

13. CULTURAL HERITAGE

13.1 Introduction

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 construction, operation and decommissioning of the Borrisbeg Renewable Energy Development referred to as the Proposed Project (i.e. Proposed Wind Farm and Proposed Grid Connection), located at Borrisbeg and adjacent townlands in Co. Tipperary.

The purpose of this chapter is to assess the potential direct and indirect effects of the Proposed Project on the surrounding archaeological, architectural and cultural heritage landscape. The assessment is based on both a desktop review of the available cultural heritage and archaeological data, a field inspection of the Proposed Project footprint and EIAR Study Boundary (the Site) and the minor accommodation works area at junction 22 off the M7 which is temporarily required for turbine delivery. An assessment of potential effects, including cumulative effects, is presented.

For the purposes of this EIAR:

- > The ‘**Proposed Wind Farm**’ refers to the 9 no. turbines and supporting infrastructure which is the subject of this Section 37E application.
- > The ‘**Proposed Grid Connection**’ refers to the 110kV substation and supporting infrastructure which will be the subject of a separate Section 182A application.
- > The ‘**Proposed Project**’ comprises the Proposed Wind Farm and the Proposed Grid Connection, all of which are located within the EIAR Study Boundary (the ‘**Site**’) and assessed together within this EIAR.

Please see section 1.1.1 of this EIAR for further details. A detailed description of the Proposed Project is provided in Chapter 4 of this EIAR.

13.1.1 Proposed Project

The Proposed Project (the Proposed Wind Farm and Proposed Grid Connection) is assessed in this chapter. The Proposed Wind Farm will consist of the following:

- i. 9 no. wind turbines with an overall turbine tip height of 185 metres; a rotor blade diameter of 163 metres; and hub height of 103.5 metres, and associated foundations and hard-standing areas;*
- ii. A thirty-year operational life of the wind farm from the date of full commissioning of the wind farm and subsequent decommissioning;*
- iii. Underground electrical cabling (33kV) and communications cabling;*
- iv. A temporary construction compound;*
- v. A temporary security cabin;*
- vi. A meteorological mast with a height of 30 metres and associated foundation and hard-standing area;*
- vii. A new gated site entrance on the L3248;*
- viii. Junction accommodation works and a new temporary access road off the L3248, to facilitate turbine delivery to the site;*
- ix. Upgrade of existing site tracks/roads and provision of new site access roads, junctions and hardstand areas.*
- x. Upgrade of the existing L7039/L70391 junction for secondary site access off the L70391;*
- xi. A borrow pit;*

- xii. Spoil Management;*
- xiii. Tree felling;*
- xiv. Site Drainage;*
- xv. Biodiversity Enhancement Plan (including restoration of a segment of the Eastwood River, and planting of natural woodland and hedgerow);*
- xvi. Operational Stage site signage; and*
- xvii. All ancillary works and apparatus.*

The Proposed Grid Connection, which will be subject to a separate planning application under Section 182A of the Planning and Development Act, 2000 (as amended) is located within the townlands of Strogue and Clonmore, Co. Tipperary, and will consist of the following:

- 1. 1 no. permanent 110kV substation compound (2 no. control buildings with welfare facilities, all associated electrical plant and apparatus, security fencing, underground cabling, wastewater holding tank, site drainage and all ancillary works);*
- 2. a temporary construction compound;*
- 3. 2km underground 110kV electrical cabling route (including joint bays and watercourse crossings) which will run through the L-7039 road and new track through agricultural land; and*
- 4. 2 no. new end masts that will break the existing Ikerrin to Thurles 110kV OHL.*

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

13.1.2 Location and Topography

The Proposed Project is located within a rural setting in north Tipperary, approximately 11km south of Roscrea Town and approximately 2.5km northeast of Templemore town centre. Landuse currently comprises a mix of pastoral agriculture, small scale commercial forestry and local roads. The surrounding landuse predominantly comprises pastoral agriculture, and commercial and residential use along local roads and within Templemore town.

13.1.3 Statement of Authority

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

13.1.4 Relevant Guidance and Legislation

13.1.4.1 Guidance

The assessment of the potential effects of the Proposed Project on cultural heritage has been carried out in accordance with the various planning policies and strategy guidance detailed in Section 1.2 in Chapter 1 of this EIAR and the following:

- Architectural Heritage Protection Guidelines for Planning Authorities (Department of Arts, Heritage and the Gaeltacht, 2011).

- > Advice Notes on Current Practice (in preparation of Environmental Impact Statements) (Environmental Protection Agency (EPA), 2003).
- > Guidelines on the information to be contained on the Environmental Impact Assessment Report (EPA, 2022).
- > Department of Arts, Heritage, Gaeltacht and the Islands, 1999, Framework and Principles for the Protection of the Archaeological Heritage, 1999.
- > Guidance on Setting and the Historic Environment, Historic Environment Division, February 2018.
- > European Commission (2002). Assessment of plans and projects significantly affecting Natura 2000 sites. Publications Office of the European Union, Luxembourg.
- > European Commission (2020). Guidance document on wind energy developments and EU nature legislation. Publications Office of the European Union, Luxembourg.
- > Planning and Development Acts 2000 (as amended).
- > NRA (2009). Guidelines for Assessment of Ecological Impacts of National Road Schemes. National Roads Authority, Ireland.
- > EPA (2022). Guidelines on the information to be contained in Environmental Impact Statement reports. Environmental Protection Agency, Johnstown Castle Estate, Wexford.
- > DoHPLG (2018). Guidelines for planning authorities and An Bord Pleanála on carrying out Environmental Impact Assessment. Department of Housing, Planning and Local Government, Government of Ireland, Dublin.
- > Tipperary Count Council (2022). Tipperary County Development Plan 2022-2028. Tipperary County Council, Nenagh, Co. Tipperary.

13.1.4.2 Legislation

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

Both the National Monuments Acts 1930 to 2004 and relevant provisions of the Cultural Institutions Act 1997 are the primary means of ensuring protection of archaeological monuments, the latter of which includes all man-made structures of whatever form or date. There are a number of provisions under the National Monuments Acts which ensure protection of the archaeological resource. These include the Register of Historic Monuments (1997 Act) which means that any interference to a monument is illegal under that Act. All registered monuments are included on the Record of Monuments and Places (RMP).

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

The term ‘national monument’ as defined in Section 2 of the National Monuments Act 1930 means a monument ‘*the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto*’. National monuments in State care include those which are in the ownership or guardianship of the Minister for Arts, Heritage and the Gaeltacht. Section 5 of the National Monuments Act (1930) allows owners of other national monuments

to appoint the Minister for the Arts, Heritage and the Gaeltacht or the relevant local authority as guardian of such monuments, subject to their consent. This means in effect that while the property of such a monument remains vested in the owner, its maintenance and upkeep are the responsibility of the State. Some monuments are also protected by Preservation Orders and are also regarded as National Monuments. National Monuments also includes (but not so as to limit, extend or otherwise influence the construction of the foregoing general definition) every monument in Saorstát Éireann to which the Ancient Monuments Protection Act, 1882, applied immediately before the passing of this Act, and the said expression shall be construed as including, in addition to the monument itself, the site of the monument and the means of access thereto and also such portion of land adjoining such site as may be required to fence, cover in, or otherwise preserve from injury the monument or to preserve the amenities thereof.

Under the Heritage Act (1995) architectural heritage is defined to include *‘all structures, buildings, traditional and designed, and groups of buildings including street-scapes and urban vistas, which are of historical, archaeological, artistic, engineering, scientific, social or technical interest, together with their setting, attendant grounds, fixtures, fittings and contents...’*. A heritage building is also defined to include *‘any building, or part thereof, which is of significance because of its intrinsic architectural or artistic quality or its setting or because of its association with the commercial, cultural, economic, industrial, military, political, social or religious history of the place where it is situated or of the country or generally’*.

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

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

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

13.1.4.4 Tipperary County Development Plan 2022-2028

The Tipperary County Development Plan 2022-2028 came into effect on 22nd August 2022. The relevant policies and objectives of Tipperary County Council regarding archaeology and built heritage were consulted in the CDP and include the following:

13.1.4.4.1 **Architectural Heritage**

It is the policy of the Council to:

13 - 1 Encourage and support the sympathetic restoration, re-use and maintenance of protected structures thereby ensuring their conservation and protection. In considering proposals for development, the Council will have regard to the Architectural Heritage Protection Guidelines for Planning Authorities, (DAHG 2011) or any amendment thereof, and proposals that will have an unacceptable impact on the character and integrity of a protected structure or adjoining protected structure will not be permitted.

13 - 2 Encourage and support new development that contributes to the enhancement of ACAs with regard to; a) Impact on the character, appearance and integrity of the ACA in terms of compatibility in design, colour, finishes and massing of form; b) Impact on the existing amenities, character and heritage of the ACA; c) The importance of retaining important architectural and townscape elements such as shopfronts, sash windows, gutters and down pipes, plasterwork etc as appropriate.

13 - 3 Seek the sympathetic restoration, appropriate re-use and maintenance of buildings/features which are considered to be of local and vernacular architectural importance.

It is the objective of the Council to:

13 - A Support the owners of structures on the RPS and structures in ACAs through educational and information actions to assist in the conservation and active use of built heritage.

13 - B Administer and manage built heritage funding schemes such as the ‘Built Heritage Investment Scheme’, ‘Structures at Risk Scheme’ etc and any review thereof, to support owners of built heritage in the county.

13.1.4.4.2 **Archaeological Heritage**

It is a policy of the Council to:

13 - 4 Safeguard sites, features and objects of archaeological interest, including Recorded Monuments, National Monuments and Monuments on the Register of Historic Monuments, and archaeological remains found within Zones of Archaeological Potential located in historic towns and other urban and rural areas. In safeguarding such features of archaeological interest, the Council will seek to secure their preservation (i.e. in situ or in exceptional circumstances preservation by record) and will have regard to the advice and recommendation of the Department of Arts, Heritage and the Gaeltacht. Where developments, due to their location, size or nature, may have implications for archaeological heritage, the Council may require an archaeological assessment to be carried out. This may include for a requirement for a detailed Visual Impact Assessment of the proposal and how it will impact on the character or setting of adjoining archaeological features. Such developments include those that are located at, or close to an archaeological monument or site, those that are extensive in terms of area (1/2 ha or more) or length (1 kilometre or more), those that may impact on the underwater environment and developments requiring EIA.

13 - 5 Respect and preserve the remains (both sub-surface and upstanding) of the medieval towns in line with the Conservation, Management and Interoperation Plans in place for each town, in line with the guidance of the Heritage Council and the National Policy on Town Defences (DEHLG, 2008).

13 - 6 Consider landscapes of archaeological significance and, if considered necessary, require an impact assessment for proposed development which could have a significant impact on the identified landscape.

13 - 7 Consider underwater archaeology and ensure that development to river banks or coastal edges within the vicinity of a site of archaeological interest shall not be detrimental to the character of the archaeological site or its setting.

It is an objective of the Council to:

13 - C Ensure that the towns of Cashel, Fethard, Carrick on Suir and Clonmel remain members of the Irish Walled Towns Network, and to carry out an annual maintenance, interpretation and conservation programme in respect of each of these towns

13 - D Carry out an audit of archaeological landscapes in Tipperary over the lifetime of the Plan, having consideration to landscapes that may extend into adjoining counties.

13 - E Work closely with the relevant State bodies, International Council on Monuments and Sites, UNESCO, the relevant local authorities and local stakeholders to support the designation of the Royal Sites as a UNESCO World Heritage Site.

13 - F Safeguard archaeological artefacts found on land or in rivers and, as appropriate, to file a ‘Report of Discovery’ with the National Museum of Ireland under Section 68 (2) of the National Cultural Institutions Act, 1997.

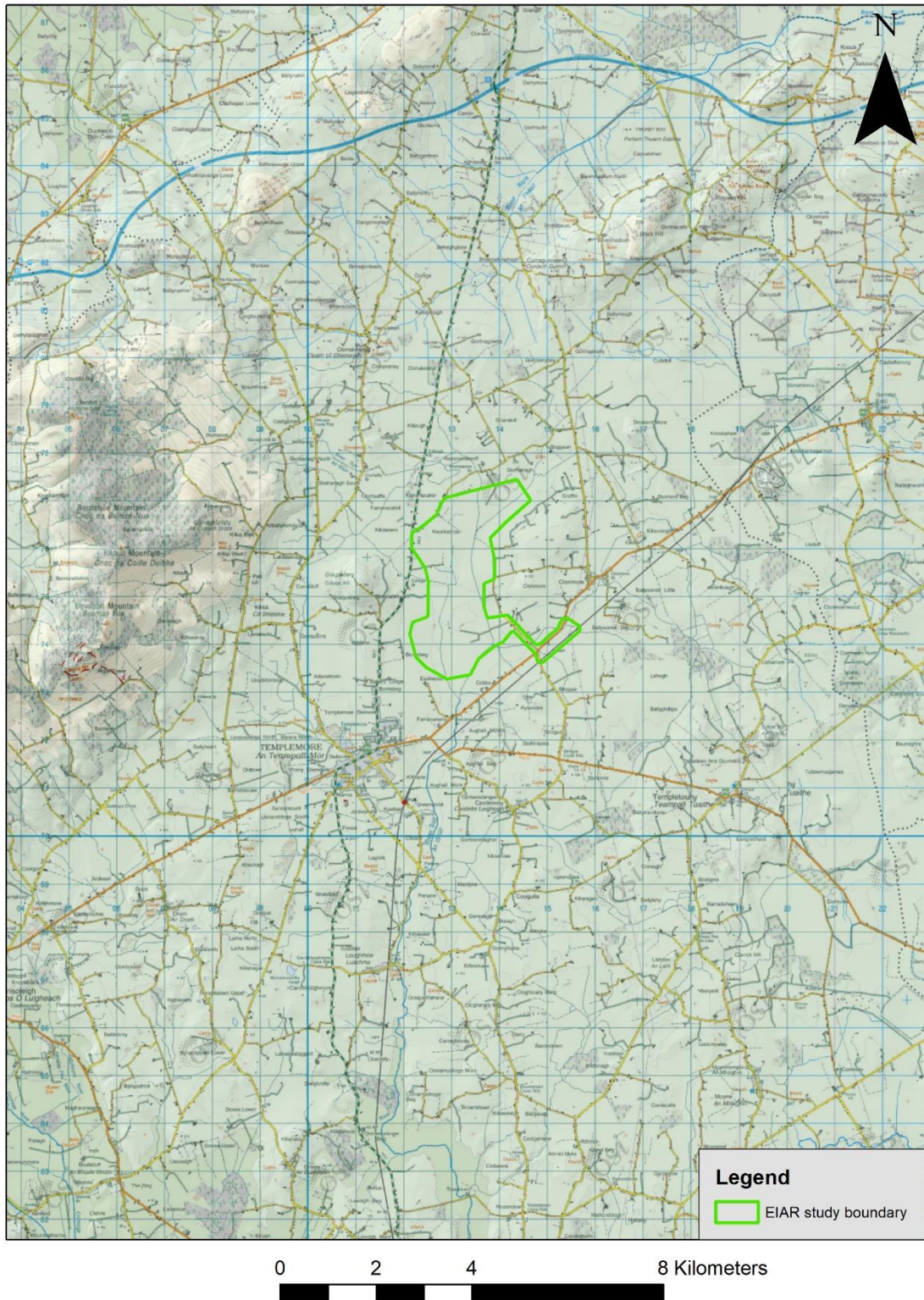


Figure 13.1: Site location map.

13.1.5 Statutory Consultations

13.1.5.1 Tipperary County Council

Members of the project team and the applicant met with representatives from Tipperary County Council (TCC) via MS Teams on the 10th May 2023. No archaeology, architectural or cultural heritage related concerns were raised by the Council during the meeting. No scoping response was received from Tipperary County Council.

13.1.5.2 National Monuments Service

A scoping request was issued to the DAU pertaining to archaeology and cultural heritage in October and December of 2022 and April and December of 2023; however, no archaeology, architectural or cultural heritage related responses were received from the National Monuments Services /Development Applications Unit of the Department of Housing, Local Government and Heritage (DHLGH).

13.1.5.3 Heritage Council

A scoping request was issued to the Heritage Council in October and December 2022 and April and October of 2023; however no response was received to date.

13.1.5.4 Fáilte Ireland

A scoping response was received from Fáilte Ireland in October 2023 which included reference to their EIAR Guidelines for the Consideration of Tourism and Tourism Related Projects. In relation to Cultural Heritage and Archaeology, the guidelines note that cultural heritage and archaeology can be a key component of tourism projects and the impact of tourism on the maintenance of cultural heritage should be given the utmost consideration, whether positive or negative. As a tourism attraction, cultural heritage should be strongly considered in non-tourism developments and the impact upon tourism considered as potential impact. The guidelines note that archaeology can be a tourism attractor, is non-renewable and a focus should be a presumption in favour of its preservation in-situ or where preservation in-situ is not the option chosen, there must be preservation by record (i.e. archaeological excavation and recording must take place) in line with statutory requirements.

13.2 Assessment Methodology

The assessment of the archaeology, architecture and cultural heritage of the Proposed Project included geographic information system (GIS) mapping, desk-based research and field inspection.

13.2.1 Geographical Information Systems (GIS)

GIS is a computer database which captures, stores, analyses, manages and presents data that is linked to location. GIS is geographic information systems which includes mapping software and its application with remote sensing, land surveying, aerial photography, mathematics, photogrammetry, geography and tools that can be implemented with GIS software. GIS was used to manage the datasets relevant to the archaeological and architectural heritage assessment and for the creation of all the maps in this section of the report. This involved the overlaying of the relevant archaeological and architectural datasets on georeferenced aerial photographs and road maps (i.e. Economic and Social Research Institute (ESRI)), where available. The integration of this spatial information allows for the accurate measurement of distances of a proposed development from archaeological and cultural heritage sites and the extraction of information on ‘monument types’ from the datasets. Areas of archaeological or architectural sensitivity

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

13.2.2 Desktop Assessment

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

- > The Record of Monuments and Places (RMP)
- > The Sites and Monuments Record (SMR)
- > National Monuments in State Care County Tipperary
- > National Monuments in State Care County Laois
- > The Topographical Files of the National Museum of Ireland
- > First edition Ordnance Survey maps (OSI)
- > Second edition Ordnance Survey maps (OSI)
- > Aerial photographs (copyright of Ordnance Survey Ireland (OSI))
- > Excavations Database
- > National Inventory of Architectural Heritage (NIAH)
- > Record of Protected Structures

Each of these are discussed in the following sections.

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

A primary cartographic source and base-line data for the assessment was the consultation of the Sites and Monuments Record (SMR) and Record of Monuments and Places (RMP) for County Tipperary. 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.heritagedata.maps.arcgis.com was also consulted.

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

13.2.2.2 Cartographic Sources and Aerial Photography

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

13.2.2.3 Topographical Files - National Museum of Ireland

Details relating to finds of archaeological material and monuments in numerous townlands in the country are contained in the topographical files held in the National Museum of Ireland. In order to establish if any new or previously unrecorded finds had been recovered from the Site these files, as available on Heritage Maps (www.heritagemaps.ie), were consulted for each townland within and immediately adjacent to the Site.

13.2.2.4 Archaeological Inventory Series

Further information on archaeological sites may be obtained in the published County Archaeological Inventory series prepared by the Department of Housing, Local Government and Heritage (DHLGH). The archaeological inventories present summarised information on sites listed in the SMR/RMP and

include detail such as the size and location of particular monuments, as well as any associated folklore or local information pertaining to each site. The inventories, however, do not account for all sites or items of cultural heritage interest which are undiscovered at the time of their publication. Many sites have been discovered since the publication of the Inventory Series, which have now been added to the Sites and Monuments Record.

13.2.2.5 Record of Protected Structures

The current County Development Plan was consulted for the schedule of buildings (Record of Protected Structures) 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 Tipperary. The dataset for the Tipperary Record of Protected Structures were added to the base mapping for the Proposed Project in order to accurately assess any potential impacts on such structures.

13.2.2.6 Excavations Database

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

13.2.2.7 National Inventory of Architectural Heritage (NIAH)

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 Department of Housing, Local Government and Heritage (DHLGH). The NIAH database was consulted for all townlands within and adjacent to the 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 National Inventory of Architectural Heritage (NIAH) is a state initiative under the administration of the Department of Housing, Local Government and Heritage (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 Record of Protected Structures (RPS).

13.2.2.8 Previous Assessments

No previous assessments were carried out on the Site.

13.2.3 Field Inspection

The Proposed Project (Proposed Wind Farm and Proposed Grid Connection) were subject to a walk-over survey and windscreen survey in May 2023. A photographic and descriptive record was made of the Site and any features of interest therein. The photographic record is included as Appendix 13-1 of this EIAR. All SMR sites within the Site were inspected as well as any other relevant cultural heritage features.

13.2.3.1 Limitations Associated with Fieldwork

No limitations were encountered during fieldwork and all areas were accessed.

13.2.4 Assessment of Likely Significant Effects

The likely effects on the existing archaeological, architectural and cultural heritage environment are assessed using the criteria as set out in the *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (EPA, May 2022) and described in section 1.7 of Chapter 1. The following terminology is used when describing the likely effects of the Proposed Project from a Cultural Heritage perspective.

13.2.4.1 Types of Impact

- Direct impacts 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 impacts may arise as a result of subsurface works undertaken outside the footprint of the development, secondary environmental change such as a reduction in water levels and visual impacts.
- Cumulative Impacts arise when the addition of many impacts create a larger, more significant impact.
- Residual Impacts are the degree of environmental changes that will occur after the proposed mitigation measures have been implemented.

13.2.4.1.1 Magnitude of Effects (Significance)

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

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

A standardised approach was utilised for the assessment of impacts 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 impacts on visual setting was undertaken using both the Zone of Theoretical Visibility (ZTV) map in the Landscape and Visual Impact Assessment (LVIA), as presented in Chapter 14 of this

EIAR, and also photomontages / Photowires from specific cultural heritage assets. The analysis used in the assessment of potential impacts 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.

Other components of the Proposed Project, i.e. proposed underground grid connection cable route and other components of the Proposed Wind Farm are not deemed to be as visually prominent as the proposed turbines. Other potentially visually prominent components such as the proposed substation and proposed end masts are all considered in terms of potential visual effects.

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

Table 13.1: Distance from the proposed turbines to cultural heritage assets considered according to sensitivity

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

The **potential** visual effects of the turbines on the setting of cultural heritage assets are graded according to two criteria:

1. **Distance to the nearest turbine:** Each increment of distance is numbered from 1-5 in severity with 1 being the lowest in severity (i.e. 4-5km from the nearest turbine and 5 being the most severe (0-1km from the nearest turbine).
2. **Number of turbines visible on ZTV.** Each increment is also numbered from 1-4 with 1 being the least severe (i.e. 1-2 turbines visible) and 4 being the most severe (7-9 turbines visible).

The number values are then multiplied to arrive at a potential effect (from Not Significant to Significant). 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 impacts. The following table is used to ascertain the potential visual effect not assuming any vegetation, existing buildings, and any other screening in the landscape.

Table 13.2: Grading of Potential visual effects according to Distance and No. of Turbines visible from Cultural Heritage Assets

No. of Turbines Visible (ZTV)	1-3 (1)	4-6 (2)	7-9 (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)	Significant (16-20+)

13.3 Existing Environment

13.3.1 Results of Field Inspection

No new previously unrecorded **above-ground** archaeological monuments or features of cultural heritage merit were noted within the Site or at the accommodation works area to facilitate turbine delivery from junction 22 off the M7 onto the N62, during the walk-over surveys. A photographic record of the Proposed Project is presented in Appendix 13-1.

13.3.2 Archaeological, Architectural and Cultural Heritage

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

A number of documentary and cartographic sources (as listed in Section 13.2.2 above) were utilised in order to ascertain the potential for the presence of architectural /cultural heritage features on or within the area of the Proposed Project i.e. the Proposed Wind Farm and the Proposed Grid Connection. Section 13.3.4 addresses the Proposed Wind Farm, Section 13.3.4 address the Proposed Grid Connection and Section 13.3.5 addresses the minor accommodating works at junction 22 off the M7 which temporarily requires stoning to facilitate turbine delivery from the M7 onto the N62. Cultural heritage includes items such as buildings, farmhouses, gates, bridges, piers, and stone field boundaries.

13.3.3 Proposed Wind Farm

13.3.3.1 UNESCO World Heritage Sites and those on Tentative List

No UNESCO World Heritage Sites (WHS) or those on the Tentative list are located within 20km of the nearest proposed turbine. The nearest WHS (Tentative list) comprises the royal site of Cashel which is situated c. 33km to the south.

13.3.3.2 National Monuments

National Monuments are those recorded monuments which are in the ownership / guardianship of the Minister for Housing, Local Government and Heritage. They are frequently referred to as being in 'State Care'. National Monuments also include those which are subject to a Preservation Order. Two National Monuments in State Care are located within 10km of the nearest proposed turbine and are listed in Table

13.3 and shown on **Error! Reference source not found.** One National Monument is located in County Tipperary while the second National Monument is situated in county Laois. Six monuments subject to a Preservation Order are located within 10km of the nearest proposed turbine, all of which are located in County Tipperary. The monuments are listed and described below.

Table 13.3: National Monuments and those subject to a preservation order within 10km of the nearest proposed turbine

Nat. Mon. No.	SMR NO.	ITM E	ITM N	CLASS	TOWNLAND	TURBINE ID	DISTANCE TO NEAREST TURBINE (m)
353	TN018-012—, TN018-021—, TN018-015—	618830	683309	Standing Stones	Cullaun, Timenyhills, Timoney	T1	8,513
113	LA027-024—	622093	678057	Church	ERRILL	T1	8,767
4/2008	TN016-003—	605672	682397	Castle - motte	MOATQUARTER (Rathnaveoge Par.)	T1	9,604
4/2008	TN016-004—	605597	682556	Enclosure	MOATQUARTER (Rathnaveoge Par.)	T1	9,759
70/1938	TN017-033—	608100	683930	Castle - tower house	RATHNAVEOGE LOWER	T1	8,956
01/1996	TN022-037—	603898	678542	Ringfort - rath	CLONCANNON	T2	9,498
57/1938	TN035-030005-	611716	667096	Castle - tower house	TINVOHER	T9	6,683
4/1984	TN022-036—	603650	678374	Castle - motte	CLONCANNON	T6	9,692

13.3.3.2.1 National Monument 353 Timoney Stones

The Timoney Stones comprise a large group of standing stones in the townlands of Cullaun and Timoney Hills, all of which have individual SMR numbers. Given the large quantity of monuments in question the description of the group of stones in Cullaun townland and Timoney Hills townland is provided. All

descriptions are taken from the Historic Environment Viewer (HEV). The stones are located c. 8.5km to the north-east of the nearest proposed turbine T1.

TN018-012— : Anomalous stone group : CULLAUN

Description: National Monument No. 353. There are twenty-one standing stones in Cullaun Td., three of which have collapsed with an additional possible collapsed stone or rock outcrop. Also within this complex there is a megalithic folly consisting of a rounded boulder or roughout for a millstone resting on three small boulders. This megalithic structure was placed within a stone circle; only six of at least thirteen stones of the circle are now standing. A map published in the Ikerrin Survey (Stout 1984, 19), showing the distribution of standing stones, shows a total of 28 standing stones surviving and 14 removed. The stones range in height from 0.65m to 1.6m, usually have a rectangular plan and have no common alignment. A sample of these standing stones were recorded in detail: 1. Situated off the brow of a NNW-SSE ridge on a gentle SW-facing slope in undulating pasture-land with rock outcrop. The stone is just inside a gate, adjacent to the road. It is of sandstone, much split and weathered and is aligned on a NNW-SSE axis rising to the apex at SE. It is roughly rectangular in plan (H 0.65m; 0.53m x 0.26m) and rests on a grassy hummock with no evidence of packing-stones. A long, rectangular prostrate boulder (0.8m x 0.32m) lies immediately NNW of the site. 2. Situated on the SW slope of a NW-SE ridge, in undulating pasture-land with rock outcrop. A standing stone composed of sandstone with quartz inclusions, rectangular in plan (0.66m x 0.34m), aligned NE-SW with the apex to the SW. The base of the NW face spurs out by c. 0.15m and the top of the SE face is fractured into a stepped profile due to weathering. A grassy hummock has grown around the base of the stone and this has been hollowed out due to cattle erosion. 3. Situated on a gentle W-facing slope in undulating pasture-land. Another standing stone is visible on the brow of a hillock to SSW. This stone, a conglomerate sandstone and quartz stone with tiny flecks of mica, has a blocky base, almost square in plan (H 1.6m; 0.54m x 0.5m), aligned E-W and coming to an apex at E. The upper half is narrower and the stone is split on both flat surfaces. It is surrounded at the base by a grassy hummock which cattle have trampled. 4. Situated on a break in a gradual W-facing slope in undulating terrain. Other standing stones visible c. 30m to N (3) and also to SSE (5). A standing stone of sandstone with quartz and mica inclusions, rectangular in plan (H 1.37; 0.51m x 0.38m) and aligned N-S with its apex to N. 5. Situated on ground sloping gently to the S in undulating terrain; bedrock is exposed around the immediate base of the standing stone to the N and E. This stone is aligned N-S with the apex to the N but it appears to have split leaving a false top. The base is quite rectangular in plan (H 1.16m; 0.51m x 0.48m). Composed of sandstone with some mica. 6. Situated in a slight hollow on a very gradual W-facing slope in undulating pasture. Other standing stones are visible c. 100m to SE and c. 200m to SW and W. A stone wall in the immediate vicinity may be preventing intervisibility with other sites. The stone appears to have naturally split in two; loose stones around the base appear to be fragments of the standing stone. It is rectangular in plan (H 0.96m; 0.41m x 0.29m), aligned E-W and is composed of sandstone and mica. 7. Situated on a break in a SW-facing slope in very undulating pasture. Other standing stones are visible c. 100m to N, c. 60m to E, to SSW and SW and a ringfort (18:13) is visible to SW. This stone is rectangular in plan (H 0.95m; 0.55m x 0.26 which narrows to 0.11m to S), aligned N-S with its apex to N. It is of sandstone with a few small quartz pebble inclusions. 8. Situated on a SSW slope off the crest of a NW-SE ridge. A number of standing stones are visible to the SE, SW, and W-WSW; no. 7 is c. 60m to the W. A weathered rectangular block composed of sandstone with a lot of quartz pebble inclusions. A number of stones at the base appear to have split from the standing stone. It has a rectangular base plan (H 1.55m; 0.72m x 0.26 which narrows to 0.19m to S). In 2002 archaeological monitoring by Anne-Marie Lennon on all ground disturbance near this site revealed nothing of archaeological interest. This monitoring was carried out under Licence No. 02E1125 (Bennett 2004, 476). Irish Grid Ref. of monitoring 21944/18391. The above description is derived from 'The Archaeological Inventory of County Tipperary. Vol. 1 - North Tipperary' compiled by Jean Farrelly and Caimin O'Brien (Dublin: Stationery Office, 2002). In certain instances the entries have been revised and updated in the light of recent research. Date of upload/revision: 22 September 2008

TN018-015— : Anomalous stone group : TIMONEY HILLS

Description: National Monument No. 353. On the upper hillslopes of Timoney Hills in undulating terrain with a lot of rock outcrop visible. The site is on the land of the former Hutchinson (later Parker-Hutchinson) estate; Timoney Park House was situated 1km to the N. A map published in the Ikerrin Survey depicts 245 standing stones, 70 of which had been removed, and five cairns, which have also been

removed (Stout 1984, 19). There are now at least 121 standing stones surviving. A number of standing stones in one field could not be identified due to very heavy gorse growth at the time of visit. Of the 121 standing stones identified, 93 are upstanding and 28 have collapsed. A number of these standing stones are very small (ranging from 0.3-0.8m H). The above description is derived from 'The Archaeological Inventory of County Tipperary. Vol. 1 - North Tipperary' compiled by Jean Farrelly and Caimin O'Brien (Dublin: Stationery Office, 2002). In certain instances the entries have been revised and updated in the light of recent research. Date of upload/revision: 22 September 2008



Plate 13.1: Example of some of the standing stones which form the Timoney Stones (phot courtesy of www.carrowkeel.com).

The ZTV indicates that the Timoney Stones are located in an area where none of the proposed turbines will theoretically be visible (Figure 13.3). A photowire (Appendix 14-5 Photowire Visualisation Booklet, PWVP – Q) of the proposed turbines from the nearest public road to the National Monuments in Cullaun townland also demonstrates no visibility of the proposed turbines.

13.3.3.2.2 National Monument 113 Errill Church

Errill church (Nat. Mon. No. 113) is located in County Laois c. 8.7km north-east of the nearest proposed turbine, T1. It is described in the HEV as follows:

LA027-024— : Church : ERRILL

Description: National Monument No. 113. A late medieval church (dims. 16.9m E-W; 8.8m N-S; wall T 1.1m). Features include a doorway towards W end of S wall and a splayed chamfered ope with round head at E end of S wall. Some pieces of cut stone used as grave-markers. (Harbison 1970, 139-40). Reference to a church here (O'Hanlon and O'Leary 1907, vol. 1, 305; O'Flanagan 1933, 90) and described by Carrigan (Carrigan 1905, vol. 2, 347-348). The above description is derived from the published 'Archaeological Inventory of County Laois' (Dublin Stationery Office, 1995) compiled by P. David Sweetman, Olive Alcock and Bernie Moran. In certain instances the entries have been revised and updated in the light of recent research. Date of upload: 17 December 2007



Plate 13.2: Errill church, Co. Laois. (Photo courtesy of www.thestandingstone.ie).

The ZTV indicates that the church is located in an area in which none of the proposed turbines will theoretically be visible.

Impacts and mitigation are addressed below in Section 13.5.3.

13.3.3.2.3 Preservation Order 4/2008 Motte & Bailey and Enclosure

Two monuments subject to a Preservation Order (4/2008) are located in Moatquarter, Co. Tipperary over 9.5km to the north-west of the nearest proposed turbine., T1. The monuments are described on the HEV as follows:

TN016-003— : Castle - motte : MOATQUARTER (Rathnaveoge Par.)

Description: Situated near S end of a roughly N-S ridge, overlooking a valley, in pasture. The land rises steadily E of the site, though the slope is still overlooked by a motte. A church (OF047-009—) and graveyard (OF047-009001-), rectangular enclosure (OF047-008—) and sunken ways are visible on the opposing ridge to the S-SW. The site consists of a steep-sided, flat-topped mound (max. diam. NE-SW 11m; 8.5m N-S; 9.6m E-W; H 9m) of classic pudding-bowl profile. Enclosed from E to S to NW by a fosse (With 1.6m; D 2m) which has been dug into the ridge. The enclosing bank (With 1.3m) on the SE side appears to be the remains of the original ridge and is actually a false bank or counterscarp. No bailey visible. The above description is derived from 'The Archaeological Inventory of County Tipperary. Vol. 1 - North Tipperary' compiled by Jean Farrelly and Caimin O'Brien (Dublin: Stationery Office, 2002). In certain instances the entries have been revised and updated in the light of recent research. Date of upload/revision: 6 September 2010. This monument is subject to a preservation order made under the National Monuments Acts 1930 to 2014 (PO no. 4/2008).

TN016-004— : Enclosure : MOATQUARTER (Rathnaveoge Par.)

Description: Situated on the NW slope of a fairly steep hill. The exact location is difficult to pinpoint as the field boundaries have been changed and the site levelled. Depicted as a circular enclosure on the 1st ed. (1840) OS 6-inch map, however on the 1901 ed. only a portion of the bank at W is depicted. Not

visible at ground level. A farmhouse and outbuilding are located c. 100m E of the approximate site location. The above description is derived from 'The Archaeological Inventory of County Tipperary. Vol. 1 - North Tipperary' compiled by Jean Farrelly and Caimin O'Brien (Dublin: Stationery Office, 2002). In certain instances the entries have been revised and updated in the light of recent research. Date of upload/revision: 06 September 2010. This monument is subject to a preservation order made under the National Monuments Acts 1930 to 2014 (PO no. 4/2008).

The monuments at Moatquarter are located in an area where the ZTV shows no visibility of the proposed turbines.

Impacts and mitigation are addressed below in Section 13.5.3.

13.3.3.2.4 Preservation Order No. 70/1938 Tower House - Rathnaveoge Castle

The tower house at Rathnaveoge, Co. Tipperary is located c. 8.9km north-west of the nearest proposed turbine, T1. The monument is described on the HEV as follows:

TN017-033— : Castle - tower house : RATHNAVEOGE LOWER

Description: Situated on the NE end of a natural platform of rock outcrop which has been quarried into in places, particularly SW of the tower house. It is a likely to have been the source of building material for the tower house. The outcrop occurs in an area of rolling pastureland. Described in the Civil Survey (1654-6) as 'a stumpe of a castle wch was never finished' (Simington 1931, vol. 1, 16). 'John O Magher of Clonekeany Esqr. Irish Papist' is listed as proprietor (ibid.). The tower house (ext. dims. 12.15m NW-SE x 10.7m NE-SW; wall T 0.76-1.25m) is four storeys high, constructed of roughly coursed rubble of local sandstone, with limestone surrounds and block and start quoins, and a projecting turret at the E angle. The walls have a slight splay but no real batter. The building is entered at ground-floor level in the NE face. The door surround is destroyed, however, above it there is an elaborate wall-niche with chamfered surround surmounted by a pediment. The niche has curving margins on either side. This presumably contained the coat of arms and/or foundation date or inscription, however there is no visible trace of the stone. The main doorway led into a lobby, only scant remains of which survive, with an internal wall projecting from the NE wall and a jamb projecting from the SE wall. There is no evidence of a garderobe. All upper floors, which were wooden and carried in the thickness of the wall or supported by corbels, were accessed from spiral stairs in the projecting turret. Each floor in this turret is lit by a narrow light with accompanying gun loop. There are no windows in the main block at ground-floor level, but there is a flat-headed single light in each face at first-floor level and larger flat-headed windows in each face at second and third-floor level. A window embrasure in the NW wall at second-floor level has a wooden lintel in situ. At first and second-floor level there is a large fireplace in the SW wall, with stone lintels and mantels - the second floor example is four-centred with chamfered surround and chamfered mantel. There is an elaborate fireplace in the NE wall at third-floor level. It is flat-lintelled with moulded surround and stylised foliage motif running along the lintel with a curving mantle overhead which has partially collapsed. Masonry does not survive above third-floor level. The above description is derived from 'The Archaeological Inventory of County Tipperary. Vol. 1 - North Tipperary' compiled by Jean Farrelly and Caimin O'Brien (Dublin: Stationery Office, 2002). In certain instances the entries have been revised and updated in the light of recent research. Date of upload/revision: 22 September 2008 This monument is subject to a preservation order made under the National Monuments Acts 1930 to 2014 (PO no. 70/1938).

The ZTV also demonstrates no theoretical visibility of any of the proposed turbines from this location. Impacts and mitigation are addressed below in Section 13.5.3.

13.3.3.2.5 Preservation Order No. 1/1996 Ringfort and 4/1984 Motte – The Motte, Cloncannon

Ringfort (PO no. 1/1996) is located c. 9.4km north-west of the nearest proposed turbine, T2. The nearby motte (PO no. 4/1984) is situated c. 9.6km north-west of T6. The monuments are described on the HEV as follows:

TN022-037— : Ringfort - rath : CLONCANNON

Description: Situated on a W-facing slope of rising ground in an upland area with a nearby motte (TN022-036) to the SW. A circular area (diam. E-W 33m) enclosed by an earth and stone bank (With 2m; int. H 0.35m; ext. H 0.5m) preserved at E only, elsewhere reduced to a scarp. An outer fosse (With 4m; D 0.6m) is visible only in places and there is a possible entrance gap (With 2m) at E. The above description is derived from 'The Archaeological Inventory of County Tipperary. Vol. 1 - North Tipperary' compiled by Jean Farrelly and Caimin O'Brien (Dublin: Stationery Office, 2002). In certain instances the entries have been revised and updated in the light of recent research. Date of upload/revision: 22 September 2008.

TN022-036— : Castle - motte : CLONCANNON

Description: Situated on a glacial hillock in the foothills of an upland area with extensive views in all directions. The motte overlooks a narrow deep stream-cut ravine running NE-SW which is 85m to the S and SE. According to Cunningham (1987, 117) this motte was located on the route of the Slighe Dhála. The summit of Benduff overlooks the monument 1.4km to the ENE, with good views of Borrisnoe Mountain, Kilduff Mountain and the Devilsbit Mountain to the SE. Nearby ringforts (TN022-037—; TN022-039—) 290m to the NE and 440m S respectively. A steep-sided flat-topped oval-shaped mound (H 4.8m; top diam. 27m NE-SW; 18m NW-SE) with enclosing berm (With 8m) around the base of the motte defined by an earthen bank (ext. H 3m; int. H 0.5m), the berm was created when the builders of the mound cut into the site of the natural hillock in order to create the oval shaped motte. A second berm (With 9m-16m; ext. H 2m) encircles the base of the hillock on which the motte is situated, this second berm is enclosed by an earth and stone bank (With 5m; ext. H 2m; int. H 0.9m) with a possible entrance gap at NNW now destroyed by adjacent quarry. The stepped profile of the defences of the motte were created by the builders of the monument cutting into the side of a natural glacial hillock. There is no bailey visible although quarrying operations to the E and N of the motte may have destroyed any original bailey in this area. Quarrying to the N and E of the monument has resulted in the removal of the outer enclosing bank from NNW-N-E. A flat-topped plateau area (diam. 90m) to the E of the motte would have been a suitable location for a bailey area, this area is now used as silt pools by the adjoining quarry (Stout 1984, 111). A shallow depression or hollow area on top of motte may suggest the presence of a structure on top of the mound. The Civil Survey of 1654-56 recorded the existence of 'Cloncannanane [Cloncannon] castle' which was described at the time as one of 'six castles out of all manner of repayre' (Simington 1931, 4). The 1654-56 Civil Survey of the parish of Aghnameadle recorded that in the townland of Cloncannon there 'is upon the sd lands a castle wanting repaire & a mill seate (TN022-069—) upon a brooke called Collatrom [Ollatrim]' (ibid., 22). Today there are no surface remains of any other castle (TN022-068—) in the townland of Cloncannon. Of the six castles listed all were stone castles such as Rathnaveoge Castle (TN017-033—). A castle is depicted in this townland on the Down Survey barony map of Ikerrin. It is possible that the castle depicted on the Down Survey map was a stone castle which stood on the summit of Cloncannon motte. Alternatively this castle site may have been located elsewhere within the townland of Cloncannon. A nearby moated site (TN022-038001-) is located in area where the castle is depicted on the Down Survey map. (Stout 1984, 111-12; Cunningham 1987, 117-18). See attached plan taken from Stout, G. 1984 The archaeological survey of the barony of Ikerrin. The above description is derived from 'The Archaeological Inventory of County Tipperary. Vol. 1 - North Tipperary' compiled by Jean Farrelly and Caimin O'Brien (Dublin: Stationery Office, 2002). In certain instances the entries have been revised and updated in the light of recent research. Compiled by: Caimin O'Brien Date of upload/revision: 21 July 2014. This monument is subject to a preservation orders made under the National Monuments Acts 1930 to 2014 (PO no. 4/1984 and PO no. 1/1996).

The ZTV again demonstrates no theoretical visibility of the proposed turbines from the area of these monuments. Impacts and mitigation are addressed below in Section 13.5.3.

13.3.3.2.6 Preservation Order No. 57/1938 Tower House - Loughmoe Castle

The tower house at Tinvoher is located c. 6.6km south of the nearest proposed turbine, T9. It is described on the HEV as follows:

TN035-030005 : Castle - tower house : TINVOHER

Description: Situated on flat pasture with the nearby River Suir to the E and a church (TN035-030002) and ringwork (TN035-030001-) to the W. A four-storey tower house with attic, constructed of coursed rubble with rounded angles and slight base-batter. A seventeenth-century semi-fortified Z-plan house (TN035-030004-) is attached to the N façade of the tower house. The tower was accessed from a main doorway in the centre of the N wall which led to a lobby protected by an overhead murder-hole. The spiral stairs in the NE angle were accessed off the lobby and are now blocked up while the ground floor is reached through a doorway directly opposite the main entrance. The ground floor is barrel vaulted with a second vault over the second floor, the latter floor containing an armorial fireplace, now inaccessible. It bears the shields of the Butler and Purcell families with the initials IFP and FP or BP over the fireplace. Other decorative features on the fireplace consists of interlaced triangles and six interlaced rings within a Star of David. All windows were single or twin flat-headed types. Externally at the base of the E wall off-centre to the S there is a large garderobe chute opening which is fed from several garderobes in the SE angle of the tower. A box machicolation at wall-walk level at the centre of the W wall is accessible from the attic. A series of cut-stone corbels support a machicolation at wall-walk level on the N and S walls. The above description is derived from 'The Archaeological Inventory of County Tipperary. Vol. 1 - North Tipperary' compiled by Jean Farrelly and Caimin O'Brien (Dublin: Stationery Office, 2002). In certain instances the entries have been revised and updated in the light of recent research. Date of upload/revision: 22 September 2008. This monument is subject to a preservation order made under the National Monuments Acts 1930 to 2014 (PO no. 57/1938).

The ZTV demonstrates theoretical visibility of 7-9 proposed turbines from this location. Impacts and mitigation are addressed below in Section 13.5.3.

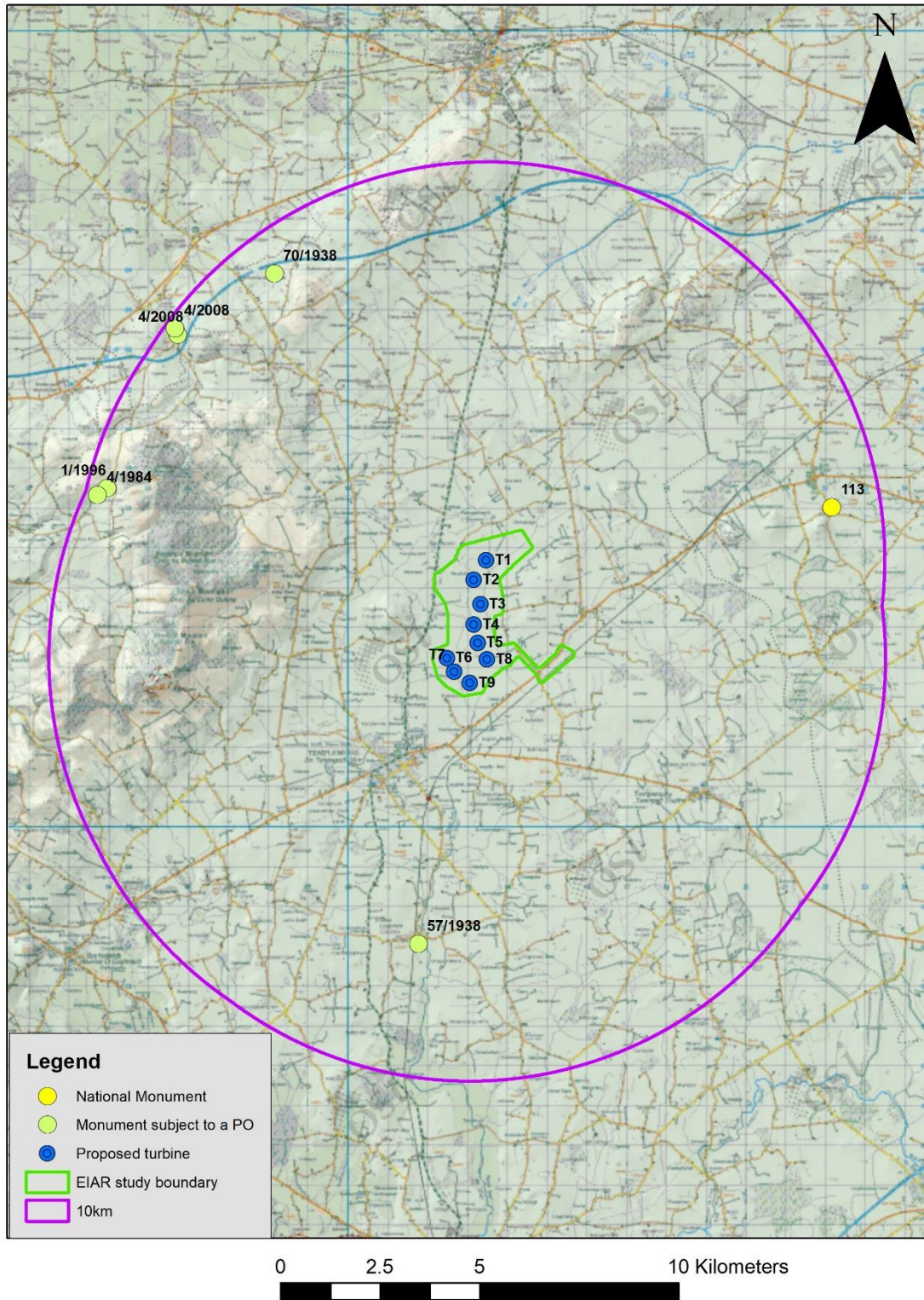


Figure 13.2: National Monuments and those subject to a Preservation Order within 10km of the nearest proposed turbine.

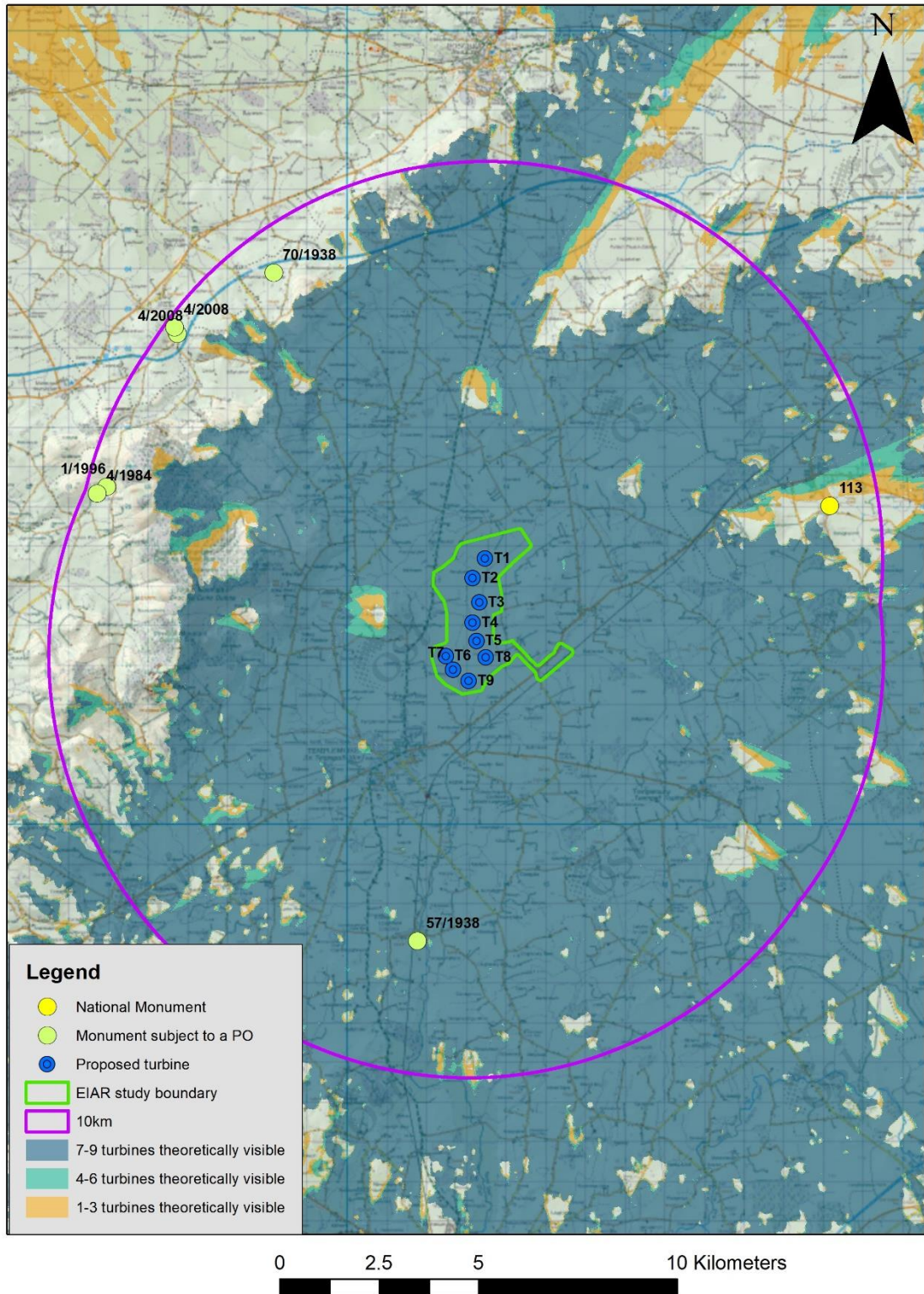


Figure 13.3: National Monuments and those subject to a Preservation Order with ZTV.

13.3.3.3 Recorded Monuments within the Site

One recorded monument (TN029-030— redundant record) is located within the proposed Site. The monument is listed in Table 13.4 and shown on Figure 13.4 below.

Table 13.4: SMR located within the proposed Site

SMRS	ITM (E)	ITM (N)	Class	Townland	Turbine No.	Distance (m)
TN029-030—	613018	674670	Redundant record	BALLYCAHILL (Templemore Par.)	T5	189

13.3.3.3.1 TN029-030---- Redundant record

This monument is located within the Site c. 189m west of T5. It was visited as part of the site walk-over survey and as per the description no trace of an archaeological monument is apparent at this location (Plate 13.3). It is described on the HEV as follows:

TN029-030— : Redundant record : BALLYCAHILL (Templemore Par.)

Description: Non-archaeological. Natural hillock depicted on GSI aerial photographs (S. 45/4) taken in 1973. Compiled by: Jean Farrelly and Caimin O'Brien Date of upload/revision: 22 September 2008

Impacts and mitigation are addressed below in Section 13.4.



Plate 13.3: Site of redundant record TN029-030—, looking NW.

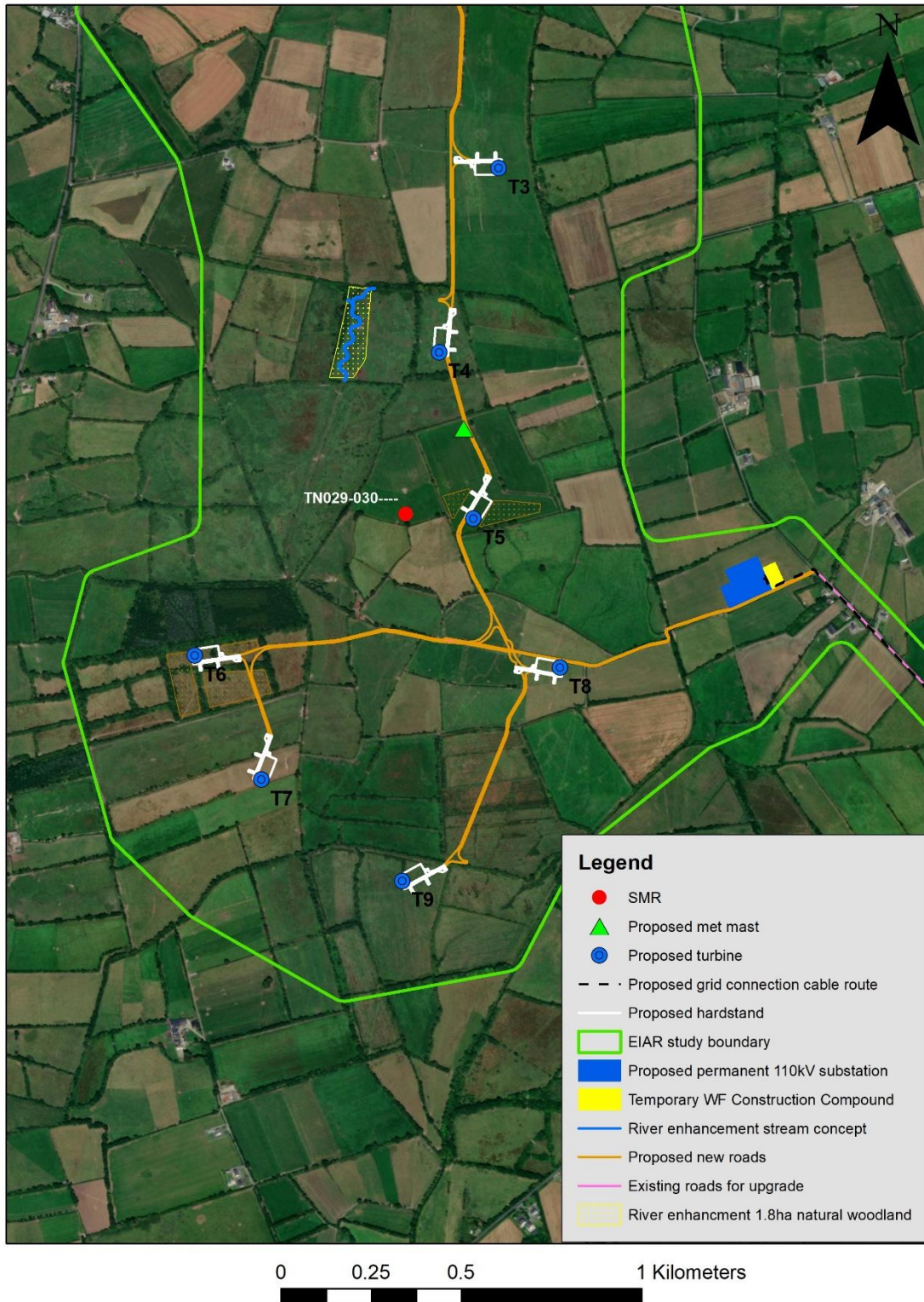


Figure 13.4: Recorded monument within the Site.

13.3.3.4 Recorded Monuments within 5km of the nearest proposed turbine

A total of one hundred and thirty-four (134) recorded monuments are located within 5km of the nearest proposed turbine. This number includes the monument located within the Site discussed above in Section 13.3.3.3. The monument locations are shown on Figure 13.5 and listed in Table 13.5. The ZTV shows

that 131 of the 134 monuments are located in areas where 7-9 turbines will theoretically be visible (Figure 13.6). The largest number of monuments within the 5km study area date to the early medieval period and are represented by enclosures and ringforts. An overview of the broad periods and monument types represented within the 5km study area is presented below.

Table 13.5: Recorded monuments within 5km of the nearest proposed turbine.

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
1	TN029-030—	613018	674670	Redundant record	BALLYCAHILL (Templemore Par.)	T5	189
2	TN029-029—	613828	674810	Enclosure	CLONMORE (Killavinoge Par.)	T5	640
3	TN029-028—	613818	674960	Enclosure	CLONMORE (Killavinoge Par.)	T5	682
4	TN023-045—	613381	677412	Castle - unclassified	KNOCKANROE (Templemore Par.)	T1	683
5	TN029-027—	614047	675170	Earthwork	CLONMORE (Killavinoge Par.)	T3	897
6	TN029-032—	613678	672480	Enclosure	COBBS	T9	1,350
7	TN029-100—	610918	673650	Enclosure	KILTILLIHA	T6	1,640
8	TN029-025—	611178	672970	Redundant record	TEMPLEMORE DEMESNE	T7	1,733
9	TN023-046001-	614717	677969	Church	SKEHANAGH (Killavinoge Par.)	T1	1,788
10	TN023-046002-	614717	677969	Graveyard	SKEHANAGH (Killavinoge Par.)	T1	1,788
11	TN023-047—	614797	678029	Children's burial ground	SKEHANAGH (Killavinoge Par.)	T1	1,887

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
12	TN029-033—	614704	672810	Ringfort - rath	KYLEMORE	T9	1,892
13	TN023-056—	615187	676029	Redundant record	CLONMORE (Killavinoge Par.)	T1	1,895
14	TN029-031—	615367	674630	Earthwork	CLONMORE (Killavinoge Par.)	T8	1,959
15	TN029-070—	613408	671730	Ringfort - rath	AUGHALL BEG	T9	1,963
16	TN029-034—	614687	672610	Redundant record	KYLEMORE	T9	1,975
17	TN023-057—	615447	676319	Redundant record	CLONMORE (Killavinoge Par.)	T1	2,062
18	TN029-036—	614687	672433	Enclosure	KYLEMORE	T9	2,074
19	TN029-069—	612698	671600	Moated site	AUGHALL MORE	T9	2,076
20	TN023-044—	614027	678769	Church	SHANAKILL	T1	2,125
21	TN029-035—	614887	672600	Redundant record	KYLEMORE	T9	2,152
22	TN029-026—	611238	672280	Redundant record	TEMPLEMORE DEMESNE	T7	2,154
23	TN029-011—	610390	675160	Ringfort - rath	CRAIGUEDARG, CURRAD UFF	T6	2,226
24	TN029-071—	613877	671520	Ringfort - rath	AUGHALL BEG	T9	2,302
25	TN029-037—	614847	672260	Ringfort - rath	BALLINLASSA	T9	2,306

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
26	TN029-024—	610748	672480	Designed landscape - tree-ring	TEMPLEMORE DEMESNE	T7	2,369
27	TN023-055—	610543	675986	Castle - ringwork	BALLYCAHILL (Templemore Par.), CLONTAAFFE	T6	2,548
28	TN029-072—	613837	671230	Ringfort - rath	AUGHALL BEG, CASTLELEINY	T9	2,560
29	TN029-062007-	610880	672049	Graveslab	TEMPLEMORE DEMESNE	T7	2,564
30	TN029-062006-	610877	672050	Graveslab	TEMPLEMORE DEMESNE	T7	2,566
31	TN029-062001-	610858	672048	Church	TEMPLEMORE DEMESNE	T7	2,580
32	TN029-062005-	610862	672028	Graveyard	TEMPLEMORE DEMESNE	T7	2,592
33	TN029-010—	609895	675189	Enclosure	CURRADUFF	T6	2,697
34	TN029-062—	611084	671698	Historic town	TEMPLEMORE DEMESNE	T7	2,712
35	TN023-043003-	611038	678029	Burial ground	KILLOUGH (Templemore Par.)	T1	2,719
36	TN023-043001-	611028	678019	Ecclesiastical enclosure	KILLOUGH (Templemore Par.)	T1	2,723
37	TN023-043002-	611028	678019	Bullaun stone	KILLOUGH (Templemore Par.)	T1	2,723

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
38	TN029-073—	613857	671020	Ringfort - rath	GORTEENDANGAN	T9	2,766
39	TN029-038—	616036	673118	Earthwork	LAHAGH	T8	2,824
40	TN029-062003-	610742	671819	House - indeterminate date	TEMPLEMORE DEMESNE	T7	2,827
41	TN029-062002-	610743	671814	Castle - tower house	TEMPLEMORE DEMESNE	T7	2,831
42	TN029-062004-	610749	671808	Bawn	TEMPLEMORE DEMESNE	T7	2,831
43	TN029-077—	614897	671480	Ringfort - rath	CASTLELEINY	T9	2,878
44	TN029-040—	616047	672770	Earthwork	LAHAGH	T8	2,989
45	TN029-012—	609395	674138	Ringfort - rath	GORTACURRA	T6	3,042
46	TN029-081001-	614747	671081	House - fortified house	CASTLELEINY	T9	3,104
47	TN029-081002-	614743	671076	Bawn	CASTLELEINY	T9	3,105
48	TN029-039—	616427	673141	Ringfort - rath	LAHAGH	T8	3,178
49	TN023-071—	609995	676922	Enclosure	CLONTAAFFE	T2	3,192
50	TN029-017—	609207	673991	Ringfort - rath	GORTACURRA	T6	3,239
51	TN029-023002-	609688	672540	Mound	LLOYDSBOROUGH (Killea Par.)	T7	3,245
52	TN029-023001-	609658	672510	Mound	LLOYDSBOROUGH (Killea Par.)	T7	3,285

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
53	TN030-001—	616747	674440	Enclosure	BALLYSORRELL BIG	T8	3,306
54	TN029-009—	609327	675457	Moated site	PARK (Killea Par.)	T6	3,323
55	TN029-082—	615057	670940	Ringfort - rath	CASTLELEINY	T9	3,399
56	TN029-078—	615707	671580	Earthwork	BALLINROE	T9	3,402
57	TN029-079001-	615651	671507	Church	BALLINROE	T9	3,403
58	TN029-079002-	615655	671492	Graveyard	BALLINROE	T9	3,416
59	TN029-088—	610378	671290	Redundant record	MANNA SOUTH	T7	3,466
60	TN024-009001-	616888	676377	Church	GLEBE (Killavinoge Par.)	T1	3,479
61	TN024-009002-	616897	676379	Graveyard	GLEBE (Killavinoge Par.)	T1	3,488
62	TN029-076—	613128	670159	Enclosure	GORTEENMAGHER	T9	3,496
63	TN029-101—	612468	670171	Redundant record	CLOONE	T9	3,523
64	TN023-036—	612978	680265	Ringfort - rath	GORTNAGOWNA (Killavinoge Par.)	T1	3,562
65	TN023-069—	609958	677949	Standing stone	SKEHANAGH NORTH	T2	3,588
66	TN023-033—	611378	679689	Enclosure	CLONAKENNY	T1	3,598
67	TN024-007—	617048	676749	Redundant record	DROMARD BEG	T1	3,621

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
68	TN023-066—	611218	679609	Standing stone	CLONAKENNY	T1	3,628
69	TN023-054—	609558	677029	Ringfort - rath	KILBALLYHEMIKIN	T2	3,641
70	TN029-074—	612588	669991	Enclosure	GORTEENMAGHER	T9	3,686
71	TN023-042—	609848	677969	Ringfort - rath	SKEHANAGH NORTH	T2	3,694
72	TN023-032—	611288	679819	Enclosure	CLONAKENNY	T1	3,756
73	TN029-083—	615749	671059	Ringfort - rath	BALLINROE	T9	3,773
74	TN029-084—	614527	670181	Children's burial ground	KILCURKREE	T9	3,789
75	TN029-006002-	608685	674928	Graveyard	PARK (Killea Par.)	T6	3,805
76	TN029-006003-	608685	674928	Bullaun stone	PARK (Killea Par.)	T6	3,805
77	TN029-006001-	608686	674938	Church	PARK (Killea Par.)	T6	3,805
78	TN023-053—	609279	676529	Ringfort - rath	KILBALLYHEMIKIN	T2	3,845
79	TN029-092—	608664	675062	House - medieval	PARK (Killea Par.)	T6	3,850
80	TN023-052—	609289	676829	Earthwork	KILBALLYHEMIKIN	T2	3,869
81	TN023-031—	611478	680089	Enclosure	CLONAKENNY	T1	3,883
82	TN023-029—	610846	679674	Ringfort - rath	CLONAKENNY	T1	3,914

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
83	TN029-075003-	612428	669781	Earthwork	CLOONE	T9	3,915
84	TN029-075—	612418	669771	Settlement deserted - medieval	CLOONE	T9	3,926
85	TN029-016—	608469	673970	Enclosure	LLOYDSBOROUGH (Killea Par.)	T6	3,976
86	TN029-075001-	612445	669699	Castle - tower house	CLOONE	T9	3,994
87	TN029-075002-	612428	669701	Bawn	CLOONE	T9	3,994
88	TN023-030002-	611402	680249	Bawn	CLONAKENNY	T1	4,059
89	TN023-030005-	611298	680188	Field system	CLONAKENNY	T1	4,060
90	TN023-030001-	611425	680265	House - fortified house	CLONAKENNY	T1	4,062
91	TN023-030003-	611316	680203	Church	CLONAKENNY	T1	4,063
92	TN029-080—	616407	671320	Redundant record	BALLINROE	T9	4,121
93	TN023-030006-	611388	680348	Settlement deserted - medieval	CLONAKENNY	T1	4,152
94	TN029-005—	608313	674803	Ringfort - rath	KILLEA (Killea Par.)	T6	4,154
95	TN023-030004-	611334	680328	Moated site	CLONAKENNY	T1	4,162
96	TN029-015—	608319	673530	Earthwork	KILLAWARDY (Killea Par.)	T6	4,182
97	TN024-008—	617617	676589	Redundant record	DROMARD BEG	T1	4,193

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
98	TN023-051—	608719	676249	Ringfort - rath	KILBALLYHEMIKIN	T6	4,205
99	TN023-067—	608719	676369	Standing stone	KILBALLYHEMIKIN	T6	4,263
100	TN029-008—	608123	674045	Enclosure	KILLAWARDY (Killea Par.)	T6	4,317
101	TN029-004—	608133	675105	Enclosure	KILLEA (Killea Par.)	T6	4,379
102	TN023-028—	610378	679883	Ringfort - rath	CLONAKENNY	T1	4,385
103	TN029-066—	611268	669541	Moated site	LAGHILE (Loughmoe West Par.)	T9	4,465
104	TN023-040—	609189	678409	Ringfort - rath	BORRISNOE	T2	4,483
105	TN023-049—	608209	675799	Ringfort - rath	PARK (Killea Par.)	T6	4,490
106	TN023-050—	608321	676088	Ritual site - holy well	KILKIP WEST	T6	4,493
107	TN023-070—	612726	681182	Enclosure - large enclosure	KYLEANNAGH	T1	4,506
108	TN023-048—	608119	675649	Ringfort - rath	PARK (Killea Par.)	T6	4,527
109	TN029-064—	610138	670141	Enclosure	FOREST	T7	4,532
110	TN029-067—	611468	669361	Enclosure	LAGHILE (Loughmoe West Par.)	T9	4,560
111	TN023-035—	609607	679368	Ritual site - holy well	GORTEEN (Bourney Par.)	T1	4,642
112	TN029-052—	609119	670871	Ringfort - rath	OLDTOWN	T7	4,651

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
113	TN029-002—	607958	675552	Ringfort - rath	PARK (Killea Par.)	T6	4,653
114	TN024-011—	617137	679559	Road - unclassified togher	CULLAHILL (Bourney Par.),DROMARD MORE	T1	4,665
115	TN035-011—	612316	669028	Ringfort - rath	PENANE	T9	4,676
116	TN030-019—	616983	671171	Ringfort - rath	BALLYKNOCKANE (Templetouhy Par.)	T9	4,685
117	TN023-034—	609750	679645	Enclosure	GORTEEN (Bourney Par.)	T1	4,692
118	TN024-006—	617667	678739	Road - unclassified togher	DROMARD MORE	T1	4,692
119	TN029-085—	614697	669261	Ringfort - rath	COOGULLA	T9	4,705
120	TN029-051—	608779	671150	Settlement deserted - medieval	OLDTOWN	T7	4,743
121	TN023-016—	611190	680914	Redundant record	SHANACLOON (Bourney Par.)	T1	4,744
122	TN029-022—	608089	672360	Boulder-burial	KILLAWARDY (Killea Par.)	T6	4,749
123	TN030-014—	617677	671980	Ringfort - rath	LISDALLEN AND DRUMMIN	T8	4,798
124	TN035-019—	614711	669128	Enclosure	COOGULLA	T9	4,834
125	TN030-031001-	616862	670687	Ringfort - rath	BALLYKNOCKANE (Templetouhy Par.)	T9	4,862

MAP ID	SMR	ITM E	ITM N	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)
126	TN030-021—	617348	671342	Ringfort - rath	BALLYKNOCKANE (Templetouhy Par.)	T8	4,863
127	TN029-053—	609010	670649	Designed landscape - folly	SANDYMOUNT	T7	4,880
128	TN030-031002-	616887	670651	Earthwork	BALLYKNOCKANE (Templetouhy Par.)	T9	4,904
129	TN030-020—	617087	670900	Redundant record	BALLYKNOCKANE (Templetouhy Par.)	T9	4,920
130	TN029-065—	610398	669461	Enclosure	WHITEFIELD	T9	4,939
131	TN024-005—	616927	680238	Barrow - ring-barrow	CULLAHILL (Bourney Par.)	T1	4,955
132	TN035-012—	613794	668759	Ritual site - holy well	COOGULLA	T9	4,956
133	TN030-006—	618117	672560	Earthwork	LISDALLEEN AND DRUMMIN	T8	4,965
134	TN029-007—	607471	674499	Enclosure	KILLAWARDY (Killea Par.)	T6	4,967

13.3.3.4.1 *The Prehistoric Period*

The prehistoric period is represented by a relatively low number of monuments (5) including a ring barrow (1), standing stones (3) and a boulder burial (1).

Various types of barrow are known in the archaeological record and include bowl barrows, mound barrows, ring barrows and ditch barrows. Ring Barrows are a circular or oval raised area (generally up to 1m above the external ground level or level with it) enclosed by fosse(s) and outer bank(s), with or without an entrance. They are part of the Bronze/Iron Age burial tradition (c. 2400 BC - AD 400).

Standing stones are a common feature of the prehistoric Irish landscape consisting of single, upright stones. They are known by various names such as gallán, dallán and long stone. All standing stones are not necessarily of the same date or have the same function. Excavations of standing stones have shown that some mark prehistoric burials and some may have had a ritual or commemorative function. They have similar axis to standing stone pairs and may therefore date to the Bronze Age (2400-500BC).

The term boulder burial was coined in the 1970s to describe a class of monument that was quite prevalent in the south west, consisting of a single large boulder sitting on three or four support stones. The support stones lift the boulder off the ground and provide a small chamber-like area under the stone. Boulder burials often occur in groups and in association with other monuments and are generally believed to be burial monuments although not all excavated examples have produced human bone.

All of the monuments dating to the prehistoric period are located in excess of 3.5km from the nearest proposed turbine.

13.3.3.4.2 *The Early Medieval Period*

The Early Medieval period is represented by enclosures and ringforts which account for 55 of the 134 monuments within 5km of the nearest proposed turbine. Enclosures consist of an area defined by an enclosing element (e.g. bank, wall, fosse, scarp), or indicated as such cartographically, and occurring in a variety of shapes and sizes, possessing no diagnostic features which would allow classification within another monument category. These may date to any period from prehistory onwards. Enclosures with a diameter greater than 70m should be classed as Large Enclosure. Ringforts are a roughly circular or oval area surrounded by an earthen bank with an external fosse. Some examples have two (bivallate) or three (trivallate) banks and fosses, but these are less common and have been equated with higher status sites belonging to upper grades of society. They functioned as residences and/or farmsteads and broadly date from 500 to 1000 AD.

13.3.3.4.3 *Medieval Period*

At least 17 monuments within 5km of the nearest proposed turbine may be attributed to the medieval period. They include tower houses, bawns, an unclassified castle, deserted medieval settlements, moated sites and the historic town of Templemore.

Moated sites, of which there are four within 5km of the nearest proposed turbine, comprise a square, rectangular or occasionally circular area, sometimes raised above the ground, enclosed by a wide, often water-filled, fosse, with or without an outer bank and with a wide causewayed entrance. They date to the late 13th/early 14th centuries and were primarily fortified residences/farmsteads of Anglo-Norman settlers though they were also built by Gaelic lords.

Unclassified castles comprise a castle that cannot be more precisely classified. They can date from the late 12th to the 16th century AD. One such monument TN023-045— is located within 700m of the nearest proposed turbine, T1. It does not, however, have any visible remains at ground level.

A castle – ringwork comprises an early form of castle consisting of a circular, oval or polygonal area enclosed by an earth and stone bank and outer fosse. Constructed by the Anglo-Normans and Gaelic lords in the 13th century AD.

Tower houses were a later development, primarily dating to the 15th and 16th centuries. They comprise a fortified residence in the form of a tower, usually four or five storeys high, and for the most part slightly more rectangular than square in plan. They were constructed by a lord or landholder and were often partially or completely enclosed by a bawn. The majority date to the 15th and 16th centuries AD.

Deserted medieval settlements, of which there are three within 5km of the nearest proposed turbine comprise an abandoned medieval settlement dating from the 13th century to 1550 AD. They often consist of a group of houses in close proximity with associated land plots, associated with a parish church and/or castle or tower house, often evident as earthworks.

The historic town of Templemore TN029-062— is situated c. 2.7km south-west of the nearest proposed turbine, T7. The ZTV shows theoretical visibility of 7-9 turbines from the area of the historic town. Photomontage 15 (EIAR Volume 2) taken from the N62 to the north of the town shows that six turbines will be visible from this area. A photowire (Appendix 14-5 Photowire Visualisation Booklet, PWVP – I) from Templemore Town Park towards the centre of the town, however, demonstrates no visibility of the proposed turbines from this location.

The historic town is described on the HEV as follows:

TN029-062— : Historic town : TEMPLEMORE DEMESNE

Description: Situated on flat pasture with good views in all directions. Templemore, known as Corkatenny until the sixteenth century, was granted to Thomas de Hereford by Theobald Walter before his death in 1206. In a series of charters dating to the early thirteenth century de Hereford gave tithes and ecclesiastical benefices of all his lands, including 'Corcateny' to the Augustinian abbey of Saint Thomas in Dublin (Reg. St. Thomas, Dublin 194, 196, 237). This Order built a church (TN029-062001) in the town probably early in the thirteenth century, though the first reference to it in the Abbey register dates to 1240 (Gilbert 1889, 315-16). Thomas de Hereford appears to have relinquished his claims on Templemore as William de Marisco was found to have held land of Theobald Walter, son of the first Theobald, at 'Coredofeney' at the time of his death in 1284 (CDI, vol. 2, 510). A Purcell lord of Corketeni was noted in 1356 but the de Marisco family are again associated with the area in the later sixteenth century (CSPI, vol. 2, 366). The castle (TN029-062002) at Templemore dates to this period. During the seventeenth century Templemore passed through the hands of Purcell, Baron of Loughmoe and Walter Lawless (Walsh 1991, 6-7). In the Civil Survey (1654-6) Templemore is described as 'The Mannor, Castle Towne, and lands of Tamplemore' (Simington 1931, vol. 1, 78). In 1698 John Carden leased 'the Manor Town, Castle and lands of Templemore containing two colpes [c. 2000 acres]' (Walsh 1991, 126). In 1704 Carden bought the freehold to this property from the Duke of Ormond (ibid.). The Carden family lived in Templemore castle until 1740 when it was destroyed by fire (Walsh 1991, 5). The present town of Templemore was built as a market town in the latter half of the eighteenth century. The above description is derived from 'The Archaeological Inventory of County Tipperary. Vol. 1 - North Tipperary' compiled by Jean Farrelly and Caimin O'Brien (Dublin: Stationery Office, 2002). In certain instances the entries have been revised and updated in the light of recent research. Date of upload/revision: 22 September 2008

13.3.3.4.4 Monuments with Religious Associations

Twenty-three monuments within 5km of the nearest proposed turbine have religious associations and may date to a number of time periods. The monuments comprise churches, graveyards, burial grounds, ecclesiastical enclosures, a children's burial ground, holy wells, bullaun stones and a graveslab. Some of these monuments are found near to or in association with each other and the nearest of these is situated c. 1.7km from the nearest proposed turbine, T1.

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.

The term 'bullaun' (from the Irish word 'bullán', which means a round hollow in a stone, or a bowl) is applied to boulders of stone or bedrock with hemispherical hollows or basin-like depressions, which may have functioned as mortars. They are frequently associated with ecclesiastical sites and holy wells and so may have been used for religious purposes. Other examples which do not appear to have ecclesiastical associations can be found in bedrock or outcrop in upland contexts, often under blanket bog, and are known as bedrock mortars. They date from the prehistoric period to the early medieval period (5th-12th centuries AD).

One ecclesiastical enclosure is located within 5km of the nearest proposed turbine. They comprise a large oval or roughly circular area, usually over 50m in diameter, defined by a bank/banks and external fosse/fosses or drystone wall/walls, enclosing an early medieval church or monastery and its associated areas of domestic and industrial activity. They date to the early medieval period (5th-12th centuries AD).

Seven churches, five graveyards and a burial ground are located within 5km of the nearest proposed turbine. In some cases the churches and graveyards are found in association with each other. They can be of any date from c. 500 AD onwards. Children's burial grounds, of which there are two, comprise an area of unconsecrated ground for the interment of unbaptised or stillborn children, often known under various Irish names: Cillín, Caldrough, 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.

13.3.3.4.5 **Post Medieval Period**

At least five monuments which may be attributed to the post-medieval period are located within 5km of the nearest proposed turbine. They include two designed landscape features, a tree ring and a folly, two fortified houses. The nearest of these monuments, TN029-024— tree ring, is located c. 2.3km from the nearest proposed turbine, T7. Tree rings may be described as a wall, bank, fosse or an earthwork platform, or any combination of these, usually circular or oval in plan, used to define or enclose a cluster of ornamental trees. They date from the 17th to the 19th century AD.

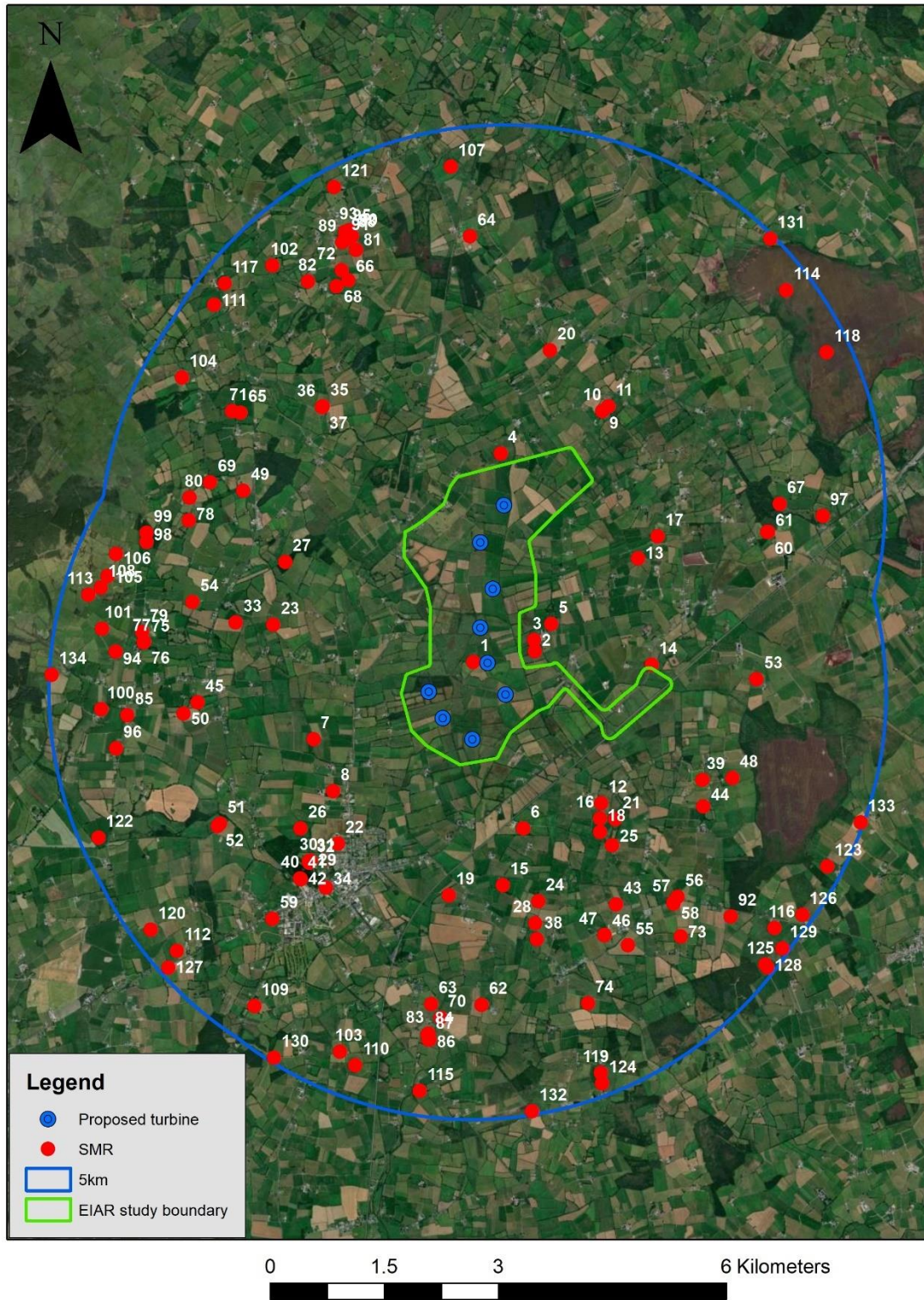


Figure 13.5: Recorded monuments within 5km of the nearest proposed turbine.

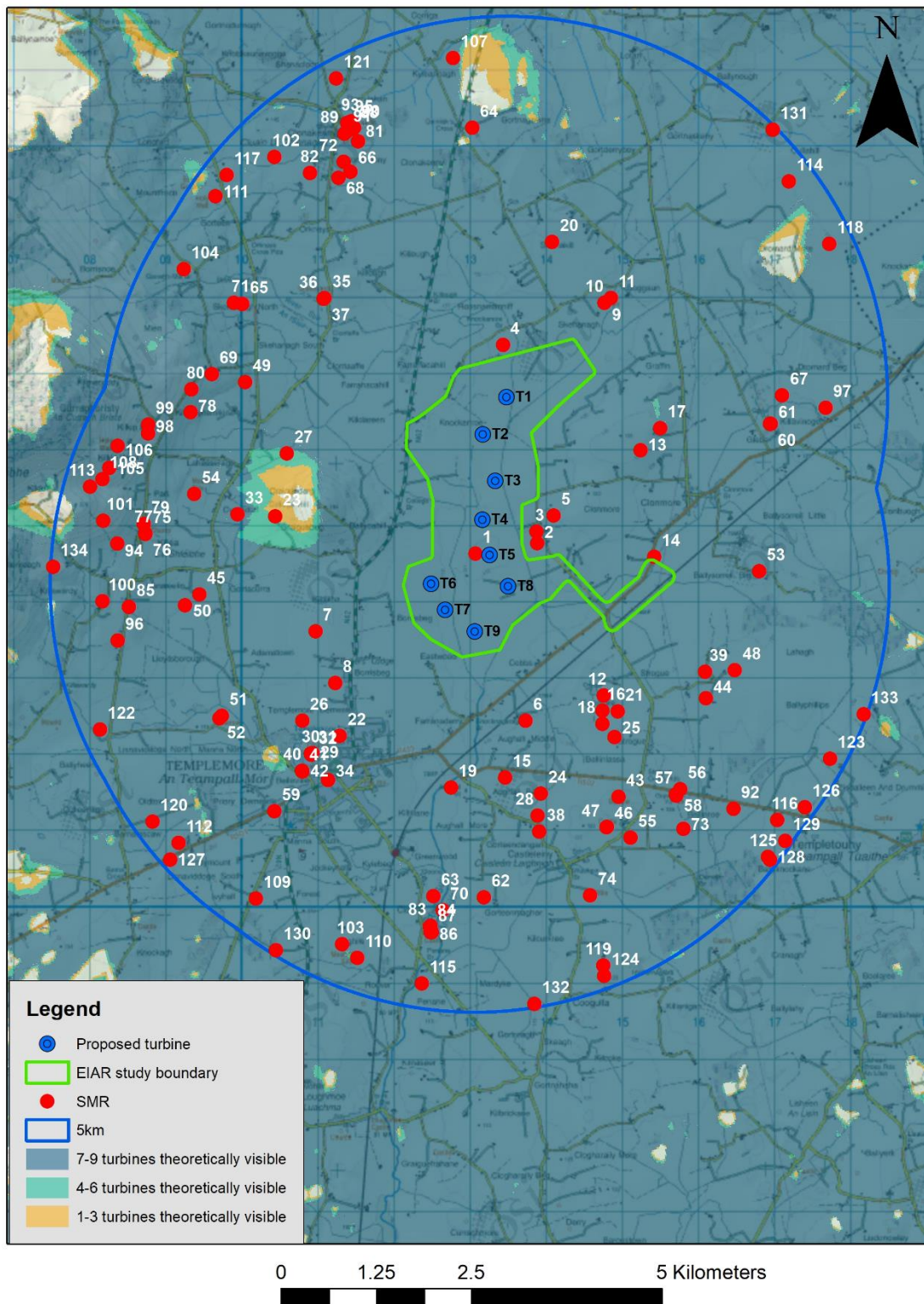


Figure 13.6: Recorded monument within 5km of the nearest proposed turbine with ZTV showing theoretical visibility.

13.3.3.5 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 Site. One entry was returned for the townland of Clonmore and relates to the discovery of human remains on a farm at Darreens or Pollough, Clonmore, near Templemore, Co. Tipperary. It is noted that the precise location of the find is unknown, however, as there is no townland called Darreens or Pollough in the area.

Clonmore, Co. Tipperary, Tipperary*NMI Burial Excavation Records**County: Tipperary Site name: Clonmore, Co. Tipperary**Sites and Monuments Record No.: N/A Licence number: –**Author: –**Site type: Graves of indeterminate date**Period/Dating: –**ITM: E 616118m, N 675482m*

In February 1972 human remains were exposed in ground trampled by cattle on a farm at Darreens or Pollough, Clonmore, near Templemore, Co. Tipperary.²⁶³ The remains were found at a depth of c. 0.3m below ground level in a field known locally as the Green Hill. The site was not visited by NMI personnel, and the remains do not appear to have been acquired. Neither Pollough nor Dareens are listed in the townland index, so it is not possible to be any more specific about the location of this site.

263. The exact location of the find-place is not known. According to the landowner, the townland was called Pollough, but no such townland is listed in the index.

13.3.3.6 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 Site. No finds are recorded within the vicinity of the Site with the nearest shown on www.heritagemaps.ie being located c. 3.5km to the north-east and comprising a bog road.

13.3.3.7 Sub-Surface Archaeological Potential

A previously unrecorded rectangular crop mark was noted within the Site during a review of the available aerial photography for the area. It comprises a rectangular area measuring c. 58m NW/SE x 53m NE/SW and is situated in pasture c. 315m north-west of T1 and c. 23m north-east of the proposed temporary borrow pit (Figure 13.7). No visible above-ground remains of this feature are apparent, however, the form of the crop mark as visible on both Google Earth and MapGenie imagery may suggest that it represents the remains of a moated site. It is not indicated on any editions of the available historic mapping. Moated sites generally comprise a square, rectangular or occasionally circular area, sometimes raised above the ground, enclosed by a wide, often water-filled, fosse, with or without an outer bank and with a wide causewayed entrance. They date to the late 13th/early 14th centuries and were primarily fortified residences/farmsteads of Anglo-Norman settlers though they were also built by Gaelic lords. While no infrastructure is proposed in the immediate area of the crop mark mitigation measures are recommended in order to ensure accidental damage does not occur during the construction stage of the Proposed Project.

Due to the extent of groundworks associated with the construction phase of the Proposed Project, the greenfield nature of the Site and the presence of a previously unrecorded rectangular crop mark as detailed above, it is possible that previously unrecorded sub-surface archaeological finds, features or deposits are located within the Site. The potential therefore exists that sub-surface archaeological sites or features, if present within the Site, may be directly impacted by construction phase activities. Mitigation measures to ameliorate this potential impact are detailed in Section 13.5.2.4 below.



Figure 13.7: Rectangular crop mark visible on aerial photography to north-west of T1 and north-east of proposed temporary borrow pit.

13.3.3.8 Archaeological Landscapes

Section 13.7.2 of Tipperary CDP states the following in relation to archaeological landscapes:

‘An archaeological landscape is a natural landscape that has been deliberately modified by a group (or groups) of people during a particular archaeological period (or periods). It provides context and meaning to individual archaeological sites and helps us to understand how our ancestors lived. Such landscapes have the potential to be of cultural, economic, social and/or environmental value. International best practice, as outlined in the European Convention on the Protection of Archaeological Heritage (Valetta Convention) 1992 and the European Landscape Convention (Florence Convention) 2000 supports a landscape-based approach to archaeological protection. It is an objective of the Council to carry out an audit of archaeological landscapes in Tipperary over the lifetime of the Plan.’

No archaeological landscapes have been formally identified or designated in the CDP.

13.3.3.9 Protected Structures within 5km of the nearest proposed turbine

No Protected Structures are located within the Site.

A total of 105 protected structures are located within 5km of the nearest proposed turbine. Seventy-six of these are located in the town of Templemore which accounts for the large number of structures within the 5km study area (Figure 13.10). They are shown on Figure 13.9 and listed in Table 13.6. The ZTV shows that the majority of the structures are located in areas where 7-9 turbines will theoretically be visible (Figure 13.11). Potential impacts and mitigation are addressed below in Section 13.4. Both the distance to the nearest turbine and the number of turbines visible from each asset are used to arrive at a level of potential effect on setting.

The nearest protected structure comprises a two-storey house in Borrisbeg (TRPS97) which is located c. 1.1km from T7.

TRPS97	Borrisbeg House, Templemore	Borrisbeg		Thurles MD
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Figure 13.8: Extract from Tipperary CDP RPS showing entry for Borrisbeg House TRPS97.

Table 13.6: RPS structures within 5km of the nearest proposed turbine.

RPS ID	STRUCTURE	LOCATION	ITM E	ITM N	TURBINE	DISTANCE TO TURBINE (m)
TRPS97	Two storey house	Borrisbeg	611614	673304	T7	1,186
TRPS102	Butlers Lodge	Butlers Lodge	611148	673282	T7	1,609
TRPS141	Two storey house	Curraduff	610281	674792	T6	2,213
TRPS667	house'	Killough	611126	677709	T2	2,470
TRPS351	Shanakill House	Shanakill	614603	678911	T1	2,477
TRPS699	Saint Ann's Roman Catholic Chapel	Clonmore	615773	675429	T3	2,504
TRPS666	lodge'	Killough	611106	677843	T2	2,568

RPS ID	STRUCTURE	LOCATION	ITM E	ITM N	TURBINE	DISTANCE TO TURBINE (m)
TRPS142	Two storey house	Curraduff	609758	675389	T6	2,897
TRPS140	Creamery	Curraduff	609841	675594	T6	2,908
TRPS220	Templemore train station	Kiltillane	611967	670837	T9	3,003
TRPS185	Bellwood House	Greenwood	612157	670773	T9	3,003
TRPS702	Castleleiny Roman Catholic Church	Gorteendangan	614108	670578	T9	3,265
TRPS703	water pump'	Gorteendangan	614197	670599	T9	3,276
TRPS704	handball alley'	Castleiny	614340	670656	T9	3,279
TRPS665	Skehanagh House	Skehanagh	609935	677619	T2	3,464
TRPS405	Woodville House	Woodville	611294	670637	T9	3,469
TRPS124	Cloone House	Cloone	612407	669924	T9	3,777
TRPS313	Two storey house	Park	608659	675038	T6	3,850
TRPS312	Killea School	Park	608698	675338	T6	3,883
TRPS125	Cloone Lodge	Cloone	612238	669842	T9	3,888
TRPS206	St. James R.C. Church	Killea	608573	674794	T6	3,895
TRPS261	Lloydsborough House	Lloydsborough	608683	672921	T6	3,988
TRPS204	Two storey house	Killawardy	608433	674053	T6	4,007
TRPS663	St Brigid's Roman Catholic Church	Clonakenny	611215	680407	T1	4,290
TRPS662	Rourkes	Clonakenny	611234	680459	T1	4,325
TRPS664	Garrets Mill	Mien	609136	678201	T2	4,434
TRPS401	Whitefield Mill	Whitefields	610767	669546	T9	4,679
TRPS265	Loran Park	Loran	615072	681256	T1	4,815
TRPS701	folly tower'	Sandymount	609009	670649	T7	4,880
TMS6	House	Church Street	611414	671997	T7	2,281

RPS ID	STRUCTURE	LOCATION	ITM E	ITM N	TURBINE	DISTANCE TO TURBINE (m)
TMS34	House	Main Street - North	611323	671847	T7	2,456
TMS36	House	Main Street	611374	671873	T7	2,407
TMS43	Dwelling	Richmond Road	610633	671430	T7	3,195
TMS49	Dwelling	Talavera	610870	671195	T7	3,249
TMS53d	Farm Yard and dwelling	Templemore Abbey, Priory Demesne	609987	671589	T7	3,524
TMS53e	Farm Yard and dwelling	Templemore Abbey, Priory Demesne	610048	671637	T7	3,447
TMS67a	Remains of church and graveyard.	Town Park	610861	672053	T7	2,574
TMS67b	Remains of Blackcastle	Town Park	610744	671806	T7	2,836
TMS69	Limestone pedestrian bridge	Town Park	610626	672126	T7	2,690
TMS70	St. Mary's Hall	Church Street	611467	672076	T7	2,186
TMS71	John Scott	Black Castle Road	610554	671874	T7	2,916
TMS72	House	Richmond Road	610592	671481	T7	3,181
TMS73	O'Dwyer Bridge	Richmond Road	610901	671594	T7	2,902
TMS74	Garda Station	Main Street	611125	671750	T7	2,645
TMS75	Methodist Church	Main Street - North	611066	671764	T7	2,668
TMS76	Post box	Church Street	611403	671884	T7	2,383
TMS79	House	Main Street - South	611265	671755	T7	2,565
TMS81	Dwelling	The Mall	610942	671533	T7	2,928
TMS82	Dwelling	The Mall	610944	671525	T7	2,933
TMS83	Dwelling	The Mall	610945	671518	T7	2,939
TMS89	Small bridge	Church Avenue	610989	671304	T7	3,093
TMS90	Church	Garda Siochána College	610757	671060	T7	3,424

RPS ID	STRUCTURE	LOCATION	ITM E	ITM N	TURBINE	DISTANCE TO TURBINE (m)
TMS64a	Cast Iron Sewer Vents	Barrack Street and Manna South	610794	671180	T7	3,303
TMS1	Demesne B&B	Roscrea Road	611350	672318	T7	2,054
TMS2	St Mary's Church	Church Street	611471	672142	T7	2,128
TMS3	St Mary's National School	Church Street	611466	672077	T7	2,185
TMS4	Old School Master's House/Rectory	Church Street (east side)	611458	672052	T7	2,211
TMS5	Church View House	Church Street (west side)	611415	672077	T7	2,213
TMS12	Vacant shop	Main Street - South	611275	671764	T7	2,552
TMS12a	Meagher's		611269	671759	T7	2,560
TMS13	Foley's Bar	Main Street -South	611221	671732	T7	2,608
TMS14	Abrakebabra and	Main Street -South	611166	671697	T7	2,667
TMS15	Collier	Main Street -South	611099	671678	T7	2,721
TMS16	The Old Malt House	Main Street -South	611089	671671	T7	2,731
TMS17	D O'Doherty and Sons	Patrick Street - South	611054	671649	T7	2,770
TMS18	Mockler's Pharmacy	Patrick Street - South	611038	671643	T7	2,783
TMS19	Jameson Racing	41/42 Patrick Street - South	611007	671630	T7	2,812
TMS20	Tom Maher's Inn	Patrick Street - South	611002	671623	T7	2,820
TMS21	House	Patrick Street - South	610983	671620	T7	2,834
TMS22	Mullally's Menswear	Patrick Street - South	610959	671607	T7	2,858
TMS23	Temple Tiles	Patrick Street - North	610938	671628	T7	2,854

RPS ID	STRUCTURE	LOCATION	ITM E	ITM N	TURBINE	DISTANCE TO TURBINE (m)
TMS24	T. Kennedy	Patrick Street - North	610996	671661	T7	2,793
TMS25	James J. Kelly & Sons Solicitors	Patrick Street - North	611011	671664	T7	2,781
TMS26	The Library	Main Street - North	611046	671716	T7	2,719
TMS27	M. Condon	Main Street - North	611055	671717	T7	2,713
TMS28	House	Main Street - North	611062	671721	T7	2,706
TMS29	Bank of Ireland	Main Street - North	611072	671729	T7	2,693
TMS31	Bridget Kennedy	Main Street - North	611175	671775	T7	2,598
TMS32	John Maher	19 Main Street - North	611218	671796	T7	2,556
TMS37	Kinnane's shop	Corner of Mary St. and Main St.	611433	671881	T7	2,371
TMS38	Templemore Town Hall	Main Street	611181	671746	T7	2,618
TMS40	Dwelling	The Mall	610941	671542	T7	2,922
TMS41	Ryan's Xpress Stop	Corner of Patrick Street and The Mall	610927	671592	T7	2,889
TMS44	Garda Siochána College	Talavera Place	610682	671162	T7	3,382
TMS45	The White House	Talavera Place	610814	671150	T7	3,317
TMS47	Polly's Public House	Talavera	610826	671163	T7	3,300
TMS48	G. & A. McGourty	Talavera	610846	671168	T7	3,285
TMS51	House	Barracks Street/ Talavera	610810	671193	T7	3,283
TMS53a	Gate Lodge	Priory Demesne	610183	671265	T7	3,613
TMS53b	Demesne Walls	Priory Demesne	610242	671276	T7	3,566
TMS53c	Archway	Templemore Abbey, Priory Demesne	610035	671596	T7	3,484

RPS ID	STRUCTURE	LOCATION	ITM E	ITM N	TURBINE	DISTANCE TO TURBINE (m)
TMS54	Robert Johnston	Thurles Road	610499	670916	T7	3,688
TMS56	House	Richmond Road, Belleville	610529	671445	T7	3,250
TMS57	Anna O'Brien	Richmond Road, Belleville	610510	671432	T7	3,272
TMS61	Joe Hennessy	Richmond Grove	610633	671431	T7	3,195
TMS68	Templemore Court House	Bank Street	611264	671681	T7	2,628
TMS64b	Cast Iron Sewer Vents	Barrack Street and Manna South	610875	671094	T9	3,332
TMS77	John Fitzpatrick	Mary Street-North	611499	671901	T9	2,313
TMS78	House/Shop front	Mary Street	611515	671883	T9	2,316
TMS80	St. Joseph's Primary School	Church Road	611618	671848	T9	2,278
TMS84	Graveyard	Church Avenue	611550	671645	T9	2,482
TMS85	John Delaney	Church Avenue - South	611259	671480	T9	2,790
TMS86	John McDevitt	Church Avenue	611265	671487	T9	2,780
TMS87	House	Church Avenue - South	611278	671496	T9	2,765
TMS88	House	Church Avenue - South	611271	671492	T9	2,773

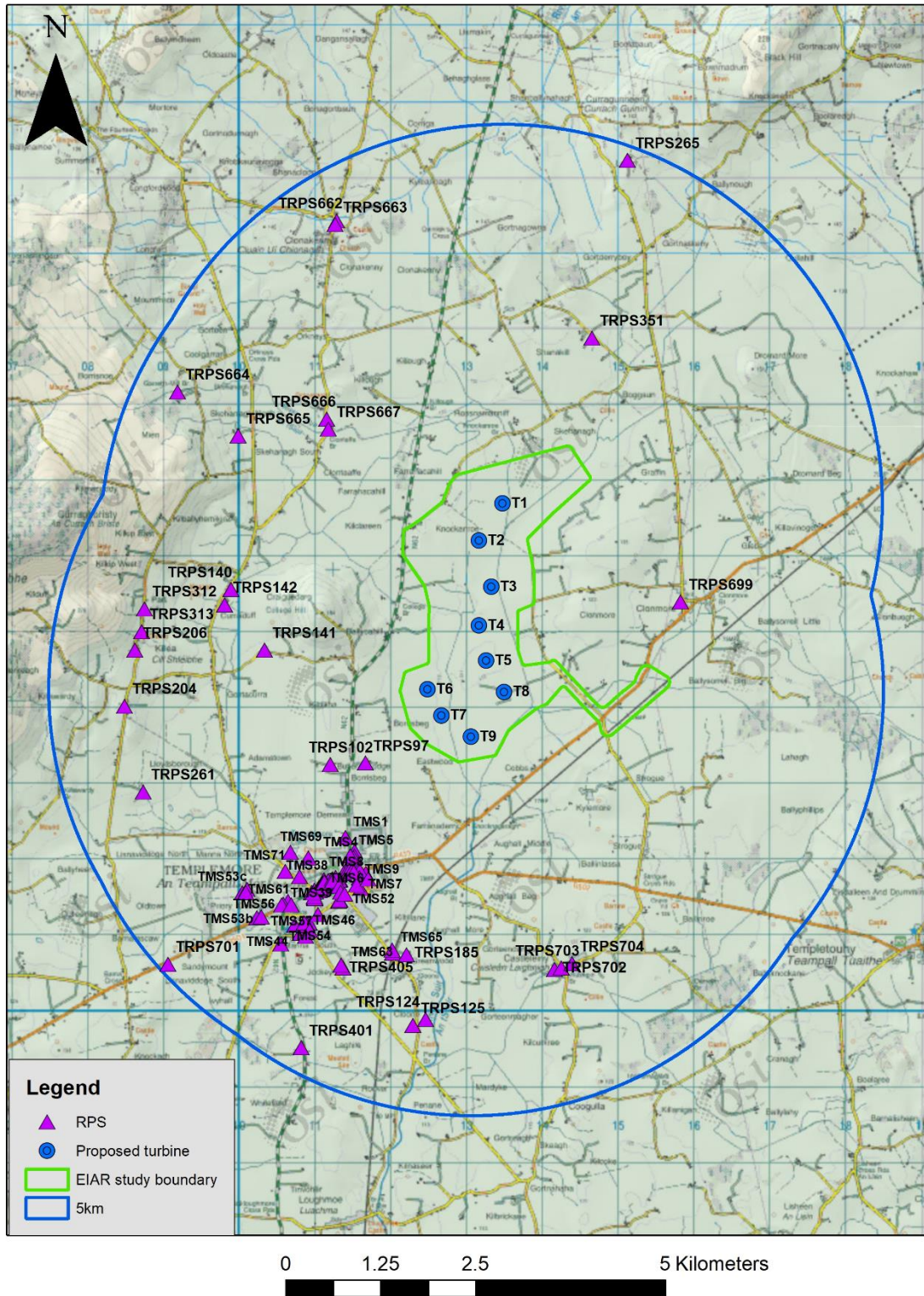


Figure 13.9: RPS structures located within 5km of the nearest proposed turbine.

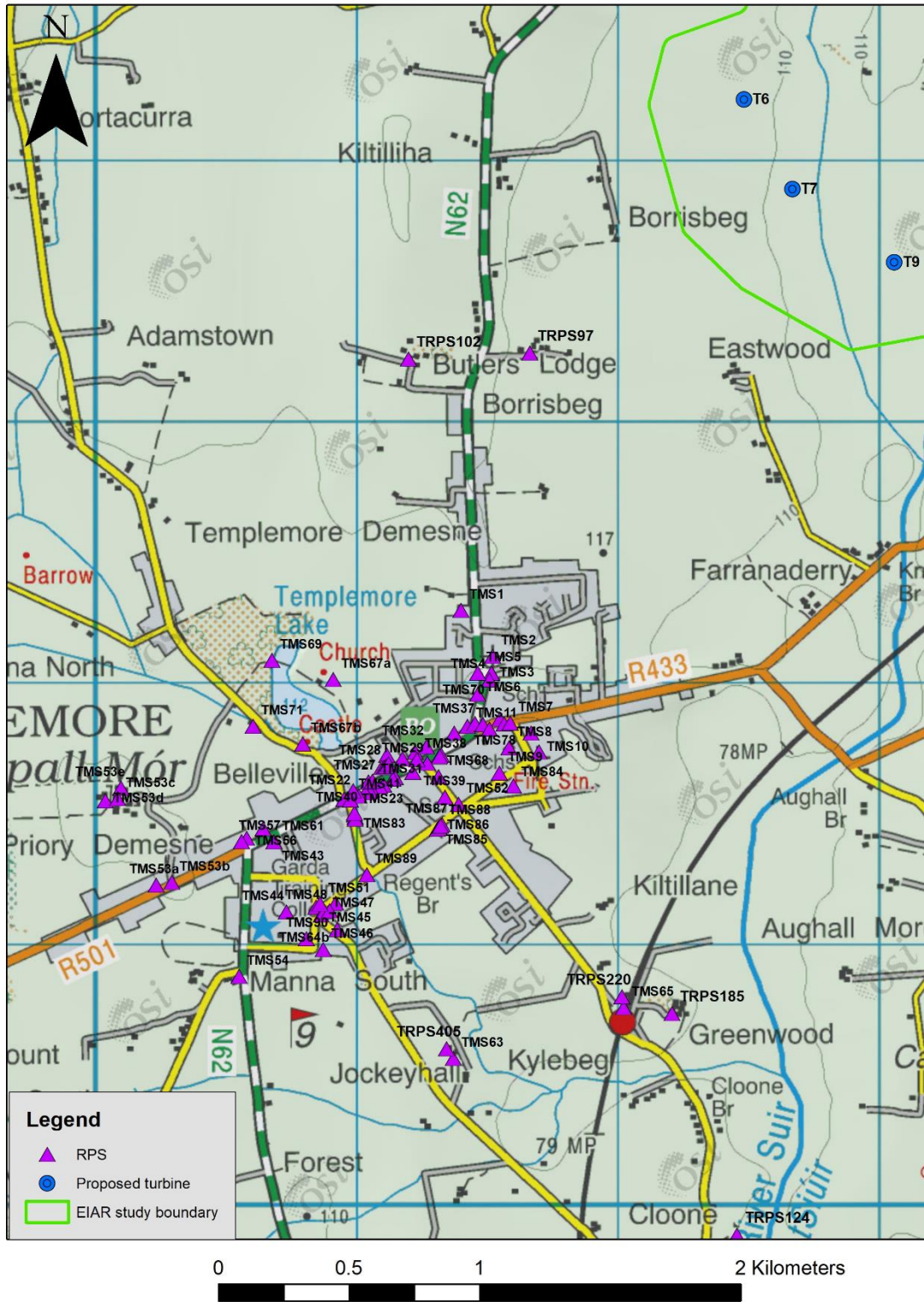


Figure 13.10: RPS structures in Templemore.

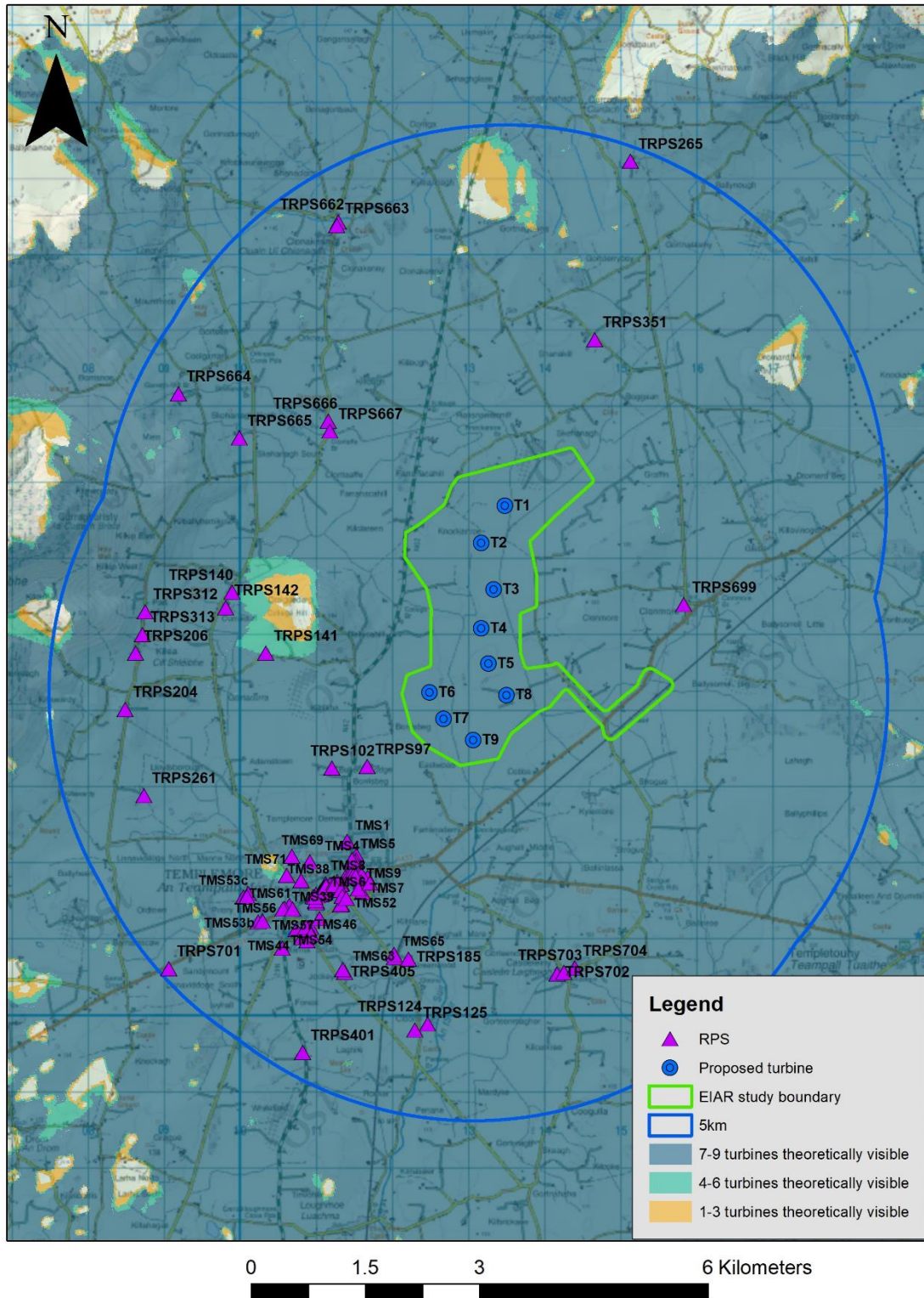


Figure 13.11: Protected Structures within 5km of the nearest proposed turbine with ZTV showing theoretical visibility.

13.3.3.10 NIAH Structures and Historic Gardens within 5km of the nearest proposed turbine

No NIAH structures are located within the Site.

Sixty-three structures listed in the NIAH are located within 5km of the nearest proposed turbine, with a large number of these located in Templemore town. They are listed in Table 13.7 and shown in Figure 13.12 below. The nearest structure is situated c. 2.1km to the south-west of the nearest proposed turbine, T7, and comprises St Mary’s Church in Templemore (Reg. 22308002). The remaining structures are all located in excess of 2.1km up to 4.9km from the nearest proposed turbine. The ZTV demonstrates theoretical visibility of the majority of the NIAH structures (Figure 13.13). Potential impacts on this aspect of the built heritage resource are addressed below in Section 13.4.

Thirteen historic gardens are located within 5km of the nearest proposed turbine (Table 13.8, Figure 13.12). Some of these are associated with the NIAH structures listed in Table 13.7, while others may have no surviving associated structures. Similarly, in some instances there may be no surviving garden features. The nearest historic garden comprises that associated with Eastwood House. The southern portion of the Site is located within the demesne for the house, as shaded in grey on the first edition OS historic map (see Section 13.3.3.11 below). T9 and its associated hardstand are located within the demesne, however, no garden or demesne features are denoted on the historic mapping in this area, nor were any detected during field survey carried out as part of this assessment, although it is currently planted with young conifers.

Table 13.7: NIAH sites within 5km of the nearest proposed turbine.

NIAH Reg.	Date	Structure]	Townland	ITM E	ITM N	Turbine No.	Distance To Turbine (m)
22308002	1780 - 1800	Saint Mary's Church (Templemore)	KILTILLANE	611472	672141	T7	2,128
22308004	1845 - 1850	Saint Mary's National School	KILTILLANE	611467	672075	T7	2,186
22308003	1850 - 1855	Church View, house	TEMPLEMORE DEMESNE	611416	672081	T7	2,209
22308045	1945 - 1955	Saint Joseph's Primary School	KILTILLANE	611621	671842	T9	2,281
22308044	1915 - 1920	hall	KILTILLANE	611539	671885	T9	2,299
22308043	1780 - 1820	House	KILTILLANE	611515	671885	T9	2,314
22308048	1880 - 1885	Catholic Church of the Sacred Heart	KILTILLANE	611653	671775	T9	2,316
22308047	1860 - 1865	Convent of the Sisters of Mercy	KILTILLANE	611536	671792	T9	2,373
22308042	1810 - 1820	The Orphanage	KILTILLANE	611442	671859	T9	2,382
22402309	1875 - 1885	Fortescue, cottage ornee	KILLOUGH (TEMPLEMORE PR)	611131	677707	T2	2,465
22402902	1830 - 1835	Saint Anne's Catholic Church	CLONMORE (DOLLA PR)	615768	675425	T3	2,499
22308041	1780 - 1820	House	KILTILLANE	611275	671763	T7	2,553

NIAH Reg.	Date	Structure]	Townland	ITM E	ITM N	Turbine No.	Distance To Turbine (m)
22402308	1870 - 1890	Fortescue, gate lodge	KILLOUGH (TEMPLEMORE PR)	611107	677842	T2	2,566
22308020	1830 - 1870	house	KILTILLANE	611176	671774	T7	2,597
22308038	1800 - 1840	House	KILTILLANE	611225	671737	T7	2,602
22308037	1815 - 1930	Templemore Town Hall, market house	KILTILLANE	611189	671750	T7	2,610
22308036	1800 - 1840	House	KILTILLANE	611158	671706	T7	2,664
22308018	1800 - 1840	Templemore Methodist Church	KILTILLANE	611065	671767	T7	2,666
22308053	1900 - 1920	Allied Irish Bank	KILTILLANE	611287	671603	T9	2,678
22308001	1800 - 1840	Templemore Abbey, bridge	TEMPLEMORE DEMESNE	610631	672124	T7	2,688
22308017	1840 - 1880	Bank of Ireland	KILTILLANE	611075	671725	T7	2,695
22308016	1800 - 1840	house	KILTILLANE	611062	671720	T7	2,707
22308034	1830 - 1870	House	KILTILLANE	611037	671648	T7	2,780
22308014	1800 - 1840	T. Kennedy, house	KILTILLANE	610997	671655	T7	2,796
22308033	1890 - 1910	The Crescent, house	KILTILLANE	611006	671632	T7	2,811
22308032	1800 - 1840	House	KILTILLANE	610998	671628	T7	2,818

NIAH Reg.	Date	Structure]	Townland	ITM E	ITM N	Turbine No.	Distance To Turbine (m)
22308013	1880 - 1920	T. Morkan, house	KILTILLANE	610940	671627	T7	2,853
22308030	1840 - 1880	E.J. Grey, house	KILTILLANE	610961	671610	T7	2,854
22402901	1910 - 1940	Killea Creamery	CURRADUFF	609844	675598	T6	2,907
22308008	1860 - 1870	Abbey Lodge, gate lodge	BELLEVILLE	610558	671872	T7	2,915
22308050	1820 - 1860	House	KILTILLANE	610942	671535	T7	2,927
22402914	1845 - 1855	Templemore Railway Station, store/warehouse	KILTILLANE	611986	670845	T9	2,988
22402919	1830 - 1870	Bellwood House	GREENWOOD	612153	670778	T9	2,999
22402915	1845 - 1850	Templemore Railway Station, foot bridge	KILTILLANE	611988	670816	T9	3,015
22402916	1845 - 1850	Templemore Railway Station, railway station	KILTILLANE	611971	670797	T9	3,039
22402917	1845 - 1850	Templemore Railway Station, building misc	KILTILLANE	611988	670787	T9	3,042
22402918	1845 - 1850	Greenwood Bridge	KILTILLANE	611953	670702	T9	3,134
22308027	1840 - 1880	house	MANNA SOUTH	610679	671445	T7	3,155
22308011	1910 - 1930	House	BELLEVILLE	610594	671480	T7	3,181
22308066	1810 - 1850	House	MANNA SOUTH	610869	671196	T7	3,249

NIAH Reg.	Date	Structure]	Townland	ITM E	ITM N	Turbine No.	Distance To Turbine (m)
22308069	1810 - 1850		MANNA SOUTH	610859	671188	T7	3,261
22402920	1825 - 1835	Catholic Church of Saint John the Baptist	GORTEENDANGAN	614116	670576	T9	3,270
22308065	1900 - 1930	House	MANNA SOUTH	610848	671170	T7	3,282
22308062	1860 - 1900	Talavera House	MANNA SOUTH	610812	671190	T7	3,285
22308064	1800 - 1840	House	MANNA SOUTH	610826	671167	T7	3,297
22308063	1780 - 1820	The White House	MANNA SOUTH	610815	671150	T7	3,317
22308059	1860 - 1890	water pump	MANNA SOUTH	610521	671302	T7	3,366
22308061	1810 - 1815	McCan Barracks	MANNA SOUTH	610661	671159	T7	3,396
22308070	1850 - 1855	McCan Barracks, church/chapel	MANNA SOUTH	610762	671057	T7	3,423
22308067	1800 - 1840	Wellington Lodge, house	MANNA SOUTH	610822	671018	T9	3,424
22402913	1800 - 1840	Woodville House	WOODVILLE (TEMPLEMORE PR)	611304	670641	T9	3,461
22402307	1915 - 1925	Skehanagh House	SKEHANAGH NORTH	609937	677621	T2	3,463
22308009	1860 - 1870	Templemore Abbey, farmyard complex	PRIORY DEMESNE	610001	671600	T7	3,507

NIAH Reg.	Date	Structure]	Townland	ITM E	ITM N	Turbine No.	Distance To Turbine (m)
22308068	1860 - 1865	Templemore Abbey, demesne walls/gates/railings	PRIORY DEMESNE	610241	671276	T7	3,567
22308010	1860 - 1870	Templemore Abbey, gate lodge	PRIORY DEMESNE	610221	671276	T7	3,579
22402904	1800 - 1840	Castle House, folly	PARK (KILLEA PR)	608664	675061	T6	3,850
22402905	1830 - 1835	Saint James's Catholic Church	KILLEA (ARDCRONY PR)	608576	674801	T6	3,893
22402908	1685 - 1840	Lloydsborough House	LLOYDSBOROUGH (KILLEA PR)	608695	672931	T6	3,974
22402906	1780 - 1820	House	KILLAWARDY (KILLEA PR)	608433	674059	T6	4,006
22402304	1895 - 1900	Saint Brigid's Catholic Church	CLONAKENNY	611227	680406	T1	4,283
22402925	1760 - 1800	Whitefield Mill, mill (water)	WHITEFIELD	610778	669546	T9	4,673
22402912	1830 - 1870	Sandymount Castle, folly	SANDYMOUNT	609016	670653	T7	4,873
22402903	1930 - 1950	dam/reservoir/basin	KILDUFF,KILLAWARDY (KILLEA PR)	607514	674833	T6	4,950

Table 13.8: Historic gardens located within 5km of the nearest proposed turbine.

Site Name	ITM E	ITM N	Turbine No.	Distance To Turbine (m)
Eastwood House	612347	673240	T7	745
Templemore Castle	610748	671840	T7	2,808
Castleleiny House	614847	671240	T9	3,033
Ash Park	609148	675139	T6	3,397
Woodville House, Templemore	611348	670640	T9	3,440
Skehanagh House	609948	677639	T2	3,460
The Priory	610048	671540	T7	3,513
Dromard House	617146	677139	T1	3,742
Sorrelhill House	617046	675639	T3	3,769
Manna Cottage	610348	670840	T7	3,838
Lloydsborough House	608648	672840	T6	4,049
Derrylahan House	611748	680838	T1	4,437
Loran Park	615147	681338	T1	4,918

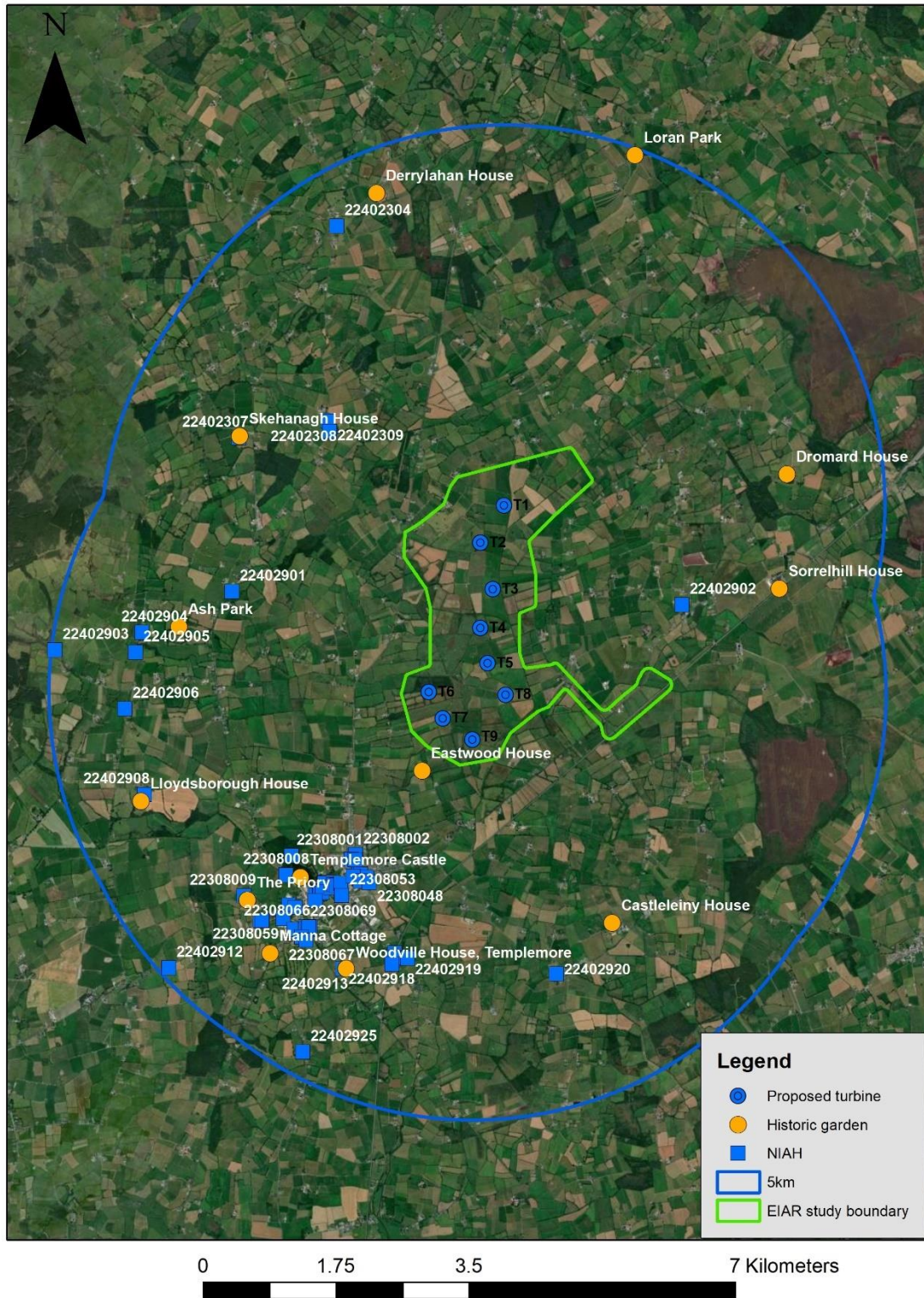


Figure 13.12: NIAH structures and historic gardens within 5km of the nearest proposed turbine.

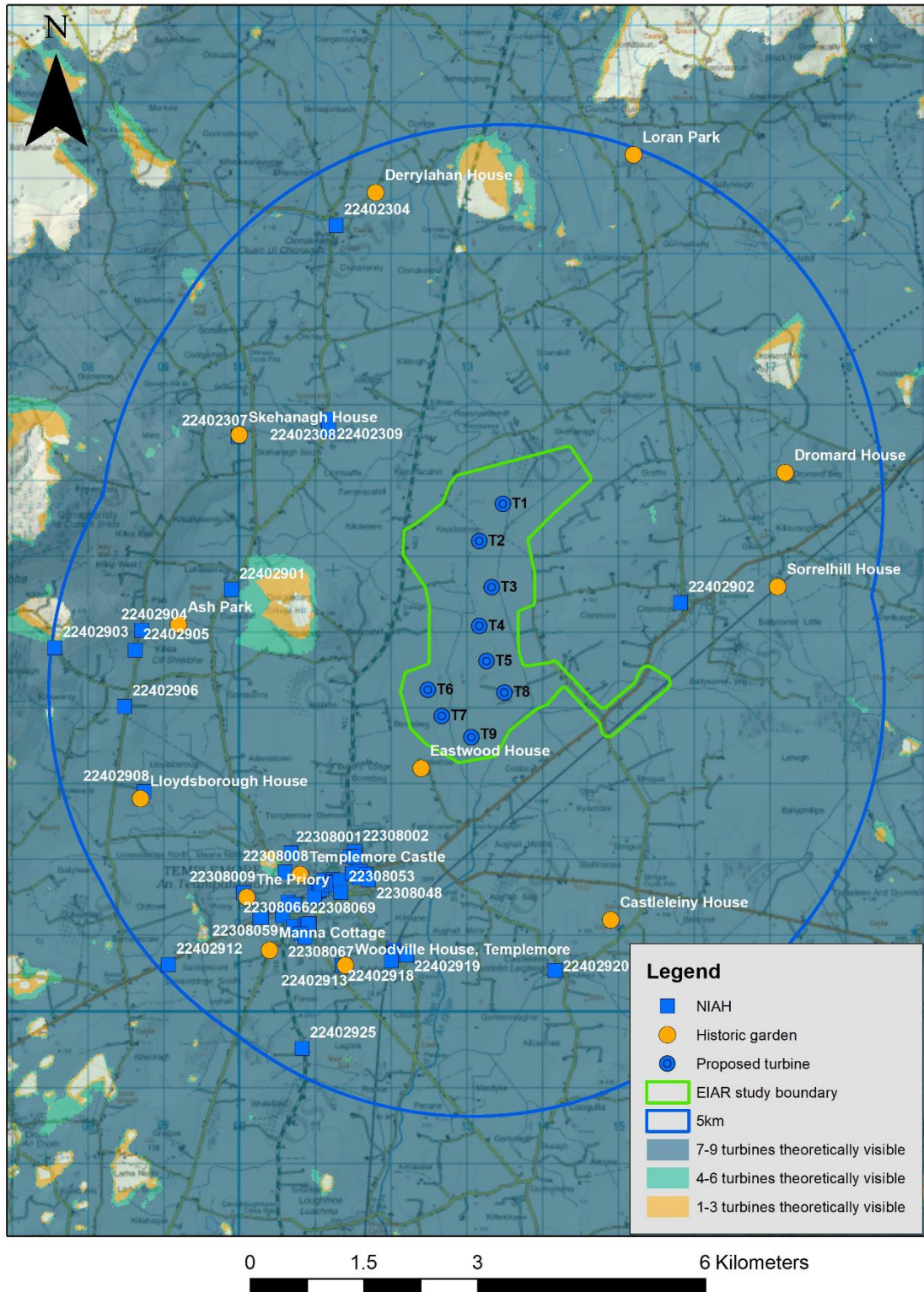


Figure 13.13: NIAH structures and historic gardens within 5km of the nearest proposed turbine with ZTV showing theoretical visibility.

13.3.3.11 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 Site. Field survey also assisted in determining if any local cultural heritage features were located in the vicinity of any Proposed Project infrastructure.

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 Site shows it being divided into fields for agricultural purposes. Consequently, some small structures are depicted within the Site and are likely to have been small settlements. Other features denoted within the Site comprise lime kilns, which would have been associated with agricultural practices of the 19th century. The Site currently largely comprises intensively farmed improved pasture and rough pasture with a small portion of coniferous forestry. No surface trace of any structures or lime kilns denoted on the first edition historic mapping were visible at the time of field survey for this assessment. It is likely that modern agricultural practices and land improvement has resulted in the removal of these features some time in the late 19th or early 20th century.

A circular feature is indicated on the first edition OS map immediately south of the proposed road to T8 and south of an existing farm track (Figure 13.15). It is denoted with a dashed/dotted line and is not hachured as an enclosure or ringfort would typically be. It is not indicated on the later second edition 25-inch OS map. The area of the circular feature was visited as part of the field survey carried out for this assessment and no evidence for an archaeological monument or later cultural heritage feature was apparent at this location which comprises pastureland on a low hillock. It is possible that it is the hillock that is denoted on the historic map.



Plate 13.4: Area of circular feature indicated on first edition OS map, looking W.

As outlined above (Section 13.3.3.11) T9 and its associated hardstand are located within the demesne of Eastwood House which itself is located further to the south-west outside the Site. The demesne is shaded on the first edition OS map, however, no potential demesne features associated with the house are denoted in the area of T9. This area is now planted with coniferous forestry.

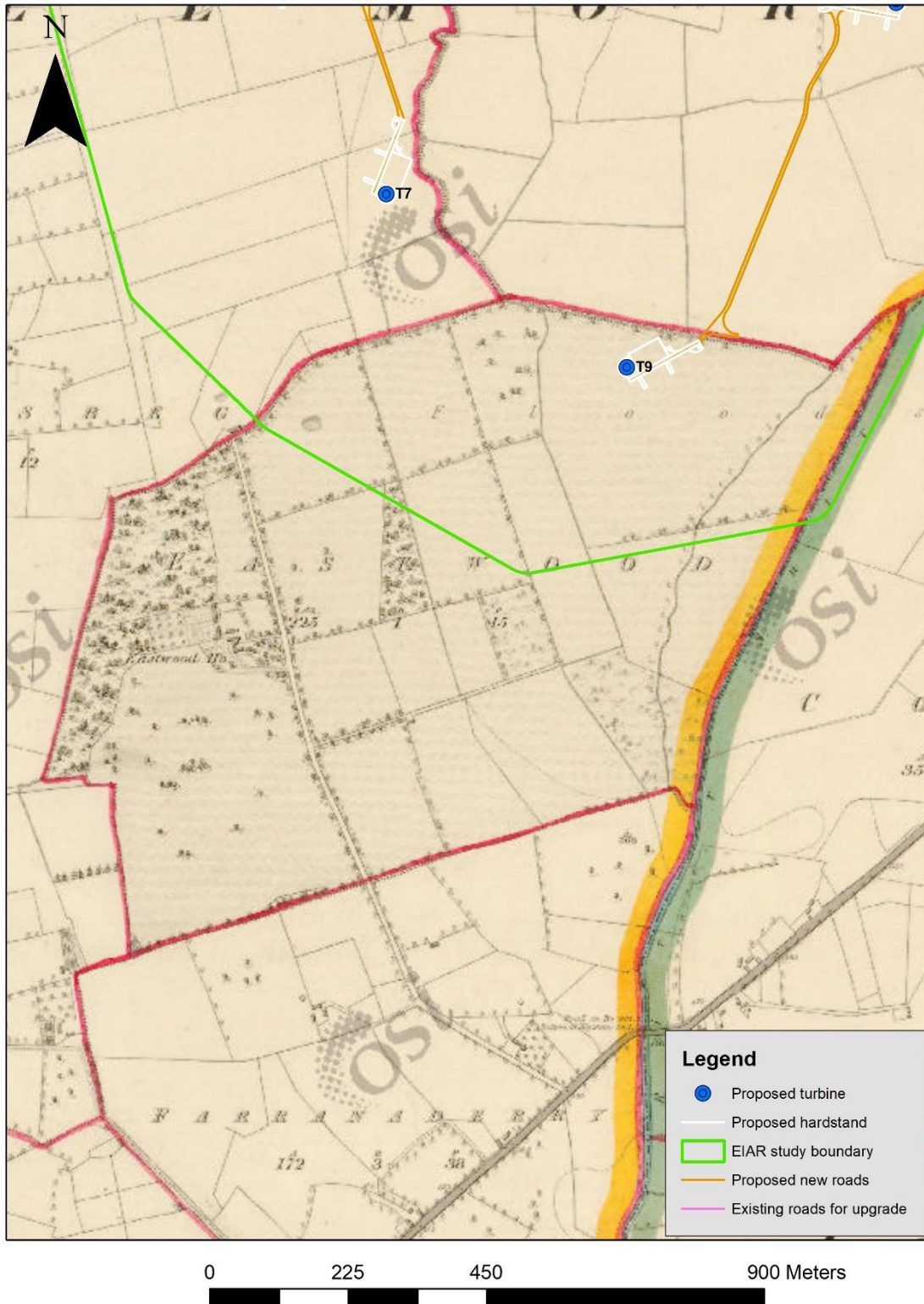


Figure 13.14: Proposed T9 and hardstand in relation to demesne associated with Eastwood House denoted as shaded area on 1st edition OS map.

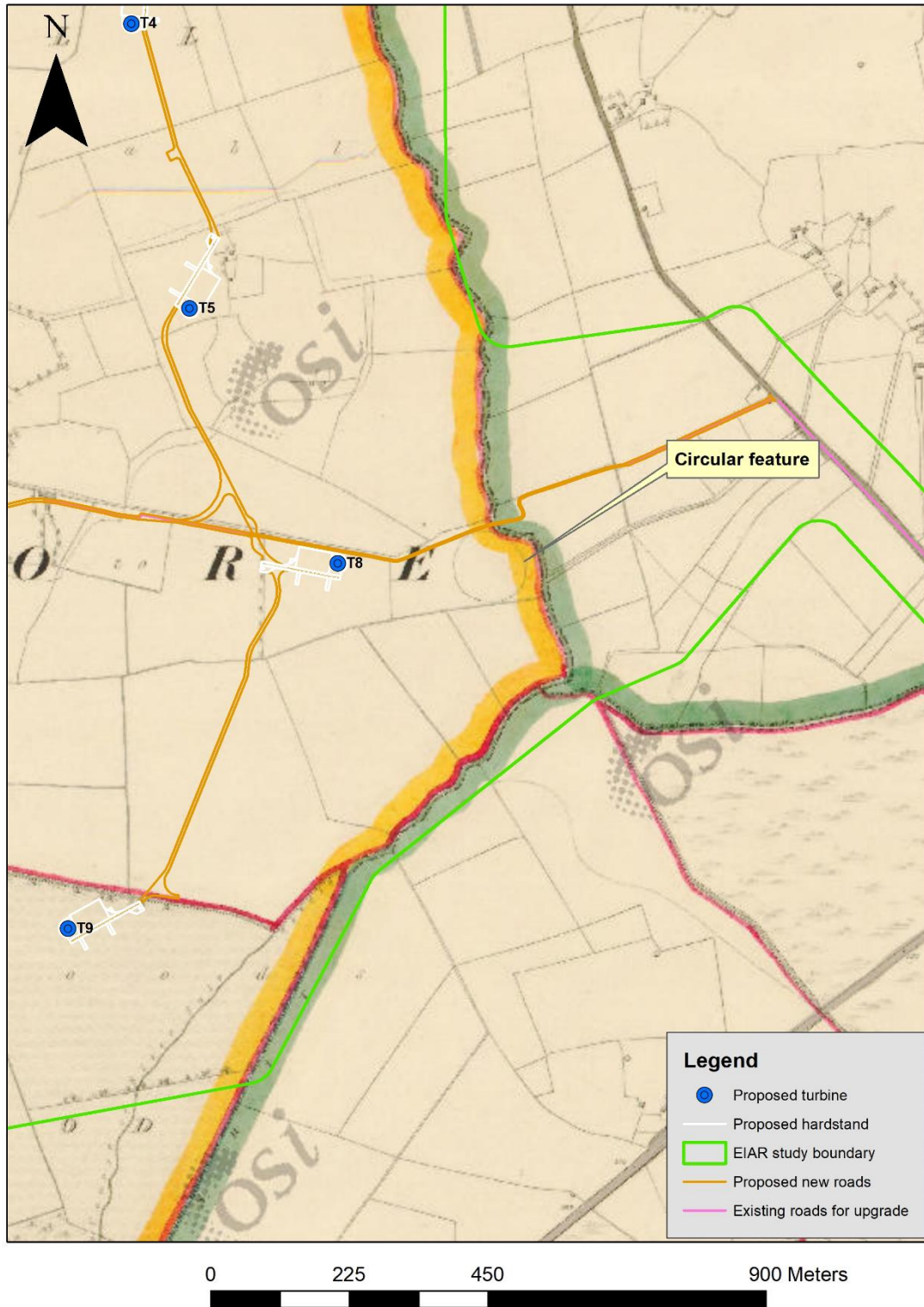


Figure 13.15: Circular feature as depicted on 1st edition OS map.

13.3.3.12 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 Site, townland boundaries between same are also present. Proposed Project infrastructure crosses the townland boundaries in a number of places. For example, the proposed road which extends to T9 crosses the boundary between Eastwood townland and Ballycahill townland. Similarly, the road to T6 and T7 crosses the townland boundary between Borrisbeg and Ballycahill. The proposed road between T3 and T4 also crosses the boundary between Knockanroe and Ballycahill. In the majority of cases the townland boundaries comprise mature field boundaries which continue to act as field divisions.

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 Site (Table 13.9). None of the placenames present within the Site would seem to refer to sites or features of archaeological or cultural heritage potential.

Table 13.9: Townlands within the Site and their meanings.

Townland	Logainm Meaning
Skehanagh	The place of hawthorns, thorn bushes
Graffin	No specific translation provided
Clonmore	Big meadow or pasture
Strogue	Top of a hill
Eastwood	East wood
Ballycahill	No specific translation provided

Townland	Logainm Meaning
Borrisbeg	No specific translation provided
Knockanroe	The red hill

13.3.4 Proposed Grid Connection

The proposed Grid Connection comprises an onsite 110kV substation, c.2km underground cabling route and end mast towers which break into the existing 110kV Ikerrin to Thurles overhead line. The proposed substation is located at the south-east side of the Site in the townland of Clonmore. It is proposed to construct an underground cabling connection between the proposed permanent 110kV substation and the new end mast towers breaking the existing 110kV Ikerrin to Thurles overhead line (OHL). The underground cabling will follow a c.2km route which will run through a mix of local road (L-L7039) and new track on agricultural land.

Cultural heritage assets within 100m of either side of the underground electrical cabling 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. A photographic record of the Proposed Grid Connection underground electrical cabling route is presented in Appendix 13-1.

13.3.4.1 National Monuments

No National Monuments in State Care or those subject to a preservation order are located within 100m of the underground electrical cabling route, end masts or in the vicinity of the proposed substation and its associated temporary compound.

13.3.4.2 Recorded Monuments

No recorded monuments are located within 100m of the proposed underground electrical cabling route, end masts or in the vicinity of the proposed 110kV substation and temporary compound. The nearest recorded monument to the proposed underground electrical cabling route and end masts comprises an earthwork TN029-031— c. 270m to the north of the north-east end of the underground cabling route. The nearest recorded monument to the proposed 110kV substation and temporary compound comprises an enclosure TN029-029— c. 280m to the north-west (Figure 13.16). According to the descriptions of the monuments as provided on the HEV no above-ground trace of either monument is apparent.

13.3.4.3 Sub-Surface Archaeological Potential

Approximately 1.1km of the proposed underground electrical cabling route and the proposed 110kV substation and associated construction compound are located in pasture. Given the greenfield nature of these areas it is possible that previously unrecorded sub-surface archaeological finds, features or deposits are located within the footprint of the proposed substation and compound site and along the proposed electrical cabling route where it extends through pasture. The potential therefore exists that sub-surface archaeological sites or features, if present within these areas, may be directly impacted by construction phase activities. Mitigation measures to ameliorate this potential impact are detailed in Section 13.5.2.4 below.

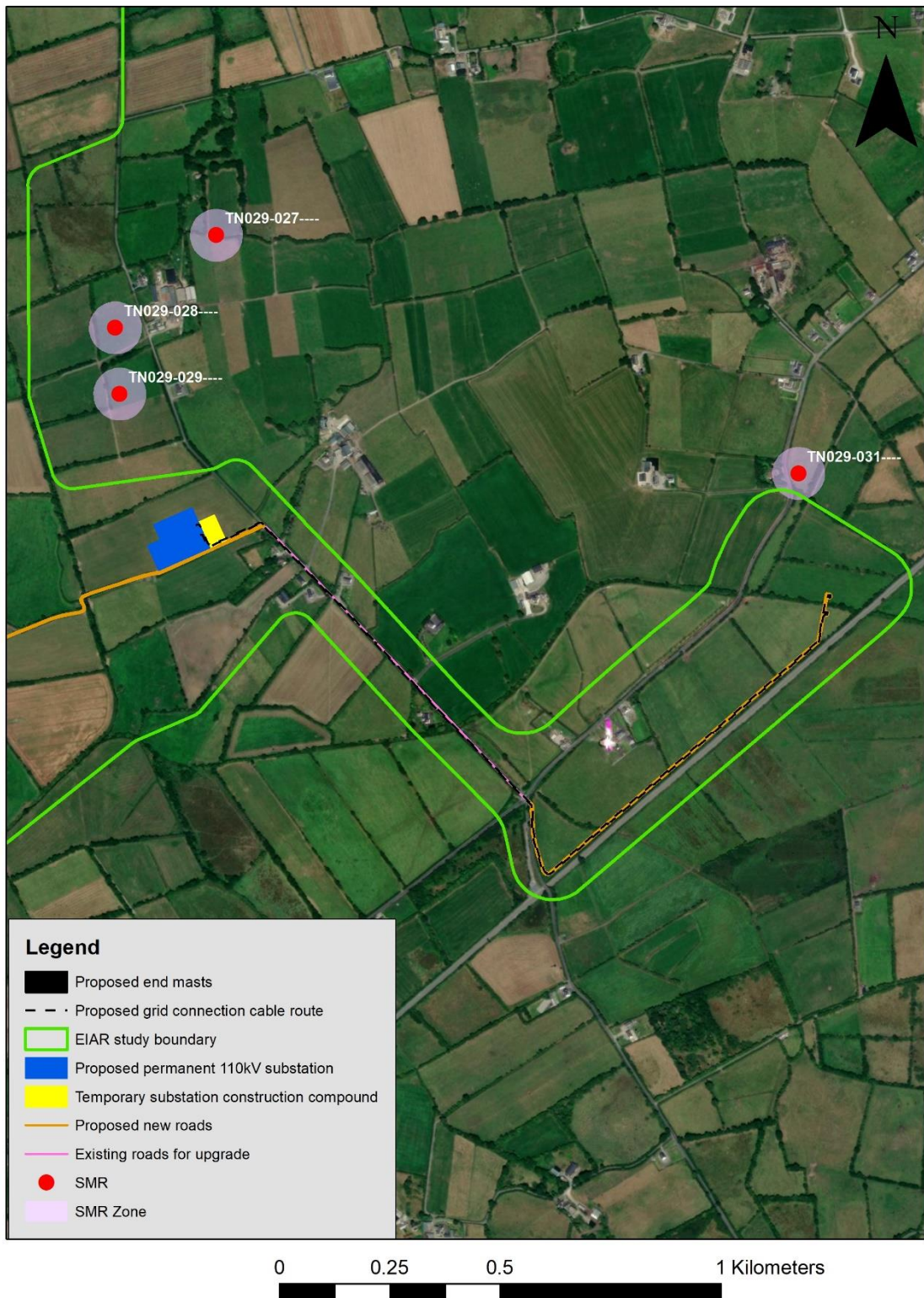


Figure 13.16: Nearest recorded monuments to the proposed substation and underground electrical cabling route.

13.3.4.4 Protected Structures

No Protected Structures are located within 100m of either side of the proposed underground electrical cabling route and end masts or in the vicinity of the proposed 110kV substation and temporary construction compound. The nearest RPS structure (TRPS699) is located c. 1.9km north-east of the

proposed substation and c. 1.1km north-east of the proposed underground electrical cable route (Figure 13.17). It comprises Saint Anne's Roman Catholic Chapel and is also included in the NIAH (see below).

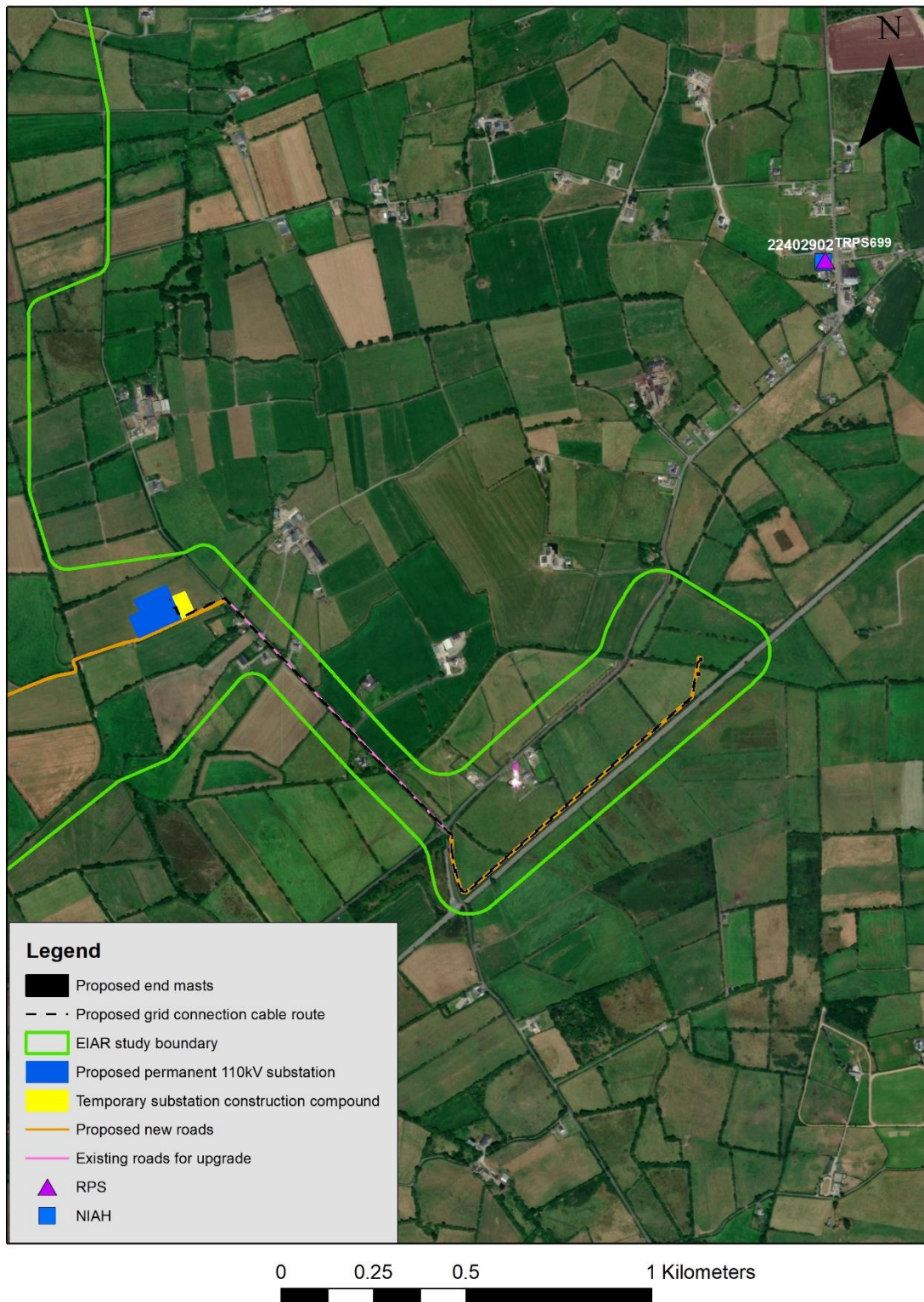


Figure 13.17: Nearest RPS and NIAH structure to proposed 110kV substation and underground electrical cabling route.

13.3.4.5 NIAH

No NIAH structures are located within 100m of the proposed underground electrical cabling route and end masts or in the vicinity of the proposed 110kV substation and temporary construction compound. As outlined above, the nearest structure comprises Saint Anne’s Catholic Church (NIAH Reg. 22402902) which is also a Protected Structure (TRPS699) (Figure 13.17).

13.3.4.6 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 along the proposed underground electrical cabling route and end masts, and in the vicinity of the proposed 110kV substation and temporary construction compound. No such features are indicated on the first edition OS map along the Proposed Grid Connection infrastructure. The proposed underground electrical cabling route extends through pasture adjacent to the Great Southern and Western Railway which is indicated and named on the second edition 25-inch OS map and is still an operational railway.

The underground electrical cabling route also crosses a stone road bridge (CH1) on the public road (Figure 13.18) which is indicated but not named on the available historic mapping. Directional drilling will be utilised at this crossing therefore direct impacts to the structure are not anticipated.

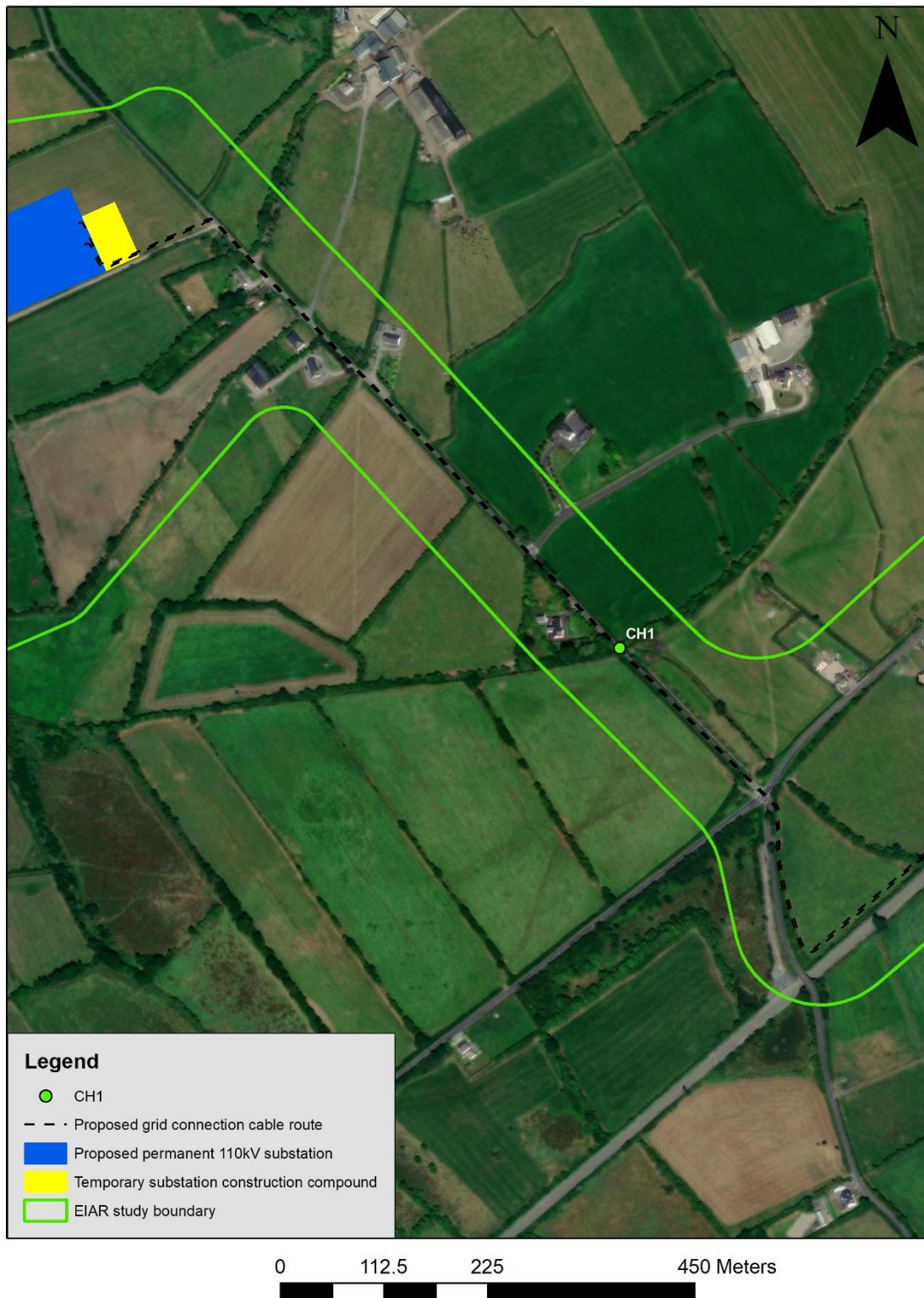


Figure 13.18: Stone road bridge CH1 on proposed underground electrical cabling route at Clonmore/Shroogue townlands.

13.3.5 Proposed Turbine Delivery Route

It is proposed that the large wind turbine components will be delivered from the selected port to the Site via the M7, exiting at Junction 22 onto the N62 heading southwards for approximately 9.4km before reaching the proposed new turbine component entrance at the northwest of the Site. Junction accommodation works in the form of minor, temporary works are only required at junction 22 off the

M7 motorway. No National Monuments, those subject to a preservation order, recorded monuments, Protected Structures or NIAH structures or items are located in the area of the proposed works. The nearest monuments are located over 100m to the north-west and comprise monuments discovered and subsequently excavated as part of the archaeological resolution stage of the motorway construction. The land through which the proposed works extends is within the CPO of the motorway and it is considered that all archaeological investigations and mitigation deemed necessary in this area during the construction stage of the motorway was undertaken at that time.

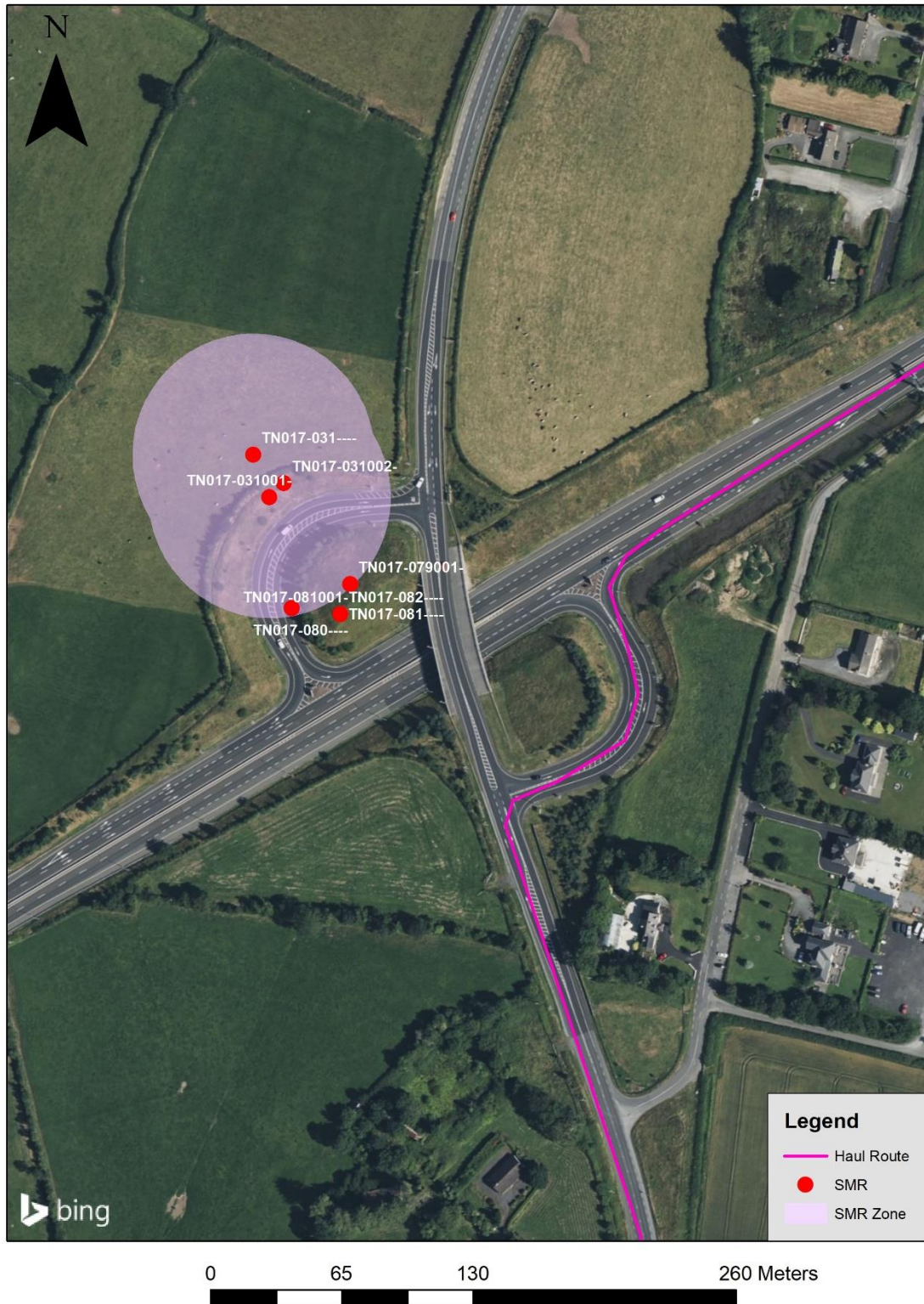


Figure 13.19: Proposed haul route in vicinity of M8 motorway showing nearest recorded monuments.

13.4 Likely Effects and Associated Mitigation Measures

13.5 Do Nothing Scenario

If the Proposed Project were not to proceed, the potential to impact on Cultural Heritage would be removed.

If the Proposed Project were not to proceed, the opportunity to capture part of Tipperary’s valuable renewable energy resource 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.

If the Proposed Project were not to proceed, the opportunity to restore a segment of the Eastwood River by improving channel stability, instream habitat and establishing a natural wooded riparian buffer would be lost. Please see Appendix 6-4 Biodiversity Management and Enhancement Plan for details.

13.5.1 Construction Phase Potential Impacts (Indirect)

Indirect effects, in terms of archaeology, architectural and cultural heritage are considered to be those effects which happen away from ‘the Site’. This includes impacts on visual setting of any cultural heritage assets in the wider landscape. Since these effects are only possible once development is operational, they are considered operational effects and are therefore discussed in Section 13.5.3 below. No indirect effects were identified which would occur at the construction stage.

13.5.2 Construction Phase Potential Impacts (Direct)

Direct Impact refers 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 impacts on the known and potential archaeological heritage. These are outlined below with the suggested mitigation measures.

13.5.2.1 UNESCO World Heritage Sites and those on Tentative List

Proposed Wind Farm

No UNESCO World Heritage Sites (WHS) or those on the Tentative list are located within 20km of the nearest proposed turbine. No direct effects to such assets as a result of the Proposed Wind Farm are therefore identified.

Proposed Grid Connection

No UNESCO World Heritage Sites (WHS) or those on the Tentative list are located on or immediately adjacent to the proposed substation/compound or grid connection route/end masts therefore no impacts are identified.

13.5.2.2 National Monuments

Proposed Wind Farm

No National Monuments or those subject to a Preservation Order are located on or in the immediate vicinity of the Proposed Wind Farm. No direct effects to such assets as a result of the Proposed Wind Farm are therefore identified. No National Monuments are located on or in the immediate vicinity of the proposed minor, temporary works required at junction 22 off the M7 motorway. No direct impacts to this aspect of the archaeological resource are therefore identified.

Proposed Grid Connection

No National Monuments of those subject to a Preservation order are located on or immediately adjacent to the proposed substation/compound or grid connection route/end masts therefore no impacts are identified.

Two National Monuments in State Care and six monuments subject to a Preservation Order are located within 10km of the nearest proposed turbine.

13.5.2.3 Recorded Monuments

Proposed Wind Farm

One recorded monument (TN029-030— redundant record) is located within the Site c. 189m west of T5. The monument is not considered to be archaeological in nature and no direct impacts to same as a result of the Proposed Wind Farm are identified. No recorded monuments are located on or in the immediate vicinity of the proposed minor, temporary works required at junction 22 off the M7 motorway. No direct impacts to this aspect of the archaeological resource are therefore identified.

Proposed Grid Connection

No recorded monuments are located on or in the immediate vicinity of the proposed substation/compound or the proposed underground electrical cabling route/end masts. No direct impacts to this aspect of the archaeological resource are therefore identified.

13.5.2.4 Sub-surface Archaeological Potential

Identification of Impact

Proposed Wind Farm

A rectangular crop mark which may represent the remains of a previously unrecorded archaeological monument (moated site) was noted within the Site during a review of aerial photography. No above-ground remains of the rectangular enclosure are apparent, however, it is not located within the footprint of any proposed infrastructure therefore no direct impacts are identified.

Given the presence of this potential feature and due to the extent of groundworks associated with the construction phase of the Proposed Wind Farm and the greenfield nature of the Site, it is possible that previously unrecorded sub-surface archaeological finds, features or deposits are located within the Site. The potential therefore exists that sub-surface archaeological sites or features, if present within the Site, may be directly impacted by construction phase activities. The potential impact on sub-surface archaeological finds and features, should they exist, as a result of ground works associated with the construction stage of the Proposed Wind Farm are likely to be direct, negative and permanent in the absence of appropriate mitigation measures.

The proposed minor, temporary works required at junction 22 off the M7 motorway is located in an area which previously underwent significant ground works associated with the construction of the motorway. Any sub-surface archaeology which may have been located on or close to this area was dealt with at the pre-construction or construction stage of the motorway. No direct impacts to this aspect of the archaeological resource are therefore identified.

Proposed Grid Connection

Approximately 1.1km of the proposed underground electrical cabling route and the proposed 110kV substation, associated construction compound and 2 no. end masts are located in pasture. Given the greenfield nature of these areas it is possible that previously unrecorded sub-surface archaeological finds, features or deposits are located within the footprint of the proposed substation and compound site and along the proposed electrical cabling route and end masts in these areas. The potential therefore exists that sub-surface archaeological sites or features, if present within these areas, may be directly impacted by construction phase activities. The potential impact on sub-surface archaeological finds and features, should they exist, as a result of ground works located in pasture areas are likely to be direct, negative and permanent in the absence of appropriate mitigation measures.

Mitigation measures

- > A buffer zone of 20m should be established around the outer extent of the crop mark, as visible on aerial photography, prior to the commencement of any construction works. The buffer should comprise fencing with keep out signage capable of lasting the duration of the construction phase of the Proposed Project. No ground works, storage of topsoil or movement of machinery will take place within the buffer.
- > Pre-development archaeological testing of the Proposed Project infrastructure in previously undisturbed greenfield areas of the Site 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 deemed necessary 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 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 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 potential impact 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.



Figure 13.20: Crop mark and 20m buffer zone.

13.5.2.5 Protected Structures

Proposed Wind Farm

No Protected Structures subject to statutory protection are located within the Site therefore no potential direct impacts to this resource are identified. No protected structures are located on or in the immediate vicinity of the proposed minor, temporary works required at junction 22 off the M7 motorway. No direct impacts to this aspect of the cultural heritage resource are therefore identified.

Proposed Grid Connection

No Protected Structures subject to statutory protection are located within the Site therefore no direct impacts to this resource from the construction of the Proposed Grid Connection infrastructure are identified.

13.5.2.6 **NIAH structures and Historic Gardens**

Proposed Wind Farm

No structures listed in the NIAH are located within the Site or at the temporary works area at Junction 22,, therefore no direct impacts to such structures are identified. No historic gardens are located within the Site, although the historic garden of Eastwood House is located a short distance, c. 780m to the south-west of T9. T9 and its hardstand are located within the demesne of Eastwood House, however, no direct impacts to the historic garden or any demesne features have been identified.

No NIAH structures are located on or in the immediate vicinity of the proposed minor, temporary works required at junction 22 off the M7 motorway. No direct impacts to this aspect of the cultural heritage resource are therefore identified.

Proposed Grid Connection

No structures listed in the NIAH are located within the Site, therefore no direct impacts to such structures or historic gardens due to the construction of the Proposed Grid Connection infrastructure are identified. No direct impacts to this resource are therefore identified.

13.5.2.7 **Features of Local Cultural Heritage Merit**

Proposed Wind Farm

No upstanding features of local cultural heritage merit were identified within the Site therefore no direct impacts to same are anticipated. No items of local cultural heritage merit are located on or in the immediate vicinity of the proposed minor, temporary works required at junction 22 off the M7 motorway. No direct impacts to this aspect of the cultural heritage resource are therefore identified.

Proposed Grid Connection

One stone road bridge (CH1) is located on the proposed underground grid connection route at Clonmore/Strogue townlands. Directional Drilling will be utilised at this crossing therefore direct impacts to the bridge structure are not anticipated.

13.5.3 **Operational Phase Potential Impacts (Indirect)**

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

Impacts 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 impact on 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 impact to the setting of a monument. For purposes of assessing visual impact 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 impact. 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 example proposed temporary construction compounds or the Proposed Grid Connection (including the 110kV substation etc) which would not be dominant in the wider landscape setting in general. The assessment of impacts on visual setting was undertaken using both the Zone of Theoretical Visibility (ZTV) map in the Landscape and Visual Impact Assessment (LVIA), as presented in Chapter 14 of this EIAR, and also photomontages / Photowires from specific cultural heritage assets. The ZTV is a bare-ground model which does not take screening vegetation into account.

13.5.3.1 UNESCO World Heritage Sites and those on Tentative List

Proposed Wind Farm

No UNESCO World Heritage Sites (WHS) or those on the Tentative list are located within 20km of the nearest proposed turbine. No potential effects to the setting of such sites as a result of the Proposed Wind Farm are therefore identified.

Proposed Grid Connection

No UNESCO World Heritage Sites (WHS) or those on the Tentative list are located within 20km of the proposed substation or underground electrical cabling route (including end masts). No potential effects to the setting of such sites as a result of the proposed grid connection area therefore identified.

13.5.3.2 National Monuments

Proposed Wind Farm

Identification of Impact

Two National Monuments in State Care and six monuments subject to a Preservation Order are located within 10km of the nearest proposed turbine (Table 13.3). The ZTV demonstrates that only one of the monuments (PO No. 57/1938 Tower House) at Tinvoher is located in an area where there will be theoretical visibility of 7-9 turbines. All of the other monuments, including the National Monument comprising the Timoney Stones at Cullaun and Timoney Hills (Nat. Mon. 353) and Errill Church in Co. Laois (Nat. Mon. No. 113) are located in areas with no theoretical visibility of the proposed turbines. A photowire (Appendix 14-5 Photowire Visualisation Booklet, PWVP – Q) from the nearest public road to the National Monuments in Cullaun townland also demonstrates no visibility of the proposed turbines. No potential visual effects on these monuments are therefore identified.

The tower house at Tinvoher (PO No. 57/1938) is situated c. 6.6km south of the nearest proposed turbine, T9. The ZTV demonstrates theoretical visibility of 7-9 turbines from this area. Given the distance between the monument and the nearest turbine, however, a change to the immediate setting of the tower house will not occur. A change to the wider setting in which the monument is located is acknowledged, however, but is considered to be Not Significant.

Mitigation Measures

It is 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

Not Significant.

Significance of Effects

The overall significance of effects will be Not Significant.

Table 13.10: Table of impacts on National Monuments and those subject to a Preservation Order within 10km of the nearest proposed turbine.

Nat. Mon. No.	SMR NO.	CLASS	TOWNLAND	TURBINE ID	DISTANCE TO NEAREST TURBINE (m)	Potential Effect	Significance of Effect
353	TN018-012—, TN018-021—, TN018-015—	Standing Stones	Cullaun, Timenyhills, Timoney	T1	8,513	Indirect visual	N/A
113	LA027-024—	Church	ERRILL	T1	8,767	Indirect visual	N/A
4/2008	TN016-003—	Castle - motte	MOATQUARTER (Rathnaveoge Par.)	T1	9,604	Indirect visual	N/A
4/2008	TN016-004—	Enclosure	MOATQUARTER (Rathnaveoge Par.)	T1	9,759	Indirect visual	N/A
70/1938	TN017-033—	Castle - tower house	RATHNAVEOGE LOWER	T1	8,956	Indirect visual	N/A
01/1996	TN022-037—	Ringfort - rath	CLONCANNON	T2	9,498	Indirect visual	N/A
57/1938	TN035-030005-	Castle - tower house	TINVOHER	T9	6,683	Indirect visual	Not Significant
4/1984	TN022-036—	Castle - motte	CLONCANNON	T6	9,692	Indirect visual	N/A

Proposed Grid Connection

Identification of Impact

No National Monuments or those subject to a Preservation Order are located on or in close proximity to the Proposed Grid Connection. The nearest of these monuments comprises the tower house at Tinvoher (PO No. 57/1938) which is situated c. 7.6km to the south-west of the proposed substation. A change to the immediate setting of this monument as a result of the Proposed Grid Connection will not therefore

occur. A change to the wider setting within which the tower house is located is identified but is regarded as Imperceptible.

Mitigation Measures

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

Residual Effect

Imperceptible.

Significance of Effects

The overall significance of effects will be Imperceptible.

13.5.3.3 Recorded Monuments

Proposed Wind Farm

Identification of Impact

One recorded monument (TN029-030— redundant record) is located within the Site. It comprises a redundant record which has no above-ground elements and is considered to be non-archaeological. No potential visual effects to this monument are therefore identified.

A total of one hundred and thirty-four (134) recorded monuments are located within 5km of the nearest proposed turbine. This number includes the monument located within the Site discussed above. The monuments within the 5km study area were overlaid on the ZTV to ascertain what number of turbines may be visible from their locations. The ZTV shows that 131 of the 134 monuments are located in areas where 7-9 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 the table below are based on the **worst case 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 impact on setting altogether. Furthermore, many of these monuments may not be readily discernible in the landscape which further ameliorates effects on setting. The physical status of those monuments within 1-2km of the proposed turbines (Map ID 1-16) was checked on the HEV and where no surface trace of the monuments survives no potential visual effect is concluded. The same is concluded for redundant records.

Table 13.11: Table of potential effects on setting of recorded monuments within 5km of the nearest proposed turbine.

MAP ID	SMR	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effects
1	TN029-030—	Redundant record	BALLYCA HILL (Templemore Par.)	T5	189	7-9	N/A

MAP ID	SMR	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effects
2	TN029-029—	Enclosure	CLOMNORE (Killavinog e Par.)	T5	640	7-9	N/A
3	TN029-028—	Enclosure	CLOMNORE (Killavinog e Par.)	T5	682	7-9	N/A
4	TN023-045—	Castle – unclassified	KNOCKANROE (Templemore Par.)	T1	683	7-9	N/A
5	TN029-027—	Earthwork	CLOMNORE (Killavinog e Par.)	T3	897	7-9	N/A
6	TN029-032—	Enclosure	COBBS	T9	1,350	7-9	N/A
7	TN029-100—	Enclosure	KILTILLIHA	T6	1,640	7-9	N/A
8	TN029-025—	Redundant record	TEMPLEMORE DEMESNE	T7	1,733	7-9	N/A
9	TN023-046001-	Church	SKEHANAGH (Killavinog e Par.)	T1	1,788	7-9	N/A
10	TN023-046002-	Graveyard	SKEHANAGH (Killavinog e Par.)	T1	1,788	7-9	N/A
11	TN023-047—	Children's burial ground	SKEHANAGH (Killavinog e Par.)	T1	1,887	7-9	Moderate
12	TN029-033—	Ringfort - rath	KYLEMORE	T9	1,892	7-9	Moderate
13	TN023-056—	Redundant record	CLOMNORE (Killavinog e Par.)	T1	1,895	7-9	N/A

MAP ID	SMR	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effects
14	TN029-031—	Earthwork	CLONMORE (Killavinoge Par.)	T8	1,959	7-9	N/A
15	TN029-070—	Ringfort - rath	AUGHALL BEG	T9	1,963	7-9	Moderate
16	TN029-034—	Redundant record	KYLEMORE	T9	1,975	7-9	N/A
17	TN023-057—	Redundant record	CLONMORE (Killavinoge Par.)	T1	2,062	7-9	N/A
18	TN029-036—	Enclosure	KYLEMORE	T9	2,074	7-9	Slight
19	TN029-069—	Moated site	AUGHALL MORE	T9	2,076	7-9	Slight
20	TN023-044—	Church	SHANAKILL	T1	2,125	7-9	Slight
21	TN029-035—	Redundant record	KYLEMORE	T9	2,152	7-9	N/A
22	TN029-026—	Redundant record	TEMPLEMORE DEMESNE	T7	2,154	7-9	N/A
23	TN029-011—	Ringfort - rath	CRAIGUEDARG, CURRADUFF	T6	2,226	4-6	Slight
24	TN029-071—	Ringfort - rath	AUGHALL BEG	T9	2,302	7-9	Slight
25	TN029-037—	Ringfort - rath	BALLINLASSA	T9	2,306	7-9	Slight
26	TN029-024—	Designed landscape - tree-ring	TEMPLEMORE DEMESNE	T7	2,369	7-9	Slight
27	TN023-055—	Castle - ringwork	BALLYCAHILL (Templemore Par.), CLONTAAFFE	T6	2,548	4-6	Slight

MAP ID	SMR	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effects
28	TN029-072—	Ringfort - rath	AUGHAL L BEG,CAS TLELEINY	T9	2,560	7-9	Slight
29	TN029-062007-	Graveslab	TEMPLEMORE DEMESNE	T7	2,564	7-9	Slight
30	TN029-062006-	Graveslab	TEMPLEMORE DEMESNE	T7	2,566	7-9	Slight
31	TN029-062001-	Church	TEMPLEMORE DEMESNE	T7	2,580	7-9	Slight
32	TN029-062005-	Graveyard	TEMPLEMORE DEMESNE	T7	2,592	7-9	Slight
33	TN029-010—	Enclosure	CURRADUFF	T6	2,697	7-9	Slight
34	TN029-062—	Historic town	TEMPLEMORE DEMESNE	T7	2,712	7-9	Slight
35	TN023-043003-	Burial ground	KILLOUGH (Templemore Par.)	T1	2,719	7-9	Slight
36	TN023-043001-	Ecclesiastical enclosure	KILLOUGH (Templemore Par.)	T1	2,723	7-9	Slight
37	TN023-043002-	Bullaun stone	KILLOUGH (Templemore Par.)	T1	2,723	7-9	Slight
38	TN029-073—	Ringfort - rath	GORTEENANGAN	T9	2,766	7-9	Slight
39	TN029-038—	Earthwork	LAHAGH	T8	2,824	7-9	Slight
40	TN029-062003-	House - indeterminate date	TEMPLEMORE DEMESNE	T7	2,827	7-9	Slight

MAP ID	SMR	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effects
41	TN029-062002-	Castle tower house	TEMPLEMORE DEMESNE	T7	2,831	7-9	Slight
42	TN029-062004-	Bawn	TEMPLEMORE DEMESNE	T7	2,831	7-9	Slight
43	TN029-077—	Ringfort rath	CASTLELEINY	T9	2,878	7-9	Slight
44	TN029-040—	Earthwork	LAHAGH	T8	2,989	7-9	Slight
45	TN029-012—	Ringfort rath	GORTACURRA	T6	3,042	7-9	Slight
46	TN029-081001-	House fortified house	CASTLELEINY	T9	3,104	7-9	Slight
47	TN029-081002-	Bawn	CASTLELEINY	T9	3,105	7-9	Slight
48	TN029-039—	Ringfort rath	LAHAGH	T8	3,178	7-9	Slight
49	TN023-071—	Enclosure	CLONTA AFTE	T2	3,192	7-9	Slight
50	TN029-017—	Ringfort rath	GORTACURRA	T6	3,239	7-9	Slight
51	TN029-023002-	Mound	LLOYDSBOROUGH (Killea Par.)	T7	3,245	7-9	Slight
52	TN029-023001-	Mound	LLOYDSBOROUGH (Killea Par.)	T7	3,285	7-9	Slight
53	TN030-001—	Enclosure	BALLYSORRELLBIG	T8	3,306	7-9	Slight
54	TN029-009—	Moated site	PARK (Killea Par.)	T6	3,323	7-9	Slight
55	TN029-082—	Ringfort rath	CASTLELEINY	T9	3,399	7-9	Slight
56	TN029-078—	Earthwork	BALLINROE	T9	3,402	7-9	Slight

MAP ID	SMR	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effects
57	TN029-079001-	Church	BALLINROE	T9	3,403	7-9	Slight
58	TN029-079002-	Graveyard	BALLINROE	T9	3,416	7-9	Slight
59	TN029-088—	Redundant record	MANNA SOUTH	T7	3,466	7-9	N/A
60	TN024-009001-	Church	GLEBE (Killavinoghe Par.)	T1	3,479	7-9	Slight
61	TN024-009002-	Graveyard	GLEBE (Killavinoghe Par.)	T1	3,488	7-9	Slight
62	TN029-076—	Enclosure	GORTENMAGHER	T9	3,496	7-9	Slight
63	TN029-101—	Redundant record	CLOONE	T9	3,523	7-9	N/A
64	TN023-036—	Ringfort - rath	GORTNA GOWNA (Killavinoghe Par.)	T1	3,562	7-9	Slight
65	TN023-069—	Standing stone	SKEHANAGH NORTH	T2	3,588	7-9	Slight
66	TN023-033—	Enclosure	CLONAKENNY	T1	3,598	7-9	Slight
67	TN024-007—	Redundant record	DROMARD BEG	T1	3,621	7-9	Slight
68	TN023-066—	Standing stone	CLONAKENNY	T1	3,628	7-9	Slight
69	TN023-054—	Ringfort - rath	KILBALLYHEMIKIN	T2	3,641	7-9	Slight
70	TN029-074—	Enclosure	GORTENMAGHER	T9	3,686	7-9	Slight
71	TN023-042—	Ringfort - rath	SKEHANAGH NORTH	T2	3,694	7-9	Slight

MAP ID	SMR	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effects
72	TN023-032—	Enclosure	CLONAK ENNY	T1	3,756	7-9	Slight
73	TN029-083—	Ringfort - rath	BALLINR OE	T9	3,773	7-9	Sight
74	TN029-084—	Children's burial ground	KILCURK REE	T9	3,789	7-9	Slight
75	TN029-006002-	Graveyard	PARK (Killea Par.)	T6	3,805	7-9	Slight
76	TN029-006003-	Bullaun stone	PARK (Killea Par.)	T6	3,805	7-9	Slight
77	TN029-006001-	Church	PARK (Killea Par.)	T6	3,805	7-9	Slight
78	TN023-053—	Ringfort - rath	KILBALLY HEMIKIN	T2	3,845	7-9	Slight
79	TN029-092—	House - medieval	PARK (Killea Par.)	T6	3,850	7-9	Slight
80	TN023-052—	Earthwork	KILBALLY HEMIKIN	T2	3,869	7-9	Slight
81	TN023-031—	Enclosure	CLONAK ENNY	T1	3,883	7-9	Slight
82	TN023-029—	Ringfort - rath	CLONAK ENNY	T1	3,914	7-9	Slight
83	TN029-075003-	Earthwork	CLOONE	T9	3,915	7-9	Slight
84	TN029-075—	Settlement deserted - medieval	CLOONE	T9	3,926	7-9	Slight
85	TN029-016—	Enclosure	LLOYDSB OROUGH (Killea Par.)	T6	3,976	7-9	Slight
86	TN029-075001-	Castle tower house	CLOONE	T9	3,994	7-9	Slight
87	TN029-075002-	Bawn	CLOONE	T9	3,994	7-9	Slight
88	TN023-030002-	Bawn	CLONAK ENNY	T1	4,059	7-9	Not Significant

MAP ID	SMR	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effects
89	TN023-030005-	Field system	CLONAK ENNY	T1	4,060	7-9	Not Significant
90	TN023-030001-	House - fortified house	CLONAK ENNY	T1	4,062	7-9	Not Significant
91	TN023-030003-	Church	CLONAK ENNY	T1	4,063	7-9	Not Significant
92	TN029-080—	Redundant record	BALLINR OE	T9	4,121	7-9	N/A
93	TN023-030006-	Settlement - deserted - medieval	CLONAK ENNY	T1	4,152	7-9	Not Significant
94	TN029-005—	Ringfort - rath	KILLEA (Killea Par.)	T6	4,154	7-9	Not Significant
95	TN023-030004-	Moated site	CLONAK ENNY	T1	4,162	7-9	Not Significant
96	TN029-015—	Earthwork	KILLAWA RDY (Killea Par.)	T6	4,182	7-9	Not Significant
97	TN024-008—	Redundant record	DROMAR D BEG	T1	4,193	7-9	N/A
98	TN023-051—	Ringfort - rath	KILBALLY HEMIKIN	T6	4,205	7-9	Not Significant
99	TN023-067—	Standing stone	KILBALLY HEMIKIN	T6	4,263	7-9	Not Significant
100	TN029-008—	Enclosure	KILLAWA RDY (Killea Par.)	T6	4,317	7-9	Not Significant
101	TN029-004—	Enclosure	KILLEA (Killea Par.)	T6	4,379	7-9	Not Significant
102	TN023-028—	Ringfort - rath	CLONAK ENNY	T1	4,385	7-9	Not Significant
103	TN029-066—	Moated site	LAGHILE (Loughmoe West Par.)	T9	4,465	7-9	Not Significant
104	TN023-040—	Ringfort - rath	BORRISN OE	T2	4,483	7-9	Not Significant

MAP ID	SMR	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effects
105	TN023-049—	Ringfort - rath	PARK (Killea Par.)	T6	4,490	7-9	Not Significant
106	TN023-050—	Ritual site - holy well	KILKIP WEST	T6	4,493	7-9	Not Significant
107	TN023-070—	Enclosure - large enclosure	KYLEANN AGH	T1	4,506	1-3	Not Significant
108	TN023-048—	Ringfort - rath	PARK (Killea Par.)	T6	4,527	7-9	Not Significant
109	TN029-064—	Enclosure	FOREST	T7	4,532	7-9	Not Significant
110	TN029-067—	Enclosure	LAGHILE (Loughmoe West Par.)	T9	4,560	7-9	Not Significant
111	TN023-035—	Ritual site - holy well	GORTEEN (Bourney Par.)	T1	4,642	7-9	Not Significant
112	TN029-052—	Ringfort - rath	OLDTOWN	T7	4,651	7-9	Not Significant
113	TN029-002—	Ringfort - rath	PARK (Killea Par.)	T6	4,653	7-9	Not Significant
114	TN024-011—	Road - unclassified together	CULLAHILL (Bourney Par.), DROMARD MORE	T1	4,665	7-9	Not Significant
115	TN035-011—	Ringfort - rath	PENANE	T9	4,676	7-9	Not Significant
116	TN030-019—	Ringfort - rath	BALLYKNOCKANE (Templetohy Par.)	T9	4,685	7-9	Not Significant
117	TN023-034—	Enclosure	GORTEEN (Bourney Par.)	T1	4,692	7-9	Not Significant
118	TN024-006—	Road - unclassified together	DROMARD MORE	T1	4,692	7-9	Not Significant

MAP ID	SMR	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effects
119	TN029-085—	Ringfort - rath	COOGUL LA	T9	4,705	7-9	Not Significant
120	TN029-051—	Settlement deserted - medieval	OLDTOWN	T7	4,743	7-9	Not Significant
121	TN023-016—	Redundant record	SHANACLOON (Bourney Par.)	T1	4,744	7-9	N/A
122	TN029-022—	Boulder-burial	KILLAWARDY (Killea Par.)	T6	4,749	7-9	Not Significant
123	TN030-014—	Ringfort - rath	LISDALLEEN AND DRUMMIN	T8	4,798	7-9	Not Significant
124	TN035-019—	Enclosure	COOGUL LA	T9	4,834	7-9	Not Significant
125	TN030-031001-	Ringfort - rath	BALLYKNOCKANE (Templetouhy Par.)	T9	4,862	7-9	Not Significant
126	TN030-021—	Ringfort - rath	BALLYKNOCKANE (Templetouhy Par.)	T8	4,863	7-9	Not Significant
127	TN029-053—	Designed landscape - folly	SANDYMOUNT	T7	4,880	7-9	Not Significant
128	TN030-031002-	Earthwork	BALLYKNOCKANE (Templetouhy Par.)	T9	4,904	7-9	Not Significant
129	TN030-020—	Redundant record	BALLYKNOCKANE (Templetouhy Par.)	T9	4,920	7-9	N/A
130	TN029-065—	Enclosure	WHITEFIELD	T9	4,939	7-9	Not Significant
131	TN024-005—	Barrow - ring-barrow	CULLAHILL	T1	4,955	7-9	Not Significant

MAP ID	SMR	CLASS	TD.	TURBINE ID	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effects
			(Bourney Par.)				
132	TN035-012—	Ritual site - holy well	COOGULLA	T9	4,956	7-9	Not Significant
133	TN030-006—	Earthwork	LISDALLEN AND DRUMMIN	T8	4,965	7-9	Not Significant
134	TN029-007—	Enclosure	KILLAWARDEY (Killea Par.)	T6	4,967	7-9	Not Significant

Mitigation Measures

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

Residual Impact

The residual impact will be the same as those identified in the table of Potential Effects.

Significance of Effects

The overall significance of effects range from Not Significant to Moderate. In reality the effect will be less severe due to natural screening, boundaries, buildings and vegetation, which will alleviate if not remove the impact 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.

Proposed Grid Connection

No recorded monuments are located within 100m of the proposed underground electrical cabling route and end masts or in the vicinity of the proposed substation and temporary construction compound. The nearest recorded monument to the proposed underground electrical cabling route and end masts comprises an earthwork TN029-031— c. 270m to the north of the north-east end of the route. The nearest recorded monument to the proposed 110kV substation comprises an enclosure TN029-029— c. 280m to the north-west. According to the descriptions of the monuments as provided on the HEV no above-ground trace of either monument is apparent. No potential visual effects to the setting of any monuments as a result of the Proposed Grid Connection are therefore identified.

13.5.3.4 Sub-surface Archaeology

One potential archaeological monument comprising a rectangular crop mark is located within the Site. It comprises a sub-surface feature with no above-ground expression. Potential visual effects to this and any other sub-surface archaeology which may exist within the Site are negated by the sub-surface nature of such features that do not have any above-ground elements on which the Proposed Project will have a visual effect.

13.5.3.5 Protected Structures

Identification of Impact

Proposed Wind Farm

No Protected Structures subject to statutory protection are located within the Site.

A total of 105 protected structures are located within 5km of the nearest proposed turbines. Seventy-six of these are located in the town of Templemore which accounts for the large number of structures within the 5km study area. The ZTV shows that the majority of the structures are located in areas where 7-9 turbines will theoretically be visible with only one structure located in an area where 4-7 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 the table below are based on a theoretical model and therefore the worst case 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 than that identified.

Table 13.12: Potential visual effects on RPS structures within 5km of the nearest proposed turbine.

RPS ID	STRUCTURE	LOCATION	TURBINE	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically visible	Theoretical Significance of Effects
TRPS97	Two storey house	Borrisbeg	T7	1,186	7-9	Moderate
TRPS102	Butlers Lodge	Butlers Lodge	T7	1,609	7-9	Moderate
TRPS141	Two storey house	Curraduff	T6	2,213	4-6	Slight
TRPS667	house'	Killough	T2	2,470	7-9	Slight
TRPS351	Shanakill House	Shanakill	T1	2,477	7-9	Slight
TRPS699	Saint Ann's Roman Catholic Chapel	Clonmore	T3	2,504	7-9	Slight
TRPS666	lodge'	Killough	T2	2,568	7-9	Slight
TRPS142	Two storey house	Curraduff	T6	2,897	7-9	Slight
TRPS140	Creamery	Curraduff	T6	2,908	7-9	Slight
TRPS220	Templemore train station	Kiltillane	T9	3,003	7-9	Slight

RPS ID	STRUCTURE	LOCATION	TURBINE	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically visible	Theoretical Significance of Effects
TRPS185	Bellwood House	Greenwood	T9	3,003	7-9	Slight
TRPS702	Castleleiny Roman Catholic Church	Gorteendangan	T9	3,265	7-9	Slight
TRPS703	water pump'	Gorteendangan	T9	3,276	7-9	Slight
TRPS704	handball alley'	Castleiny	T9	3,279	7-9	Slight
TRPS665	Skehanagh House	Skehanagh	T2	3,464	7-9	Slight
TRPS405	Woodville House	Woodville	T9	3,469	7-9	Slight
TRPS124	Cloone House	Cloone	T9	3,777	7-9	Slight
TRPS313	Two storey house	Park	T6	3,850	7-9	Slight
TRPS312	Killea School	Park	T6	3,883	7-9	Slight
TRPS125	Cloone Lodge	Cloone	T9	3,888	7-9	Slight
TRPS206	St. James R.C. Church	Killea	T6	3,895	7-9	Slight
TRPS261	Lloydsborough House	Lloydsborough	T6	3,988	7-9	Slight
TRPS204	Two storey house	Killawardy	T6	4,007	7-9	Not Significant
TRPS663	St Brigid's Roman Catholic Church	Clonakenny	T1	4,290	7-9	Not Significant
TRPS662	Rourkes	Clonakenny	T1	4,325	7-9	Not Significant
TRPS664	Garrets Mill	Mien	T2	4,434	7-9	Not Significant
TRPS401	Whitefield Mill	Whitefields	T9	4,679	7-9	Not Significant

RPS ID	STRUCTURE	LOCATION	TURBINE	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically visible	Theoretical Significance of Effects
TRPS265	Loran Park	Loran	T1	4,815	7-9	Not Significant
TRPS701	folly tower'	Sandymount	T7	4,880	7-9	Not Significant
TMS6	House	Church Street	T7	2,281	7-9	Slight
TMS34	House	Main Street - North	T7	2,456	7-9	Slight
TMS36	House	Main Street	T7	2,407	7-9	Slight
TMS43	Dwelling	Richmond Road	T7	3,195	7-9	Slight
TMS49	Dwelling	Talavera	T7	3,249	7-9	Slight
TMS53d	Farm Yard and dwelling	Templemore Abbey, Priory Demesne	T7	3,524	7-9	Slight
TMS53e	Farm Yard and dwelling	Templemore Abbey, Priory Demesne	T7	3,447	7-9	Slight
TMS67a	Remains of church and graveyard.	Town Park	T7	2,574	7-9	Slight
TMS67b	Remains of Blackcastle	Town Park	T7	2,836	7-9	Slight
TMS69	Limestone pedestrian bridge	Town Park	T7	2,690	7-9	Slight
TMS70	St. Mary's Hall	Church Street	T7	2,186	7-9	Slight
TMS71	John Scott	Black Castle Road	T7	2,916	7-9	Slight
TMS72	House	Richmond Road	T7	3,181	7-9	Slight
TMS73	O'Dwyer Bridge	Richmond Road	T7	2,902	7-9	Slight
TMS74	Garda Station	Main Street	T7	2,645	7-9	Slight

RPS ID	STRUCTURE	LOCATION	TURBINE	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically visible	Theoretical Significance of Effects
TMS75	Methodist Church	Main Street - North	T7	2,668	7-9	Slight
TMS76	Post box	Church Street	T7	2,383	7-9	Slight
TMS79	House	Main Street - South	T7	2,565	7-9	Slight
TMS81	Dwelling	The Mall	T7	2,928	7-9	Slight
TMS82	Dwelling	The Mall	T7	2,933	7-9	Slight
TMS83	Dwelling	The Mall	T7	2,939	7-9	Slight
TMS89	Small bridge	Church Avenue	T7	3,093	7-9	Slight
TMS90	Church	Garda Siochána College	T7	3,424	7-9	Slight
TMS64a	Cast Iron Sewer Vents	Barrack Street and Manna South	T7	3,303	7-9	Slight
TMS1	Demesne B&B	Roscrea Road	T7	2,054	7-9	Slight
TMS2	St Mary's Church	Church Street	T7	2,128	7-9	Slight
TMS3	St Mary's National School	Church Street	T7	2,185	7-9	Slight
TMS4	Old School Master's House/Rectory	Church Street (east side)	T7	2,211	7-9	Slight
TMS5	Church View House	Church Street (west side)	T7	2,213	7-9	Slight
TMS12	Vacant shop	Main Street - South	T7	2,552	7-9	Slight
TMS12a	Meagher's		T7	2,560	7-9	Slight
TMS13	Foley's Bar	Main Street - South	T7	2,608	7-9	Slight
TMS14	Abrakebabra and	Main Street - South	T7	2,667	7-9	Slight

RPS ID	STRUCTURE	LOCATION	TURBINE	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically visible	Theoretical Significance of Effects
TMS15	Collier	Main Street - South	T7	2,721	7-9	Slight
TMS16	The Old Malt House	Main Street - South	T7	2,731	7-9	Slight
TMS17	D O’Doherty and Sons	Patrick Street - South	T7	2,770	7-9	Slight
TMS18	Mockler’s Pharmacy	Patrick Street - South	T7	2,783	7-9	Slight
TMS19	Jameson Racing	41/42 Patrick Street - South	T7	2,812	7-9	Slight
TMS20	Tom Maher’s Inn	Patrick Street - South	T7	2,820	7-9	Slight
TMS21	House	Patrick Street - South	T7	2,834	7-9	Slight
TMS22	Mullally’s Menswear	Patrick Street - South	T7	2,858	7-9	Slight
TMS23	Temple Tiles	Patrick Street - North	T7	2,854	7-9	Slight
TMS24	T. Kennedy	Patrick Street - North	T7	2,793	7-9	Slight
TMS25	James J. Kelly & Sons Solicitors	Patrick Street - North	T7	2,781	7-9	Slight
TMS26	The Library	Main Street - North	T7	2,719	7-9	Slight
TMS27	M. Condon	Main Street - North	T7	2,713	7-9	Slight
TMS28	House	Main Street - North	T7	2,706	7-9	Slight
TMS29	Bank of Ireland	Main Street - North	T7	2,693	7-9	Slight
TMS31	Bridget Kennedy	Main Street - North	T7	2,598	7-9	Slight

RPS ID	STRUCTURE	LOCATION	TURBINE	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically visible	Theoretical Significance of Effects
TMS32	John Maher	19 Main Street - North	T7	2,556	7-9	Slight
TMS37	Kinnane's shop	Corner of Mary St. and Main St.	T7	2,371	7-9	Slight
TMS38	Templemore Town Hall	Main Street	T7	2,618	7-9	Slight
TMS40	Dwelling	The Mall	T7	2,922	7-9	Slight
TMS41	Ryan's Xpress Stop	Corner of Patrick Street and The Mall	T7	2,889	7-9	Slight
TMS44	Garda Siochána College	Talavera Place	T7	3,382	7-9	Slight
TMS45	The White House	Talavera Place	T7	3,317	7-9	Slight
TMS47	Polly's Public House	Talavera	T7	3,300	7-9	Slight
TMS48	G. & A. McGourty	Talavera	T7	3,285	7-9	Slight
TMS51	House	Barracks Street/ Talavera	T7	3,283	7-9	Slight
TMS53a	Gate Lodge	Priory Demesne	T7	3,613	7-9	Slight
TMS53b	Demesne Walls	Priory Demesne	T7	3,566	7-9	Slight
TMS53c	Archway	Templemore Abbey, Priory Demesne	T7	3,484	7-9	Slight
TMS54	Robert Johnston	Thurles Road	T7	3,688	7-9	Slight
TMS56	House	Richmond Road, Belleville	T7	3,250	7-9	Slight
TMS57	Anna O'Brien	Richmond Road, Belleville	T7	3,272	7-9	Slight

RPS ID	STRUCTURE	LOCATION	TURBINE	DISTANCE TO TURBINE (m)	No. of Turbines Theoretically visible	Theoretical Significance of Effects
TMS61	Joe Hennessy	Richmond Grove	T7	3,195	7-9	Slight
TMS68	Templemore Court House	Bank Street	T7	2,628	7-9	Slight
TMS64b	Cast Iron Sewer Vents	Barrack Street and Manna South	T9	3,332	7-9	Slight
TMS77	John Fitzpatrick	Mary Street-North	T9	2,313	7-9	Slight
TMS78	House/Shop front	Mary Street	T9	2,316	7-9	Slight
TMS80	St. Joseph's Primary School	Church Road	T9	2,278	7-9	Slight
TMS84	Graveyard	Church Avenue	T9	2,482	7-9	Slight
TMS85	John Delaney	Church Avenue - South	T9	2,790	7-9	Slight
TMS86	John McDevitt	Church Avenue	T9	2,780	7-9	Slight
TMS87	House	Church Avenue - South	T9	2,765	7-9	Slight
TMS88	House	Church Avenue - South	T9	2,773	7-9	Slight

Mitigation Measures

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

Residual Effect

Since no mitigation measures are being proposed the residual effect will range from Not Significant to Moderate.

Significance of Effects

The overall significance of effects will range from Not significant to 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 impact on setting altogether.

Proposed Grid Connection

Identification of Impact

No Protected Structures are located within 100m of either side of the proposed underground electrical cabling route and end masts or in the vicinity of the proposed 110kV substation and temporary construction compound. The nearest RPS structure (TRPS699) is located c. 1.9km north-east of the proposed substation and c. 1.1km north-east of the proposed underground electrical cable route. No potential effects to the immediate setting of the structures are identified. A change to the wider setting in which the protected structures are located is acknowledged but is regarded as Not Significant.

Mitigation Measures

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

Residual Effect

Not Significant.

Significance of Effects

The overall significance of effects will be Not Significant.

13.5.3.6 NIAH Structures and Historic Gardens

Proposed Wind Farm

Identification of Impact

No NIAH structures are located within the proposed Site.

Sixty-three structures listed in the NIAH are located within 5km of the nearest proposed turbine, with a large number of these located in Templemore town. The ZTV demonstrates theoretical visibility of 7-9 turbines from all of the NIAH structures.

Thirteen historic gardens are located within 5km of the nearest proposed turbine. The nearest historic garden comprises that associated with Eastwood House. The southern portion of the Proposed Wind Farm site is located within the demesne for the house, as shaded in grey on the first edition OS historic map. T9 and its associated hardstand are located within the demesne, however, no garden or demesne features are denoted on the historic mapping in this area, nor were any detected during field survey carried out as part of this assessment. The ZTV also demonstrates theoretical visibility of 7-9 turbines from all of the historic gardens within the 5km study area. It should be noted, however, that some of these sites may have no surviving features while others may be associated with NIAH structures.

Both the distance to the nearest turbine and the number of turbines visible from each NIAH structure and garden are used to arrive a level of potential effect on setting (Table 13.13 and Table 13.14). Potential effects on setting as detailed in the tables below are based on the **worst-case 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 than that identified. For example, the historic garden at Eastwood to the south-west of the Proposed Wind Farm would appear from a review of aerial photography to have few surviving features and the area of the gardens now used for agricultural purposes.

Table 13.13: Potential visual effects on NIAH structures within 5km of the nearest proposed turbine.

NIAH Reg.	Date	Structure]	Townland	T No.	Distance To Turbine (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effect
2230800 2	1780 - 1800	Saint Mary's Church (Templemore)	KILTILLANE	T7	2,128	7-9	Slight
2230800 4	1845 - 1850	Saint Mary's National School	KILTILLANE	T7	2,186	7-9	Slight
2230800 3	1850 - 1855	Church View, house	TEMPLEMORE DEMESNE	T7	2,209	7-9	Slight
2230804 5	1945 - 1955	Saint Joseph's Primary School	KILTILLANE	T9	2,281	7-9	Slight
2230804 4	1915 - 1920	hall	KILTILLANE	T9	2,299	7-9	Slight
2230804 3	1780 - 1820	House	KILTILLANE	T9	2,314	7-9	Slight
2230804 8	1880 - 1885	Catholic Church of the Sacred Heart	KILTILLANE	T9	2,316	7-9	Slight
2230804 7	1860 - 1865	Convent of the Sisters of Mercy	KILTILLANE	T9	2,373	7-9	Slight
2230804 2	1810 - 1820	The Orphanage	KILTILLANE	T9	2,382	7-9	Slight
2240230 9	1875 - 1885	Fortescue, cottage ornee	KILLOUGH (TEMPLEMORE PR)	T2	2,465	7-9	Slight
2240290 2	1830 - 1835	Saint Anne's Catholic Church	CLONMORE (DOLLA PR)	T3	2,499	7-9	Slight
2230804 1	1780 - 1820	House	KILTILLANE	T7	2,553	7-9	Slight
2240230 8	1870 - 1890	Fortescue, gate lodge	KILLOUGH (TEMPLEMORE PR)	T2	2,566	7-9	Slight
2230802 0	1830 - 1870	house	KILTILLANE	T7	2,597	7-9	Slight
2230803 8	1800 - 1840	House	KILTILLANE	T7	2,602	7-9	Slight

NIAH Reg.	Date	Structure]	Townland	T No.	Distance To Turbine (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effect
22308037	1815 - 1930	Templemore Town Hall, market house	KILTILLANE	T7	2,610	7-9	Slight
22308036	1800 - 1840	House	KILTILLANE	T7	2,664	7-9	Slight
22308018	1800 - 1840	Templemore Methodist Church	KILTILLANE	T7	2,666	7-9	Slight
22308053	1900 - 1920	Allied Irish Bank	KILTILLANE	T9	2,678	7-9	Slight
22308001	1800 - 1840	Templemore Abbey, bridge	TEMPLEMORE DEMESNE	T7	2,688	7-9	Slight
22308017	1840 - 1880	Bank of Ireland	KILTILLANE	T7	2,695	7-9	Slight
22308016	1800 - 1840	house	KILTILLANE	T7	2,707	7-9	Slight
22308034	1830 - 1870	House	KILTILLANE	T7	2,780	7-9	Slight
22308014	1800 - 1840	T. Kennedy, house	KILTILLANE	T7	2,796	7-9	Slight
22308033	1890 - 1910	The Crescent, house	KILTILLANE	T7	2,811	7-9	Slight
22308032	1800 - 1840	House	KILTILLANE	T7	2,818	7-9	Slight
22308013	1880 - 1920	T. Morkan, house	KILTILLANE	T7	2,853	7-9	Slight
22308030	1840 - 1880	E.J. Grey, house	KILTILLANE	T7	2,854	7-9	Slight
22402901	1910 - 1940	Killea Creamery	CURRADUFF	T6	2,907	7-9	Slight
22308008	1860 - 1870	Abbey Lodge, gate lodge	BELLEVILLE	T7	2,915	7-9	Slight
22308050	1820 - 1860	House	KILTILLANE	T7	2,927	7-9	Slight
22402914	1845 - 1855	Templemore Railway Station,	KILTILLANE	T9	2,988	7-9	Slight

NIAH Reg.	Date	Structure]	Townland	T No.	Distance To Turbine (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effect
		store/warehouse					
22402919	1830 - 1870	Bellwood House	GREENWOOD	T9	2,999	7-9	Slight
22402915	1845 - 1850	Templemore Railway Station, foot bridge	KILTILLANE	T9	3,015	7-9	Slight
22402916	1845 - 1850	Templemore Railway Station, railway station	KILTILLANE	T9	3,039	7-9	Slight
22402917	1845 - 1850	Templemore Railway Station, building misc	KILTILLANE	T9	3,042	7-9	Slight
22402918	1845 - 1850	Greenwood Bridge	KILTILLANE	T9	3,134	7-9	Slight
22308027	1840 - 1880	house	MANNA SOUTH	T7	3,155	7-9	Slight
22308011	1910 - 1930	House	BELLEVILLE	T7	3,181	7-9	Slight
22308066	1810 - 1850	House	MANNA SOUTH	T7	3,249	7-9	Slight
22308069	1810 - 1850		MANNA SOUTH	T7	3,261	7-9	Slight
22402920	1825 - 1835	Catholic Church of Saint John the Baptist	GORTEENDANGA N	T9	3,270	7-9	Slight
22308065	1900 - 1930	House	MANNA SOUTH	T7	3,282	7-9	Slight
22308062	1860 - 1900	Talavera House	MANNA SOUTH	T7	3,285	7-9	Slight
22308064	1800 - 1840	House	MANNA SOUTH	T7	3,297	7-9	Slight
22308063	1780 - 1820	The White House	MANNA SOUTH	T7	3,317	7-9	Slight
22308059	1860 - 1890	water pump	MANNA SOUTH	T7	3,366	7-9	Slight

NIAH Reg.	Date	Structure]	Townland	T No.	Distance To Turbine (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effect
22308061	1810 - 1815	McCan Barracks	MANNA SOUTH	T7	3,396	7-9	Slight
22308070	1850 - 1855	McCan Barracks, church/chapel	MANNA SOUTH	T7	3,423	7-9	Slight
22308067	1800 - 1840	Wellington Lodge, house	MANNA SOUTH	T9	3,424	7-9	Slight
22402913	1800 - 1840	Woodville House	WOODVILLE (TEMPLEMORE PR)	T9	3,461	7-9	Slight
22402307	1915 - 1925	Skehanagh House	SKEHANAGH NORTH	T2	3,463	7-9	Slight
22308009	1860 - 1870	Templemore Abbey, farmyard complex	PRIORY DEMESNE	T7	3,507	7-9	Slight
22308068	1860 - 1865	Templemore Abbey, demesne walls/gates/railings	PRIORY DEMESNE	T7	3,567	7-9	Slight
22308010	1860 - 1870	Templemore Abbey, gate lodge	PRIORY DEMESNE	T7	3,579	7-9	Slight
22402904	1800 - 1840	Castle House, folly	PARK (KILLEA PR)	T6	3,850	7-9	Slight
22402905	1830 - 1835	Saint James's Catholic Church	KILLEA (ARDCRONY PR)	T6	3,893	7-9	Slight
22402908	1685 - 1840	Lloydsborough House	LLOYDSBOROUGH (KILLEA PR)	T6	3,974	7-9	Slight
22402906	1780 - 1820	House	KILLAWARDY (KILLEA PR)	T6	4,006	7-9	Not Significant
22402304	1895 - 1900	Saint Brigid's Catholic Church	CLONAKENNY	T1	4,283	7-9	Not Significant
22402925	1760 - 1800	Whitefield Mill, mill (water)	WHITEFIELD	T9	4,673	7-9	Not Significant
22402912	1830 - 1870	Sandymount Castle, folly	SANDYMOUNT	T7	4,873	7-9	Not Significant

NIAH Reg.	Date	Structure]	Townland	T No.	Distance To Turbine (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effect
22402903	1930 - 1950	dam/reservoir/basin	KILDUFF,KILLAWA RDY (KILLEA PR)	T6	4,950	7-9	Not Significant

Table 13.14: Potential visual effects on historic gardens within 5km of the nearest proposed turbine.

Site Name	Turbine No.	Distance To Turbine (m)	No. of Turbines Theoretically Visible	Theoretical Significance of Effect
Eastwood House	T7	745	7-9	Moderate
Templemore Castle	T7	2,808	7-9	Slight
Castleleiny House	T9	3,033	7-9	Slight
Ash Park	T6	3,397	7-9	Slight
Woodville House, Templemore	T9	3,440	7-9	Slight
Skehanagh House	T2	3,460	7-9	Slight
The Priory	T7	3,513	7-9	Slight
Dromard House	T1	3,742	7-9	Slight
Sorrelhill House	T3	3,769	7-9	Slight
Manna Cottage	T7	3,838	7-9	Slight
Lloydsborough House	T6	4,049	7-9	Not Significant
Derrylahan House	T1	4,437	7-9	Not Significant
Loran Park	T1	4,918	7-9	Not Significant

Mitigation Measures

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

Residual Effect

Since no mitigation measures are being proposed the residual impact will range from Not Significant to Moderate.

Significance of Effects

The overall significance of effects will range from Not Significant to 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 impact on setting altogether.

13.5.3.7 Features of Local Cultural Heritage Merit

Proposed Wind Farm

No upstanding structures or items of local cultural heritage merit are located within or adjacent to the Proposed Wind Farm footprint therefore no potential visual effects to such features will occur.

Proposed Grid Connection

One local cultural heritage feature (CH1) comprising a stone road bridge is located on the proposed underground electrical cabling route. Given the underground nature of the electrical cabling no potential visual effects to the bridge are identified.

13.6 Cumulative Impacts

Cumulative impact is 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 impacts between and the Proposed Project the other projects described in Chapter 2 of the EIAR, hereafter referred to as the other projects, have been considered in terms of impacts on archaeology and cultural heritage.

The projects considered in relation to the potential for in combination impacts arising from construction, operational and decommissioning phases of the Proposed Project and for which all relevant data was reviewed include those listed below:

13.6.1 All extant planning applications within 20km

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

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

13.6.2 Other Wind Farms

A number of other existing or permitted wind farms are located within 20km of the Proposed Project. These wind farms are located as separate clusters to the north-east (Monaincha – Operational), south-east (Brukana – Operational, Lisheen I and III – Operational), west (Curraghraigue – Operational, Ballinaveny – Operational, Ballinlough-Ikerrin - Operational) and south-west (Upperchurch – permitted, Gortnahalla – Operational). The wind farms were considered cumulatively with the Proposed Project and in particular with regard to potential cumulative visual effects.

13.6.3 Cumulative Impacts (Direct Impacts – Construction stage)

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

13.6.3.1 Cumulative impacts (direct) considering other windfarms within 20km

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

No UNESCO World Heritage Sites, National Monuments in State Care, RPS structures or NIAH sites are located within the footprint of the Proposed Project and therefore no direct effects on 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 away from the Site and therefore are not capable of being directly impacted by the Proposed Project. No cumulative effects will occur therefore.

One recorded monument TN029-030— is located within the EIAR Study Boundary. It is, however, a redundant record and is regarded as non-archaeological. No direct impacts to same have been identified as a result of the Proposed Project therefore no cumulative impacts will occur.

13.6.3.1.2 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 permanent, negative and significant. After the mitigation measures are implemented, however, these potential effects will be Not Significant. The overall significance of effects is therefore Not Significant.

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

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

13.6.4 Cumulative Effects (Indirect Impact on Setting)

Indirect impacts on setting occur at the operational stage of the development (when turbines are operational). In this regard in order to assess overall cumulative effects on archaeology and cultural heritage, the Proposed Project is considered in the context of the Operational and Proposed wind farms within 20km.

13.6.4.1 UNESCO World Heritage sites (tentative)

No UNESCO World Heritage Sites (WHS) or those on the Tentative list are located within 20km of the nearest proposed turbine. 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 and proposed wind farms within 20km.

13.6.4.2 National Monuments in State Care

Two National Monuments in State Care and six monuments subject to a Preservation Order are located within 10km of the nearest proposed turbine. The ZTV demonstrates that only one of the monuments (PO No. 57/1938 Tower House) at Tinvoher is located in an area where there will be theoretical visibility of 7-9 turbines. All of the other monuments, including the National Monument comprising the Timoney Stones at Cullaun and Timoney Hills (Nat. Mon. 353) and Errill Church in Co. Laois (Nat. Mon. No. 113) are located in areas with no theoretical visibility of the proposed turbines. The tower house at Tinvoher (PO No. 57/1938) is situated c. 6.6km south of the nearest proposed turbine, T9. Given the distance between the monument and the nearest turbine a change to the immediate setting of the tower house will not occur. A change to the wider setting in which the monument is located is acknowledged, however, but is considered to be Not Significant.

When considered cumulatively with other wind farms within 20km the ZTV demonstrates theoretical visibility of the Proposed Project turbines and the operational turbines of Brukana and Lisheen wind farms to the south-east and only partial theoretical visibility of the operational Monaincha wind farm to the north. In this regard there is potential for cumulative impacts to the wider setting of the tower house at Tinvoher, however, the Brukana and Lisheen wind farms are at a distance of c. 7.5km-8km to the south-east of the Proposed Project. In this regard potential cumulative effects to setting are not regarded as significant. No cumulative effects to the immediate setting of the monument is identified.

13.6.4.3 Recorded Monuments

One recorded monument (TN029-030— redundant record) is located within the proposed Wind Farm Site. It comprises a redundant record which has no above-ground elements and is considered to be non-archaeological. No potential visual effects to this monument are therefore identified.

A total of one hundred and thirty-four (134) recorded monuments are located within 5km of the nearest proposed turbine. This number includes the monument located within the Site discussed above. The monuments within the 5km study area were overlaid on the ZTV to ascertain what number of turbines may be visible from their locations. The ZTV shows that 131 of the 134 monuments are located in areas where 7-9 turbines will theoretically be visible. The overall significance of effects on recorded monuments within 5km will be Not Significant - 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 impact on setting altogether.

When considered cumulatively with the other operational and proposed wind farms it should be noted that none of the existing or permitted wind farms are within the 5km study area. The ZTV demonstrates that the Brukana and Lisheen turbines and some of the Monaincha turbines may theoretically be visible in addition to the proposed nine turbines but at a distance in excess of 5km from same. In this regard there is potential for cumulative impacts to the wider setting of recorded monuments, however, no significant effects are identified and no potential cumulative effects to the immediate setting of such monuments will occur.

13.6.4.4 Protected Structures and NIAH

No Protected Structures subject to statutory protection are located within the Proposed Wind Farm Site. A total of 105 protected structures are located within 5km of the nearest proposed turbine. Seventy-six of these are located in the town of Templemore which accounts for the large number of structures within the 5km study area. The ZTV shows that the majority of the structures are located in areas where 7-9 turbines will theoretically be visible with only one structure located in an area where 4-7 turbines will theoretically be visible. The overall significance of effects on Protected Structures will be Not Significant to 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 impact on setting altogether.

No NIAH structures are located within the proposed wind farm site. Sixty-three structures listed in the NIAH are located within 5km of the nearest proposed turbine, with a large number of these located in Templemore town. The ZTV demonstrates theoretical visibility of 7-9 turbines from all of the NIAH structures. Thirteen historic gardens are located within 5km of the nearest proposed turbine. The ZTV also demonstrates theoretical visibility of 7-9 turbines from the location of these features.

When considered cumulatively with the other operational and proposed wind farms it should be noted that none of the existing or permitted wind farms are within the 5km study area. The ZTV demonstrates that the Bruckana and Lisheen turbines and some of the Monaincha turbines may theoretically be visible in addition to the proposed nine turbines but at a distance in excess of 5km from same. In this regard there is potential for cumulative impacts to the wider setting of Protected Structures and NIAH items, however, no significant effects are identified and no potential cumulative effects to the immediate setting of such structures will occur.

13.7 Decommissioning Phase

There will be no significant potential impacts on the archaeological, architectural and cultural heritage environment during the decommissioning of the Proposed Project. Any potential direct impacts will already have been resolved through mitigation measures during the construction phase.

13.8 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 survey, GIS based mapping, ZTV and was also assisted by photowire and 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 Site and any proposed infrastructure therein and a windscreen survey and walk-over survey of the Proposed Grid Connection. One recorded monument is located within the proposed Site, however, it is a redundant record and considered non-archaeological. It is also located outside the footprint of any Proposed Project infrastructure.

Where potential impacts have been identified, such as to potential sub-surface archaeology, appropriate mitigation measures have been recommended in order to minimise any such impacts. Recommended mitigation includes a 20m buffer zone around a rectangular crop mark, Pre-development archaeological testing of the Proposed Project infrastructure in previously undisturbed greenfield areas of the Site under licence from the National Monuments Service and archaeological monitoring during the construction stage of the project.

Potential indirect effects on the setting of any UNESCO World Heritage Sites 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 nearest proposed turbine.

The ZTV demonstrates theoretical visibility of 7-9 proposed turbines from the majority of cultural heritage assets within 5km and from one monument subject to a Preservation Order within 10km. Both the distance to the nearest turbine and the number of turbines visible from each cultural heritage asset were used to arrive a level of potential effect on setting. Potential effects on setting are based on the **worst case 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 underground electrical cabling route were assessed for potential impacts to same. No direct impacts to the recorded archaeological, architectural or cultural heritage resource as a result of the proposed grid connection route have been identified. Mitigation measures are recommended where deemed appropriate and include archaeological testing of greenfield areas along the proposed route. An assessment of potential impacts as a result the minor, temporary turbine delivery accommodating works at junction 22 off the M7 to the N62 was also carried out. No direct or indirect impacts to the recorded archaeological or cultural heritage resource were identified.

An assessment of potential cumulative effects was also undertaken taking into consideration other extant planning applications and operational 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 operational and proposed wind farms, no significant cumulative impacts have been identified and no cumulative effects to the immediate setting of cultural heritage assets will occur.