's Church

St. Molua's church in Killaloe (Nat Mon 279) is located c. 6km from the nearest proposed turbine T03. The ZTV indicates theoretical visibility of 3-4 turbines from this area. Photowire PW-F demonstrates limited visibility from the church, however, with only the tip of T3 visible on the horizon in the distance. The church is described on the Historic Environment Viewer (HEV) as follows:

CL045-033015 : Church (present location) : SHANTRAUD

Description: Originally located on Friar's Island, Co. Tipperary, on the River Shannon (TN025-022001-) until its removal and re-erection in the grounds of Killaloe RC church in 1929. St. Molua's oratory (built around the 10th/11th century) was moved due to flooding of the River Shannon by the ESB for the Ardnacrusha power station. The church was called after St Molua of Clonfert-mulloe (Co. Laois) who is said to have had a church in the Killaloe district and who died in the early 7th century. Present remains consist of a nave (ext. dims. nave 5.57m N-S; 8.2m E-W; wall T 0.8m) and chancel (4.2m N-S; 4m E-W; wall T 1.05m) church, the nave of which is the earlier building with the chancel being added later (Leask 1930, 130-35), as revealed when the church was being moved to its present location. The nave walls are constructed with uncoursed cyclopean sandstone masonry while the chancel walls are constructed with roughly squared stones of smaller size. The chancel has a single-light round-headed E window with stepped sillstone and unusual flat-headed doorway in the S wall. The round-headed chancel arch has curious jambstones which are not flush with the chancel arch and project inwards. The triangular-shaped stone chancel roof is bonded with lime mortar and is well preserved. The nave walls are poorly preserved and only survive several courses high with a poorly preserved trabeate doorway in the W wall. Excavations at Friar's Island prior to the removal of the church revealed that the church was constructed on a stone platform enclosed by a possible cashel with a revetment wall of unknown purpose. A second stone platform (22ft (6.71m) N-S; 50ft (15.25m) E-W) was located to the S of the church and eleven skeletons were uncovered under or close to the foundations of the N wall of the church (Macalister 1929, 16-24). The stone-roofed chancel of this church may have been constructed to house some relic of St. Molua, an earlier saint than St. Flannan who probably lived in the 8th century (Harbison 2005, 72). St. Molua's church is a National Monument in State Care, no. 279.

14.3.3.2.3

National Monument No. 6 St. Flannan's Church

St Flannan's Church at Shantraud (Nat. Mon. No. 6) is located in Kilalloe c. 6.3km from the nearest Proposed turbine, T03. The ZTV also demonstrates theoretical visibility of 3-4 turbines from this area. It is described on the HEV as follows:

CL045-033003 : Church : SHANTRAUD

Description: Situated c. 20m N of St Flannan's cathedral (CL045-033006-) and c. 1.5m below the present ground level of the churchyard. A stone-roofed Romanesque oratory built c. AD 1100 under the patronage of king Muirchertach Ua Briain (1086-1119) (Gem 2006, 74). Several possible functions have been suggested such as a shrine for important relics (taking the fireproof nature of the stone roof into consideration), a possible place for royal burial or a subsidiary church to the main cathedral (ibid. 90-94). The oratory comprises a rectangular barrel-vaulted nave (int. dims. c. 8.8m x 5.3m) to the E of which was a contemporary chancel, which is now missing. The walls are of roughly rectangular blocks of mortared yellow and brown sandstone set on a simple plinth (H 0.2m) with larger stones used for the quoins. The N and S walls have a pronounced batter. The stone roof is neatly built and has been repaired (19th-century drawings show the roof disrupted by plant growth). A chamber with a pointed barrel vault above the nave carries the apex of the stone roof. The chancel also had a masonry vault and an outer masonry roof with a chamber in between. The chancel arch (With 2m; H 3m) is plain with a projecting chamfered abacus under the arch. The nave was lit by only two plain narrow lights with inclined jambs and stepped sills, one in each side wall towards the E end. The heads of the windows are formed of two slabs leaned together. The upper chamber is lit by a window in each gable wall of neat ashlar construction. The E gable window has inclined jambs with its head formed of two inclined slabs while the W window is round-headed. The W doorway (With 1m; H 2.5m) is highly decorative, well constructed and is integral to the original building. Externally the doorway is of three orders. The inner order is plain; the middle order is supported by short round columns standing on modern bases and has worn capitals which are decorated with animal and foliate carvings. The arch has a round roll moulding with a double hollow behind. The outer order has plain jambs. The arch is composed of two roll mouldings with a hollow moulding between. Externally there is a roll hood-moulding with very

worn traces of dentil decoration. A cross-slab (CL045-033004) lies in the interior. St Flannan's Oratory is a National Monument in State care, no. 6. (Bradley et al. 1988; Gem 2006, 74-105). Compiled by: Mary Tunney. Date of upload: 15 January 2018.

14.3.3.2.4

Preservation Order No. 4/2001 Derry Castle

Preservation order No. 4/2001 relates to five monuments located in proximity to each other at Derry Demesne, Co. Tipperary c. 7.9km north-east of the nearest Proposed turbine, T03. The monuments comprise a tower house, bawn, crannog, causeway and ringfort. The ZTV demonstrates no theoretical visibility of the Proposed turbines from this location (Figure 14-3).

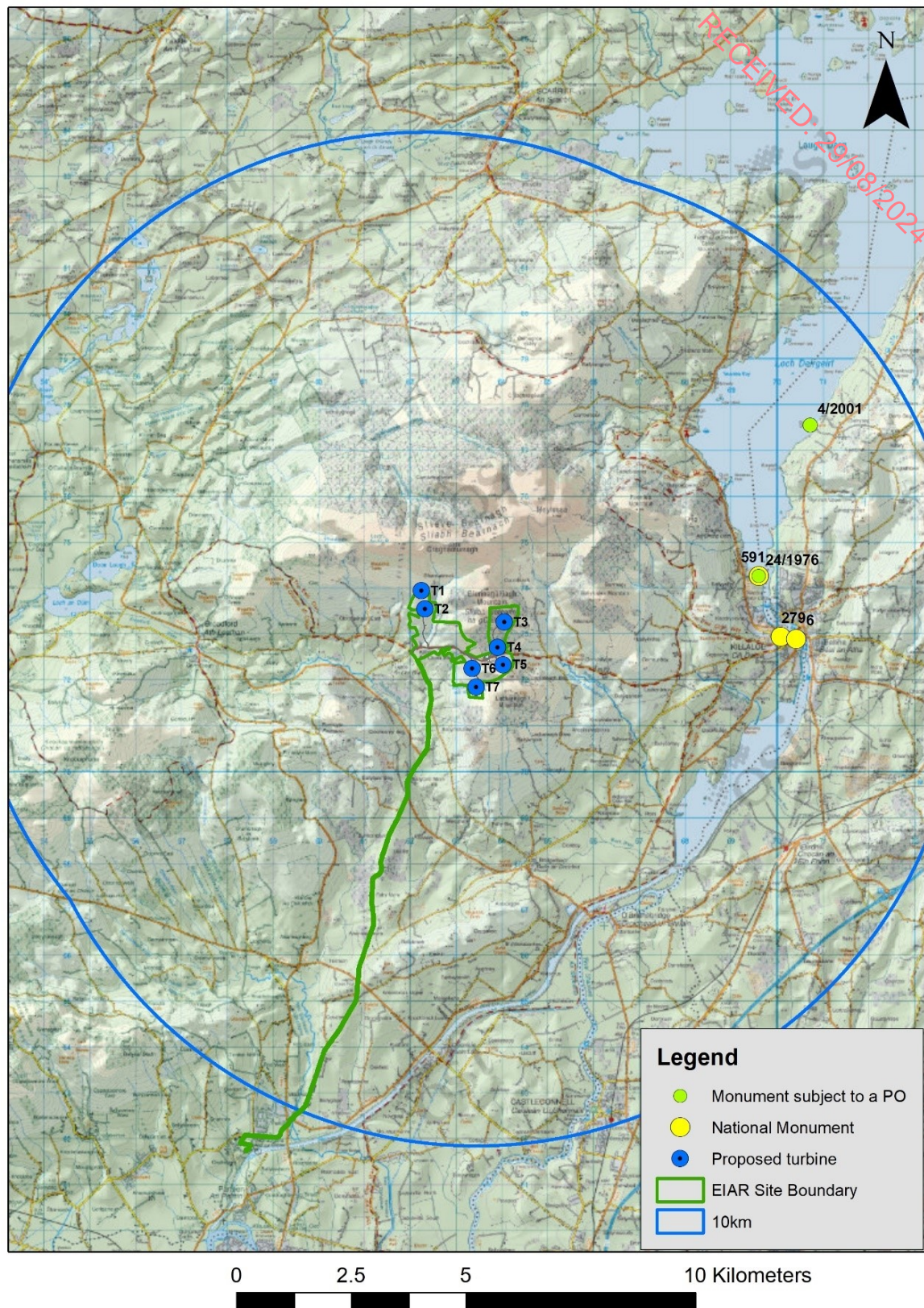


Figure 14-2: National Monuments and those subject to a Preservation Order within 10km of the proposed turbines.

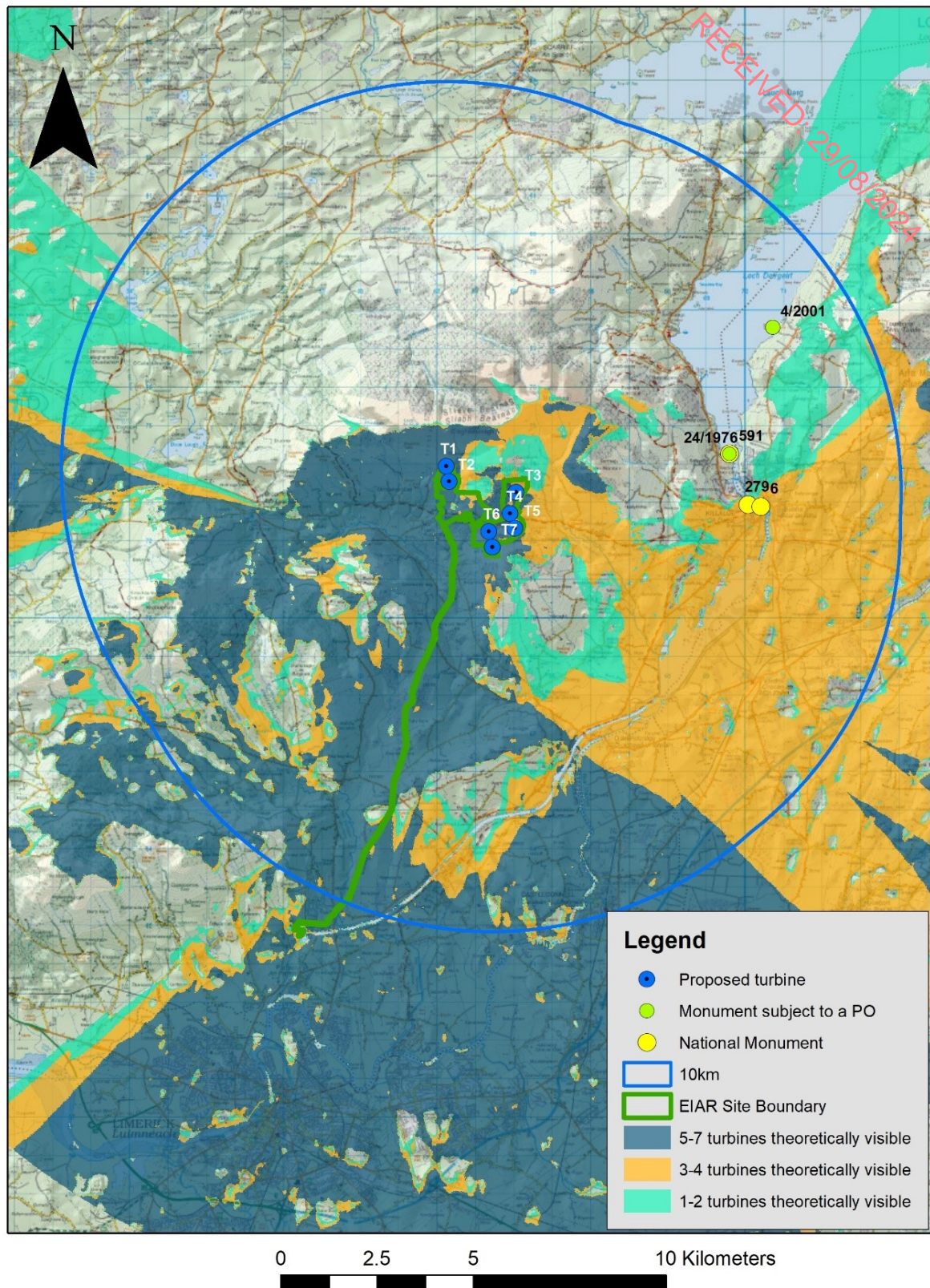


Figure 14-3: National Monuments and those subject to a Preservation Order within the ZTV.

14.3.3.3 Recorded Monuments

Three recorded monuments, CL044-063—, CL044-031— and CL044-086— are located within the Proposed Wind Farm site and all comprise enclosures. They are listed in Table 14-4, shown on Figure 14-4 and are described below where monument information is available. Recorded monuments along the Proposed Grid Connection Route are discussed in Section 14.3.4.

A total of 131 recorded monuments are located within 5km of the proposed turbines and include the three monuments within the Proposed Wind Farm site boundary as referenced above. The monument locations are shown on Figure 14-5 and listed in Table 14-4. The ZTV shows that 49 of the 131 monuments are located in areas where 5-7 turbines will theoretically be visible (Figure 14-6). Twenty-six monuments are located in areas where 3-4 turbines will theoretically be visible, and 19 monuments are located in areas where 1-2 turbines will theoretically be visible. Thirty-seven 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.

Descriptions for the monuments within the Proposed Wind Farm site are not currently available on the HEV. The Archaeological Survey of Ireland (ASI) files were consulted, however, no descriptive information for the monuments is contained therein. The site walk-over survey and visual inspection of the Proposed Wind Farm site in addition to the desktop assessment shows that CL044-086— has no surviving above-ground remains, while CL044-031— comprises an upstanding monument with trees and scrub growing on its perimeter. A review of the available aerial photography for the area suggests that CL044-063— has some upstanding remains, albeit low visibility.

Table 14-4: Recorded monuments within 5km of the proposed turbines.

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
1	CL044-065—	564063	672185	Cairn - unclassified	LACKAREAGH BEG	T05	203
2	CL044-063—	563086	671987	Enclosure	BALLYMOLONEY	T07	333
3	CL044-031—	562332	673020	Enclosure	SHANNACKNOCK	T02	570
4	CL045-034—	564706	672288	Fulacht fia	LACKAREAGH BEG	T05	721
5	CL044-066—	564338	671691	Cist	LACKAREAGH MORE	T05	767

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
6	CL0 44-086— -	562299	672820	Enclosure	KILLEAG Y (Stritch)	T02	768
7	CL0 45-001— -	564939	673494	Burial ground	COUMB RACK	T03	943
8	CL0 44-062— -	562892	671060	Enclosure	BALLYM OLONEY	T07	967
9	CL0 44-029— -	561264	673486	Ritual site - holy well	KILLOKE NNEDY	T02	1024
10	CL0 44-0280 01-	561090	673560	Church	KILLOKE NNEDY	T02	1193
11	CL0 44-0280 02-	561090	673551	Graveyard	KILLOKE NNEDY	T02	1194
12	CL0 44-060— -	562094	672245	Enclosure	KILBANE ,KILLEA GY (Goonan)	T06	1222
13	CL0 44-027— -	561084	674492	Megalithic tomb - wedge tomb	KILLOKE NNEDY	T01	1231
14	CL0 45-035— -	565338	672310	Enclosure	LACKAR EAGH BEG	T05	1350
15	CL0 44-0300 01-	561296	672653	Earthwork	CLOON GAHEEN EAST	T02	1360

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
16	CL0 44-0300 02-	561298	672644	Castle - unclassified	CLOON GAHEEN EAST	T02	1364
17	CL0 45-002— -	565007	674269	Enclosure	CLASSA GH	T03	1383
18	CL0 45-0360 01-	565405	672432	Standing stone	LACKAR EAGH BEG	T05	1416
19	CL0 45-0360 03-	565426	672402	Megalithic structure	LACKAR EAGH BEG	T05	1436
20	CL0 45-0360 02-	565432	672381	Enclosure	LACKAR EAGH BEG	T05	1442
21	CL0 45-0360 04-	565434	672407	Standing stone	LACKAR EAGH BEG	T05	1444
22	CL0 44-025— -	560626	674004	Standing stone	CLOON GAHEEN WEST	T01	1581
23	CL0 44-026— -	560598	673175	Enclosure	CLOON GAHEEN EAST	T02	1735
24	CL0 44-061— -	562369	670488	Enclosure	BALLYQ UIN MORE	T07	1735
25	CL0 45-062— -	565756	673464	Cupmarked stone	AILLEM ORE	T03	1748

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
26	CL0 44-024-	560423	674204	Enclosure	CLOON GAHEEN WEST	T01	1797
27	CL0 45-051-	564828	670641	Enclosure	KILROU GHIL	T07	1890
28	CL0 44-067-	564343	670231	Enclosure	BALLYK NAVIN	T07	1900
29	CL0 45-037-	565644	671264	Enclosure	KNOCK ADERRE EN (Tulla Lower By.)	T05	1992
30	CL0 44-059-	561828	670629	Enclosure	CLOON YCONRY BEG	T07	2012
31	CL0 44-064-	564035	669909	Enclosure	FAHY BEG	T07	2072
32	CL0 45-038-	565857	671246	Enclosure	KNOCK ADERRE EN (Tulla Lower By.)	T05	2181
33	CL0 44-023-	560226	672852	Enclosure	CLOON GAHEEN WEST	T02	2185
34	CL0 44-077-	562982	669697	Enclosure	BALLYM OLONEY	T07	2225
35	CL0 44-	559953	673894	Enclosure	CLOON GAHEEN WEST	T01	2256

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
	021— -						
36	CL0 45- 0520 02-	564877	670175	Bullaun stone	KILROU GHIL	T07	2256
37	CL0 45- 0520 01-	564918	670181	Children's burial ground	KILROU GHIL	T07	2279
38	CL0 44- 022— -	559984	673421	Enclosure	CLOON GAHEEN WEST	T01	2294
39	CL0 44- 073— -	562412	669801	Enclosure	BALLYQ UIN MORE	T07	2304
40	CL0 44- 056— -	561538	670505	Enclosure	CLOON YCONRY BEG	T07	2317
41	CL0 44- 058— -	561813	670151	Enclosure	BALLYQ UIN BEG	T07	2350
42	CL0 44- 072— -	562115	669894	House - 16th/17th century	BALLYQ UIN MORE	T07	2368
43	CL0 44- 020— -	559914	672947	Enclosure	CLOON GAHEEN WEST	T02	2454
44	CL0 44- 074— -	562423	669622	Enclosure	BALLYQ UIN MORE	T07	2463
45	CL0 44-	561690	670061	Ritual site - holy well	BALLYQ UIN BEG	T07	2499

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
	057— -						
46	CL0 45- 040— -	566310	671434	Enclosure	KNOCK ADERRE EN (Tulla Lower By.)	T05	2503
47	CL0 36- 038— -	559709	674702	Megalithic tomb - wedge tomb	CLOON GAHEEN WEST	T01	2598
48	CL0 44- 051— -	560197	671953	Megalithic tomb - wedge tomb	CLOON YCONRY MORE	T02	2650
49	CL0 44- 053— -	560279	671831	Megalithic tomb - wedge tomb	CLOON YCONRY MORE	T02	2665
50	CL0 45- 003— -	566683	673513	Enclosure	BALLYKI LDEA	T03	2676
51	CL0 45- 039— -	565923	670519	Enclosure	KNOCK ADERRE EN (Tulla Lower By.)	T05	2679
52	CL0 45- 004— -	566786	673504	Enclosure	BALLYKI LDEA	T03	2778
53	CL0 44- 080— -	563647	669062	Enclosure	FAHY MORE NORTH	T07	2831
54	CL0 44- 052— -	560244	671551	Megalithic structure	CLOON YCONRY MORE	T02	2882

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
55	CL0 44-019-	559317	673672	Enclosure	CLOON GAHEEN WEST	T01	2907
56	CL0 44-085-	560391	671279	Hillfort	CLOON YCONRY MORE,F ORMOY LE BEG	T02	2985
57	CL0 45-005-	567023	672635	Enclosure	GARRAU NBOY	T05	3044
58	CL0 44-054-	560504	670926	Enclosure	CAPPAN ASLISH	T07	3052
59	CL0 44-055-	560855	670083	Enclosure	BALLYQ UIN BEG	T07	3118
60	CL0 44-018-	559099	674300	Megalithic tomb - wedge tomb	CLOON GAHEEN WEST	T01	3124
61	CL0 45-053-	565233	669332	Standing stone	KILROU GHIL	T07	3139
62	CL0 44-078-	563072	668723	Enclosure	WOODP ARK (Tulla Lower By.)	T07	3176
63	CL0 45-006-	567056	674290	Enclosure	GORTM AGY	T03	3197
64	CL0 44-	562880	668652	Enclosure	WOODP ARK (Tulla	T07	3272

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
	076— -				Lower By.)		
65	CL0 45- 041— -	566938	670896	Enclosure	BALLYC ORNEY	T05	3298
66	CL0 45- 007— -	567316	672071	Enclosure	GARRAU NBOY	T05	3340
67	CL0 44- 070— -	560709	669881	Enclosure	CAPPAN ASLISH	T07	3355
68	CL0 44- 048— -	559645	671511	Enclosure	FORMO YLE BEG	T02	3358
69	CL0 44- 087— -	559334	671874	Enclosure	FORMO YLE BEG	T02	3411
70	CL0 45- 008— -	567466	673029	Enclosure	BALLYKI LDEA	T03	3462
71	CL0 45- 043— -	567442	672001	Enclosure	LACKEN BAUN	T05	3472
72	CL0 44- 049— -	559693	671268	Enclosure	FORMO YLE BEG	T02	3477
73	CL0 45- 009— -	567491	674108	Enclosure	FEENLE A	T03	3568
74	CL0 44-	563430	668301	Enclosure	FAHY MORE NORTH	T07	3581

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
	079— -						
75	CL0 44- 050— -	559806	670988	Enclosure	FORMO YLE BEG	T02	3591
76	CL0 45- 010— -	567636	673392	Earthwork	BALLYKI LDEA	T03	3622
77	CL0 44- 075— -	562745	668313	Enclosure	FAHY MORE SOUTH	T07	3629
78	CL0 45- 055— -	567003	670315	Megalithic structure	ROSS (Tulla Lower By.)	T05	3649
79	CL0 44- 017— -	558594	673456	Megalithic tomb - wedge tomb	BARBAN E	T01	3652
80	CL0 45- 0120 02-	567663	673005	Enclosure	GARRAU NBOY	T03	3660
81	CL0 45- 0120 01-	567664	673005	Mass-house	GARRAU NBOY	T03	3661
82	CL0 45- 011— -	567652	672220	Enclosure	GARRAU NBOY	T05	3665
83	CL0 44- 047— -	559630	671052	Enclosure	FORMO YLE MORE	T02	3670
84	CL0 45-	567198	670571	Enclosure	BALLYC ORNEY	T05	3680

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
	042— -						
85	CL0 45- 013— -	567697	672619	House - 16th/17th century	GARRAU NBOY	T05	3715
86	CL0 45- 014— -	567752	673571	Enclosure	GORTM AGY	T03	3746
87	CL0 44- 016— -	558598	672731	Megalithic tomb - unclassified	ARDSKE AGH	T02	3783
88	CL0 45- 045— -	567709	671568	Enclosure	BALLYC ORNEY	T05	3805
89	CL0 44- 046— -	559356	671131	Enclosure	FORMO YLE MORE	T02	3822
90	CL0 45- 0540 01-	566810	669757	Children's burial ground	ROSS (Tulla Lower By.)	T05	3847
91	CL0 45- 0540 02-	566818	669741	Ritual site - holy well	ROSS (Tulla Lower By.)	T05	3864
92	CL0 45- 044— -	567455	670445	Enclosure	BALLYC ORNEY	T05	3966
93	CL0 45- 015— -	568000	673394	Megalithic structure	GORTM AGY	T03	3986
94	CL0 44-	560899	668751	Enclosure	CAPPAN ASLISH	T07	4009

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
	071— -						
95	CL0 53- 022— -	564021	667921	Burial ground	FAHY BEG	T07	4009
96	CL0 45- 046— -	567919	671525	Enclosure	CLOONF ADDA	T05	4020
97	CL0 44- 015— -	558176	673442	Megalithic tomb - unclassified	ARDSKE AGH	T01	4068
98	CL0 45- 016— -	568012	674270	Enclosure	FEENLE A	T03	4112
99	CL0 37- 017— -	567952	674534	Enclosure	FEENLE A	T03	4124
100	CL0 44- 014— -	558084	673572	Megalithic tomb - wedge tomb	ARDSKE AGH	T01	4144
101	CL0 44- 013— -	557997	674274	Megalithic tomb - wedge tomb	DRUMMI N (Kilseily ED)	T01	4220
102	CL0 44- 045— -	559114	670798	Megalithic tomb - wedge tomb	FORMO YLE MORE	T02	4222
103	CL0 45- 017— -	568231	672518	Enclosure	CREEVE ROE	T05	4243
104	CL0 54-	564628	667751	Ritual site - holy well	ARDATA GGLE	T07	4309

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
	002— -						
105	CL0 45- 018— -	568324	673071	Enclosure	CREEVE ROE	T03	4315
106	CL0 44- 044— -	558261	672005	Children's burial ground	KYLE	T02	4322
107	CL0 45- 0190 01-	568352	673418	Standing stone	KNOCK YCLOVA UN	T03	4338
108	CL0 45- 0190 02-	568352	673418	Mound	KNOCK YCLOVA UN	T03	4338
109	CL0 36- 037— -	557940	675110	Enclosure	DRUMMI N (Killokenn edy ED)	T01	4412
110	CL0 44- 043— -	557989	672440	Enclosure	DERRY (Tulla Lower By.)	T02	4445
111	CL0 45- 056— -	568433	674042	Enclosure	BALLYV ALLY	T03	4479
112	CL0 45- 021— -	568513	672520	Enclosure	CREEVE ROE	T05	4525
113	CL0 45- 022— -	568530	672251	Enclosure	CREEVE ROE	T05	4542
114	CL0 45-	568517	674010	Enclosure	BALLYV ALLY	T03	4557

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
	020— -						
115	CL0 53- 021— -	563922	667354	Enclosure	ARDA TGA	T07	4558
116	CL0 45- 023— -	568573	672871	Enclosure	CREVE ROE	T03	4579
117	CL0 45- 024— -	568602	673149	Enclosure	KNOCK YCLOVA UN	T03	4590
118	CL0 37- 015— -	567253	676559	Enclosure	BALLYC UGGAR AN	T03	4591
119	CL0 37- 018— -	568091	675456	Redundant record	CRA GLE A	T03	4609
120	CL0 37- 013— -	566353	677286	Enclosure	CARRO WNAKIL LY (Tulla Lower By.)	T03	4617
121	CL0 53- 018— -	563328	667247	Enclosure	ARDA TGA	T07	4636
122	CL0 37- 012— -	566307	677364	Enclosure	CARRO WNAKIL LY (Tulla Lower By.)	T03	4661
123	CL0 44- 012— -	557460	673920	Megalithic tomb - wedge tomb	VIOLET HILL	T01	4747

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
124	CL0 45-025— -	568762	673203	Enclosure	KNOCK YCLOVA UN	T03	4748
125	CL0 45-026— -	568777	672850	Enclosure	CREEVE ROE	T03	4784
126	CL0 53-020— -	563378	667077	Megalithic tomb - wedge tomb	ARDATA GGLE	T07	4805
127	CL0 45-027— -	568822	673136	Enclosure	KNOCK YCLOVA UN	T03	4810
128	CL0 53-009— -	560619	667882	Ritual site - holy well	KILMOR E (Tulla Lower By.)	T07	4873
129	CL0 45-047— -	568430	670251	Fulacht fia	CLOONF ADDA	T05	4921
130	CL0 45-028— -	568928	672947	Standing stone	CREEVE ROE	T03	4926
131	CL0 45-029— -	568950	672913	Standing stone	CREEVE ROE	T03	4951

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14.3.3.3.1 *The Prehistoric Period*

The prehistoric period is represented by at least 30 monuments including megalithic tombs (11 wedge tombs, 4 megalithic structures and 2 unclassified megalithic tombs), an unclassified cairn, 2 fulachta fiadh, a hillfort, a cist and 7 standing stones.

Hillforts comprise a large, enclosed area that is more than 1 hectare in size (diam. c. 110m), and usually encompassing between 2 and 22 hectares (diam. exceeding c. 160m). Hillforts are always located in high upland terrain – on top of, or on the spur or ridge of a hill or mountain, or on hills which, if not high, are very prominent locally. They are defined by an earthen or earth and stone bank/banks or a

wall/walls and external fosse/fosses and can be circular, oval or more irregularly shaped in plan if following the contours of a hilltop. In the case of bivallate or multivallate examples, the banks are often widely spaced. They may have been important ceremonial tribal centres and/or permanent or temporary settlements. Some examples date from the Early Neolithic (c. 3600 BC), others from the Middle to Late Bronze Age (c. 1400-500 BC) with examples of reoccupation in the later Iron Age (c. 100-400 AD). The hillfort located within the 5km study area is located c. 2.9km from the nearest Proposed turbine, T02.

Megalithic tombs and structures comprise 17 of the monuments within the 5km study area which date to the prehistoric period. Eleven of these comprise wedge tombs the nearest of which is located c. 1.2km from the nearest Proposed turbine, T01. Wedge tombs consist of a long burial gallery, sometimes with an antechamber or small closed end-chamber. They are generally broader and higher at the front, which invariably faces in a westerly direction. They are roofed by slabs laid directly on the side-walls which often have one or more rows of outer- walling. Evidence from the small number of excavated examples suggests that they were being built between 2,500 and 2,000 BC representing the last phase of megalithic tomb building.

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 fulacht fia is situated c. 720m to the east of T5.

An unclassified cairn CL044-065— is located just outside the EIAR boundary in Lackareagh Beg townland (Figure 14-7 below) It is situated on the summit of a hill just over 200m to the south-east of the nearest Proposed turbine, T05. It should be noted that the location of the cairn as indicated by the red SMR dot is incorrect, the correct position for the monument being c. 36m to the south. Unclassified cairns comprise a mound constructed primarily of stone which cannot be classified as a specific cairn type. They can date to any period from prehistory onwards. The term cairn is derived from the Irish word 'carn' meaning a heap or pile of stones. The cairn at Lackareagh was visited as part of the assessment and comprises an overgrown mound of stones with a depression towards the centre of same. Given its hilltop location it commands extensive views to the north-west and north. A description for the monument is not currently available on the HEV. It is also not depicted on the available historic mapping. The ZTV demonstrates theoretical visibility of 5-7 proposed turbines from the monument location.

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Plate 14-1: CL044-065— Cairn – unclassified, looking SE.



Plate 14-2: Extensive view to NW from CL044-065— Cairn – unclassified.

Seven standing stones are located within 5km of the Proposed Wind Farm. Standing stones consist of a stone which has been deliberately set upright in the ground, usually orientated on a north-east-south-west axis, although other orientations do occur, and varying in height from 0.5m up to 6m. They functioned as prehistoric burial markers, commemorative monuments, indicators of routeways or boundaries and date from the Bronze and Iron Ages (c. 2400 BC - AD 500), with some associated with early medieval ecclesiastical and burial contexts (c. 5th-12th centuries). The nearest standing stone is situated c. 1.4km from the nearest proposed turbine, T05.

14.3.3.3.2

The Early Medieval Period

The Early Medieval period is mainly represented by enclosures which account for 80 of the 131 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, such as a ringfort. 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. The nearest enclosures comprise those located within the Proposed Wind Farm site boundary, CL044-063—, CL044-031— and CL044-086—. Monument descriptions are not available on the HEV for the enclosures, however, it should be noted that CL044-086— is levelled and no longer has any above-ground expression. Enclosures CL044-063— and CL044-031— comprise upstanding but low-visibility monuments.



Plate 14-3: Site of enclosure CL044-086—, looking WNW.



Plate 14-4: General view of enclosure CL044-031— from farm track to west, looking NE.

14.3.3.3.3 **Medieval Period**

At least one monument within 5km of the proposed turbines may be attributed to the medieval period. It comprises an unclassified castle which is situated c. 1.3km from the nearest Proposed turbine, T2.

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.

14.3.3.3.4 **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, burial grounds, children's burial grounds, a holy well and a bullaun stone. 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.

One church and graveyard are located within 5km of the proposed turbines at Killokennedy townland c. 1.1km from the nearest Proposed turbine, T02. 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: Cillin, 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 c. 2.2km from the nearest Proposed turbine, T07.

Two burial grounds are located within 5km of the proposed turbines. The nearest of these monuments is situated c. 940m from the nearest Proposed Turbine, T03. Burial grounds comprise an area of ground, set apart for the burial of the dead, not associated with a church. They date from the medieval period (5th - 16th centuries AD) onwards.

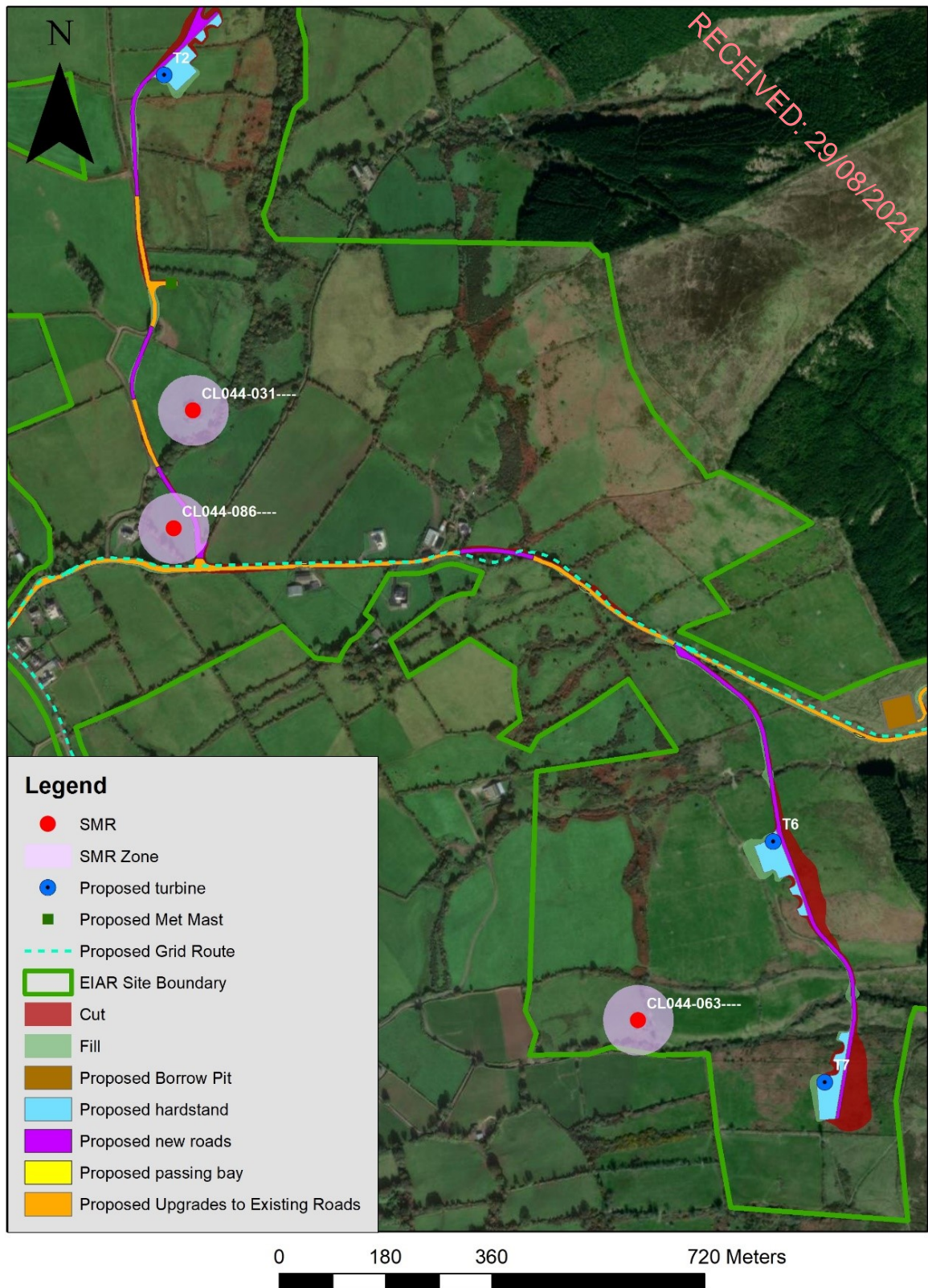


Figure 14-4: Recorded monuments within the Proposed Wind Farm site boundary.

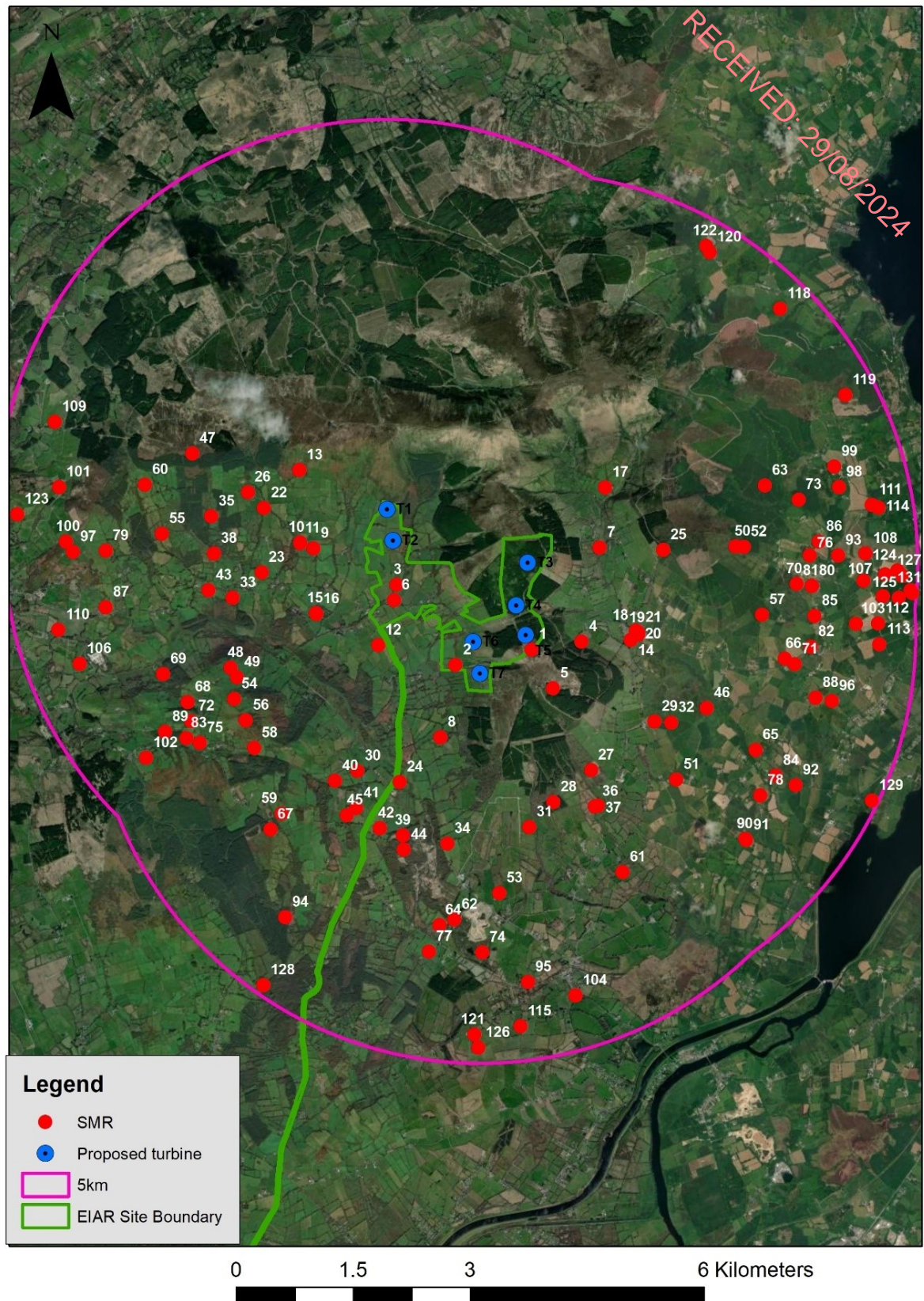


Figure 14-5: Recorded monuments within 5km of the proposed turbines.

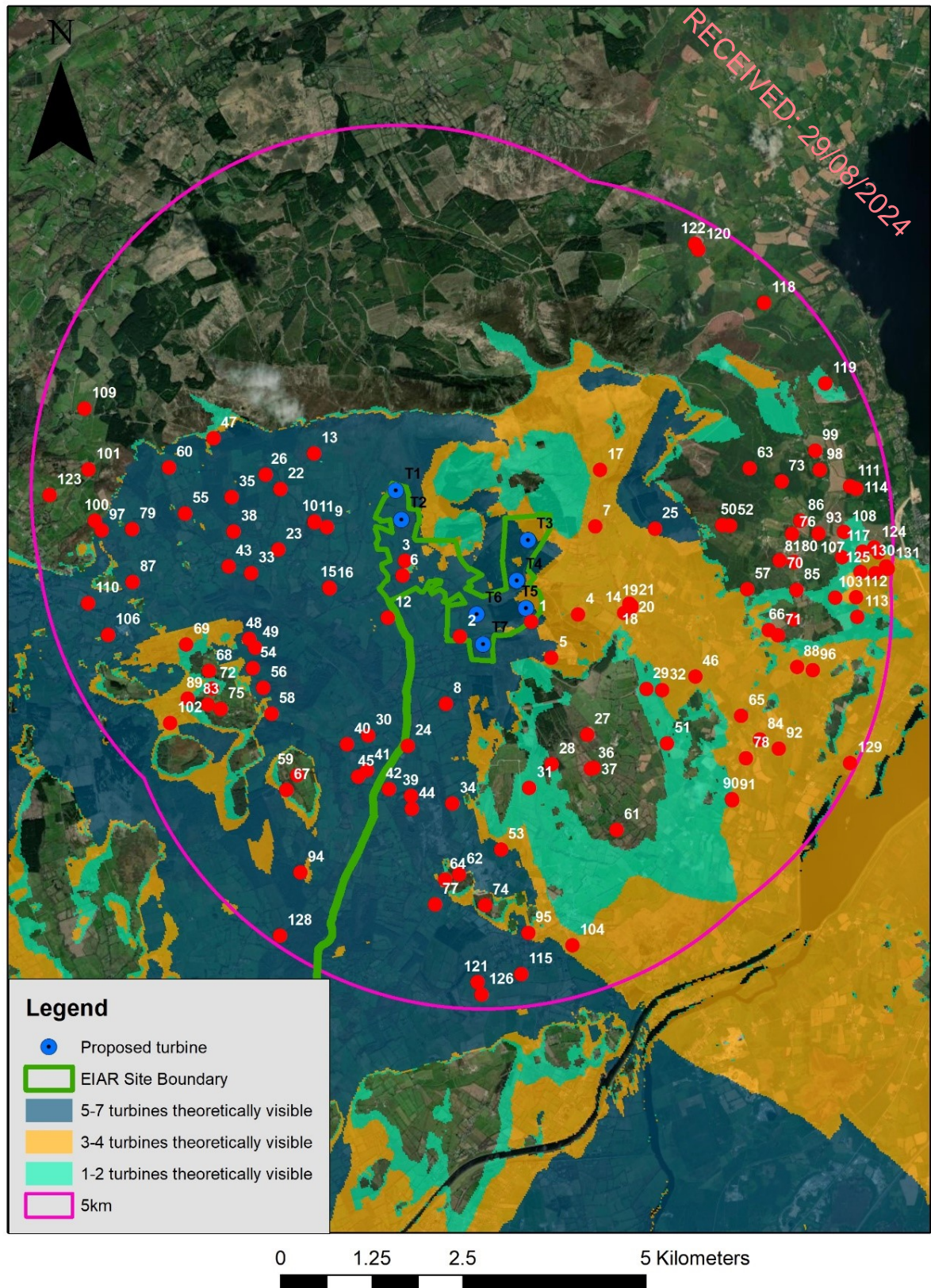


Figure 14-6: Recorded monuments within 5km of the proposed turbines and ZTV.

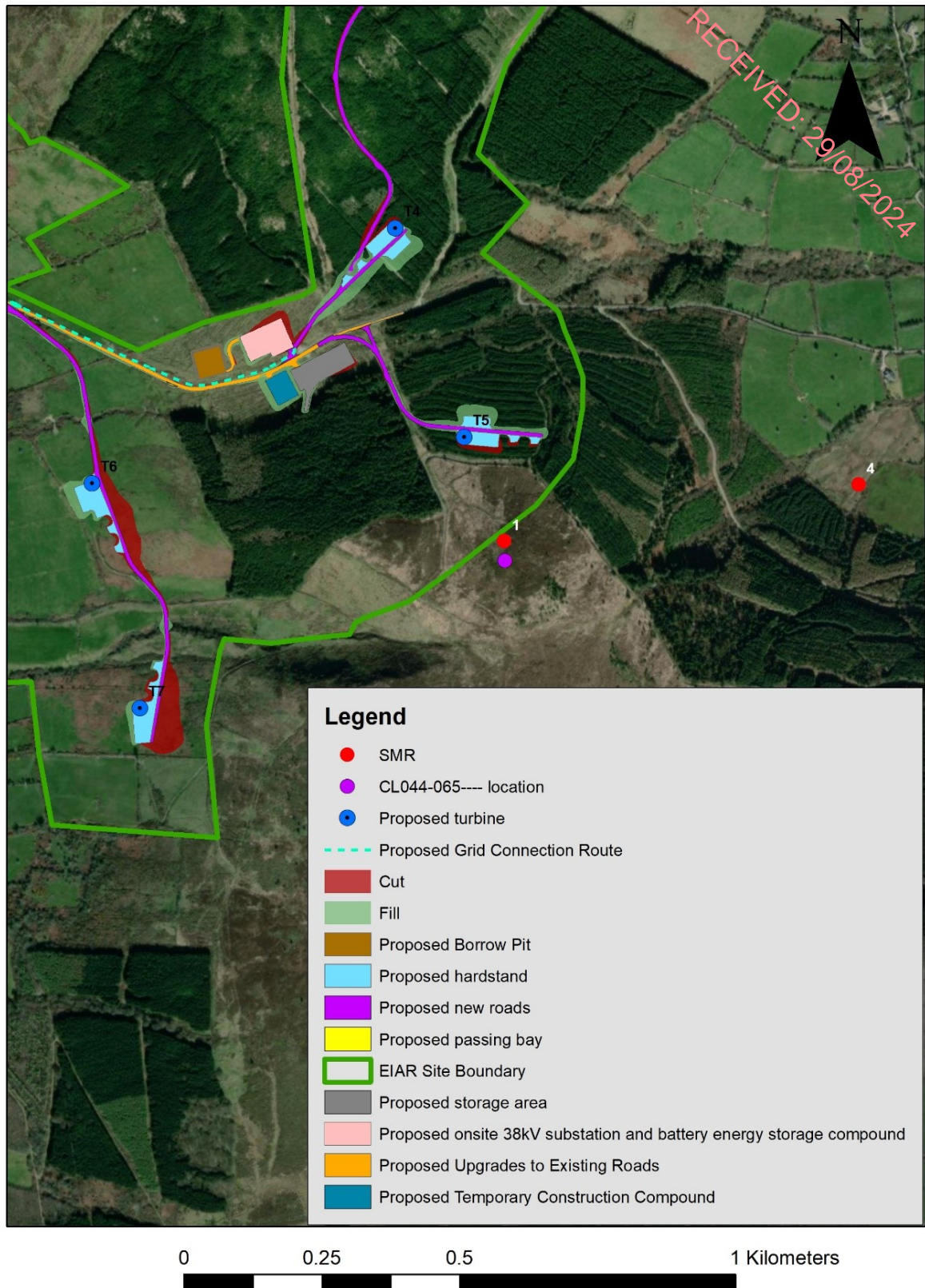


Figure 14-7: Location of cairn CL044-065— outside EIAR Site Boundary.

14.3.3.4 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. One entry was returned for the townland of Lackareagh Beg but had no archaeological findings (see below). The entry as provided on www.excavations.ie is reproduced here.

2002:0181 - LACKAREAGH BEG, Clare

County: Clare Site name: LACKAREAGH BEG

Sites and Monuments Record No.: SMR 45:36(01-04) Licence number: 02E0156

Author: Brian Hodkinson

Site type: No archaeology found

Period/Dating: N/A

ITM: E 564756m, N 671997m

Monitoring of the groundworks for a private house, in the vicinity of an enclosure, standing stone and possible megalith, revealed no deposits or artefacts of archaeological significance. According to the SMR mapping, there was an enclosure in an adjacent field, but the monument is no longer extant because of erosion by the Ardcloney River.

14.3.3.5 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, the nearest find comprising a polished stone axehead is located c. 2.6km to the west.

National Museum Point: Polished Stone Axehead

Name: 1971:912

Object Type: Polished Stone Axehead

14.3.3.6 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 affected by construction phase activities. Mitigation measures to ameliorate this potential effect are detailed in Section 14.4.3.4 below.

14.3.3.7 Archaeological Landscapes

No archaeological landscapes have been formally identified or designated in the Clare CDP 2023-2029.

14.3.3.8 Protected Structures

No Protected Structures are located within the Proposed Wind Farm site. Protected Structures along the Proposed Grid Connection Route are dealt with in Section 14.3.4.3 below.

One Protected Structure (Ref. 188) is located just inside the EIAR Site Boundary in the village of Kilbane. It comprises Kilbane Bridge and is described in the CCDP (Vol. 4 RPS) as follows:

RPS No.: 188	Name: Kilbane Bridge	NGR: 162029 ; 172600
NIAH No.: 20404407	Area: Broadford	Map: Volume 2
Structure: Bridge	Townland: Kilbane	Map reference: I8
Date: 1740-1760	Summary description: Single arch stone road bridge over river in good repair. Constructed of rubble limestone with coursed lime mortar joints. Large cut dressed limestone capping exists on parapet walls. Parapet walls are three courses high with capping on top. Cut-stone voussoirs in good repair with cut ring stones over segmented arches. Soffits are in good repair with no evidence of render.	
In use as: Bridge		
Additional Use: N/A		
Historical Use: N/A	Categories of special interest: Architectural, Material, Historical, Technical	
Rating: Regional		



Figure 14-8: Extract from CCDP, RPS showing entry for Kilbane Bridge, (Ref. 188).

No works to the bridge, which is located adjacent to the Proposed Grid Connection Route (see Section 14.3.4.3 below), will occur as a result of the Proposed Project.



Plate 14-5: Kilbane Bridge (RPS Ref. 188), looking NW.

Ten protected structures are located within 5km of the proposed turbines. Many of the structures are also included in the NIAH. They are shown on Figure 14-9 and listed in Table 14-5. The ZTV shows that three structures are located in areas where 5-7 turbines will theoretically be visible (Figure 14-10) with four structures where 3-4 turbines will theoretically be visible. One structure is located in an area where 1-2 turbines will theoretically be visible while two structures are located where none of the proposed turbines will theoretically be visible. Potential impacts and mitigation are addressed below in Section 14.4.

The nearest structures comprise Kilbane Bridge (Ref. 188), described above and shown in Plate 14-5, and St Mary's Church (Ref. 99), both of which are located in Kilbane village. The bridge is located c. 992m from the nearest Proposed turbine, T02, while the church is located c. 1.2km from the nearest Proposed turbine, T02.

Table 14-5: RPS structures within 5km of the proposed turbines.

RPS ID	NIAH Reg.	STRUCTURE	ITM E	ITM N	TURBINE	DISTANCE TO TURBINE (m)
188	20404407	Kilbane Bridge	561989	672641	T02	992
99	20404401	St Mary's Church, Kilbane	561754	672437	T02	1267
427	N/A	Glenomera House	561861	670253	T07	2242
133	20404516	Sacred Heart Church, Garraunboy	567807	672114	T05	3826
190	20404518	Bridgetown Bridge	564566	668105	T07	3952
172	20405405	St Thomas's Church, Ardnataggle	564495	667992	T07	4041
73	N/A	The Forge, Ardnataggle	564615	667787	T07	4271
94	20404517	Ross House	566916	669201	T05	4316
588	N/A	Ardcloony Bridge	567497	669262	T05	4688
89	N/A	Two Mile Gate Cottage	567331	676830	T03	4839

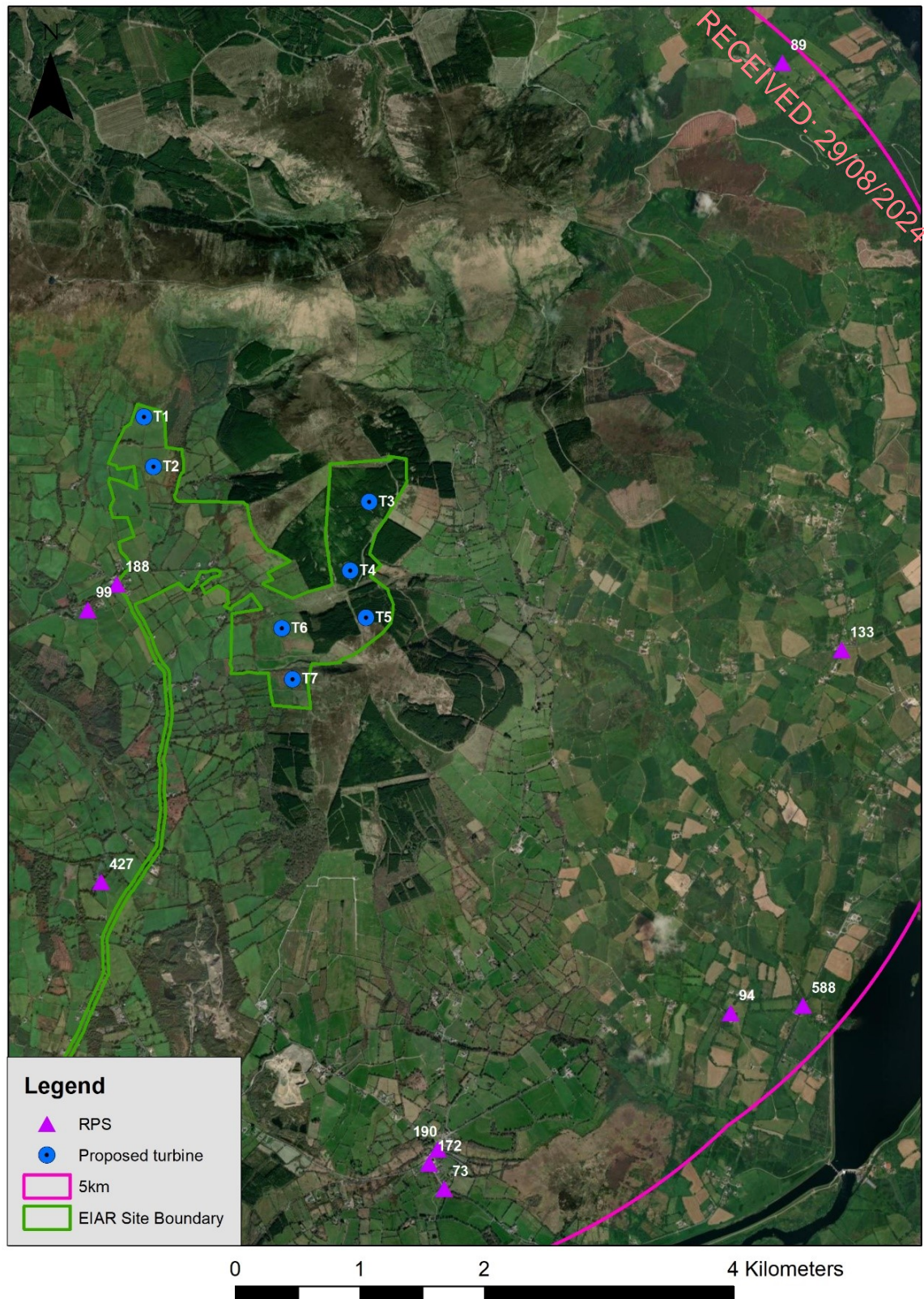


Figure 14-9: RPS structures located within 5km of the proposed turbines.

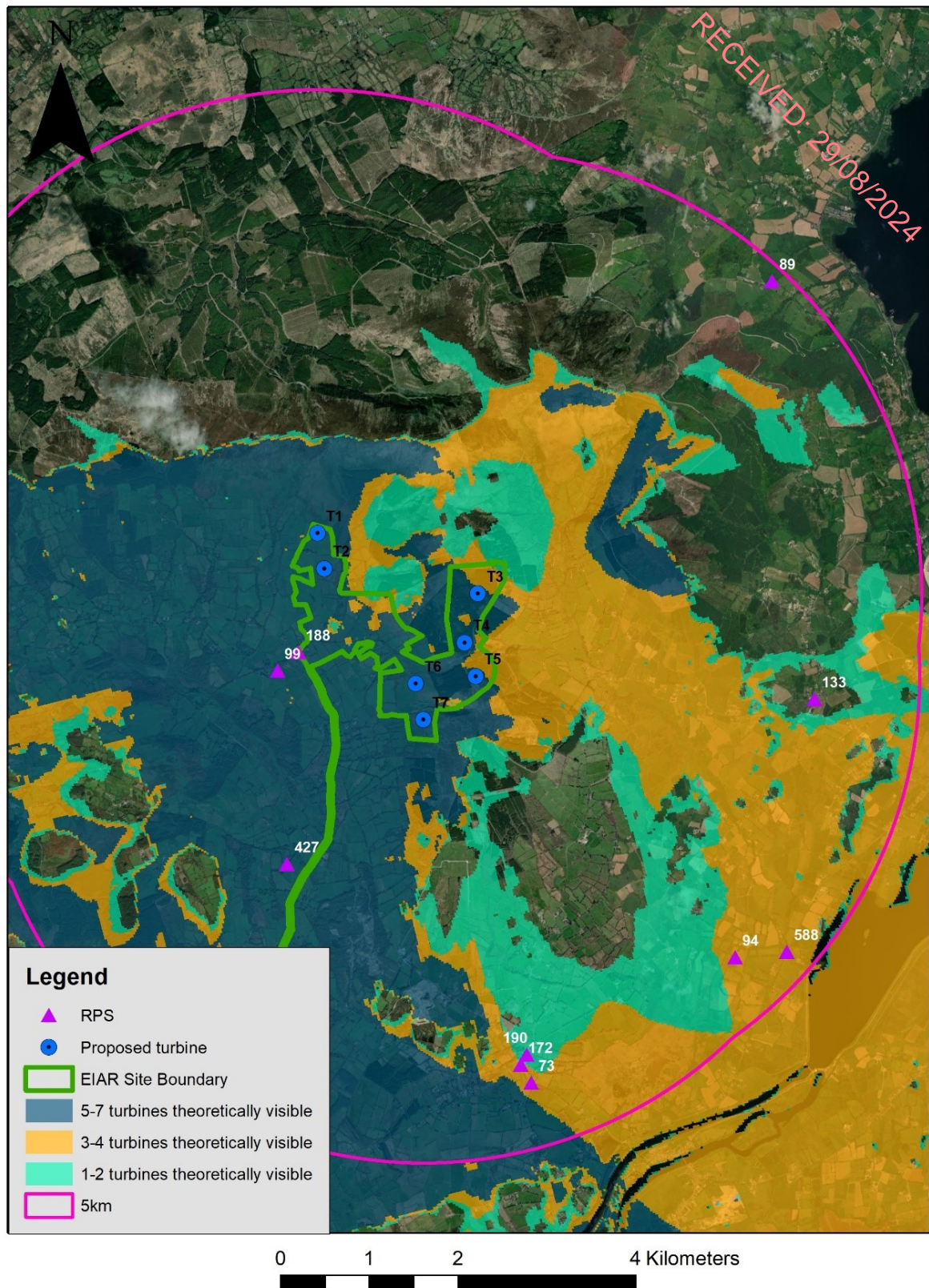


Figure 14-10: RPS structures within 5km of the proposed turbines within the ZTV

14.3.3.9 NIAH Structures and Historic Gardens

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 14.3.4 below.

Six structures listed in the NIAH are located within 5km of the proposed turbines and are listed in Table 14-6 and shown in Figure 14-11 below. The nearest structure comprises the bridge at Kilbane (Reg. 20404407) which is also a Protected Structure (Ref. 188) (see Section 14.3.3.8 above). The ZTV demonstrates theoretical visibility 5-7 turbines from two of the NIAH structures, theoretical visibility of 3-4 turbines from two structures, and theoretical visibility of 1-2 turbines from one structure. One structure is located in area where none of the proposed turbines will theoretically be visible (Figure 14-12). Potential effects on this aspect of the built heritage resource are addressed below in Section 14.4.

Seven historic gardens are located within 5km of the proposed turbines (Table 14-7, Figure 14-11). Some of those gardens are associated with the NIAH structures listed in Table 14-6. The nearest historic garden comprises that associated with Ballyquin House and is located c. 2.4km from the nearest Proposed turbine, T07. Ballyquin House is no longer extant and many of the original garden features are no longer present.

Table 14-6: NIAH sites within 5km of the proposed turbines.

NIAH Reg.	Date	Structure]	Townland	ITM E	ITM N	Turbine No.	Distance To Turbine (m)
20404407	1800 - 1840	Bridge	KILBANE,KILLEAGY (Goonan)	561987	672642	T02	991
20404401	1840 - 1860	Saint Mary's Catholic Church	KILBANE	561754	672437	T02	1266
20404516	1905 - 1910	Catholic Church of the Sacred Heart and Saint Lua	LACKENBAUN	567808	672114	T05	3827
20404518	1830 - 1870	Bridge	CLONBOY	564567	668105	T07	3953
20405405	1975 - 1985	Saint Thomas's Catholic Church	ARDATAGGLE	564494	667991	T07	4041
20404517	1760 - 1800	Ross House	ROSS (TULLA LOWER)	566948	669215	T05	4328

Table 14-7: Historic gardens located within 5km of the proposed turbines.

Site Name	ITM E	ITM N	Turbine No.	Distance To Turbine (m)
Ballyquin House	562158	669741	T07	2476
Mount Shannon	565058	669141	T07	3202
Glebe House	566757	670240	T05	3494
Clonboy House	564758	668641	T07	3513
Ross House	566957	669141	T05	4388
Ardcloony House	567657	669141	T05	4889
Violet Hill	557259	673640	T01	4960

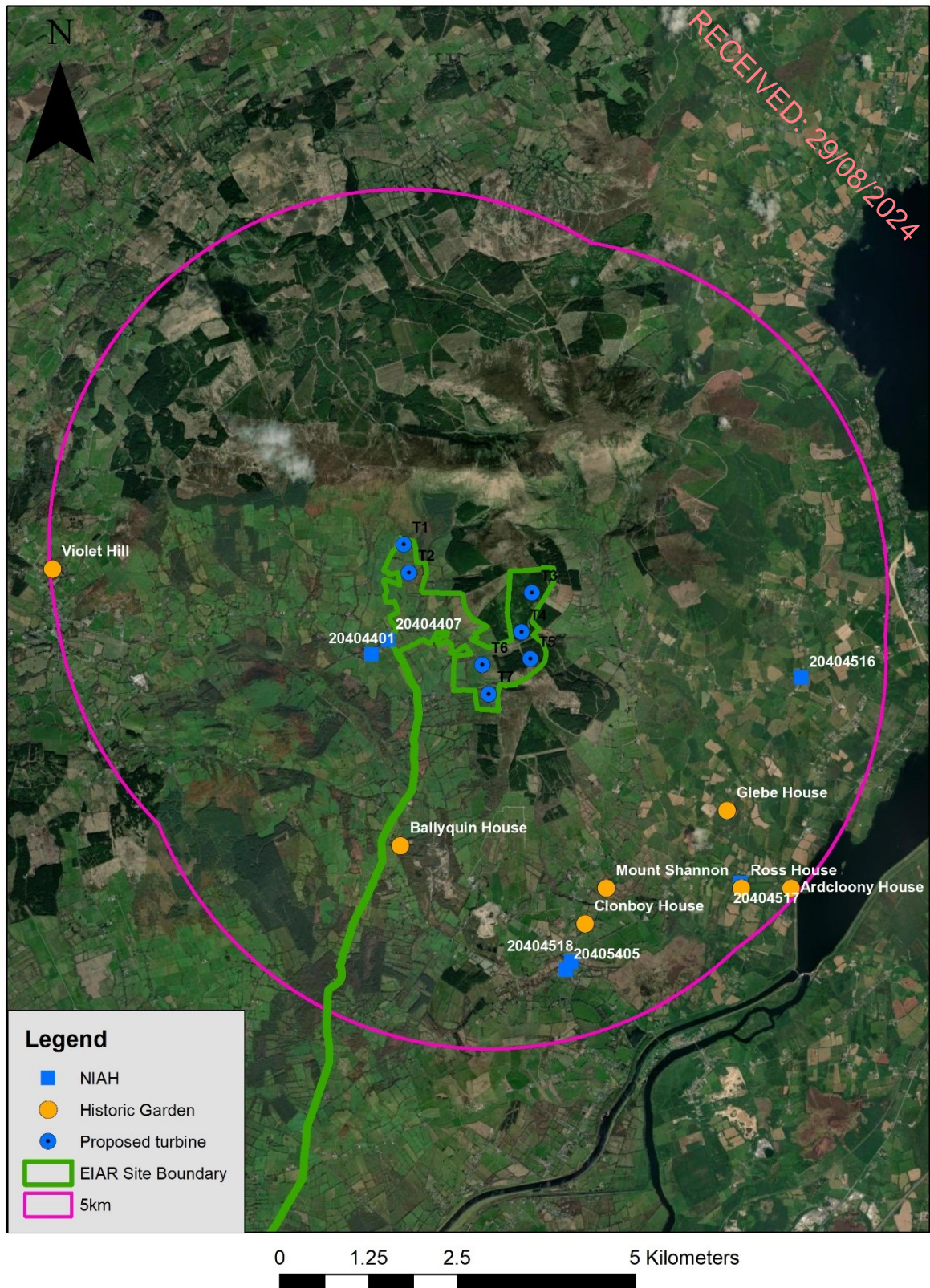


Figure 14-11: NIAH structures and historic gardens within 5km of the proposed turbines.

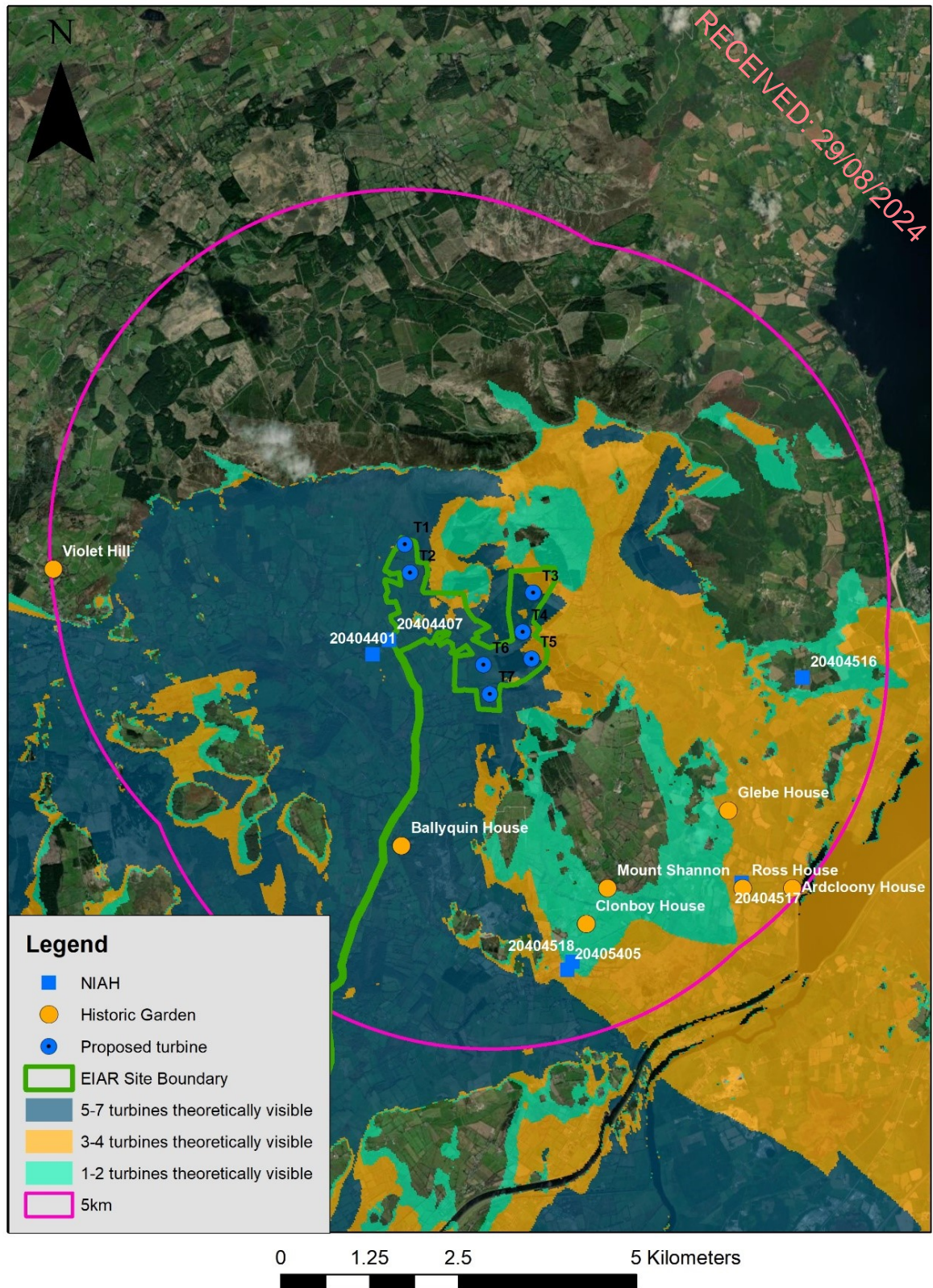


Figure 14-12: NIAH structures and historic gardens within 5km of the proposed turbines within the ZTV showing theoretical visibility.

14.3.3.10 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 surveys 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 western portion of the site divided into fields for agricultural purposes with more open marginal land towards the east. 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.

14.3.3.11 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 T04 crosses the boundary between Maherareah and Killeagy. 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 14-8).

Table 14-8: Townlands within the Proposed Wind Farm site and their meanings.

Townland	Logainm Meaning
SHANNAKNOCK (An Seachnoc)	No meaning provided. Possible meaning – ‘the old hill’
KILLEAGY (Ryan) (Coill Eagáí (Ryan))	No meaning provided
KILLEAGY (Stritch) (Coill Eagáí (Stritch))	No meaning provided
KILLEAGY (Goonan) (Coill Eagáí (Goonan))	No meaning provided
LACKAREAGH BEG (An Leaca Riabhach Bheag)	The small grey or streaked hillside
BALLYMOLONEY (Baile Uí Mhaolomhnaigh)	No meaning provided, likely to mean Maloney’s homestead, town or townland
MAGHERAREAGH (An Machaire Riabhach)	No meaning provided, possibly means the grey or streaked plain

14.3.3.12 Proposed Turbine Delivery Route

It is envisaged that the large wind turbine components will be delivered to the Proposed Project site from Foynes (Shannon) Port, via the N69, N18, M7 motorway, R494, R463, R466, and L3022-0. Accommodation works will be required along the public road network at O’Briens bridge for the proposed Blade Transition Area. No Cultural Heritage assets (National Monuments, recorded monuments, RPS or NIAH structures or items of local cultural heritage merit) are located on or in close proximity to the proposed Blade Transition Area.

A visual assessment of the proposed accommodation works areas on the TDR was carried out. 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).

14.3.4 Proposed Grid Connection Route

The Proposed Grid Connection Route includes for 38kV underground grid connection cabling, connecting the proposed onsite 38kV substation to the national electricity grid via the existing Ardnacrusha 110kV electricity substation located in the townlands of Castlebank and Ballykeelaun. The cabling will be located within the public road corridor or existing tracks for its entire length. The total length of the Proposed Grid Connection Route is approximately 14.7km, all of which is located in Co. Clare.

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 14-1.

14.3.4.1 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 Monuments are located in Killaloe over 6km to the east.

14.3.4.2 Recorded Monuments

Two recorded monuments, CL044-086— Enclosure and CL044-061— Enclosure, are located within 100m of the Proposed Grid Connection Route. The nearest recorded monument to the proposed onsite 38kV substation comprises enclosure CL044-063— which is discussed in Section 14.3.3.3 above as it is located within the Proposed Wind Farm site. Enclosure CL044-086— is also located within the Proposed Wind Farm site and comprises a levelled monument which is discussed in Section 14.3.3.3 above. Neither monument is described on the HEV and no descriptive information is contained within the ASI monument files. The distance to the Proposed Grid Connection Route as listed in Table 14-9 are to the centrepoint of the monuments. The distance of the Proposed Grid Connection Route to the outer extents of the enclosures may be less than that provided in Table 14-9 below, however, the outer extent of CL044-061— cannot be determined as it is not depicted on the available historic mapping, nor is it visible on aerial photography. CL044-086— is depicted on the second edition OS map as a hachured oval enclosure, the outer extent of which measures c. 41m to the Proposed Grid Connection Route (Figure 14-14). The latter does not extend through the Zone of Notification (ZoN) for either monument. The monuments are listed in Table 14-9 below and shown on Figure 14-13.

Table 14-9: 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
CL044-061—	562369	670488	Enclosure	BALLYQUIN MORE	61	Not within Zone of Notification
CL044-086—	562299	672820	Enclosure	KILLEAGY (Stritch)	64	Not within Zone of Notification

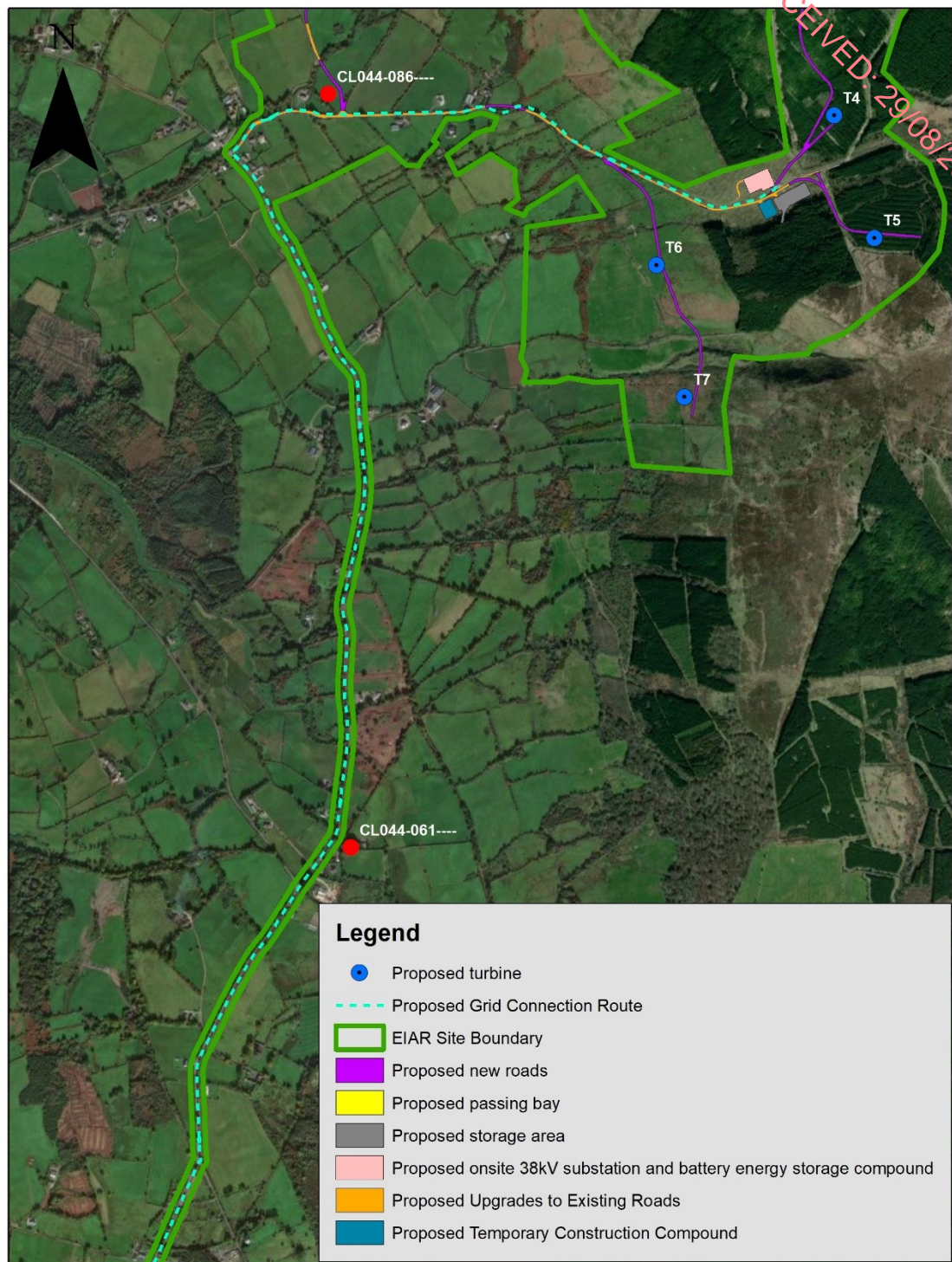


Figure 14-13: Overview of recorded monuments within 100m of the Proposed Grid Connection Route.

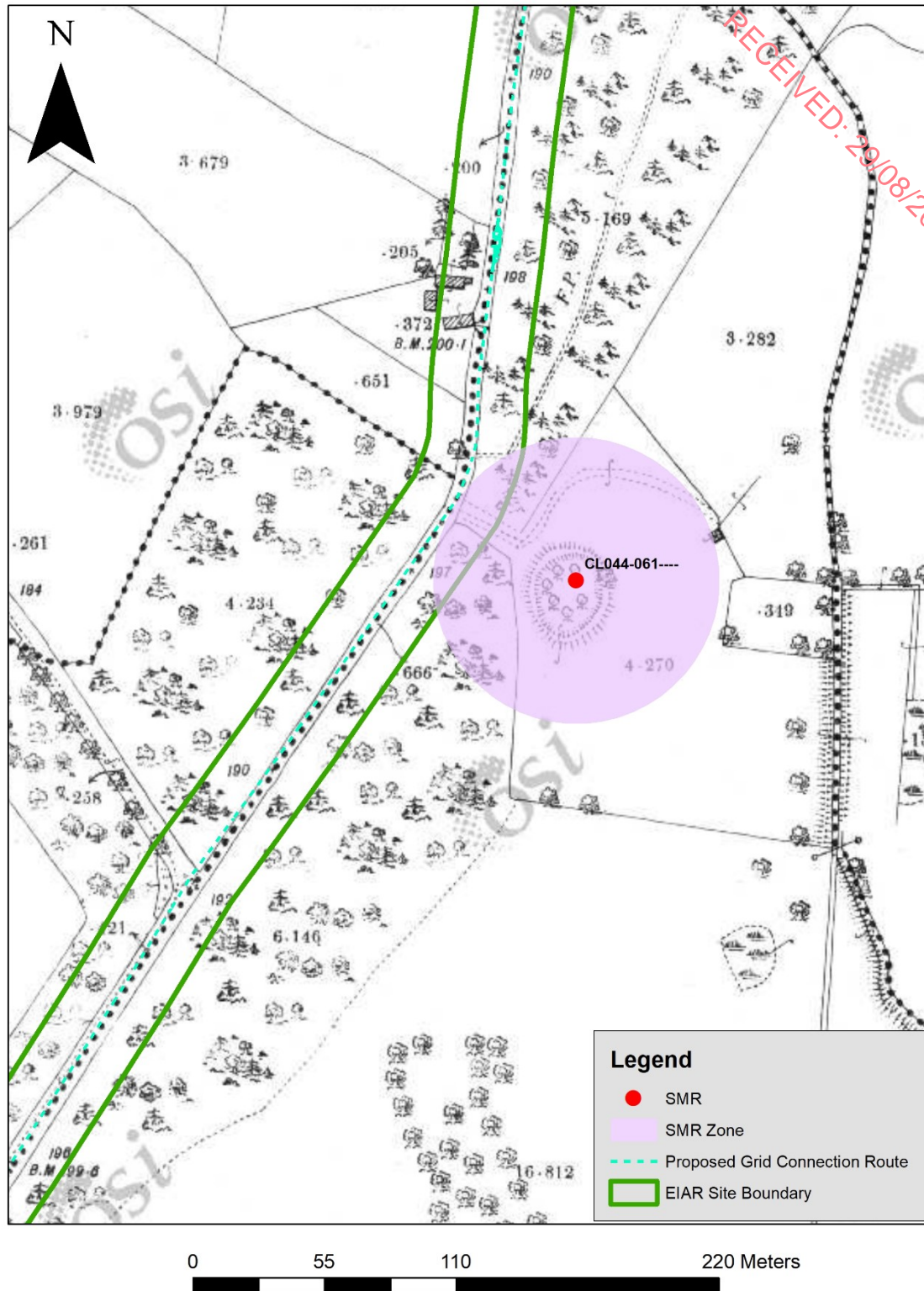


Figure 14-14: Enclosure CL044-061— as depicted on the second edition OS map in relation to the Proposed Grid Connection Route.

14.3.4.3 Protected Structures

Two Protected Structures (RPS Ref. 188 and 650) are located within 100m of the Proposed Grid Connection Route (Table 14-10 and Figure 14-15). Both structures comprise bridges, Kilbane Bridge Ref. 188 and Blackwater Bridge Ref. 650. Kilbane Bridge is also located within the EIAR Site Boundary and is discussed in Section 14.3.3.8 above. No works are taking place to Kilbane Bridge which is not

located directly on the Proposed Grid Connection Route. The Proposed Grid Connection Route crosses Blackwater Bridge (RPS Ref. 650) towards the southern end of the route. The option of strapping the Proposed Grid Connection Route electrical cable to the side of the bridge structure within a stainless steel pipe fixture has been investigated, as there is insufficient depth in the bridge deck to bury the cables; Horizontal Directional Drilling (HDD) is not feasible due to the curvature of the road at this location. As the bridge is a Protected Structure consultation with Clare County Council Heritage Officer was carried out regarding the proposals for the Proposed Grid Connection Route at this location. An onsite meeting was held with the Heritage Officer as described in Chapter 2 on 26th March who had no objection in principle to the proposals, subject to a number of requirements regarding the methodology used to attach the ducting to the bridge. The methodology is detailed in Chapter 4 of the EIAR.

Table 14-10: RPS within 100m of the Proposed Grid Connection Route

RPS NO.	NIAH REF	Structure	ITM E	ITM N	Distance to Proposed Grid Connection Route
188	20404407	Kilbane Bridge	561989	672641	9
650	N/A	Blackwater Bridge	559361	662470	0

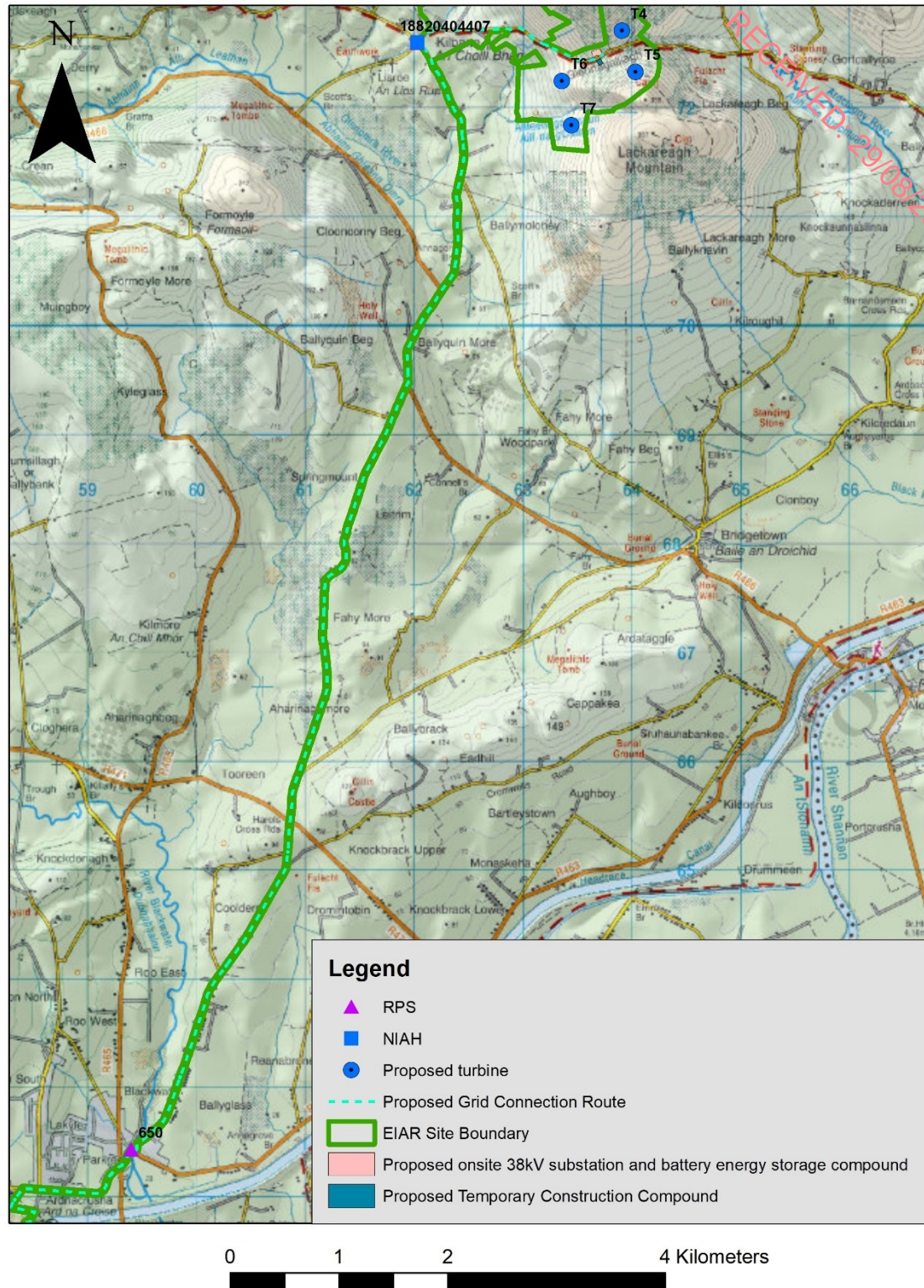


Figure 14-15: RPS and NIAH structures within 100m of the Proposed Grid Connection Route.


RPS No.: 650	Name: Blackwater Bridge	ITM: 559361 ; 662470	
NIAH No.: N/A	Area: Parteen	Map: Volume 2	
Structure: Bridge	Townland: Parkroe	Map reference: I12	
Date: 1780-1800	Summary description: Late 18 th century cut-limestone road bridge comprising single arch over the River Blackwater with ashlar voussoirs, spandrels and parapets.		
In use as: Bridge	Categories of special interest: Architectural, Detail/Design		
Additional Use: N/A			
Historical Use: Bridge			
Rating: Regional			

Figure 14-16: Extract from CCDP Vol 4 Record of Protected Structures showing entry for Blackwater Bridge, Ref. 650.



Plate 14-6: Blackwater Bridge, RPS 650.

14.3.4.4 NIAH

Only one structure listed in the NIAH is located within 100m of the Proposed Grid Connection Route and comprises Kilbane Bridge (Reg. 20404407) which is also a Protected Structure (Ref. 188) and is discussed in Section 14.3.4.3 above and shown on Figure 14-15. No works to the structure are proposed as part of the Proposed Grid Connection Route. A description of the bridge as provided on www.buildingsofireland.ie is reproduced below. No historic gardens are located within 100m of the Proposed Grid Connection Route.

14.3.4.4.1 NIAH Reg. 20404407 Kilbane Bridge

Description:

Single-arch rubble stone road bridge over river, built c. 1820, with cut-stone voussoirs.

14.3.4.5 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.

Two items of cultural heritage merit were noted along the Proposed Grid Connection Route and comprise bridges CH1 and CH2. They are listed in Table 14-11 and shown on Table 14-16. As HDD will be utilised at both bridge crossings no potential direct effects to these structures will occur.

Table 14-11: CH features along Proposed Grid Connection Route.

CH No.	Type	Name	ITM E	ITM N	Distance to Proposed Grid Connection Route
CH1	Bridge	Unnamed	562388	671852	0
CH2	Bridge	Aghnagor Bridge	562355	670802	0

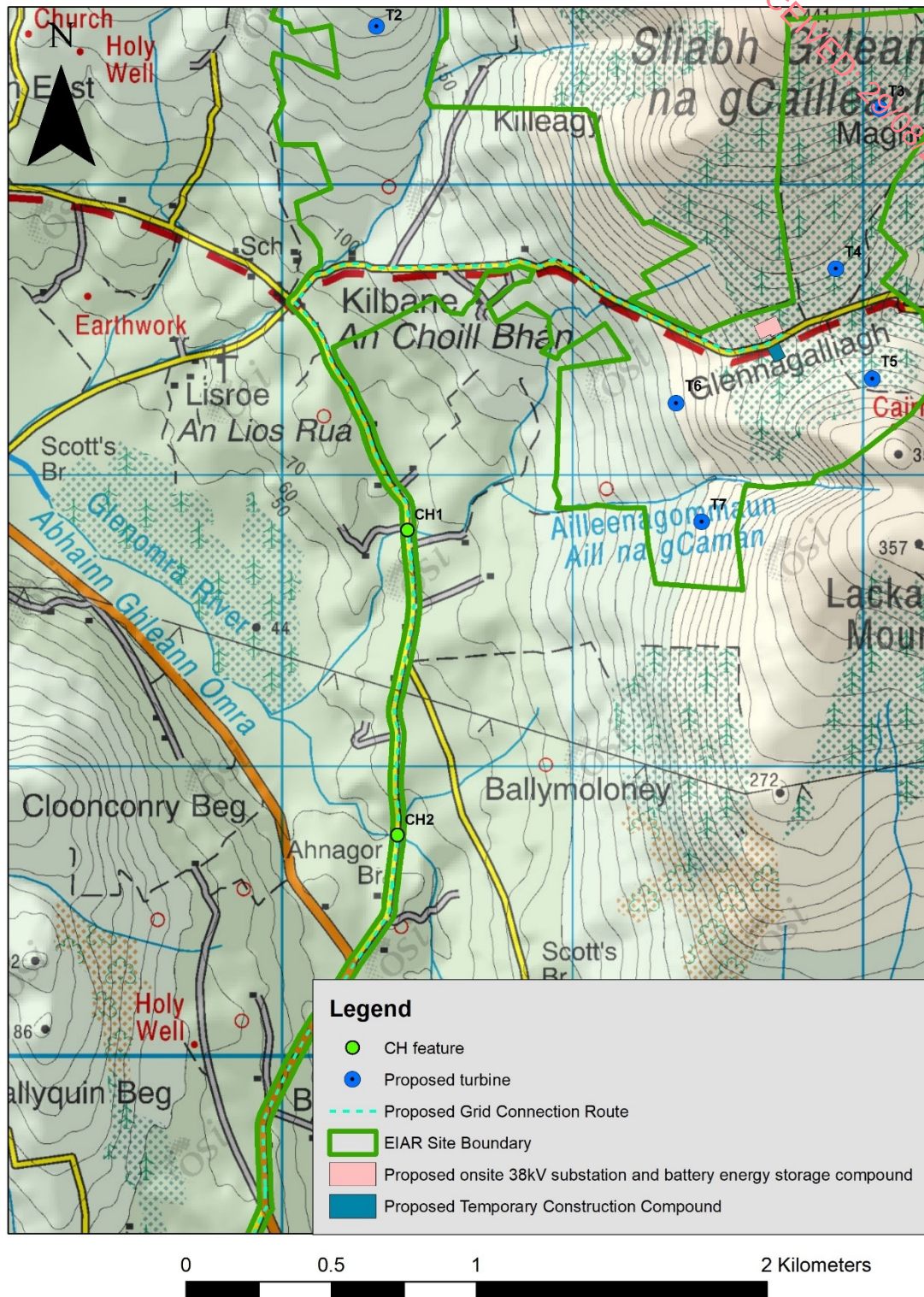


Figure 14-17: CH features along Proposed Grid Connection Route.

14.4

Likely Effects and Associated Mitigation Measures

14.4.1

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 Clare 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.

14.4.2

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 14.4.4 below. No indirect effects were identified which would occur at the construction stage.

14.4.3

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.

14.4.3.1

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.

14.4.3.2

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 Blade Transition Area 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.

14.4.3.3

Recorded Monuments

Three recorded monuments, CL044-063—, CL044-031— and CL044-086— are located within the Proposed Wind Farm site. None of the monuments are located within the footprint of proposed infrastructure or immediately adjacent to same therefore direct effects to the monuments as a result of the Proposed Project infrastructure therein are not identified. A total of 131 recorded monuments are located within 5km of the proposed turbines and include the three monuments within the Proposed Wind Farm site as referenced above. 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 14.4.4.3 below.

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

Two recorded monuments, CL044-086— Enclosure and CL044-061— Enclosure, are located within 100m of the Proposed Grid Connection Route, while none are located within the footprint of the proposed onsite 38kV substation and battery energy storage compound. The monuments are located off road and will not be directly affected by the Proposed Grid Connection Route which will be placed within the public road. The Proposed Grid Connection Route does not extend into the ZoN for either monument.

14.4.3.4 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 38kV 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.

14.4.3.5 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. Ten protected structures are located within 5km of the nearest Proposed turbine. Since these structures are located at a sufficient distance from the Proposed Wind Farm site, no direct effects to the structures will occur.

Two Protected Structures (RPS Ref. 188, Kilbane Bridge and Ref. 640 Blackwater Bridge) are located within 100m of the Proposed Grid Connection Route. Works to Kilbane Bridge which is located adjacent to the Proposed Grid Connection Route are not proposed therefore direct effects to this structure will not occur.

The option of strapping the Proposed Grid Connection Route underground cables to the side of the Blackwater Bridge (RPS No. 650) (as detailed in full in Chapter 4 of this EIAR) has been considered in relation to potential impacts on the bridge's status as a protected structure. The elevation to which it is proposed to strap the cable contains a single arch with voussoirs over the River Blackwater. The bridge also has parapet walls as is typical of stone road bridges. As the cable strapping solution at this location was designed with the special interest features of the Blackwater Bridge in mind (i.e. the arch and the parapet), the cable will be strapped above the arch, thus ensuring no direct negative effects on the arch of the bridge. Thus, it is not envisaged that the works required to strap the cable to the bridge will negatively directly affect the parapet walls or arch, mitigation measures are recommended in order to ensure that such direct effects do not occur at the construction stage of the Proposed Project.

Proposed Mitigation Measures

- The cables will be attached to Blackwater Bridge (RPS Ref. 650) as per the methodology outlined in Chapter 4 of the EIAR.
- The work shall be carried out in consultation with the Heritage Office of Clare County Council and shall ensure that any requirements of that office regarding works to the Protected Structure are implemented in full.
- All works at this location will be overseen by a suitably qualified archaeologist.

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.

14.4.3.6 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. Six 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 Blade Transition Area on the TDR therefore direct effects are not identified.

One structure listed in the NIAH is located within 100m of the Proposed Grid Connection Route and comprises Kilbane Bridge which is not located directly on the route. No direct effects to the Kilbane Bridge are therefore identified.

14.4.3.7 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.

Two items of cultural heritage merit (CH1-2) were noted along the Proposed Grid Connection Route and comprise two bridges. HDD will be utilised at CH1 the unnamed bridge crossing, while the crossing at CH2, Ahnagor Bridge will be completed within the bridge deck as there is sufficient room to install the cable therein. Potential direct effects to the bridge structures as a result of either proposed crossing method are not identified.

14.4.4 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 13 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.

14.4.4.1 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. No potential effects to the setting of such sites as a result of the Proposed Project are therefore identified.

14.4.4.2 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 Blade Transition Area along the TDR, or along the Proposed Grid Connection Route. Three National Monuments in State Care, one of which is also subject to a Preservation Order, are located within 10km of the proposed turbines. Three of the monuments are located in County Clare, with Derry Castle (PO 4/2001) located in County Tipperary. No National Monuments in State Care or those subject to a Preservation Order are located within 100m of the Proposed Grid Connection Route or on the footprint of the proposed onsite 38kV substation.

The nearest National Monuments to the proposed onsite 38kV substation are located in Killaloe over 6km to the east.

Table 14-12 below details the potential effects on National Monuments and those subject to a Preservation Order within 10km of the proposed turbines.

14.4.4.2.1 **National Monument No. 591, Preservation Order 24/1976**

The ringfort at Ballyvally is a National Monument (Nat. Mon. No. 591) and is also subject to a Preservation Order (24/1976). It is located c. 5.6km from the nearest Proposed turbine, T03. The ZTV indicates no theoretical visibility of the proposed turbines from this area therefore no potential visual effects to the setting of this monument are identified.

14.4.4.2.2 **National Monument No. 279 St. Molua's Church**

St. Molua's church in Killaloe (Nat Mon 279) is located c. 6km from the nearest Proposed turbine, T03. The ZTV indicates theoretical visibility of 3-4 turbines from this area. Photowire PW-F demonstrates limited visibility from the church, however, with only the tip of T03 visible on the horizon in the distance. No potential visual effects to the immediate setting of this monument are identified. Potential visual effects to its wider setting given the distance to the monument and the limited visibility demonstrated by the photowire is regarded as Imperceptible.

14.4.4.2.3 **National Monument No. 6 St. Flannan's Church**

St Flannan's Church at Shantraud (Nat. Mon. No. 6) is located in Kilalloe c. 6.3km from the nearest Proposed turbine, T3. The ZTV also demonstrates theoretical visibility of 3-4 turbines from this area. No potential visual effects to the immediate setting of the monument will occur. A change to its wider setting is acknowledged, however, given the distance of the proposed turbines from the church and its location in the town of Kilalloe this is considered to be Imperceptible.

Proposed Mitigation Measures

The distance of the National Monuments and those subject to a Preservation Order from the Proposed Wind Farm, in addition to the limited visibility of the proposed turbines from these locations, 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 and those subject to a Preservation Order will be Imperceptible.

Significance of Effects

The overall significance of effects will be Imperceptible.

Table 14-12: 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.	Name	Class	Townland	Turbine ID	Distance to nearest turbine (m)	Potential Effect	Significance of Effect
591	CL045-031—	Brian Boru's Fort	Ringfort	Ballyvally	T03	5637	Indirect visual	N/A
24/1976	CL045-031; CL045-031002-; CL045-031003-	Brian Boru's Fort	Ringfort	Ballyvally	T03	5637	Indirect visual	N/A
279	CL045-033015-	St. Molua's Church	Church	Killaloe	T03	6032	Indirect visual	Imperceptible
6	CL045-033003-	St. Flannan's Church	Church	Shantraud	T03	6373	Indirect visual	Imperceptible
4/2001	TN019-034001-; TN019-034002-; TN019-034003-; TN019-034004-; TN019-034005-	Derry Castle	Castle - tower house, Bawn, Crannog, Causeway, Ringfort - cashel	Derry Demesne	T03	7934	Indirect visual	N/A

14.4.4.3 Recorded Monuments

Three recorded monuments, CL044-063—, CL044-031— and CL044-086— are located within the Proposed Wind Farm site. A total of 131 recorded monuments are located within 5km of the proposed turbines and include the three monuments within the Proposed Wind Farm site as referenced above. The ZTV shows that 49 of the 131 monuments are located in areas where 5-7 turbines will theoretically be visible. Twenty-six monuments are located in areas where 3-4 turbines will theoretically be visible, and 19 monuments are located in areas where 1-2 turbines will theoretically be visible. Thirty-seven 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 at a level of potential effect on setting. Potential effects on setting as detailed in Table 14-13 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 or may no longer have any above-ground remains (such as CL044-086— which is located within the Proposed Wind Farm site) which further ameliorates effects on setting. No potential visual effect is concluded for redundant records, of which there is only one within 5km. The theoretical significance of effects for such monuments is graded as N/A in Table 14-13 below while an Imperceptible significance of effects is concluded for monuments located where no turbines will theoretically be visible.

Regarding the three recorded monuments within the Proposed Wind Farm site, the site walk-over survey and visual inspection of the Proposed Wind Farm site in addition to the desktop assessment shows that CL044-086— has no surviving above-ground remains, while CL044-031— comprises an upstanding monument with trees and scrub growing on its perimeter. A review of the available aerial photography for the area suggests that CL044-063— has some upstanding remains, albeit low visibility. In this regard the Moderate theoretical significance of effect on the setting of CL044-086— will in reality be Imperceptible as it has no above-ground remains. Similarly, the low-visibility nature of CL044-063— will ameliorate the theoretical significance of the visual effect on the setting of this monument.

An unclassified cairn CL044-065— is located just outside the EIAR boundary in Lackareagh Beg townland. It is situated on the summit of a hill just over 200m to the south-east of the nearest Proposed turbine, T05. The ZTV demonstrates theoretical visibility of 5-7 turbines from the monument location and a Moderate theoretical significance of effect on its setting is identified. Given the prominent location of the monument on the hill summit all seven turbines are likely to be visible from the monument with vegetative screening unlikely to ameliorate potential visual effects. However, as detailed in Section 13.4.3 of Chapter 13 of this EIAR, the unclassified Cairn (outside the EIAR Site Boundary) is not considered a high-value destinations as no above-ground infrastructure remains to identify it; moreover, it is not marked by signage, nor does it have easy access or parking to accommodate visitors. Furthermore, when considered with other similar monument types in the vicinity, a cist CL044-066— which is also a prehistoric burial monument, is located c. 560m to the south-east. The proposed turbines will not be located between these monuments and therefore will not affect any potential inter-visibility which may exist between same.

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

MA P ID	SMR	CLASS	TD.	TURBI NE ID	DISTAN CE TO TURBIN E (m)	No. of Turbines Theoretica lly visible	Theoretical Significanc e of Effect
1	CL04 4-065—	Cairn - unclassifi ed	LACKAREAGH BEG	T05	203	5-7	Moderate
2	CL04 4-063—	Enclosure	BALLYMOLONE Y	T07	333	5-7	Moderate
3	CL04 4-031—	Enclosure	SHANNAKNOCK	T02	570	5-7	Moderate
4	CL04 5-034—	Fulacht fia	LACKAREAGH BEG	T05	721	3-4	Slight

MA P ID	SMR	CLASS	TD.	TURBI NE ID	DISTAN CE TO TURBIN E (m)	No. of Turbines Theoretica lly visible	Theoretical Significanc e of Effect
5	CL04 4-066- -	Cist	LACKAREAGH MORE	T05	767	3-4	Slight
6	CL04 4-086- -	Enclosure	KILLEAGY (Stritch)	T02	768	5-7	Moderate
7	CL04 5-001- -	Burial ground	COUMBRACK	T03	943	3-4	Slight
8	CL04 4-062- -	Enclosure	BALLYMOLONE Y	T07	967	5-7	Moderate
9	CL04 4-029- -	Ritual site - holy well	KILLOKENNEDY	T02	1024	5-7	Moderate
10	CL04 4- 02800 1-	Church	KILLOKENNEDY	T02	1193	5-7	Moderate
11	CL04 4- 02800 2-	Graveyar d	KILLOKENNEDY	T02	1194	5-7	Moderate
12	CL04 4-060- -	Enclosure	KILBANE,KILLE AGY (Goonan)	T06	1222	5-7	Moderate
13	CL04 4-027- -	Megalithi c tomb - wedge tomb	KILLOKENNEDY	T01	1231	5-7	Moderate
14	CL04 5-035- -	Enclosure	LACKAREAGH BEG	T05	1350	3-4	Slight
15	CL04 4- 03000 1-	Earthwor k	CLOONGAHEEN EAST	T02	1360	5-7	Moderate

MA P ID	SMR	CLASS	TD.	TURBI NE ID	DISTAN CE TO TURBIN E (m)	No. of Turbines Theoretica lly visible	Theoretical Significanc e of Effect
16	CL04 4- 03000 2-	Castle - unclassifi ed	CLOONGAHEEN EAST	T02	1364	5-7	Moderate
17	CL04 5-002- -	Enclosure	CLASSAGH	T03	1383	3-4	Slight
18	CL04 5- 03600 1-	Standing stone	LACKAREAGH BEG	T05	1416	3-4	Slight
19	CL04 5- 03600 3-	Megalithi c structure	LACKAREAGH BEG	T05	1436	3-4	Slight
20	CL04 5- 03600 2-	Enclosure	LACKAREAGH BEG	T05	1442	3-4	Slight
21	CL04 5- 03600 4-	Standing stone	LACKAREAGH BEG	T05	1444	3-4	Slight
22	CL04 4-025- -	Standing stone	CLOONGAHEEN WEST	T01	1581	5-7	Moderate
23	CL04 4-026- -	Enclosure	CLOONGAHEEN EAST	T02	1735	5-7	Moderate
24	CL04 4-061- -	Enclosure	BALLYQUIN MORE	T07	1735	5-7	Moderate
25	CL04 5-062- -	Cupmark ed stone	AILLEMORE	T03	1748	5-7	Moderate
26	CL04 4-024- -	Enclosure	CLOONGAHEEN WEST	T01	1797	5-7	Moderate

MA P ID	SMR	CLASS	TD.	TURBI NE ID	DISTAN CE TO TURBIN E (m)	No. of Turbines Theoretica lly visible	Theoretical Significanc e of Effect
27	CL04 5-051- -	Enclosure	KILROUGHIL	T07	1890	0	Impercepti ble
28	CL04 4-067- -	Enclosure	BALLYKNAVIN	T07	1900	1-2	Not Significant
29	CL04 5-037- -	Enclosure	KNOCKADERRE EN (Tulla Lower By.)	T05	1992	1-2	Not Significant
30	CL04 4-059- -	Enclosure	CLOONYCONRY BEG	T07	2012	5-7	Slight
31	CL04 4-064- -	Enclosure	FAHY BEG	T07	2072	1-2	Not Significant
32	CL04 5-038- -	Enclosure	KNOCKADERRE EN (Tulla Lower By.)	T05	2181	3-4	Slight
33	CL04 4-023- -	Enclosure	CLOONGAHEEN WEST	T02	2185	5-7	Slight
34	CL04 4-077- -	Enclosure	BALLYMOLONE Y	T07	2225	5-7	Slight
35	CL04 4-021- -	Enclosure	CLOONGAHEEN WEST	T01	2256	5-7	Slight
36	CL04 5- 05200 2-	Bullaun stone	KILROUGHIL	T07	2256	0	Impercepti ble
37	CL04 5- 05200 1-	Children' s burial ground	KILROUGHIL	T07	2279	0	Impercepti ble
38	CL04 4-022- -	Enclosure	CLOONGAHEEN WEST	T01	2294	5-7	Slight

MA P ID	SMR	CLASS	TD.	TURBI NE ID	DISTAN CE TO TURBIN E (m)	No. of Turbines Theoretica lly visible	Theoretical Significanc e of Effect
39	CL04 4-073- -	Enclosure	BALLYQUIN MORE	T07	2304	5-7	Slight
40	CL04 4-056- -	Enclosure	CLOONYCONRY BEG	T07	2317	5-7	Slight
41	CL04 4-058- -	Enclosure	BALLYQUIN BEG	T07	2350	5-7	Slight
42	CL04 4-072- -	House - 16th/17th century	BALLYQUIN MORE	T07	2368	5-7	Slight
43	CL04 4-020- -	Enclosure	CLOONGAHEEN WEST	T02	2454	5-7	Slight
44	CL04 4-074- -	Enclosure	BALLYQUIN MORE	T07	2463	5-7	Slight
45	CL04 4-057- -	Ritual site - holy well	BALLYQUIN BEG	T07	2499	5-7	Slight
46	CL04 5-040- -	Enclosure	KNOCKADERRE EN (Tulla Lower By.)	T05	2503	3-4	Slight
47	CL03 6-038- -	Megalithi c tomb - wedge tomb	CLOONGAHEEN WEST	T01	2598	5-7	Slight
48	CL04 4-051- -	Megalithi c tomb - wedge tomb	CLOONYCONRY MORE	T02	2650	5-7	Slight
49	CL04 4-053- -	Megalithi c tomb - wedge tomb	CLOONYCONRY MORE	T02	2665	5-7	Slight
50	CL04 5-003- -	Enclosure	BALLYKILDEA	T03	2676	0	Impercepti ble

MA P ID	SMR	CLASS	TD.	TURBI NE ID	DISTAN CE TO TURBIN E (m)	No. of Turbines Theoretica lly visible	Theoretical Significanc e of Effect
51	CL04 5-039- -	Enclosure	KNOCKADERRE EN (Tulla Lower By.)	T05	2679	1-2	Not Significant
52	CL04 5-004- -	Enclosure	BALLYKILDEA	T03	2778	0	Impercepti ble
53	CL04 4-080- -	Enclosure	FAHY MORE NORTH	T07	2831	5-7	Slight
54	CL04 4-052- -	Megalithi c structure	CLOONYCONRY MORE	T02	2882	5-7	Slight
55	CL04 4-019- -	Enclosure	CLOONGAHEEN WEST	T01	2907	5-7	Slight
56	CL04 4-085- -	Hillfort	CLOONYCONRY MORE,FORMOY LE BEG	T02	2985	5-7	Slight
57	CL04 5-005- -	Enclosure	GARRAUNBOY	T05	3044	0	Impercepti ble
58	CL04 4-054- -	Enclosure	CAPPANASLISH	T07	3052	5-7	Slight
59	CL04 4-055- -	Enclosure	BALLYQUIN BEG	T07	3118	0	Impercepti ble
60	CL04 4-018- -	Megalithi c tomb - wedge tomb	CLOONGAHEEN WEST	T01	3124	5-7	Slight
61	CL04 5-053- -	Standing stone	KILROUGHIL	T07	3139	0	Impercepti ble
62	CL04 4-078- -	Enclosure	WOODPARK (Tulla Lower By.)	T07	3176	0	Impercepti ble

MA P ID	SMR	CLASS	TD.	TURBI NE ID	DISTAN CE TO TURBIN E (m)	No. of Turbines Theoretica lly visible	Theoretical Significanc e of Effect
63	CL04 5-006- -	Enclosure	GORTMAGY	T03	3197	0	Impercepti ble
64	CL04 4-076- -	Enclosure	WOODPARK (Tulla Lower By.)	T07	3272	0	Impercepti ble
65	CL04 5-041- -	Enclosure	BALLYCORNEY	T05	3298	1-2	Not Significant
66	CL04 5-007- -	Enclosure	GARRAUNBOY	T05	3340	0	Impercepti ble
67	CL04 4-070- -	Enclosure	CAPPANASLISH	T07	3355	1-2	Not Significant
68	CL04 4-048- -	Enclosure	FORMOYLE BEG	T02	3358	0	Impercepti ble
69	CL04 4-087- -	Enclosure	FORMOYLE BEG	T02	3411	1-2	Not Significant
70	CL04 5-008- -	Enclosure	BALLYKILDEA	T03	3462	0	Impercepti ble
71	CL04 5-043- -	Enclosure	LACKENBAUN	T05	3472	1-2	Not Significant
72	CL04 4-049- -	Enclosure	FORMOYLE BEG	T02	3477	1-2	Not Significant
73	CL04 5-009- -	Enclosure	FEENLEA	T03	3568	0	Impercepti ble
74	CL04 4-079- -	Enclosure	FAHY MORE NORTH	T07	3581	0	Impercepti ble

MA P ID	SMR	CLASS	TD.	TURBI NE ID	DISTAN CE TO TURBIN E (m)	No. of Turbines Theoretica lly visible	Theoretical Significanc e of Effect
75	CL04 4-050- -	Enclosure	FORMOYLE BEG	T02	3591	0	Impercepti ble
76	CL04 5-010- -	Earthwor k	BALLYKILDEA	T03	3622	0	Impercepti ble
77	CL04 4-075- -	Enclosure	FAHY MORE SOUTH	T07	3629	5-7	Slight
78	CL04 5-055- -	Megalithi c structure	ROSS (Tulla Lower By.)	T05	3649	3-4	Not Significant
79	CL04 4-017- -	Megalithi c tomb - wedge tomb	BARBANE	T01	3652	5-7	Slight
80	CL04 5- 01200 2-	Enclosure	GARRAUNBOY	T03	3660	0	Impercepti ble
81	CL04 5- 01200 1-	Mass- house	GARRAUNBOY	T03	3661	0	Impercepti ble
82	CL04 5-011- -	Enclosure	GARRAUNBOY	T05	3665	0	Impercepti ble
83	CL04 4-047- -	Enclosure	FORMOYLE MORE	T02	3670	0	Impercepti ble
84	CL04 5-042- -	Enclosure	BALLYCORNEY	T05	3680	3-4	Not Significant
85	CL04 5-013- -	House - 16th/17th century	GARRAUNBOY	T05	3715	0	Impercepti ble
86	CL04 5-014- -	Enclosure	GORTMAGY	T03	3746	0	Impercepti ble

MA P ID	SMR	CLASS	TD.	TURBI NE ID	DISTAN CE TO TURBIN E (m)	No. of Turbines Theoretica lly visible	Theoretical Significanc e of Effect
87	CL04 4-016- -	Megalithi c tomb - unclassifi ed	ARDSKEAGH	T02	3783	5-7	Slight
88	CL04 5-045- -	Enclosure	BALLYCORNEY	T05	3805	3-4	Not Significant
89	CL04 4-046- -	Enclosure	FORMOYLE MORE	T02	3822	1-2	Not Significant
90	CL04 5- 05400 1-	Children' s burial ground	ROSS (Tulla Lower By.)	T05	3847	1-2	Not Significant
91	CL04 5- 05400 2-	Ritual site - holy well	ROSS (Tulla Lower By.)	T05	3864	3-4	Not Significant
92	CL04 5-044- -	Enclosure	BALLYCORNEY	T05	3966	3-4	Not Significant
93	CL04 5-015- -	Megalithi c structure	GORTMAGY	T03	3986	0	Impercepti ble
94	CL04 4-071- -	Enclosure	CAPPANASLISH	T07	4009	5-7	Not Significant
95	CL05 3-022- -	Burial ground	FAHY BEG	T07	4009	3-4	Not Significant
96	CL04 5-046- -	Enclosure	CLOONFADDA	T05	4020	3-4	Not Significant
97	CL04 4-015- -	Megalithi c tomb - unclassifi ed	ARDSKEAGH	T01	4068	5-7	Not Significant

MA P ID	SMR	CLASS	TD.	TURBI NE ID	DISTAN CE TO TURBIN E (m)	No. of Turbines Theoretica lly visible	Theoretical Significanc e of Effect
98	CL04 5-016- -	Enclosure	FEENLEA	T03	4112	0	Impercepti ble
99	CL03 7-017- -	Enclosure	FEENLEA	T03	4124	0	Impercepti ble
100	CL04 4-014- -	Megalithi c tomb - wedge tomb	ARDSKEAGH	T01	4144	0	Impercepti ble
101	CL04 4-013- -	Megalithi c tomb - wedge tomb	DRUMMIN (Kilseily ED)	T01	4220	0	Impercepti ble
102	CL04 4-045- -	Megalithi c tomb - wedge tomb	FORMOYLE MORE	T02	4222	3-4	Not Significant
103	CL04 5-017- -	Enclosure	CREEVEROE	T05	4243	1-2	Not Significant
104	CL05 4-002- -	Ritual site - holy well	ARDATAGGLE	T07	4309	3-4	Not Significant
105	CL04 5-018- -	Enclosure	CREEVEROE	T03	4315	1-2	Not Significant
106	CL04 4-044- -	Children' s burial ground	KYLE	T02	4322	5-7	Not Significant
107	CL04 5- 01900 1-	Standing stone	KNOCKYCLOVA UN	T03	4338	1-2	Not Significant
108	CL04 5- 01900 2-	Mound	KNOCKYCLOVA UN	T03	4338	1-2	Not Significant

MA P ID	SMR	CLASS	TD.	TURBI NE ID	DISTAN CE TO TURBIN E (m)	No. of Turbines Theoretica lly visible	Theoretical Significanc e of Effect
109	CL03 6-037- -	Enclosure	DRUMMIN (Killokennedy ED)	T01	4412	0	Impercepti ble
110	CL04 4-043- -	Enclosure	DERRY (Tulla Lower By.)	T02	4445	5-7	Not Significant
111	CL04 5-056- -	Enclosure	BALLYVALLY	T03	4479	0	Impercepti ble
112	CL04 5-021- -	Enclosure	CREEVEROE	T05	4525	3-4	Not Significant
113	CL04 5-022- -	Enclosure	CREEVEROE	T05	4542	1-2	Not Significant
114	CL04 5-020- -	Enclosure	BALLYVALLY	T03	4557	0	Impercepti ble
115	CL05 3-021- -	Enclosure	ARDATAGGLE	T07	4558	5-7	Not Significant
116	CL04 5-023- -	Enclosure	CREEVEROE	T03	4579	3-4	Not Significant
117	CL04 5-024- -	Enclosure	KNOCKYCLOVA UN	T03	4590	1-2	Not Significant
118	CL03 7-015- -	Enclosure	BALLYCUGGAR AN	T03	4591	0	Impercepti ble
119	CL03 7-018- -	Redunda nt record	CRAGLEA	T03	4609	1-2	N/A
120	CL03 7-013- -	Enclosure	CARROWNAKIL LY (Tulla Lower By.)	T03	4617	0	Impercepti ble

MA P ID	SMR	CLASS	TD.	TURBI NE ID	DISTAN CE TO TURBIN E (m)	No. of Turbines Theoretica lly visible	Theoretical Significanc e of Effect
121	CL05 3-018- -	Enclosure	AR DATAGGLE	T07	4636	5-7	Not Significant
122	CL03 7-012- -	Enclosure	CARROWNAKIL LY (Tulla Lower By.)	T03	4661	0	Impercepti ble
123	CL04 4-012- -	Megalithi c tomb - wedge tomb	VIOLETHILL	T01	4747	0	Impercepti ble
124	CL04 5-025- -	Enclosure	KNOCKYCLOVA UN	T03	4748	0	Impercepti ble
125	CL04 5-026- -	Enclosure	CREEVEROE	T03	4784	3-4	Not Significant
126	CL05 3-020- -	Megalithi c tomb - wedge tomb	AR DATAGGLE	T07	4805	5-7	Not Significant
127	CL04 5-027- -	Enclosure	KNOCKYCLOVA UN	T03	4810	1-2	Not Significant
128	CL05 3-009- -	Ritual site - holy well	KILMORE (Tulla Lower By.)	T07	4873	5-7	Not Significant
129	CL04 5-047- -	Fulacht fia	CLOONFADDA	T05	4921	3-4	Not Significant
130	CL04 5-028- -	Standing stone	CREEVEROE	T03	4926	3-4	Not Significant
131	CL04 5-029- -	Standing stone	CREEVEROE	T03	4951	3-4	Not Significant

Mitigation Measures

The distance of many of the 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-Moderate.

Significance of Effects

The overall significance of effects will be Imperceptible-Moderate. In reality the effect on many monuments 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.

14.4.4.4 Protected Structures

No Protected Structures subject to statutory protection are located within the Proposed Wind Farm site. Ten protected structures are located within 5km of the Proposed Wind Farm. The ZTV shows that three structures are located in areas where 5-7 turbines will theoretically be visible with four structures where 3-4 turbines will theoretically be visible. One structure is located in an area where 1-2 turbines will theoretically be visible while two structures are located 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 14-14 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 14-14: Potential visual effects on RPS structures within 5km of the proposed turbines.

RPS ID	NIAH Reg.	STRUCTURE	TURBINE	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effect
188	20404407	Kilbane Bridge	T2	992	5-7	Moderate
99	20404401	St Mary's Church, Kilbane	T2	1267	5-7	Moderate
427	N/A	Glenomera House	T7	2242	5-7	Moderate
133	20404516	Sacred Heart Church, Garraunboy	T5	3826	0	Imperceptible
190	20404518	Bridgetown Bridge	T7	3952	1-2	Not Significant

RPS ID	NIAH Reg.	STRUCTURE	TURBINE	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effect
172	20405405	St Thomas's Church, Ardnataggle	T7	4041	3-4	Not Significant
73	N/A	The Forge, Ardnataggle	T7	4271	3-4	Not Significant
94	20404517	Ross House	T5	4316	3-4	Not Significant
588	N/A	Ardcloony Bridge	T5	4688	3-4	Not Significant
89	N/A	Two Mile Gate Cottage	T3	4839	0	Imperceptible

Two Protected Structures (RPS Ref. 188, Kilbane Bridge and Ref. 640 Blackwater Bridge) are located within 100m of the Proposed Grid Connection Route with none in proximity to the proposed onsite 38kV substation. The option of strapping the cables to the side of Blackwater Bridge (RPS Ref. 650) has been examined, as there is insufficient cover over the bridge deck to bury the cables and HDD is not suitable given the curvature of the road at this location. The cables will be attached to the bridge as per the methodology outlined in Chapter4 of the EIAR. The strapping of the cables to the bridge will result in a change to the immediate setting of the structure. It should be noted, however, that the elevation of the bridge to which the cables will be attached is not currently readily visible from the public road. A utility service is also already attached to the opposing bridge elevation which has altered the original visual appearance of the structure, albeit not readily visible from the public road. The main feature of the elevation to which it is proposed to strap the cable is the bridge arch. In order to minimise potential negative visual effects to the arch it is proposed that the cable will be strapped to the bridge elevation above the arch thereby not changing the appearance of the arch itself. A change to the setting of the bridge as a result of the strapping of the cable to the structure is acknowledged but is regarded as Not Significant given that the elevation to which the cable will be strapped is not visible from the public road and that the cable will be kept above the bridge arch.

Mitigation Measures

It is noted that natural screening, boundaries, buildings and vegetation will potentially screen visual effects to Protected Structures within 5km of the proposed turbines.

- The cable to be strapped to Blackwater Bridge (RPS Ref. 640) will be kept above the bridge arch and not transect the arch in order to minimise potential negative visual effects.
- The work shall be carried out in consultation with the Heritage Office of Clare County Council and shall ensure that any requirements of that office regarding works to the Protected Structure are implemented in full.
- All works at this location will be overseen by a suitably qualified archaeologist.

Residual Effect

Taking into account the above, the potential residual effects on Protected Structures 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.

14.4.4.5 NIAH Structures and Historic Gardens

No structures listed in the NIAH are located within the Proposed Wind Farm site while six structures listed in the NIAH are located within 5km of the proposed turbines. The nearest structure comprises the bridge at Kilbane (Reg. 20404407) which is also a Protected Structure (Ref. 188). The ZTV demonstrates theoretical visibility 5-7 turbines from two of the NIAH structures, theoretical visibility of 3-4 turbines from two structures, and theoretical visibility of 1-2 turbines from one structure. One structure is located in area where none of the Proposed turbines will theoretically be visible.

Seven historic gardens are located within 5km of proposed turbines, some of which are associated with the NIAH structures within 5km. The nearest historic garden comprises that associated with Ballyquin House and is located c. 2.4km from the nearest proposed turbine, T07. Ballyquin House is no longer extant and many of the original garden features are no longer present.

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 14-15 and Table 14-16). 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 14-15: 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
20404407	1800 - 1840	Bridge	KILBANE, KILLEAGY (Goonan)	T2	991	5-7	Moderate
20404401	1840 - 1860	Saint Mary's Catholic Church	KILBANE	T2	1266	5-7	Moderate
20404516	1905 - 1910	Catholic Church of the Sacred Heart and Saint Lua	LACKENBAUN	T5	3827	0	Imperceptible

NIAH Reg.	Date	Structure	Townland	Turbine No.	Distance To Turbine (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effect
20404518	1830 - 1870	Bridge	CLONBOY	T7	3953	1-2	Not Significant
20405405	1975 - 1985	Saint Thomas's Catholic Church	ARDATAGGLE	T7	4041	3-4	Not Significant
20404517	1760 - 1800	Ross House	ROSS (TULLA LOWER)	T5	4328	3-4	Not Significant

Table 14-16: 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
Ballyquin House	T7	2476	5-7	Slight
Mount Shannon	T7	3202	1-2	Not Significant
Glebe House	T5	3494	3-4	Not Significant
Clonboy House	T7	3513	1-2	Not Significant
Ross House	T5	4388	3-4	Not Significant
Ardcloony House	T5	4889	3-4	Not Significant
Violet Hill	T1	4960	0	Imperceptible

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. Additionally, many historic gardens may not have extant original features.

14.4.4.6 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.

14.5 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 the Proposed Project and 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 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.

14.5.1 All extant planning applications within 25km

A list of all extant planning applications within 25km 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 wind 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.

14.5.2 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-west (Carrownagowan – permitted), south-west (Oatfield – proposed, Knockshanvo – proposed, Ballycar – proposed), south (Fahy Beg – permitted) of the Proposed Wind Farm site. Individual turbines are also located to the south (Vistakon– operational) and south-west (Parteen – operational and a single domestic turbine -). The other existing, permitted and proposed wind farms, detailed in Table 14-17, were considered cumulatively with the Proposed Wind Farm and in particular with regard to potential cumulative visual effects.

Table 14-17: Wind farms within 20km of the Proposed Wind Farm.

Pl. Ref.	Wind Farm	Status	No. of Turbines
ABP.308799	Carrownagowan	Permitted	19
ABP-317227	Fahybeg	Permitted	8
ABP-318943	Ballycar	Proposed	12
ABP-318782	Oatfield	Proposed	11
ABP-319215 & ABP-319151	Knockshanvo	Proposed	9
22254	Parteen turbine	Existing	1
13746	Vistakon turbine	Existing	1
11510251	Castlewaller	Expired – not built	15
09742	Single domestic turbine	Existing	1

14.5.3 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.

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

14.5.3.1.1 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 Project 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.

Two Protected Structures (RPS Ref. 188, Kilbane Bridge and Ref. 640 Blackwater Bridge) are located within 100m of the Proposed Grid Connection Route. Works to Kilbane Bridge which is located adjacent to the route are not proposed therefore direct effects to this structure will not occur. It is proposed to strap the cables to the side of Blackwater Bridge (RPS Ref. 650), however, potential direct effects to the bridge structure are not anticipated.

14.5.3.1.2

Cumulative effects to Recorded Monuments

Three recorded monuments, CL044-063—, CL044-031— and CL044-086— are located within the Proposed Wind Farm site. None of the monuments are located within the footprint of proposed infrastructure or immediately adjacent to same therefore direct effects to the monuments as a result of the Proposed Project infrastructure therein are not identified. A total of 131 recorded monuments are located within 5km of the proposed turbines and include the three monuments within the Proposed Wind Farm site as referenced above. 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.

Two recorded monuments, CL044-086— Enclosure and CL044-061— Enclosure, are located within 100m of the Proposed Grid Connection Route. The monuments are located off road and will not be directly affected by the Proposed Grid Connection Route which will be placed within the public road.

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.

14.5.3.1.3

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 existing, permitted and proposed wind farms in the area. 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 turbines.

14.5.4

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.

14.5.4.1

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.

14.5.4.2 National Monuments in State Care

No National Monuments in State Care or those subject to a Preservation Order are located within the Proposed Wind Farm site, in the proposed Blade Transition Area along the TDR, or along the Proposed Grid Connection Route. Three National Monuments in State Care, one of which is also subject to a Preservation Order, are located within 10km of the proposed turbines. Three of the monuments are located in County Clare, with Derry Castle (PO 4/2001) located in County Tipperary. No National Monuments in State Care or those subject to a Preservation Order are located within 100m of the Proposed Grid Connection Route or on the footprint of the proposed onsite 38kV substation. The nearest National Monuments to the proposed onsite 38kV substation are located in Killaloe over 6km to the east.

The ringfort at Ballyvally is a National Monument (Nat. Mon. No. 591) and is also subject to a Preservation Order (24/1976). It is located c. 5.6km from the nearest Proposed turbine, T03. The ZTV indicates no theoretical visibility of the proposed turbines from this area therefore no potential visual effects to the setting of this monument are identified. St. Molua's church in Killaloe (Nat Mon 279) is located c. 6km from the nearest Proposed turbine, T03. The ZTV indicates theoretical visibility of 3-4 turbines from this area. Photowire PW-F demonstrates limited visibility from the church, however, with only the tip of T03 visible on the horizon in the distance. No potential visual effects to the immediate setting of this monument are identified. Potential visual effects to its wider setting given the distance to the monument and the limited visibility demonstrated by the photowire is regarded as Imperceptible. St Flannan's Church at Shantraud (Nat. Mon. No. 6) is located in Kilalloe c. 6.3km from the nearest Proposed turbine, T03. The ZTV also demonstrates theoretical visibility of 3-4 turbines from this area. No potential visual effects to the immediate setting of the monument will occur. A change to its wider setting is acknowledged, however, given the distance of the proposed turbines from the church and its location in the town of Kilalloe this is considered to be Imperceptible.

When considered cumulatively with other wind farms within 20km the ZTV demonstrates theoretical visibility of the proposed turbines and some of the proposed Knockshanvo and proposed Oatfield turbines, some of the permitted Fahybeg turbines and one of the proposed Ballycar turbines. The single Parteen and Vistakon turbines to the south also have theoretical visibility. In this regard there is potential for cumulative effects to the wider setting of the National Monuments (No. 6 and No. 279) in Kilalloe. No cumulative effects to the immediate setting of the monuments will occur as the aforementioned existing, permitted and proposed turbines are distances ranging from 6km-16km. A potential increase of the visual effects to the wider setting of the monuments at Kilalloe may occur increasing from Imperceptible to Not Significant. Given the distance of the proposed turbines and those considered cumulatively, however, no cumulative effects to the immediate setting of the monuments are identified.

14.5.4.3 Recorded Monuments (5km)

Three recorded monuments, CL044-063—, CL044-031— and CL044-086— are located within the Proposed Wind Farm site. A total of 131 recorded monuments are located within 5km of the proposed turbines and include the three monuments within the Proposed Wind Farm site as referenced above. The ZTV shows that 49 of the 131 monuments are located in areas where 5-7 turbines will theoretically be visible. Twenty-six monuments are located in areas where 3-4 turbines will theoretically be visible and 19 monuments are located in areas where 1-2 turbines will theoretically be visible. Thirty-seven 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-Moderate (Table 14-13). 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 Fahybeg and permitted

Carrownagowan wind farms are located within the 5km study area. The ZTV demonstrates that none of the permitted Carrownagowan turbines will be theoretically visible while only some of the permitted Fahybeg turbines will theoretically be visible. In this regard it is not considered that there will be increased cumulative visual effects to the wider setting of recorded monuments within 5km.

14.5.4.4 Protected Structures and NIAH (5km)

No Protected Structures subject to statutory protection are located within the Proposed Wind Farm site. Ten protected structures are located within 5km of the nearest Proposed turbine. The ZTV shows that three structures are located in areas where 5-7 turbines will theoretically be visible with four structures where 3-4 turbines will theoretically be visible. One structure is located in an area where 1-2 turbines will theoretically be visible while two structures are located 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.

Two Protected Structures (RPS Ref. 188, Kilbane Bridge and Ref. 640 Blackwater Bridge) are located within 100m of the Proposed Grid Connection Route with none in proximity to the proposed onsite 38kV substation. The option of strapping the cables to the side of Blackwater Bridge (RPS Ref. 650) has been investigated, as there is insufficient cover over the bridge deck to bury the cables and HDD is not suitable given the curvature of the road at this location. Potential direct effects and visual effects to the bridge structure is regarded as Not Significant.

No structures listed in the NIAH are located within the Proposed Wind Farm site while six structures listed in the NIAH are located within 5km of the nearest Proposed turbine. The nearest structure comprises the bridge at Kilbane (Reg. 20404407) which is also a Protected Structure (Ref. 188). The ZTV demonstrates theoretical visibility 5-7 turbines from two of the NIAH structures, theoretical visibility of 3-4 turbines from two structures, and theoretical visibility of 1-2 turbines from one structure. One structure is located in an area where none of the proposed turbines will theoretically be visible. The overall significance of effects on those 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. Seven historic gardens are located within 5km of the proposed turbines, some of which are associated with the NIAH structures within 5km. The nearest historic garden comprises that associated with Ballyquin House and is located c. 2.4km from the nearest proposed turbine, T07. Ballyquin House is no longer extant and many of the original garden features are no longer present. The overall significance of effects to historic gardens within 5km ranges from Imperceptible – Slight.

When considered cumulatively with the other existing, permitted and proposed wind farms it should be noted that only the permitted Fahy Beg Wind Farm and the permitted Carrownagowan Wind Farm are located within the 5km study area. The ZTV demonstrates that none of the permitted Carrownagowan turbines will be theoretically visible while only some of the permitted Fahybeg turbines will theoretically be visible. In this regard it is not considered that there will be increased cumulative visual effects to the wider setting of recorded monuments within 5km.

14.6 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.

14.7 Summary and 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 areas 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 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. Both the distance to the nearest turbine and the number of turbines visible from each cultural heritage asset were used to arrive at 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. Some mitigation measures are recommended regarding the strapping of the cable to Blackwater Bridge which is a Protected Structure. An assessment of potential effects as a result of accommodation works along the proposed TDR was also carried out.

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 effects have been identified and no cumulative effects to the immediate setting of cultural heritage assets will occur.