14 CULTURAL HERITAGE

14.1 Introduction

The following chapter details an archaeological, architectural, and cultural heritage assessment undertaken in advance of the proposed renewable energy development comprising 9 no. wind turbines, and associated infrastructure in the townlands of Cooloo and adjacent townlands, near Abbeyknockmoy in Co. Galway, and a grid connection, comprising 110kV underground electric cabling to the existing 110kV Cloon substation in the townland of Cloonascragh, Co. Galway. Proposed accommodation works for the Turbine Delivery Route have also been assessed as part of this Cultural Heritage chapter.

For the purposes of this EIAR:

- Where the 'Proposed Project' is referred to this encompasses the entirety of the project for the purposes of this EIA in accordance with the EIA Directive. The Proposed Project is described in detail in Chapter 4 of this EIAR.
- Where the 'Proposed Wind Farm' is referred to, this refers to turbines and associated foundations and hard-standing areas, meteorological mast, access roads, temporary construction compound, underground cabling, peat and spoil management, site drainage, biodiversity enhancement, turbine delivery accommodation works and all ancillary works and apparatus. The Proposed Wind Farm is described in detail in Chapter 4 of this EIAR.
- Where the 'Proposed Grid Connection' is referred to the 110kV onsite substation, battery energy storage system and 110kV underground cabling connecting to the existing Cloon 110kV substation, and all ancillary works and apparatus. The Proposed Grid Connection is described in detail in Chapter 4 of this EIAR.
- Where the 'Site' is referred to, this relates to the primary study area for the EIAR, as delineated by the EIAR Site Boundary in green as shown on Figure 1-1 of the EIAR and encompasses an area of approximately 355 hectares.
- Where the 'Proposed Wind Farm site' is referred to, this refers to the portion of the Site surrounding the Proposed Wind Farm but excluding the portion of the Site surrounding the Proposed Grid Connection underground cabling route.

This assessment has been carried out to ascertain the potential impact of the Proposed Project on the archaeological, architectural, and cultural heritage resource that may exist within the area. It was undertaken by Jonny Small and Faith Bailey of IAC Archaeology (IAC), on behalf of Neoen.

The assessment is based on both a desktop assessment of the available cultural heritage and archaeological data and field inspection within the study areas of the Proposed Project using appropriate methods of study. The study areas for the assessment are described in Section 14.2 below.

Desktop assessment is defined as a programme of study of the historic environment within a specified area or site that addresses agreed research and/or conservation objectives. It consists of an analysis of existing written, graphic, photographic, and electronic information in order to identify the likely heritage assets, their interests and significance and the character of the study area, including appropriate consideration of the settings of heritage assets (CIfA 2014). The assessment involved detailed interrogation of the archaeological and historical background of the Proposed Project and study area. This included information from the Record of Monuments and Places of County Galway, the topographical files of the National Museum of Ireland, and cartographic and documentary records. Inspection of the aerial photographic and satellite imagery coverage of the Site held by Tailte Éireann, Bing Maps, and Google Earth has also been carried out.

Field inspections were carried out on the 3rd–5th April 2024 and 17th July 2025. The field inspection involved walking the Site and its immediate environs, recording the terrain type and land usage, recording known and previously unknown features of archaeological, architectural or cultural heritage significance.

The assessment leads to the following:

- Determining the presence of known cultural heritage assets that may be affected by the Proposed Project;
- Assessment of the likelihood of finding previously unrecorded archaeological remains during the construction phase;
- Determining the potential pre-mitigation effects upon the setting of known cultural heritage assets in the study area;
- Determining mitigation measures based upon the results of the above research; and
- Determining the residual effects, and their significance, following the implementation of mitigation measures.

A detailed description of the Proposed Project is provided in Chapter 4 of this EIAR.

14.1.1 Location and Topography

The Site comprises three distinct elements: the Proposed Wind Farm site, the Proposed Grid Connection and the Proposed Turbine Delivery Route accommodation works.

The Proposed Wind Farm is located within a rural, agricultural setting in east Galway, approximately 12km southeast of Tuam. The village of Brierfield is located approximately 1.3km south of the nearest proposed turbine (T1), and the village of Moylough is located approximately 5.3km east of the nearest proposed turbine (T8). The N63 National Road runs south of the Proposed Wind Farm site in a general northeast-southwest orientation entering the settlement of Abbeyknockmoy and then heading northeast towards Moylough, passing within 1.27km of the nearest proposed turbine. The Proposed Wind Farm site is accessed via local roads from the R332 Regional Road, which travels in a southeast-northwest direction between Tuam and the N63 National Road, Co. Galway. The Proposed Wind Farm site itself is served by a number of existing agricultural roads and tracks. The Site location is shown in Figure 14-1. The Site measures approximately 355 hectares and falls within the townlands listed Table 1-1 (Chapter 1).

The Proposed Grid Connection includes 110kV underground cabling from the proposed onsite 110kV substation within the Site in the townland of Dangan Eighter to the existing 110kV Cloon substation in the townland of Cloonascragh, Co. Galway. The GC measures c. 20.9km in length and is located primarily within the curtilage of the public road corridor and proposed site roads. This route is fully described in Chapter 4, Section 4.3.2.4. In summary, the underground cabling will travel from the Proposed Wind Farm site to the 110kV Cloon substation via the N63, R332, R347, L2114, L2115, L2125, L2128, L6234 and L6141 roads.

The Site measures approximately 355ha and comprises a mix of agri-pastoral land and cutover bog. The L3115 Local Road runs in north–south orientation along the western boundary of the Proposed Wind Farm site and in an east-west orientation along the northern boundary of the Proposed Wind Farm site. Existing access is via an existing agricultural entrance off the L3115 local road. The Proposed Wind Farm site is also served by a number of existing agricultural roads and tracks. The Grid Reference co-ordinates for the approximate centre of the Proposed Wind Farm site are X 561556 Y 729624 (ITM). The townlands within which the Proposed Project is located are listed in Chapter 1, Table 1-1. All townlands are located in Co. Galway.

Current land-use on the Proposed Wind Farm site is predominantly agricultural with some adjacent areas in the north of the site occupied by active raised blanket bog. Land-use in the wider landscape comprises a mix of pastoral agriculture, peat bogs and low density residential.

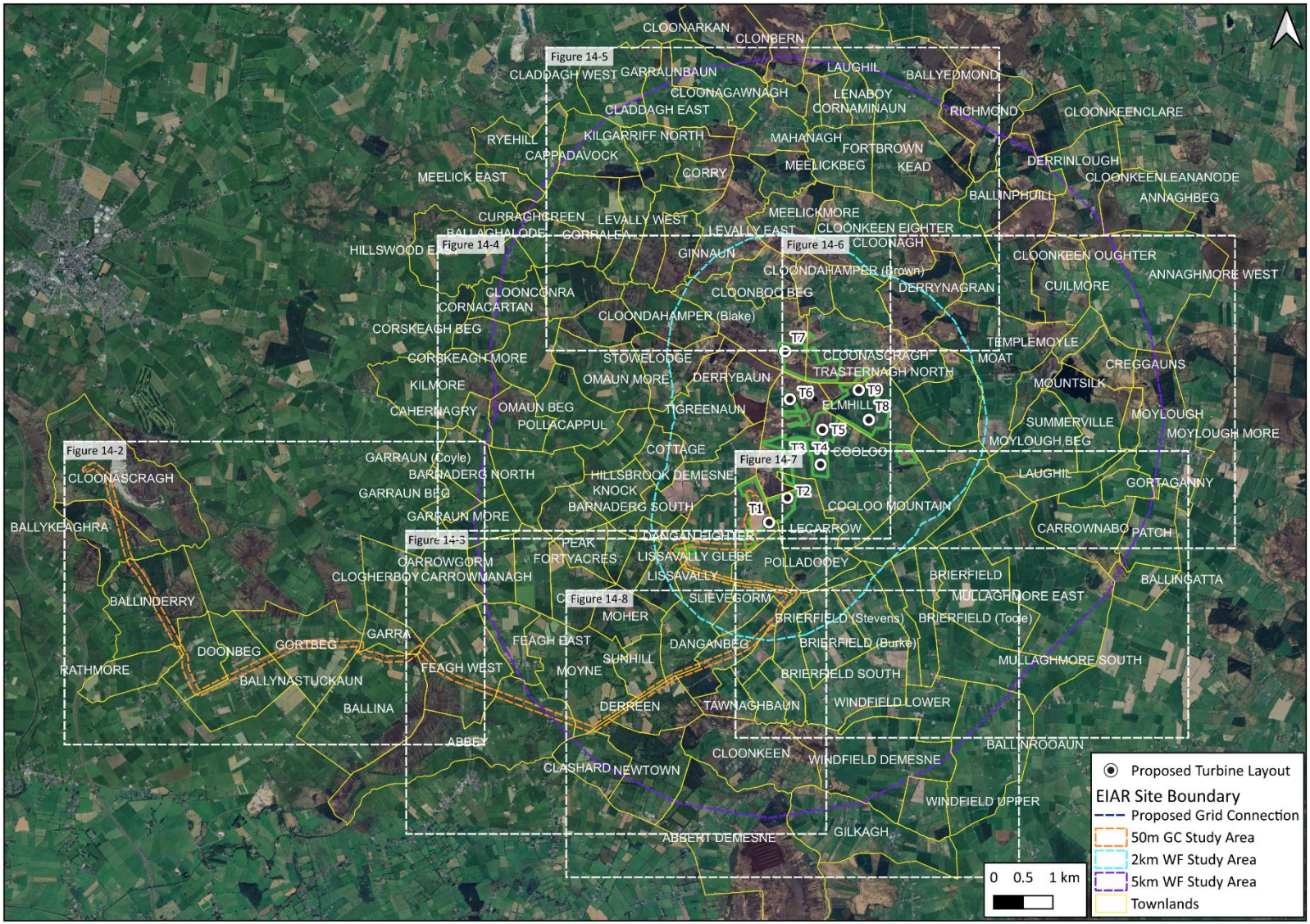

Figure 14-1: Proposed Project, showing study areas

Any interventions required for the proposed Turbine Delivery Route (TDR) have also been assessed as part of this Cultural Heritage chapter. This route is fully described in Chapter 4, Section 4.5.2. A single area of significant accommodation works is required along the TDR, comprising the construction of a temporary one-way road in the field west of the N63/R332 junction.

14.1.2 Statement of Authority

This chapter of the EIAR has been prepared by Faith Bailey and Jonny Small of IAC Archaeology. Faith (MA Cultural Landscape Management, BA (Hons) Archaeology, MIAI, MCIfA) is a licenced eligible archaeologist, a member of the Chartered Institute of Field Archaeologists, a member of the Institute of Archaeologists of Ireland and has over 22 years' experience working in the commercial cultural heritage sector. She has been responsible for the production and delivery of multiple archaeological, architectural and cultural heritage assessments and EIAR for renewable energy projects, including The Yellow River Wind Farm (Co. Offaly), Derrysallagh Wind Farm (Co. Sligo), Derreenacrinnig Wind Farm (Co. Cork) and the Robertstown Wind Farm (Co. Waterford).

Jonny (PhD Archaeology, MSci GIS and Cultural Heritage, NFQ Level 7 Cert Buildings Archaeology, MIAI) is an archaeological consultant and a member of the Institute of Archaeologists of Ireland. Jonny has over seven years of experience working in the archaeological and cultural heritage sector, both in research, fieldwork and consultancy. Jonny has been responsible for the production of impact assessments and EIARs, including the Ulster Canal Restoration Phase 3.3 (Co. Monaghan and Co. Fermanagh) and N4 Carrick-on-Shannon to Dromod Project (Co. Leitrim and Co. Roscommon). Jonny is also responsible for the production of built heritage reports and fieldwork reports, including large-scale, multi-period High Speed Two (HS2) sites.

14.1.3 Definitions

In order to assess, distil and present the findings of this study, the following definitions, specific to this chapter, apply:

'Cultural Heritage' where used generically, is an over-arching term applied to describe any combination of archaeological, architectural, and cultural heritage features, where the term:

- 'Archaeological heritage' (AH) is applied to objects, monuments, buildings or landscapes of an (assumed) age typically older than AD 1700 (and recorded as archaeological sites within the Record of Monuments and Places).
- 'Built heritage' (BH) is applied to structures, buildings, their contents and settings of an (assumed) age typically younger than AD 1700.
- 'Cultural heritage' (CH), where used specifically, is applied to other (often less tangible) aspects of the landscape such as historical events, folklore memories and cultural associations.
- 'Townland boundary' (TB) is applied to the boundaries between townlands, which are Irish land units of considerable longevity, with many likely to represent much earlier land divisions.
- 'Areas of Archaeological Potential' (AAP) is applied to areas which have an increased archaeological potential due to the importance of certain landscape features to past societies, e.g. waterways.

14.1.4 Guidance and Legislation

Legislation protecting the cultural heritage resource is described in Appendix 14-3 and Appendix 14-4.

This assessment has been undertaken having regard to the following legislation and guidelines:

- National Monuments Act 1930 to 2014 (Department of Housing, local Government and Heritage);
- The Planning and Development Act 2024 (Department of Housing, Local Government and Heritage);
- Planning & Development Regulations 2001–2018 (Department of Housing, Local Government and Heritage);
- Heritage Act, 1995, as amended;
- Frameworks and Principles for the Protection of the Archaeological Heritage, 1999, (formerly) Department of Arts, Heritage, Gaeltacht and Islands;
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999 and the Local Government (Planning and Development) Acts 2000–2018;
- Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023;
- European Convention on the Protection of the Archaeological Heritage (Valletta Convention 1992);
- The European Landscape Convention (Florence Convention 2000);
- The Granada Convention (Convention for the Protection of the Architectural Heritage of Europe, 1985); and
- Architectural Heritage Protection: Guidelines for Planning Authorities 2011.
- Guidelines on the information to be contained on the Environmental Impact Assessment Report (EPA, 2022).
- European Commission (2020). Guidance document on wind energy developments and EU nature legislation. Publications Office of the European Union, Luxembourg
- Galway County Council (2022). Galway County Development Plan 2022-2028.

The National Monuments Act 1930, as amended by various acts including but not limited to, the National Monuments (Amendment) Act 1954, the National Monuments (Amendment) Act 1987, the National Monuments (Amendment) Act 1994 and the National Monuments (Amendment) Act 2004 (together the National Monuments Acts) make provision for the protection and preservation of national monuments, archaeological monuments and archaeological objects in Ireland. The description of the existing environment in this chapter takes account of those statutory designations and the chapter takes account of the legislative monitoring and licencing requirements as mitigation.

The Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 (the 2023 Act) was enacted by the Oireachtas in late 2023 and aims to address a range of structural issues, simplify terminology, as well as provide a single accessible piece of legislation. At the date of writing many sections of the 2023 Act have yet to commence. It is not anticipated that this will result in statutory protection being extended to any potential receptors apart from those already considered in this chapter and the chapter already identifies as mitigation the various archaeological investigations and licencing requirements that will come into force when the 2023 Act is commenced. Accordingly, the EIAR conclusions are likely to be unchanged should the 2023 Act commence fully while the application is moving through the planning process.

14.1.5 Consultation

Following the initial research, a number of statutory and voluntary bodies were consulted to gain further insight into the cultural heritage of the background environment, receiving environment and study area, as follows: -

Department of Housing, Local Government and Heritage (DoHLGH)

A scoping request was issued to the DAU of the DoHLGH. The DAU noted that further comment would be provided following receipt of the full EIAR and Archaeological, Architectural and Cultural Heritage chapter. The DAU requested that the Archaeological, Architectural and Cultural Heritage chapter includes an assessment of possible effects on cultural heritage within the landscape surrounding

the Proposed Project. The DAU noted that the programme of desktop assessment and field inspection outlined in this chapter should inform a programme of targeted geophysical survey and archaeological testing.

An Taisce

No scoping response relating to archaeological, architectural and cultural heritage was received from An Taisce.

14.2 Assessment Methodology

14.2.1 Study Area Definitions

The definition of the study areas utilised for the assessment of the Proposed Project are detailed in Table 14.1. The determination of study areas is based on professional judgement, given there are no national guidelines available with regards to how the development of wind farms may impact on the archaeological, architectural and cultural heritage resource. The study area for the Proposed Wind Farm site is large, due to the potential indirect effects that may occur in the relation to the setting of archaeological, architectural and cultural heritage sites. The study area for the Proposed Grid Connection and the proposed TDR accommodation works is smaller as the footprint of these works are small-scale. For the most part, the Proposed Grid Connection will be buried beneath the existing public road network and farm lanes. A c. 1.64km section of the Proposed Grid Connection will pass through previously undisturbed pasture fields within the Proposed Wind Farm site via proposed new site access roads.

As part of the proposed biodiversity enhancements, it is proposed to change the management of land parcels within and adjacent to the Proposed Wind Farm site. These are non-intrusive works and involve managing the landscape in a less intensive manner in order to benefit wildlife and water quality. These works will have no effect upon the archaeological, architectural or cultural heritage resource and have been screened out of further assessment.

Table 14-1: Study area definitions

Proposed Project Element	Study Area	Site Types
Proposed Turbines	10 km from the proposed turbines	All sites of national significance, including National Monuments under state care or guardianship and any sites subject to a Preservation Order.
Proposed Turbines	5 km from the proposed turbines	All archaeological, architectural and cultural heritage assets subject to statutory protection, including sites listed in the RMP and RPS, NIAH structures and demesne landscapes.
Proposed Turbines	2 km from the proposed turbines	All previously unrecorded sites or structures of cultural heritage merit, such as buildings of architectural heritage merit (not included in the RPS/NIAH) and archaeological sites not included in the RMP.
Proposed Grid Connection	50m	All recorded and previously unrecorded cultural heritage sites.

Works proposed on the Turbine Delivery Route (TDR)	50m	All recorded and previously unrecorded cultural heritage sites.

14.2.2 Desktop Assessment

- United Nations Educational, Scientific and Cultural Organization (UNESCO);
- Record of Monuments and Places for County Galway;
- Sites and Monuments Record for County Galway;
- National Monuments in State Care Database;
- Schedule of Historic Monuments;
- Preservation Orders List;
- Register of Historic Monuments;
- Topographical files of the National Museum of Ireland;
- Galway County Development Plan 2022–2028;
- National Inventory of Architectural Heritage County Galway (Architectural and Garden Survey);
- Cartographic and written sources relating to the study area;
- Aerial photographs;
- Excavations Bulletin (1970-2025);
- Place name analysis.

United Nations Educational, Scientific and Cultural Organization (UNESCO)

The function of a UNESCO World Heritage list is to encourage member states to protect and manage their natural and cultural heritage. Properties considered for inclusion have cultural, historical, scientific or other significance, considered to be of outstanding value to humanity. There are three sites inscribed onto the UNESCO World Heritage List on the island of Ireland. These comprise the Giant's Causeway and Causeway Coast, Brú na Bóine and Skellig Michael, none of which lie within 10km of the Proposed Project. In addition, there are no sites included on the tentative list located within 10km.

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

Record of Monuments and Places (RMP) was established under Section 12 (1) of the National Monuments Act 1994 (as amended) which provides that the Minister for Housing, Local Government and Heritage (DoHLGH) shall establish and maintain a record of monuments and places (RMP) where it is known that such monuments exist. The record comprises of a list of monuments and relevant places and mapping showing each monument and relevant place in respect of each county in the State. Sites recorded on the RMP all receive statutory protection under the National Monuments Act. All sites listed on the RMP are referred to as Archaeological Heritage (AH sites) within this assessment.

Sites and Monuments Record (SMR) holds documentary evidence and field inspections of all known archaeological sites and monuments. Some information is also held about archaeological sites and monuments whose precise location is not known e.g. only a site type and townland are recorded. These are known to the National Monuments Section as 'un-located sites' and cannot be afforded legal protection due to lack of locational information. As a result, these are omitted from the Record of Monuments and Places. SMR sites are also listed on a website maintained by the Department of Housing, Local Government and Heritage (DoHLGH) – www.archaeology.ie. All sites listed on the SMR are referred to as Archaeological Heritage (AH sites) within this assessment.

It should be noted that revisions are proposed to the RMP and SMR, with some sites listed as redundant records and proposed for removal and other, newly discovered sites, proposed for inclusion. As the revisions have yet to take place, all current RMP/SMR sites are listed as AH sites within this assessment, with the relevant detail provided as to the nature and extent of each site included.

National Monuments in State Care Database is a list of all the National Monuments in State guardianship or ownership. Each is assigned a National Monument number whether in guardianship or ownership and has a brief description of the remains of each Monument. A National Monument receives statutory protection and is described as 'a monument or the remains of a monument the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto' (National Monuments Act, 1930, Section 2). The Minister for the DoHLGH may acquire national monuments by agreement or by compulsory order. The state or local authority may assume guardianship of any national monument (other than dwellings). The owners of national monuments (other than dwellings) may also appoint the Minister or the local authority as guardian of that monument if the state or local authority agrees. Once the site is in ownership or guardianship of the state, it may not be interfered with without the written consent of the Minister.

Two National Monuments are located within 10km of the Proposed Wind Farm site, comprising a church in Knockmoy townland (GA058-002002; NM No. 278) located c. 5.6km to the south of Turbine 1 and Knockmoy Cistercian Abbey (GA058-004001; NM No. 166), located 6.2km to the southwest of Turbine 1.

Preservation Orders List contains information on Preservation Orders and/or Temporary Preservation Orders, which have been assigned to a site or sites. Sites deemed to be in danger of injury or destruction can be allocated Preservation Orders under the 1930 Act. Preservation Orders make any interference with the site illegal. Temporary Preservation Orders can be attached under the 1954 Act. These perform the same function as a Preservation Order but have a time limit of six months, after which the situation must be reviewed. Work may only be undertaken on or in the vicinity of sites under Preservation Orders with the written consent, and at the discretion, of the Minister. There are no sites that possess Preservation Orders within the Proposed Project footprint or within 10km of the proposed turbines.

Register of Historic Monuments

The Register of Historic Monuments was established under Section 5 of the National Monuments (Amendment) Act, 1987 and requires the Minister to establish and maintain such a record. Historic monuments and archaeological areas included in the register are afforded statutory protection under the National Monuments (Amendment) Act, 1987. The register also includes sites under Preservation Orders and Temporary Preservation Orders. All registered monuments are included in the RMP.

Record of Protected Structures

Development Plans contain a catalogue of all the Protected Structures and archaeological sites within the county. The Galway County Development Plan (2022–2028) was consulted to obtain information on cultural heritage sites in and within the immediate vicinity of the Proposed Project. All protected structures are referred to as Built Heritage sites (BH) as part of this assessment.

National Inventory of Architectural Heritage (NIAH)

The National Inventory of Architectural Heritage (NIAH) was established under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. It is a government-based organisation tasked with making a nationwide record of locally, regionally, nationally and internationally significant structures dating to post-1700 AD, which in turn provides local authorities with a guide as to what structures to list within the Record of Protected Structures. Only those structures of regional importance or above are included in the Minister's recommendations for inclusion in the RPS. The NIAH have also carried out a nationwide desk-based survey of historic gardens, including demesnes that surround large houses. All NIAH structures are referred to as Built Heritage sites (BH) as part of this assessment.

Whilst the NIAH Garden Survey was utilised as part of this assessment, this was carried out in conjunction with detailed analysis of the first edition Ordnance Survey maps and field inspection, in order to identify any designed landscapes (DL) within the receiving environment of the proposed project.

Topographical Files - National Museum of Ireland

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

In order to establish if any new or previously unrecorded finds had been recovered from the Site these files, as available at the National Museum of Ireland and on Heritage Maps (www.heritagemaps.ie), were consulted for each townland within and immediately adjacent to the Site.

Cartographic Sources and Aerial Photography

Cartographic sources are important in tracing land use development within the development area as well as providing important topographical information on areas of archaeological potential and the development of buildings. Cartographic analysis of all relevant maps has been made to identify any topographical anomalies or structures that no longer remain within the landscape. These include current and former townland and parish boundaries. Townland boundaries impacted by the Proposed Project are listed as TB sites within this assessment.

The following cartographic sources were used in this assessment:

- William Petty, Down Survey Map of the County of Galway, c. 1655;
- William Larkin, A Map of the County of Galway in the Province of Connaught in Ireland, from an actual survey, 1819; and
- Ordnance Survey maps of County Galway, 1837, 1892.

All sites of potential archaeological, architectural or cultural heritage merit identified during the map analysis and aerial photographic analysis are listed as Cultural Heritage (CH) sites within this assessment.

Documentary sources were consulted to gain background information on the archaeological, architectural and cultural heritage landscape of the Proposed Project.

Aerial photographic coverage is an important source of information regarding the precise location of sites and their extent. It also provides initial information on the terrain and its likely potential for archaeology. Aerial photographs held by Tailte Éireann (1995–2013), Google Earth (2015–2023) and Bing Maps (2023) were examined for this assessment.

Excavations Bulletin

Excavations Bulletin is a summary publication that has been produced every year since 1970. This summarises every archaeological excavation that has taken place in Ireland during that year up until 2010 and since 1987 has been edited by Isabel Bennett. This information is also available online (www.excavations.ie) from 1970-2025. Information from this resource is vital when examining the archaeological content of any area, which may not have been recorded under the SMR and RMP files.

Place Names

Place Names are an important part in understanding both the archaeology, history and cultural heritage of an area. Place names can be used for generations and in some cases have been found to have their roots deep in the historical past. The main references used for the place name analysis is Irish Local Names Explained by P.W Joyce (1870), and the Place Names Database of Ireland (www.loganim.ie).

14.2.3 Field Inspection

Field inspection is necessary to determine the extent and nature of archaeological and historical remains and can also lead to the identification of previously unrecorded or suspected sites and portable finds through topographical observation and local information. The field inspection was carried out on the 3rd–5th April 2024 and 17th July 2025.

The archaeological and architectural field inspection entailed:

- Walking the Site and its immediate environs.
- Noting and recording the terrain type and land usage.
- Noting and recording the presence of known and previously unknown features of archaeological, architectural or cultural heritage significance.
- Verifying the extent and condition of recorded sites and structures (RMPs/RPS/NIAH).
- Visually investigating any suspect landscape anomalies to determine the possibility of their being anthropogenic in origin and of archaeological, architectural or cultural heritage significance.

14.2.4 Impact Assessment Methodology

The significance of potential effects has been evaluated using a systematic approach, based upon identification of the importance/value of receptors and their sensitivity to the Proposed Project development activity, together with the predicted magnitude of the impact. This is in accordance with the approach laid out in the Environmental Protection Agency's (EPA) "*Guidelines on Information to be Contained in Environmental Impact Statements*" (EPA 2022). The description of effects, following the EPA Guidelines, is detailed in Section 1.7.2 of Chapter 1.

A summary of impact assessment and the cultural heritage resource can be found in Appendix 14-5, and a summary of potential mitigation strategies can be found in Appendix 14-6.

14.2.5 Sensitivity of receptor

For each impact, the assessment identifies receptors sensitive to that impact and implements a systematic approach to understanding the impact pathways, magnitude and the level of effects on given receptors.

The definitions of receptor sensitivity for the purpose of the archaeology, architectural and cultural heritage assessment are provided in Table 14-2. This is based on the presence (or not) of statutory protection and the determination by the author. These criteria apply to both direct and indirect effects to a cultural heritage receptor.

Table 14-2 Criteria for determination of receptor sensitivity

Sensitivity	Criteria
Very High	Sites of International Importance: UNESCO World Heritage Properties (including tentative list) National Monuments

	Monuments subject to Preservation Orders
High	RMP Proposed RMP Record of Protected Structures (RPS) Architectural Conservation Area (ACA) Well-preserved demesne landscapes Previously unrecorded archaeological sites
Medium	SMR Sites listed on the NIAH (upstanding) Buildings not on NIAH/RPS (based on professional judgement) Moderately well-preserved demesne landscapes Townland boundaries
Low	Buildings not on NIAH/RPS (based on professional judgement) Poorly preserved demesne landscapes
Very Low	SMR – Record only or redundant record Proposed RMP – excavated Fully developed demesne landscapes

14.2.6 Magnitude of Impact

The scale or magnitude of potential effects (both beneficial and adverse) depends on the degree and extent to which the Proposed Project activities may change the environment, which usually varies according to project phases (i.e. construction, operational and decommissioning).

As per the EPA Guidelines (2022), the nature of effects can be categorised as follows:

- Quality: Positive, neutral or negative
- Type: Direct, indirect
- Probability: Likely or unlikely
- Duration: Momentary, brief, temporary, short-term, medium-term, long-term, permanent, reversible
- Frequency: Once, rarely, occasionally, frequently, constantly

Consideration of these aspects of the nature of effects allows for an assessment of the magnitude of effect according to the criteria shown in Table 14-3. The criteria has been defined by the author in consideration of the EPA Guidelines (2022). The Description of Effects, following the EPA Guidelines (2022) is detailed in Section 1.7.2 of Chapter 1.

Table 14-3 Criteria for determination of Magnitude of Impact

Magnitude	Criteria
Very High	These impacts arise where an archaeology or cultural heritage site, either below ground or upstanding, is completely and irreversibly destroyed.
High	An impact which, by its magnitude, duration or intensity, alters an important aspect of the archaeological and cultural heritage environment, including the setting of upstanding monuments. An impact 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 or cultural heritage feature/site.
Medium	A medium impact arises where a change to a site/monument is proposed which though noticeable, is not such that the archaeological or cultural heritage integrity of the site is compromised. The change is likely to be consistent with existing

	and emerging trends. Impacts are probably reversible and may be of relatively short duration.
Low	An impact which causes changes in the character of the environment, such as a visual impact, which are not high or very high and do not directly impact or affect an archaeological or cultural heritage feature or monument.
Very Low	An impact on an archaeological or cultural heritage feature or monument capable of measurement but without noticeable consequences.

14.2.7 Significance of Effects

An Impact Assessment Matrix (IAM) is used to determine the significance of an effect. In basic terms, the potential significance of an effect is a function of the sensitivity of the receptor and the magnitude of the impact, as shown in Table 14-4.

The matrix provides a framework for the consistent and transparent assessment of predicted effects although it is important to note that the assessments are based on the application of expert judgement.

The matrix provides levels of effect ranging from imperceptible to profound. For the purposes of this assessment, potential effects identified to be significant or above (i.e., significant, very significant or profound) are considered to be "significant in EIA terms". Potential effects identified as less than significant (i.e. moderate, slight, imperceptible or not significant) are generally considered to be not significant in EIA terms.

Table 14-4 Impact Assessment matrix for determination of significant of effect

Sensitivity of Receptor	Magnitude of Impact				
	Very High	**High**	**Medium**	**Low**	**Very Low**
Very High	Profound	Very Significant	Significant	Moderate	Slight
High	Very Significant	Significant	Significant - Moderate	Moderate - Slight	Not Significant
Medium	Significant	Significant - Moderate	Moderate	Slight	Imperceptible
Low	Moderate	Moderate - Slight	Slight	Not Significant	Imperceptible
Very Low	Slight	Not Significant	Imperceptible	Imperceptible	Imperceptible

14.2.8 Methodology of Visual Impact Assessment (Indirect Effects)

The criteria for impact assessment listed in Sections 14.2.5 to 14.2.7 were utilised for both direct and indirect effects. However, it was not within the scope of this chapter to include a site visit to every cultural heritage receptor within the study areas defined in Section 14.2.1 as the majority of these receptors are located on private land. As such, further resources were used to assess the visual impacts on setting (indirect effects). This included the Zone of Theoretical Visibility (ZTV) mapping and photomontages included in Chapter 13 of this EIAR, which were used to assess the indirect effects of the proposed turbines, which will be prominent features in the landscape.

As the Proposed Grid Connection cable will be buried, it has been screened out of the assessment of indirect effects.

14.3 Baseline Environment

Please note, references relating to EX locations, AH Sites, BH Sites, DL Sites, and CH Sites are detailed in Tables 14-5, 14-6, 14-7, 14-8 and 14-10 below.

14.3.1 Archaeological and Historical Background

The Proposed Wind Farm site is located within the townlands of Cloonascragh, Cloondahamper, Cooloo, Dangan Eighter, Elmhill and Lecarrow within County Galway. The Proposed Grid Connection passes through a further 21 townlands (Abbey, Ballina, Ballinderry, Ballykeaghra, Ballynastuckaun, Cloonascragh, Dangan Eighter, Dangan Oughter, Danganbeg, Derreen, Doonbeg, Feagh West, Garra, Gortbeg, Lissavally, Moyne, Polladooey, Rathmore, Slievegorm and Sunhill).

The Proposed Wind Farm site primarily comprises pastoral agricultural land with some areas of raised blanket bog. Cultural heritage constraints within the study area are shown on Figures 14-2 to 14-8. There is one recorded archaeological site within the Proposed Wind Farm site, comprising an 18th/19th century house (AH91), located 160m to the east of Turbine 8. There are a further 90 archaeological sites, or groups of sites, within the 5km study area (of the Proposed Wind Farm site), 11 of which include redundant records.

There are 14 recorded structures of architectural merit within the 5km study area of the Proposed Wind Farm site, including 10 protected structures. Additionally, 54 previously unrecorded sites of cultural heritage significance have been identified within the 2km study area of the Proposed Wind Farm site as part of this assessment.

Three archaeological sites, or groups of sites, are located within 50m of the Proposed Grid Connection, along with three built heritage sites and 23 previously unidentified sites of cultural heritage significance.

One site of previously unidentified cultural heritage significance is located within the proposed TDR accommodation works area.

Definitions of the study areas in relation to the Proposed Project and archaeological, architectural and cultural heritage resource are given in Table 14-1. The location of all receptors within the study area are shown in Figures 14-2 to 14- below.

Figure 14-2: West extent of Proposed Grid Connection , showing archaeological, architectural and cultural heritage receptors.

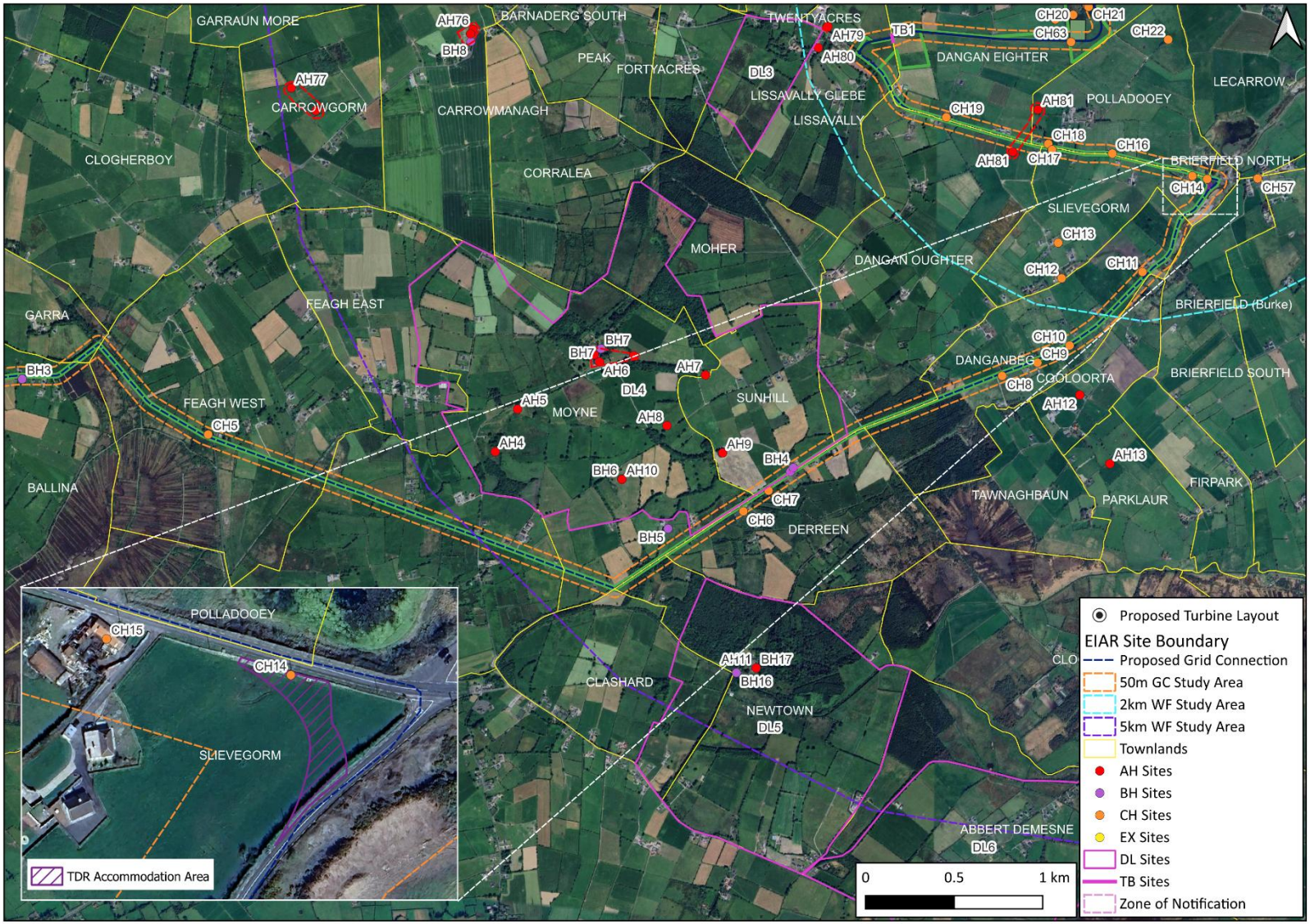

Figure 14-3: East extent of Proposed Grid Connection and TDR accommodation area, showing archaeological, architectural and cultural heritage receptors.

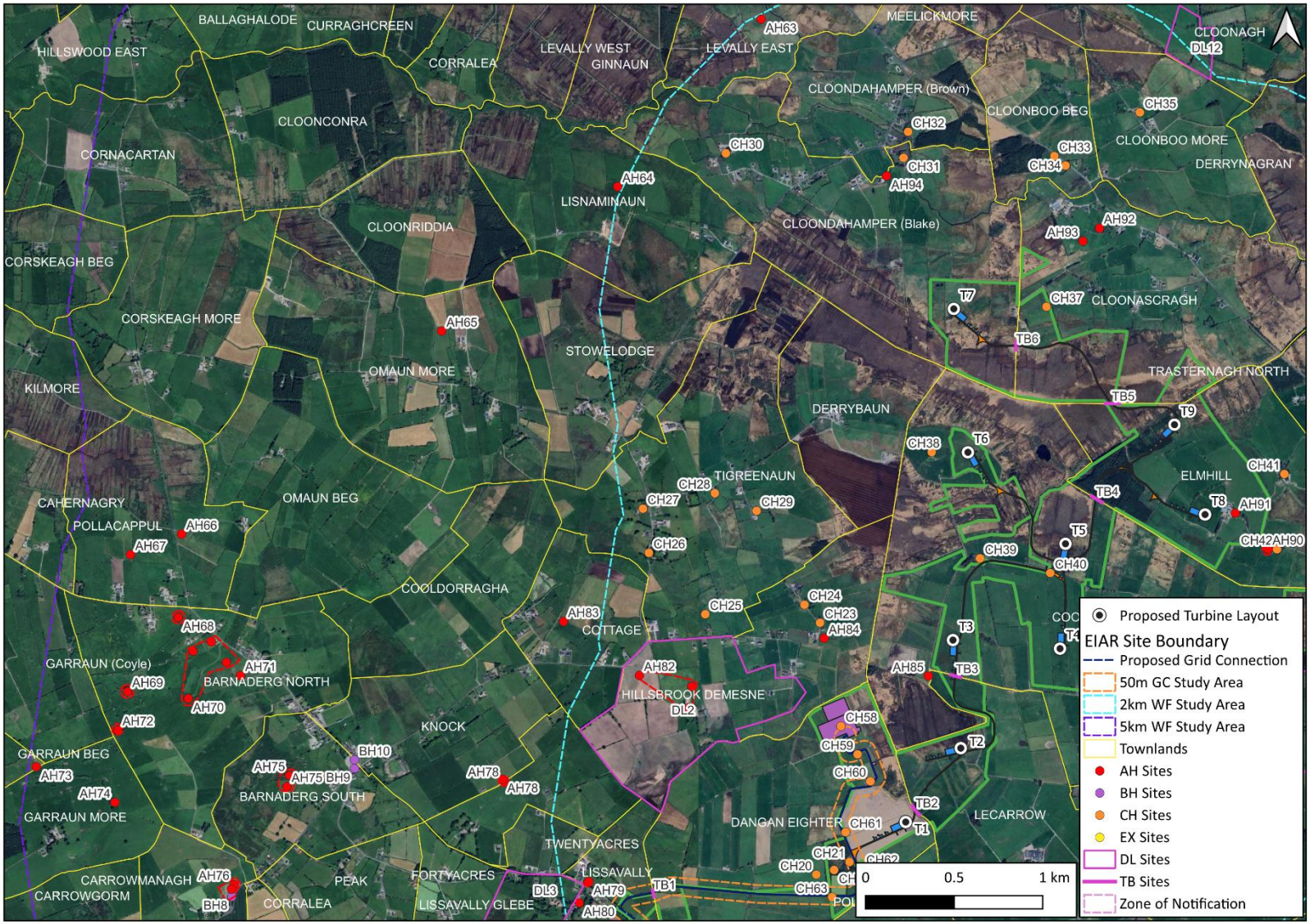

Figure 14-4: West extent of study area, showing archaeological, architectural and cultural heritage receptors

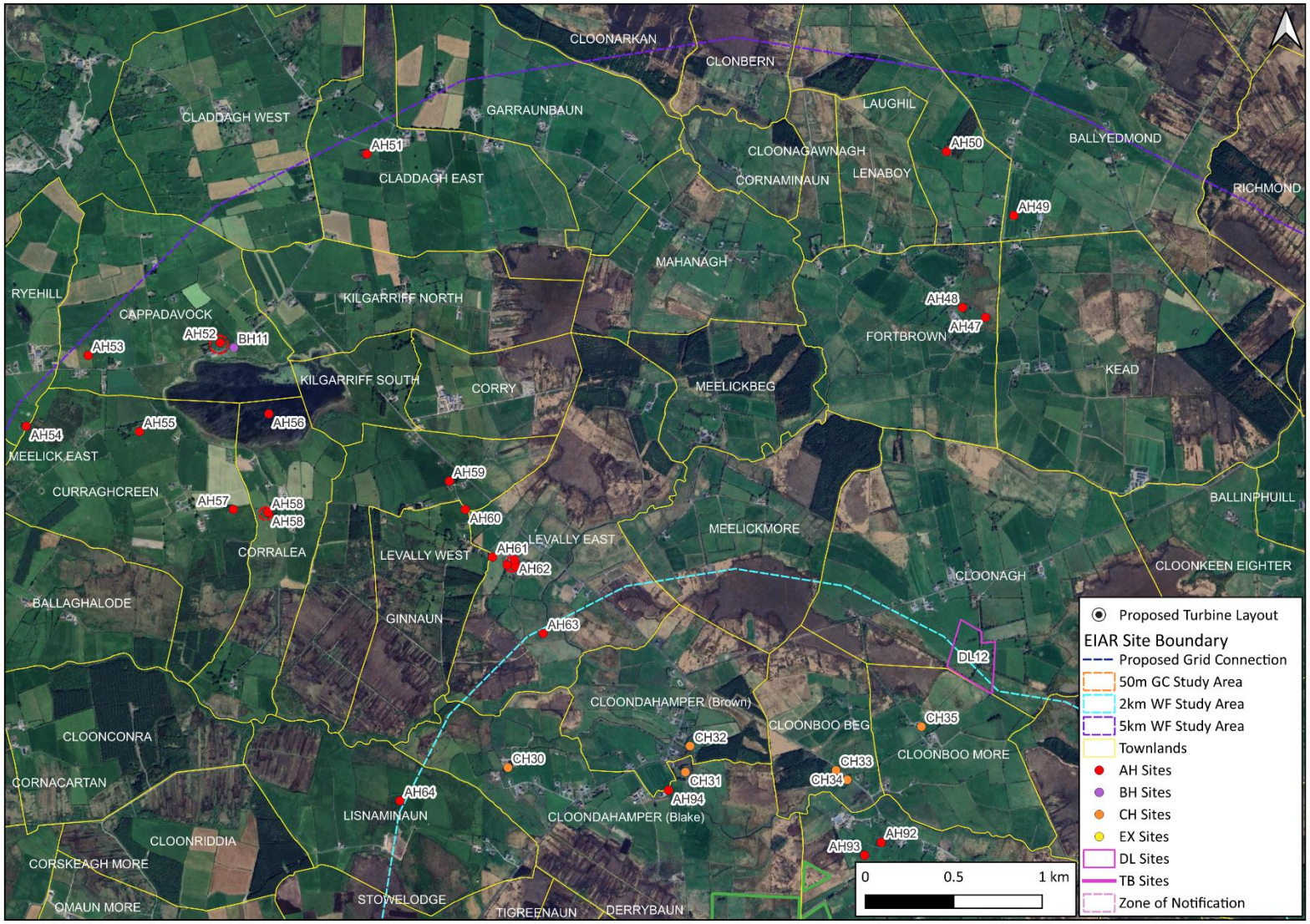

Figure 14-5: North extent of study area, showing archaeological, architectural and cultural heritage receptors

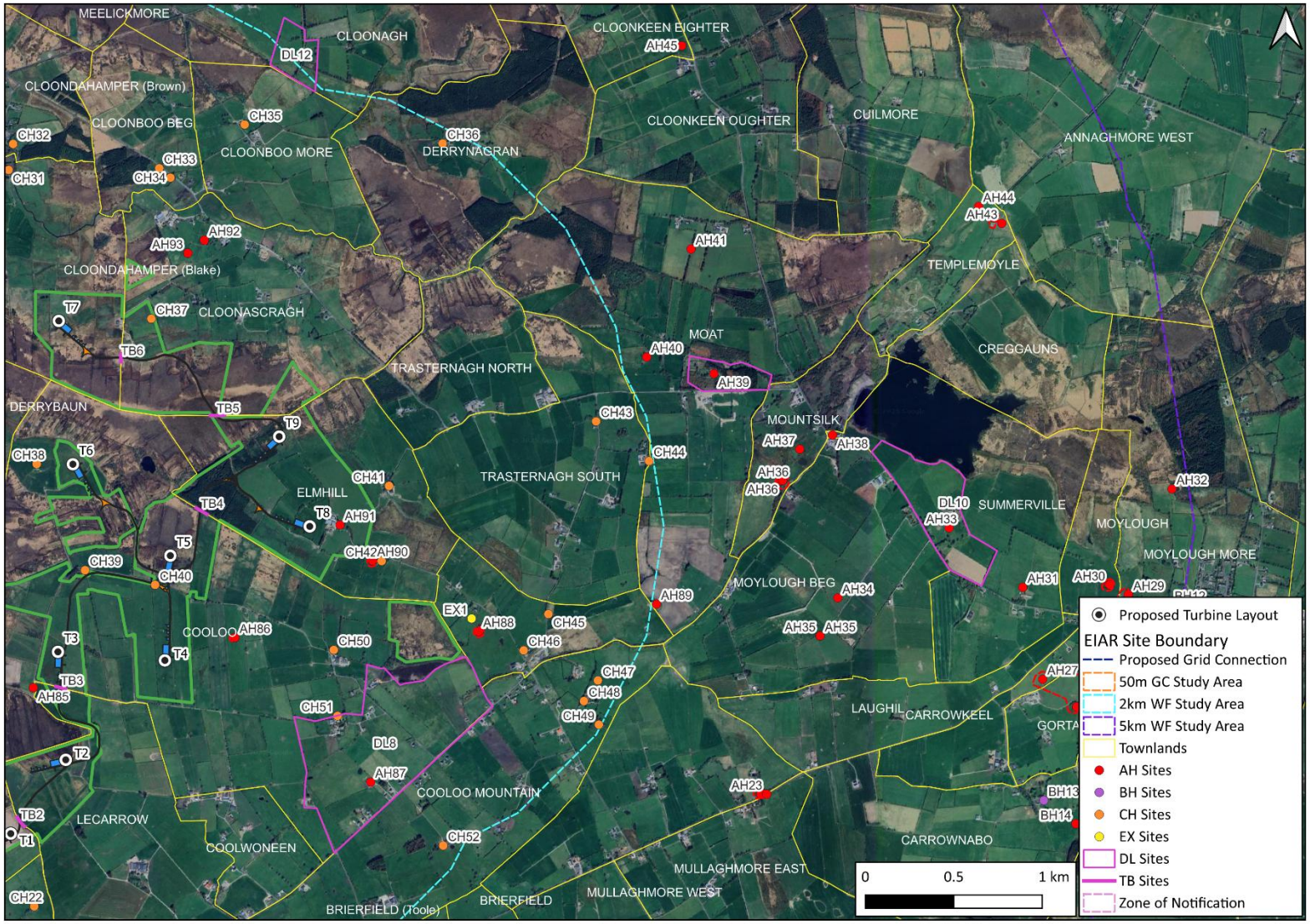

Figure 14-6: East extent of study area, showing archaeological, architectural and cultural heritage receptors

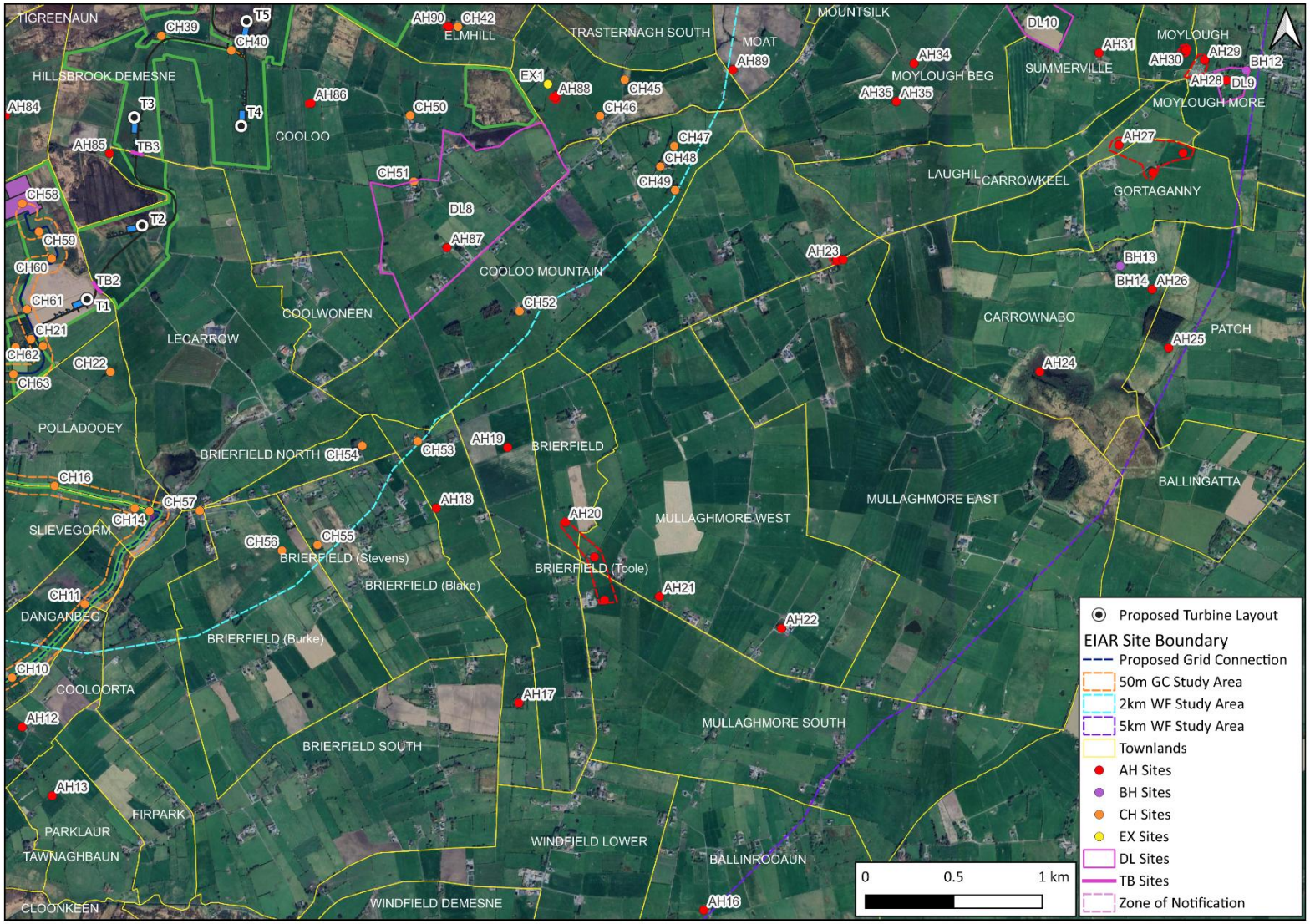

Figure 14-7: Southeast extent of study area, showing archaeological, architectural and cultural heritage receptors

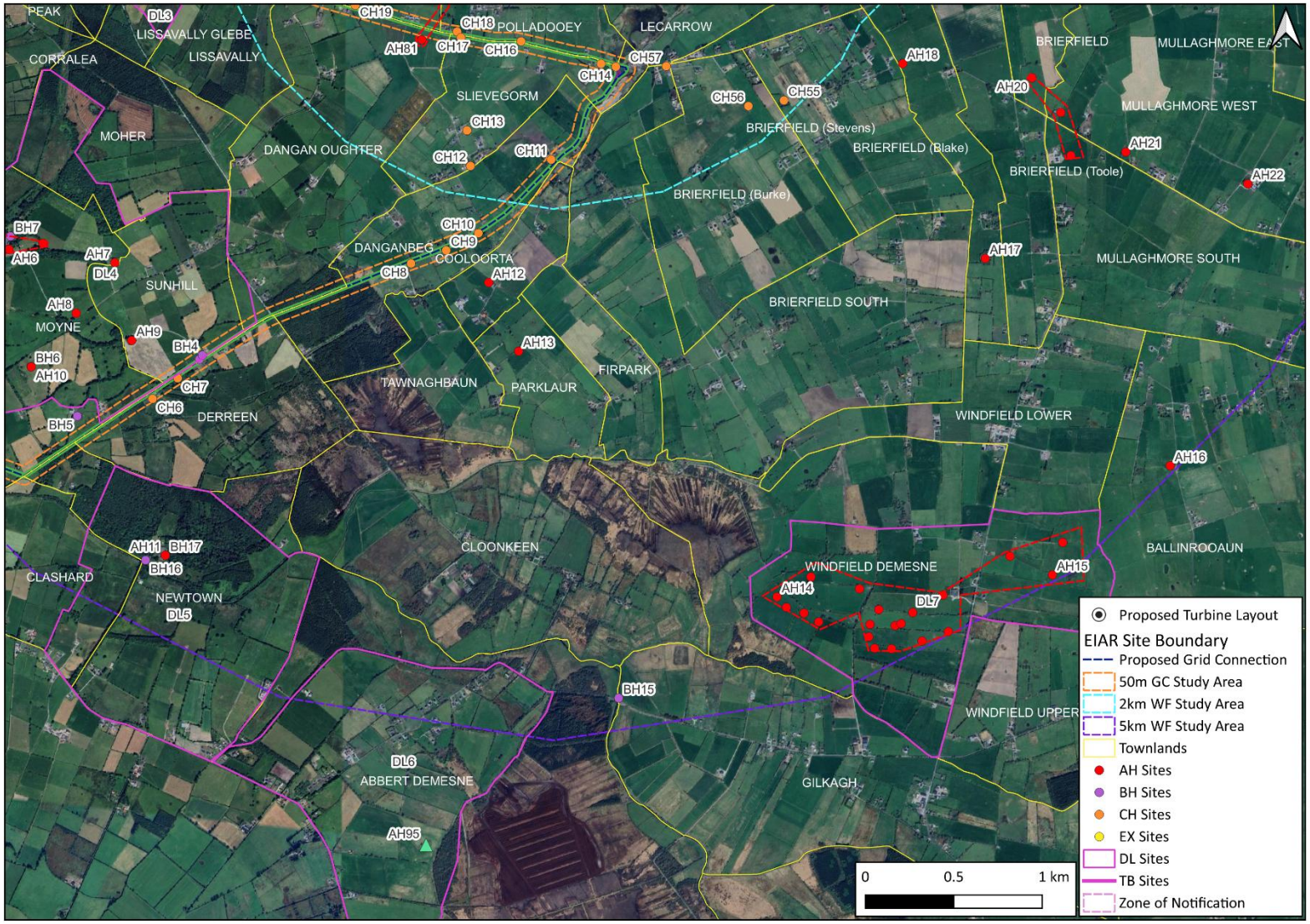

Figure 14-8: South extent of study area, showing archaeological, architectural and cultural heritage receptors

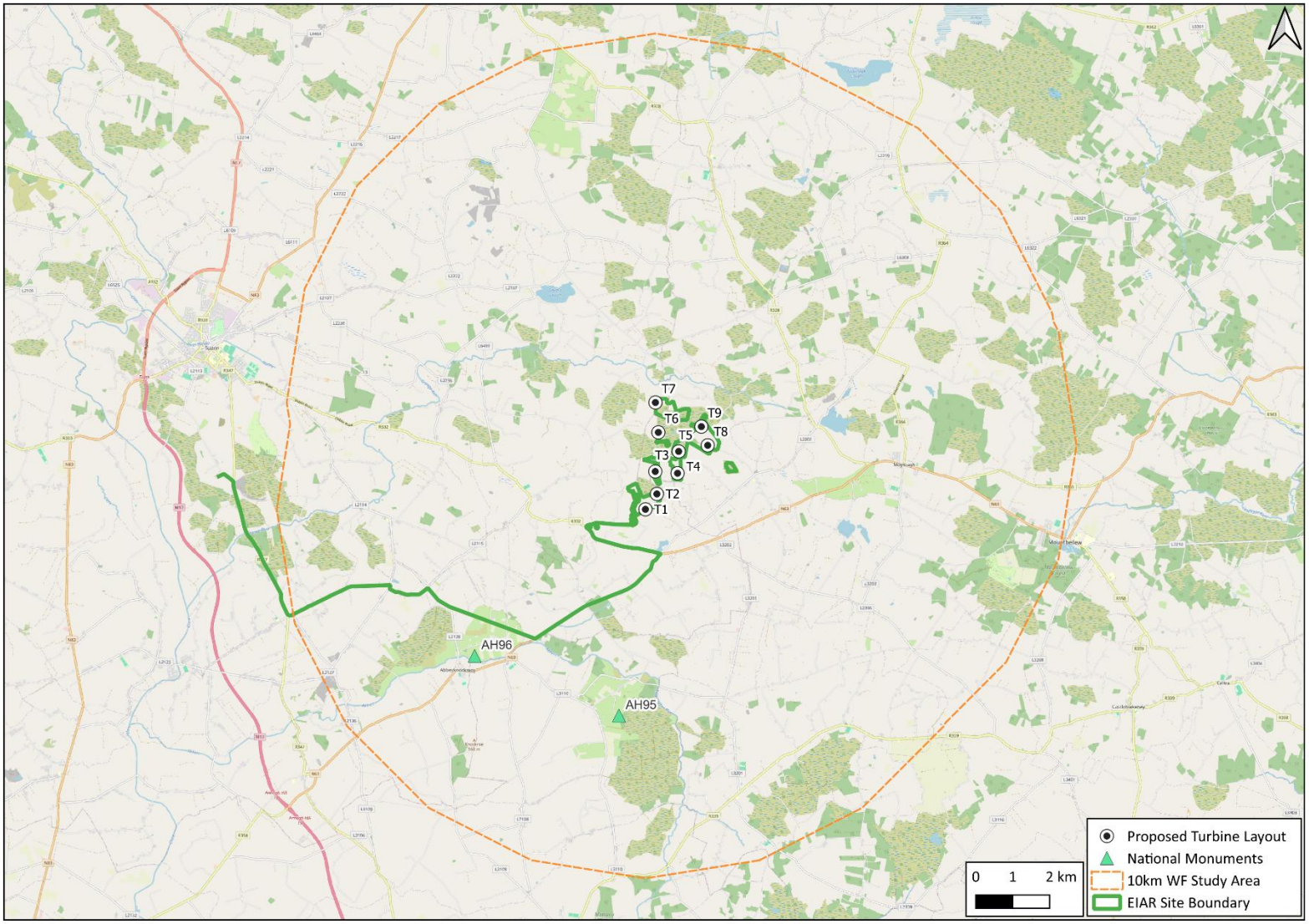

Figure 14-9: National Monuments within 10km of proposed turbines.

14.3.1.1 Prehistoric Period

Mesolithic Period (c. 8000–4000 BC)

Recent discoveries may suggest the possibility of a human presence in the southwest of Ireland as early as the Upper Palaeolithic (Dowd and Carden 2016); however, the Mesolithic period is the earliest time for which there is clear evidence for prehistoric human colonisation of the island of Ireland. During this period people hunted, foraged and gathered food and led a primarily mobile lifestyle. The presence of Mesolithic communities is most commonly evidenced by scatters of worked flint material, a by-product of the production of flint implements.

No evidence to substantiate Mesolithic activity within the Site has been discovered to date, although the wider landscape was visited by Mesolithic communities. For example, during the 1970s Higgins collected chert butt-trimmed flakes from riverine contexts in Menlough, c. 9km to the southeast of Turbine 1.

Neolithic Period (c. 4000–2500 BC)

During this period communities became less mobile and their economy became based on the rearing of stock and cereal cultivation. The transition to the Neolithic was marked by major social change. Communities had expanded and moved further inland to more permanent settlements. This afforded the development of agriculture which demanded an altering of the physical landscape. Forests were rapidly cleared and field boundaries were constructed. Pottery was also being produced, possibly for the first time. The advent of the Neolithic period also provided the megalithic tomb. There are four types of tomb in Ireland, namely the Court Cairn, Portal, Passage and Wedge; of which the latter style straddles the Neolithic to Bronze Age transition.

While recent years have seen a large increase in the number of identified Neolithic settlement and habitation sites, there is no archaeological evidence to substantiate Neolithic settlement within the immediate environs of the Proposed Project. Three megalithic tombs are known from the wider landscape. Court tomb GA059-018 is located 8.1km to the southeast of Turbine 1. Wedge tomb GA058-043 is located 8.9km to the southwest of Turbine 1, and wedge tomb GA072-037 is located 9.6km to the south of Turbine 1. The use of wedge tombs is typically dated to the Late Neolithic and Early Bronze Age.

Bronze Age (c. 2500–800 BC)

This period is marked by the use of metal for the first time. As with the transition from Mesolithic to Neolithic, the transition into the early Bronze Age was accompanied by changes in society. Megaliths were replaced in favour of individual, subterranean cist or pit burials that were either in isolation or in small cemeteries. These burials contained inhumed or cremated remains and were often, but not always, accompanied by a pottery vessel.

Over 7,000 burnt mounds or *fulacht fia* sites have been recorded in the country and c. 1,500 examples excavated, making them the most common prehistoric monument in Ireland (Waddell 2022, 164). Although burnt mounds of shattered stone occur as a result of various activities that have been practiced from the Mesolithic to the present day, the Bronze Age has long been believed to have seen the peak of this activity. Dating evidence from a growing number of burnt mounds, suggests activities resulting in burnt mounds were being carried over a span of 3,500 years in Ireland (Hawkes 2018). They are typically located in areas where there is a readily available water source, often in proximity to a river or stream or in places with a high-water table. In the field burnt mounds may be identified as charcoal-rich mounds or spreads of heat shattered stones; however, in many cases, the sites have been disturbed by later agricultural activity and are no longer visible on the field surface. Nevertheless, even

disturbed spreads of burnt mound material often preserve the underlying associated features, such as troughs, pits and gullies, intact.

No burnt mound sites were located within the Proposed Wind Farm site, although one is located in Cloonmweelaun, 7.9km to the southeast of Turbine 1 (GA059-019).

As noted previously, the use of wedge tombs is typically dated to the Late Neolithic and Early Bronze Age. The two wedge tombs in the wider landscape (GA058-043 and GA072-037) may therefore have been used during the Bronze Age.

Barrows are common Bronze Age funerary monuments, typically comprising a circular enclosure surrounding the interior which is usually a low mound. This mound often contains an inhumation or cremation burial. Although barrows have been dated from the Neolithic through to the early medieval period, they are prevalent in the Bronze Age. One barrow is located within the study area for the proposed turbines. A ring barrow (AH74) is located 4.5km to the west of Turbine 1, and an unclassified barrow is located 9.2km to the northwest of Turbine 7.

Iron Age (c. 800 BC–AD 500)

There is increasing evidence for Iron Age settlement and activity in recent years as a result of development-led excavations as well as projects such as Late Iron Age and Roman Ireland (Cahill Wilson 2014). Yet this period is distinguishable from the rather rich remains of the preceding Bronze Age and subsequent early medieval period, by a relative paucity within the current archaeological record. The Iron Age in Ireland is problematic for archaeologists as few artefacts dating exclusively to this period have been found and without extensive excavation it cannot be determined whether several monument types, such as ring-barrows or standing stones, date to the late Bronze Age or Iron Age. It is likely that there was significant continuity in the Iron Age, with earlier monuments re-used in many cases. There are no known monuments in the vicinity of the Site that would strongly suggest an active presence of Iron Age communities in this area.

14.3.1.2 Historic Period

Early Medieval Period (AD 500–1100)

The early medieval period is depicted in the surviving sources as an almost entirely rural based society. Territorial divisions were based on the *túath*, or petty kingdom, with Byrne (1973) estimating that there may have been at least 150 kings in Ireland at any given time. This period, with a new religious culture and evolving technologies, saw significant woodland clearance and the expansion of grassland. A new type of plough and the horizontal mill were two innovations that improved agriculture and allowed for the population to increase. Consequently, from c. AD 500 onwards, the landscape became well settled, as evidenced by the profuse distribution of ringforts, a dispersed distribution of enclosed settlements, normally associated with various grades of well-to-do farming and aristocratic classes in early medieval Ireland (Stout and Stout 1997, 20).

The ringfort or rath is considered to be the most common indicator of settlement during the early medieval period (Stout 1997). One of the most recent studies of early medieval settlement enclosures has suggested that there is potential for at least 60,000 such sites to have existed on the island (O'Sullivan et al. 2014, 49). Ringforts were often constructed to protect rural farmsteads and are usually defined as a broadly circular enclosure delineated by a bank and ditch. Ringforts can be divided into three broad categories – univallate sites, with one bank or ditch; multivallate sites with as many as four levels of enclosing features and platform or raised ringforts, where the interior of the ringfort has been built up. These enclosed sites were intimately connected to the division of land and the status of the occupant.

A total of 34 ringforts are located within the 5km study area of the proposed turbines, as well as an additional 17 enclosures (listed in Table 14-6). Many monuments recorded as enclosures represent ringforts or similar sites, which are too denuded or do not meet the standard shape and size expected of sites classified as ringforts. In addition, there are five souterrains in the 5km study area of the proposed turbines (AH52, AH58, AH69, AH90, AH92). Souterrains are often associated with ringforts and consist of underground passages and chambers. These sites are usually interpreted as being used for storage and defence by early medieval groups. These sites indicate that the study area surrounding the Site was characterised by a dispersed rural population during the early medieval period.

Three crannogs are also recorded in the 5km study area of the proposed turbines (AH24, AH46 and AH56). Crannogs comprise settlements constructed on artificial or modified islands, located in lacustrine and riverine environments and usually date to the early medieval period.

The early medieval period marked the arrival of Christianity in Ireland, which was to have a profound impact on the country. This is evidenced by the proliferation of ecclesiastical sites throughout the country during this period. One ecclesiastical enclosure is recorded 0.8km to the northeast of the Turbine 7 (AH93). Additionally, a total of seven churches are recorded within the 5km study area (AH29, AH36, AH42, AH62, AH76, AH79), several of which may have early medieval origins. Bullaun stones are often associated with early medieval ecclesiastical sites. Two are located within the 5km study area of the proposed turbines, AH36 and AH93, both of which are associated with ecclesiastical sites. Additionally, one holy well is recorded 2.4km to the south of Turbine 1 (AH12). The veneration of well sites is one of the oldest traditions in Irish Christianity and most likely has its origins in pagan ritual activities. These wells can manifest themselves in a variety of forms ranging from natural springs to rain collecting rock depressions. Many holy wells can be found associated with early ecclesiastical sites and well veneration and its antecedent well worship is not confined to Ireland or even to Europe. Plummer (1910) demonstrates that at least some holy wells in Ireland were important venues of pre-Christian ritual activity.

Medieval Period (AD 1100–1600)

The piecemeal conquest by the Anglo-Normans of Ireland, which commenced in AD 1169, had a fundamental impact on the Irish landscape. Their presence was strongest in the east of the country, and it is mainly in this region that land was carved up and granted to the newly arrived lords who participated. The main success of the Anglo-Norman occupation was the welding of scattered territories into a cohesive unit through the introduction of the English form of shire government. The rural landscape became a network of manorial centres; these units would generally contain a castle (motte and bailey), a manorial house and several dwellings, with extensive surrounding acreage. The Anglo-Norman conquest is visible in the wider landscape of the Proposed Project, particularly at Athenry, 19km west-southwest of the Proposed Wind Farm site. The title Baron of Athenry was granted in 1178 to Piers de Birmingham (Rynne 2016). The town of Athenry was founded in 1235, when a charter was granted to Meiler de Birmingham. De Birmingham constructed Athenry Castle which overlooks the ford of the Clarinbridge River. The medieval town was enclosed by stone walls from c. 1310, which were originally entered by five gates (ibid). The medieval town also contained a Dominican Priory, the construction of which was completed in 1261 (ibid). Evidence of the Anglo-Norman conquest is also evidenced by the presence of a moated site (AH40) located 2.1km to the east of Turbine 9. Moated sites were defended residences of Anglo-Norman tenants and centres of local control and administration (Glasscock 1970).

During the 14th to 16th centuries, tower houses were the typical residence of the Irish gentry and are a common feature in the Irish landscape. A medieval tower house built by Melughlin O'Kelly (AH71) is located 3.8km west-northwest of the Turbine 1. The site of two castles is recorded within the 5km study area of the proposed turbines. AH62 is located 2.4km to the northwest of Turbine 7 and AH21 is located 3.6km to the southeast of Turbine 1. Although no upstanding remains are present, these may have been the fortified residences of the Irish gentry. Additionally, a hall house is located 4.5km to the east of Turbine 8.

Seven churches are recorded within the 5km study area of the proposed turbines (AH29, AH36, AH42, AH62, AH76, AH79). While some these churches may date to the early medieval period or the post-medieval period, they are also noted here under the medieval heading as many may have been used in the medieval period, even if the upstanding remains post-date the medieval period.

Post-Medieval Period (AD 1600–1800)

The ending of the Williamite Wars saw the beginning of a comparative politically calm era, which allowed the country's landowners the security to experiment with the latest styles of architecture without the need to refer to defensive matters. Initially, constraints on available resources resulted in mansions of a relatively modest scale and relatively plain appearance. However, as the Irish aristocracy's sense of security grew over the following decades, their greater access to wealth helped foster a shift towards more ostentatious buildings. There are a total of 11 demesne landscapes in the 5km study area of the proposed turbines, and a further one within 50m of the Proposed Grid Connection. These are examples of the estates of wealthy landowners. The Proposed Wind Farm site itself is relatively upland and marginal land and would not have been considered attractive for the siting of large country houses and associated demesne landscapes. However, a landscape containing features as hills and mountains were often incorporated into the views as a scenic backdrop to the setting of a country house and demesne.

Ballinderry House demesne (DL1) is shown on the 1837 OS map immediately to the west of the Proposed Grid Connection . A narrow strip along the eastern side of DL1 is located within the 50m study area of the Proposed Grid Connection . The principal building, Ballinderry House, is no longer present, although the ruins of Ballinderry Castle, a tower house, remain upstanding in the north of the demesne. Several demesne features are retained, including a tree-lined avenue, tree-lined boundaries, a walled garden, parkland and tree-lined boundaries. Residential buildings have been constructed along the R347 in the east of the demesne boundary.

Hillsbrook House demesne (DL2) is shown on the 1837 OS map 880m to the west of T3 and is recorded on the NIAH Garden Survey (GA5319). The demesne has been largely subsumed into agricultural lands, and the principal structure, Hillsbrook House (AH82), has been demolished. The outline of the walled garden is visible and a designed landscape feature (a tree ring; AH82) survives.

Glebe House demesne (DL3; Lissavally Glebe townland) is shown on the 1837 OS map 1.8km to the west of T1. It is shown as a modest demesne focused around the principal structure, Glebe House, which is no longer present. Areas of planting around the site of the house are retained, as is the walled garden and original entrance avenue.

Moyne House demesne (DL4) is depicted on the 1837 OS map 2.6km to the southwest of T1 and is recorded on the NIAH Garden Survey (GA5356). This is an extensive demesne which survives largely intact. The principal structure, Moyne House (AH6; BH7) survives on a slight rise. The house, built in 1825, is an impressive building associated with several surviving outbuildings. The house is situated within extensive grounds, which has retained its parkland character. Several areas of woodland remain. The original entrance avenue is retained, which is entered via a formal entrance (BH4). A large walled garden is retained to the east of the principal structure. Additionally, several recorded archaeological and built heritage features are located within the demesne, including an earthwork (AH4), a quarry (AH5), a chapel and burial ground (AH6), a house (AH7), a ringfort (AH8), a folly (AH9) and a memorial (AH10; BH6).

Newtown demesne (DL5) is located 4.1km to the southwest of T1. It is depicted on the 1837 OS map and is recorded on the NIAH Garden Survey (GA5365). The demesne is largely intact, and is associated with Newtown House (AH11; BH17), which is upstanding. Newtown House overlooks the River Abbert, which passes through the centre of the demesne. The river is crossed by a bridge (BH16). The demesne lands retain their parkland character, and the planting is largely intact. A walled garden and farmyard are retained to the northeast of the house.

Abbert demesne (DL6) is located 4.6km to the south of T1. The demesne is depicted on the 1837 OS map and is recorded on the NIAH Garden Survey (GA5221). The principal structure, Abbert, is no longer present although part of the attached farmyard is retained, as is the walled garden. The house was formerly approached by an entrance avenue, which has been incorporated into the local road network. The surrounding parkland has subsumed into agricultural land, with several domestic developments alongside the road. The extensive planting that was formerly present in the demesne has largely been lost, although some tree-lined boundaries have been retained. A lane extends from the site of the principal structure to a ruinous church and graveyard.

Windfield House demesne (DL7) is depicted on the 1837 OS map 4.0km to the southwest of T1 and is recorded on the NIAH Garden Survey (GA5406). The principal structure, Windfield house, is no longer present, although several outbuildings, the walled gardens and walled enclosures have been retained. The entrance avenue extended to the east of the house, although this is no longer present. The entrance has been retained, although the gatehouse has been replaced by a modern structure. The surrounding parkland has generally been subdivided and cleared of much of the planting that was formerly present, including a large number of designed landscape features (AH14), predominantly tree-rings.

Cooloo Cottage demesne (DL8) is depicted 800m to the east of T4 on the 1837 OS map. The principal structure, Cooloo Cottage, is no longer present although an outbuilding (CH51) has been retained in a modern farmyard. The walled garden survives to the west of the farmyard. The entrance avenue, which originally led to the southwest of the house, has been lost. The surrounding parkland has been subdivided and the extensive planting shown on the 1837 OS map have been removed. Burial mounds (AH87) are located within DL8, although these are unrelated to the demesne and are not marked on historic mapping.

Glebe House demesne (DL9; Moylough More townland) is shown 4.7km to the east of T8 on the 1837 OS map. DL9 is a small demesne surrounding the principal structure, Glebe House (AH28; BH12; later known as Moylough Rectory). The house shown on the 1837 OS map appears to have been rebuilt/extended by the time of the 1892 OS map. An outbuilding and part of the walled garden survives to the north of the house. The entrance is still present, comprising limestone piers and cast-iron gates, and a detached gate lodge also survives. The tree-lined boundaries of the demesne remain present.

Summer Ville demesne (DL10) is located 3.2km to the east of T8, and is depicted on the 1837 OS map. The principal structure, Summer Ville, is present although the outbuildings depicted to the east of the house appear to have been replaced by a modern farmyard. The walled garden is defined to the south of the house, and the original entrance avenue is retained. Stone gate piers mark the entrance where the avenue reaches the R328. Much of the parkland that surrounds Summer Ville survives, although some has been lost along the shores of Summerville Lough, which has expanded since the time of the 1837 OS map.

Moathill Lodge demesne (DL11) is depicted on the 1837 OS map 2.3km to the east of T9 and is recorded on the NIAH Garden Survey (GA5348). DL11 comprises a modest demesne surrounding the principal structure, Moathill Lodge (AH39), which is still present. The demesne was substantially extended by the time of the 1892 OS map, with woodland plantations serving a saw mill. A large lake was added to the east of Moathill Lodge, which fed the mill and provided a landscape feature. Several features were associated with the lake, including a boat house and a bridge, although these are no longer present. A complex of outbuildings and the mill partially survive to the west of Moathill Lodge. The entrance avenue was altered by the time of the 1892 OS map, and this entrance is still present, comprising stone gate piers. The majority of the demesne lands, as depicted on the 1837 OS map, are covered by plantation.

Cloonagh House demesne (DL12) is depicted on the 1837 OS map 1.9km to the northeast of T7. The map shows a modest demesne, comprising a principal structure (Cloonagh House), a walled garden and outbuildings. None of these features survive. The demesne was accessed by a road that led to the

north and to the northwest. The section that led to the north has survived as a lane, although the northwest section is no longer present. Much of the planting within the demesne has been retained.

No buildings of architectural heritage value were identified within the Proposed Wind Farm site. In total, there are 20 buildings of architectural heritage merit, or the sites of buildings, within the 5km study area of the proposed turbines site and the 50m study area of the Proposed Grid Connection. This includes bridges, churches, houses, gated entrances, a mill, monuments, a bellstand, a post-box and water pumps. The variety of structures represent the ecclesiastical, infrastructural and industrial heritage of the surrounding area. In addition to the civic or public structures, several houses and outbuildings are recorded as Cultural Heritage (CH) sites. A total of 63 cultural heritage sites have been identified within the study areas of the Proposed Project. These structures are characteristic of the post-medieval landscape and represent the homes of farmers and workers. 'Vernacular architecture' is a term used to describe traditional buildings constructed using locally available materials and according to local/regional styles i.e. the homes and workplaces of the ordinary people. This is in contrast to formal architecture, such as the grand estate houses of the gentry, churches and public buildings, which were often designed by architects or engineers. The majority of vernacular buildings are domestic dwellings. Examples of other structures that may fall into this category include shops, outbuildings, mills, limekilns, farmsteads, forges, gates and gate piers.

14.3.2 Summary of Previous Archaeological Fieldwork

A review of the Excavations Bulletin (1970–2025) has shown that no previous archaeological fieldwork has been carried out within the Proposed Wind Farm site. One previous excavation has been carried out within 2km of the Proposed Wind Farm site, and no previous excavations were carried out within 50m of the Proposed Grid Connection (Table 14-5).

Table 14-5: Previous excavations within the Study Area.

Ex No.	Location	Description	Distance from Proposed Project
EX1	Gorteenlahard	Test trenching in the vicinity of an enclosure and children's burial-ground (GA045–022). No features of archaeological significance were identified.	1.1km southeast of proposed turbines

14.3.3 Cartographic Analysis

William Petty, Down Survey: County of Galway, c. 1655

Petty's Down Survey represents the first systematic mapping of Ireland on a scale of 40 perches to one inch (the modern equivalent of 1:50,000). This mapping used the previous Civil Survey as a guide and was concerned with the identification and recording of land ownership as opposed to the accurate mapping of topographical features or towns and villages. Occasionally major features in the landscape (for example castles or churches) are shown. The Barony maps of Ballymoe and Tiaquin were destroyed in 1711 and no other copies are available. The Galway county map shows the town of Tuam, labelled 'Tuamtowne' c. 12km to the northwest of the Proposed Wind Farm. Several features are depicted in the wider receiving environment of the Proposed Wind Farm, including a church in Knockmoy, which is likely to be the Cistercian abbey (GA058-004001) 6km to the southwest of the proposed turbines. A church is also depicted in the vicinity of Tigreenaun/Stowelodge although this does not correlate with a known archaeological site. A large house is depicted in Abbert (labelled 'Abbott'), suggesting that a structure was present at this location prior to the establishment of Abbert demesne (DL6).

William Larkin, A Map of the County of Galway in the Province of Connaught in Ireland, from an actual survey, 1819

Larkin's map of Donegal includes the area of the Proposed Project. The Proposed Wind Farm site is dominated by an area of bog. All of the demesnes located within the 5km study area of the proposed turbines and the 50m study area of the Proposed Grid Connection are depicted and named, with the exception of DL9, Glebe House (Moylough More). Summer Ville demesne (DL10) is labelled 'Thomastown' on Larkin's 1819 map. Additionally, Elmhill (AH91) is depicted and shown to comprise two buildings surrounded by planting, with two clusters of buildings to the northeast and southeast. Larkin also depicted a number of archaeological features within the landscape, including a moated site (AH40), ringforts (AH27, AH31, AH81), churches (AH29, AH76) and the ruins of a castle (AH30).

First Edition Ordnance Survey Map, 1837, scale 1:10,560

This is the first accurate historic mapping coverage of the area containing the Site. The lands of the Proposed Wind Farm are depicted as marginal bog and pasture. The Proposed Wind Farm is generally not shown to be developed, although a road correlating with the L6301 is depicted. A small number of vernacular buildings are depicted within the Proposed Wind Farm, including CH20, CH21, CH37 and CH61. Elmhill House (AH91) is depicted, with an orchard shown to its south. Ringfort AH90 is depicted to the southeast of Elmhill.

The Proposed Grid Connection follows routes that were established by the time of the 1837 OS mapping.

The section of the TDR required for accommodation works is depicted as a pasture field to the south of the R332.

Ordnance Survey Map, 1892, scale 1:10,560

By the time of the 1892 OS map the Proposed Wind Farm is shown to comprise rocky pasture, bog, gorse and pasture. The landscape has undergone a process of enclosure, with more subdivisions of land present than on the 1837 OS map. Additionally, several more drainage ditches are shown, exemplifying efforts to improve the quality of the land. Additional vernacular structures have been constructed within the Proposed Wind Farm, including CH58, CH59, CH60 and CH62. Only CH58 retains upstanding features, comprising drystone field walls at the location of the proposed onsite 110kV substation and BESS compound. By the time of the 1892 OS map Elmhill House (AH91) has been demolished and reconstructed, c. 70m to the north of its original position.

By the time of the 1892 OS map the only significant change within the route of the Proposed Grid Connection is the presence of the Athenry and Tuam Railway, which passes below the L2125 via

bridge BH2. No further changes are shown to the route of the Proposed Grid Connection , which still passes through the existing road network.

The L7126, not present at the time of the 1840 OS map, has been established by the time of the 1892 OS map. The Athenry and Tuam Railway (CH43) crosses this road and the Proposed Grid Connection via a railway bridge (BH1). The L7109 has still not been constructed by the time of the 1892 OS map.

By the time of the 1892 OS map the section of the TDR required for accommodation works still comprises a pasture field. A culvert is depicted leading from Horseleap Lough into the field.

14.3.4 Galway County Development Plan (2022–2028)

14.3.4.1 Archaeological Heritage

The Galway County Development Plan (2022–2028) recognises the statutory protection afforded to all Record of Monuments and Places (RMP) sites under the National Monuments Legislation (1930–2014). The development plan lists several aims and objectives in relation to archaeological heritage, outlined in Appendix 14-3.

There is one recorded archaeological site within the Proposed Wind Farm site, comprising an 18th/19th century house (AH91), located 160m to the east of Turbine 8. There are a further 90 archaeological sites, or groups of sites, within the 5km study area (of the proposed turbines), 11 of which include redundant records. Three archaeological sites, or groups of sites, are located within 50m of the Proposed Grid Connection. No recorded archaeological sites were identified within the 50m study area of the proposed TDR accommodation works.

Two National Monuments are located within 10km of the Proposed Wind Farm site, comprising a church in Knockmoy townland (GA058-002002; NM No. 278) located c. 5.6km to the south of Turbine 1 and Knockmoy Cistercian Abbey (GA058-004001; NM No. 166), located 6.2km to the southwest of Turbine 1.

Archaeological sites within the study area are recorded below in Table 14-6 14-6 and shown in Figures 14-2 to 14-9.

Table 14-6: Recorded archaeological sites within the study area

AH. No.	RMP No.	Location	Classification	Distance from Proposed Project	Nearest Turbine
AH1	GA043-048	Cloonascragh	Redundant record	Immediately south of proposed GC	T1
AH2	GA043-009001; GA043-009002	Ballinderry	Sundial and bridge. Upstanding remains.	Proposed GC passes below AH2	T1
AH3	GA044-061	Gortbeg	House - vernacular house. Upstanding remains.	Immediately west of proposed GC	T1
AH91	GA045-019	Elmhill	House - 18th/19th century. Upstanding remains.	160m east of proposed turbines	T8

AH85	GA044-040	Cooloo	Redundant record	245m south of proposed turbines	T3
AH90	GA045-018; GA045-018001	Elmhill	Ringfort - rath; Souterrain. Upstanding remains.	380m southeast of proposed turbines	T8
AH86	GA045-015; GA045-015001	Cooloo	Enclosure; Children's burial ground. Upstanding remains.	395m east-northeast of proposed turbines	T4
AH84	GA044-067	Hillsbrook Demesne	Redundant record	730m west of proposed turbines	T3
AH93	GA045-011; GA045-011001; GA045-011002	Cloonascragh	Children's burial ground; Ecclesiastical enclosure; Bullaun stone. Upstanding remains.	800m northeast of proposed turbines	T7
AH94	GA044-036	Cloondahamper (Blake),Cloondahamper (Brown)	Redundant record	840m north-northwest of proposed turbines	T7
AH92	GA045-012; GA045-012001	Cloonascragh	Ringfort - rath; Souterrain. Upstanding remains.	930m northeast of proposed turbines	T7
AH81	GA044-050; GA044-088	Dangan Oughter	Ringfort - rath x2. Upstanding remains.	1.0km south-southwest of proposed turbines	T1
AH82	GA044-068 – GA044-070	Hillsbrook Demesne	Designed landscape - tree-ring x2 (one removed, one surviving); House - 18th/19th century (removed)	1.4km northwest of proposed turbines	T1
AH87	GA045-016	Cooloo	Burial. Upstanding remains.	1.4km southeast of proposed turbines	T4
AH88	GA045-022; GA045-022001; GA045-022002	Gorteenlahard	Ringfort - rath; Children's burial ground; Cross-inscribed stone. No surface expression.	1.4km southeast of proposed turbines	T8

AH79	GA044-078; GA044-078001	Lissavally	Church; Graveyard. Upstanding remains.	1.8km west-southwest of proposed turbines	T1
AH80	GA044-077	Lissavally	Enclosure. No surface expression.	1.9km west-southwest of proposed turbines	T1
AH89	GA045-026	Moat	Redundant record	2.0km east of proposed turbines	T8
AH63	GA030-091	Levally East	Enclosure. No surface expression.	2.0km northwest of proposed turbines	T7
AH64	GA044-076	Lisnaminaun	Enclosure. Upstanding remains.	2.0km west-northwest of proposed turbines	T7
AH40	GA045-025	Moat	Moated site. Upstanding remains.	2.1km east of proposed turbines	T9
AH83	GA044-044	Cottage	Redundant record	2.2km west of proposed turbines	T3
AH18	GA045-003	Brierfield (Blake)	Children's burial ground. Upstanding remains.	2.3km southeast of proposed turbines	T4
AH78	GA044-071; GA044-071001	Knock, Hillsbrook Demesne	Ringfort - rath; Children's burial ground. Upstanding remains.	2.3km west of proposed turbines	T1
AH39	GA045-027	Moat	House - 18th/19th century. Upstanding remains.	2.4km east-northeast of proposed turbines	T8
AH62	GA030-090001; GA030-090002; GA030-129	Levally East	Chapel; Castle - unclassified; Church. Upstanding remains.	2.4km northwest of proposed turbines	T7
AH12	GA044-041	Cooloorta	Ritual site - holy well. Upstanding remains.	2.4km south of proposed turbines	T1
AH19	GA045-005	Brierfield (Toole)	Redundant record	2.4km southeast of proposed turbines	T2

AH41	GA045-024	Moat	Designed landscape feature. Removed.	2.5km east-northeast of proposed turbines	T9
AH61	GA030-066	Ginnaun, Levally East	Enclosure. Faint surface expression.	2.5km northwest of proposed turbines	T7
AH36	GA045-028001 — GA045-028004	Mountsilk	Church; Bullaun stone; Enclosure; Well. Upstanding remains.	2.7km east of proposed turbines	T8
AH37	GA045-056	Mountsilk	Building. Upstanding remains.	2.8km east of proposed turbines	T8
AH13	GA058-079	Parklaur	Children's burial ground. Upstanding remains.	2.8km south of proposed turbines	T1
AH35	GA045-053; GA045-053001	Moylough Beg	Ringfort - rath; Children's burial ground. Upstanding remains.	2.9km east of proposed turbines	T8
AH60	GA030-064	Ginnaun	Graveyard. Upstanding remains.	2.9km northwest of proposed turbines	T7
AH20	GA045-002; GA045-038; GA045-042	Brierfield; Mullaghmore South; Mullaghmore West	Enclosure. Upstanding remains.	2.9km southeast of proposed turbines	T4
AH23	GA045-036; GA045-036001	Mullaghmore North; Mullaghmore East	Ringfort - rath. Upstanding remains.	2.9km southeast of proposed turbines	T8
AH65	GA044-085	Omaun More	Redundant record	2.9km west of proposed turbines	T7
AH34	GA045-030	Moylough Beg	Enclosure. No surface expression.	3.0km east of proposed turbines	T8
AH38	GA045-048	Summerville	Leacht cuimhne. Upstanding remains.	3.0km east of proposed turbines	T8
AH59	GA030-092	Levally West	Ringfort - rath. No surface expression.	3.0km northwest of proposed turbines	T7

AH45	GA031-020	Cloonkeen Eighter	Quarry	3.2km northeast of proposed turbines	T9
AH17	GA045-004	Brierfield (Blake)	Ringfort - rath. Upstanding remains.	3.3km southeast of proposed turbines	T1
AH7	GA044-084	Moyne	House - 18th/19th century. Upstanding remains.	3.4km southwest of proposed turbines	T1
AH58	GA030-046; 046001; 046002	Corralea	Ringfort - rath; Children's burial ground; Souterrain	3.5km northwest of proposed turbines	T7
AH21	GA045-041	Mullaghmore West	Castle - unclassified. Upstanding remains.	3.5km southeast of proposed turbines	T4
AH75	GA044-022; GA044-023	Barnaderg South	Ringfort - rath x2. Upstanding remains.	3.5km west of proposed turbines	T1
AH33	GA045-049	Summerville	Country house. Upstanding remains.	3.6km east of proposed turbines	T8
AH6	GA044-081 – GA044-083	Moyne	Country house; Burial ground; Chapel. Upstanding remains.	3.6km southwest of proposed turbines	T1
AH9	GA058-084	Sunhill	Designed landscape - folly. Upstanding remains.	3.6km southwest of proposed turbines	T1
AH47	GA031-038	Fortbrown	Redundant record	3.7km north-northeast of proposed turbines	T7
AH48	GA031-037	Fortbrown	Enclosure. Upstanding remains.	3.7km north-northeast of proposed turbines	T7
AH57	GA030-049	Curraghcreen	Ringfort - rath. Upstanding remains.	3.7km northwest of proposed turbines	T7
AH8	GA058-073	Moyne	Ringfort - unclassified. No surface expression.	3.7km southwest of proposed turbines	T1

AH76	GA044-029; GA044-029001	Carrowmanagh	Church; Graveyard. Upstanding remains.	3.8km west of proposed turbines	T1
AH56	GA030-047	Corralea	Crannog. Upstanding remains.	3.9km northwest of proposed turbines	T7
AH31	GA045-047	Summerville	Ringfort - rath. No surface expression.	4.0km east of proposed turbines	T8
AH22	GA045-040	Mullaghmore West	Ringfort - rath. Upstanding remains.	4.1km southeast of proposed turbines	T4
AH10	GA058-074	Moyne	Leacht cuimhne. Upstanding remains.	4.1km southwest of proposed turbines	T1
AH70	GA044-015; GA044-017; GA044-019; GA044-097	Barnaderg North	Field system; Ringfort - cashel x2; Enclosure. Upstanding remains.	4.1km west of proposed turbines	T3
AH71	GA044-018	Barnaderg North	Castle - tower house. Upstanding remains.	4.1km west of proposed turbines	T3
AH42	GA045-050001; GA045-050002	Templemoyle	Church; Graveyard. Upstanding remains.	4.2km east-northeast of proposed turbines	T9
AH44	GA045-050003	Templemoyle	Enclosure. No surface expression.	4.2km east-northeast of proposed turbines	T9
AH27	GA045-006; GA045-020; GA045-021	Carrowkeel; Gortaganny	Ringfort - rath; Enclosure. Upstanding remains.]	4.2km east-southeast of proposed turbines	T8
AH43	GA045-051	Templemoyle	Redundant record	4.3km east-northeast of proposed turbines	T9
AH49	GA031-004	Ballyedmond	Children's burial ground. Upstanding remains.	4.3km north-northeast of proposed turbines	T7
AH24	GA045-008	Carrownabo	Crannog. Upstanding remains.	4.3km southeast of proposed turbines	T8

AH5	GA058-075	Moyne	Quarry	4.3km southwest of proposed turbines	T1
AH52	GA030-020; GA030-020001	Cappadavock	Ringfort - rath; Souterrain. Upstanding remains.	4.4km northwest of proposed turbines	T7
AH53	GA030-019	Cappadavock	Enclosure. No surface expression.	4.4km northwest of proposed turbines	T7
AH54	GA030-050	Curraghcreen; Ryehill	Ringfort - rath. Upstanding remains.	4.4km northwest of proposed turbines	T7
AH55	GA030-048	Curraghcreen	Ringfort - rath. No surface expression.	4.4km northwest of proposed turbines	T7
AH66	GA044-087	Pollacappul	Quarry	4.4km west of proposed turbines	T3
AH68	GA044-016; GA044-016001	Barnaderg North	Ringfort - rath; House - indeterminate date. Upstanding remains.	4.4km west of proposed turbines	T3
AH30	GA045-029001 — GA045-033003	Moylough	Castle - hall-house; Enclosure; Earthwork. Upstanding remains.	4.5km east of proposed turbines	T8
AH50	GA031-050	Laughil	Ringfort - rath. Upstanding remains.	4.5km north-northeast of proposed turbines	T7
AH4	GA058-072	Moyne	Earthwork. Upstanding remains.	4.5km southwest of proposed turbines	T1
AH11	GA058-076	Newtown	Country house. Upstanding remains.	4.5km southwest of proposed turbines	T1
AH72	GA044-021; GA044-021001	Barnaderg North	Ringfort - cashel; House - indeterminate date. Upstanding remains.	4.5km west of proposed turbines	T1
AH74	GA044-059	Garraun More	Barrow - ring-barrow. Upstanding remains.	4.5km west of proposed turbines	T1

AH29	GA045-033; GA045-033001; GA045-033002	Moylough More	Church x2; Graveyard. Upstanding remains.	4.6km east of proposed turbines	T8
AH26	GA045-007	Carrownabo	Windmill. Upstanding remains.	4.6km east-southeast of proposed turbines	T8
AH67	GA044-086	Pollacappul	Ringfort - cashel. Upstanding remains.	4.6km west of proposed turbines	T3
AH69	GA044-020; GA044-020001 – GA044-020006	Barnaderg North	Ringfort - cashel; Souterrain; House - indeterminate date	4.6km west of proposed turbines	T3
AH28	GA045-034	Moylough More	House - 18th/19th century. Upstanding remains.	4.7km east of proposed turbines	T8
AH46	GA031-032	Derrinlough	Crannog. Upstanding remains.	4.7km northeast of proposed turbines	T9
AH14	GA059-062; GA059-063; GA059-064; GA059-064001 – GA059-064011; GA059-069; GA059-070; GA059-072; GA059-072001 – GA059-072003	Windfield Demesne	Designed landscape features. Upstanding remains.	4.7km south-southeast of proposed turbines	T1
AH77	GA044-027; GA044-028	Carrowgorm	Ringfort - rath x2. Upstanding remains.	4.7km west-southwest of proposed turbines	T1
AH51	GA030-039	Claddagh East	Ringfort - rath. Upstanding remains.	4.8km north-northwest of proposed turbines	T7
AH25	GA045-045	Patch	Ringfort - rath. Very low surface expression.	4.8km southeast of proposed turbines	T8

AH32	GA045-032	Moylough More	Redundant record	4.9km east of proposed turbines	T8
AH16	GA059-003	Ballinrooaun	Ringfort - unclassified. Upstanding remains.	4.9km southeast of proposed turbines	T1
AH15	GA059-067	Windfield Demesne	Enclosure. Very low surface expression.	4.9km south-southeast of proposed turbines	T1
AH73	GA044-055	Garraun Beg	Redundant record	4.9km west of proposed turbines	T1
AH95	GA058-002002; NM No. 278	Abbert Demesne	Church. Upstanding remains.	5.6km to the south of proposed turbines	T1
AH96	GA058-004001; NM No. 166	Abbey	Knockmoy Cistercian Abbey. Upstanding remains.	6.2km to the south of proposed turbines	T1

14.3.4.2 Record of Protected Structures

The Galway County Development Plan (2022–2028) recognises the value of the built heritage to the county and is committed to the protection and enhancement of this heritage by providing measures for the protection of architectural heritage (Appendix 14-4). These include the establishment of a Record of Protected Structures (RPS) and the designation of Architectural Conservation Areas (ACAs).

There are 11 protected structures, or groups of structures, within the 5km study area of the proposed turbines and two within the 50m study area of the Proposed Grid Connection. The Proposed Grid Connection will be carried below BH2, a single-arch road bridge, by directional drilling. No protected structures were identified within the 50m study area of the proposed TDR accommodation works. Further built heritage sites recorded on the NIAH are detailed in Section 14.3.5.1.

These are listed in Table 14-7 and shown in Figures 14-2 to 14-8. The Site does not contain any ACAs.

Table 14-7: Protected Structures within the study area

BH No.	RPS/NIAH No.	Description	Townland	Distance From Project	Statutory Protection	Nearest Turbine
BH1	3931; 30405701	Water pump	Cappanapisha South	Immediately north of proposed GC	Yes	T1
BH2	3930; 30405801	Bridge	Ballynastuckaun	Proposed GC passes below BH2	Yes	T1

BH3	30404410	House	Ballina	Immediately south of proposed GC	No	T1
BH9	3915; 30404408	Monument	Barnaderg South	3.1km west of proposed turbines	Yes	T1
BH10	3914; 30404407	Water pump	Barnaderg South	3.1km west of proposed turbines	Yes	T1
BH4	3919; 30405805; 30405806	Post box; demesne walls/gates/railings	Carrownabo	3.4km southwest of proposed turbines	Yes	T1
BH7	57; 30404411; 30404412	Country house; farmyard complex	Ballynabanaba	3.7km southwest of proposed turbines	Yes	T1
BH8	3916; 30404409	Bell tower/stand	Carrowmanagh (Tiaquin By)	3.8km west of proposed turbines	Yes	T1
BH5	30405804	Mill (water)	Ballynabanaba	4.1km southwest of proposed turbines	No	T1
BH6	3918; 30405803	Monument	Ballynabanaba	4.1km southwest of proposed turbines	Yes	T1
BH11	3898; 30403008	Church/chapel	Cappadavock	4.3km northwest of proposed turbines	Yes	T7
BH13	30404510	House	Carrownabo	4.4km southeast of proposed turbines	No	T8
BH17	84; 30405817	Country house	Ballynew (Clare By)	4.5km south-southwest of proposed turbines	Yes	T1
BH14	3140; 30404511	Mill (wind)	Ardderroo	4.6km east-southeast of	Yes	T8

				proposed turbines		
BH16	30405816	Bridge	Ballynew (Clare By)	4.6km south-southwest of proposed turbines	No	T1
BH12	61; 30404506; 30404507	Rectory/glebe/vicarage/ curate's house; demesne walls/gates/railings	Ballymurry	4.8km east of proposed turbines	Yes	T8
BH15	3957; 30405819	Bridge	Abbert Demesne	4.8km south of proposed turbines	Yes	T1

14.3.5 National Inventory of Architectural Heritage

14.3.5.1 NIAH Building Survey

The National Inventory of Architectural Heritage (NIAH) survey of County Galway was carried out in 2008. A review of the architectural survey was undertaken as part of this assessment. A total of 17 structures, or groups of structures, are listed in the NIAH within the 5km study area of the proposed turbines and the 50m study area of the Proposed Grid Connection. No sites recorded on the NIAH were identified within the 50m study area of the proposed TDR accommodation works. The closest consists of BH2, a single-arch road bridge, below which the Proposed Grid Connection will be carried by directional drilling. Structures recorded on the NIAH are listed in Table 14-7 above.

14.3.5.2 Garden Survey

The first edition Ordnance Survey maps of County Galway (1840) show the extent of demesne landscapes as shaded portions of land within the 5km study area. These were established as a naturalised landscaped setting for the large houses of the landed gentry.

There are 11 designed landscapes shown on the first edition OS map of 1840 within 5km study area of the proposed turbines, including six gardens recorded within the NIAH Garden Survey. A further one designed landscape has been identified within the 50m study area of the Proposed Grid Connection. These designed landscapes have been assigned DL reference numbers for the purposes of this assessment, listed below in Table 14-8 and shown in Figure 14-2 to 14-8.

Table 14-8: Designed landscapes within the study area

DL No.	NIAH Survey No.	Name	Distance	Nearest Turbine
DL1	N/A	Ballinderry House demesne	Immediately west of the proposed GC	T1
DL8	N/A	Cooloo Cottage demesne	800m east of proposed turbines	T4

DL2	GA5319	Hillsbrook House demesne	880m west of proposed turbines	T3
DL3	N/A	Glebe House demesne (Lissavally Glebe)	1.8km west of proposed turbines	T1
DL12	N/A	Cloonagh House demesne	1.9km northeast of proposed turbines	T7
DL11	GA5348	Moathill Lodge demesne	2.3km east of proposed turbines	T9
DL4	GA5356	Moyne House demesne	2.6km southwest of proposed turbines	T1
DL10	N/A	Summer Ville demesne	3.2km east of proposed turbines	T8
DL7	GA5406	Windfield House demesne	4.0km south-southeast of proposed turbines	T1
DL5	GA5365	Newtown demesne	4.1km southwest of proposed turbines	T1
DL6	GA5221	Abbert demesne	4.6km south of proposed turbines	T1
DL9	N/A	Glebe House demesne (Moylough More)	4.7km east of proposed turbines	T8

14.3.6 Topographical Files of the National Museum of Ireland

Information on artefact finds has been recorded by the National Museum of Ireland (NMI) since the late 18th century. Location information relating to these finds is important in establishing prehistoric and historic activity in the study area. A total of 26 finds have been recorded within the 2km study area of the proposed turbines and within 50m of the Proposed Grid Connection. These are listed in Table 14-9 below. The nearest comprised a wooden vessel roughout (1995:103) and a wooden boat shaped vessel (1993,2), both of which were recovered from within a bog in Clooncascragh (Moylough parish) townland. Precise location data is not available.

Table 14-9: Stray finds recorded by the National Museum of Ireland

NMI Ref.	Find	Townland

1932:6431	Miniature Bronze spearhead	Derreen
2024,23	Bog butter	Derreen
1932:6428	Bronze socketed dagger	Cloonascragh (Tuam parish)
1932:6464	Copper alloy key	Cloonascragh (Tuam parish)
1932:6496-7	Wooden yoke fragments	Cloonascragh (Tuam parish)
1941:1530	Bronze leaf-shaped side-looped spearhead	Cloonascragh (Tuam parish)
E185:5	Polished stone axehead	Cloonascragh (Tuam parish)
2025,45	Wooden bow	Cloonascragh (Tuam parish)
1941:352	Socketed bronze spearhead	Cloonagh
1947:234	Stone axehead	Cloonagh
1947:235	Polished stone axehead	Cloonagh
E185:35	Bog Butter	Cloonagh
2023:339	Bog Butter	Derrybaun
2023:340	Wooden vessel	Derrybaun
1987:114	Polished stone axehead	Abbey
1941:384	Bronze leaf-shaped side-looped spearhead	Abbey
1967:107	Iron spearhead	Ballykeaghra
1960,2	Bronze necklace	Ballykeaghra
1960, 3	Copper alloy fibula	Ballykeaghra
1960,4	Copper alloy tweezers	Ballykeaghra
1960:5-39	35 bronze rings	Ballykeaghra
1976,8	Socketed iron spearhead	Ballinderry
1995:103	Wooden vessel roughout	Cloonascragh (Moylough parish)
1993,2	Wooden boat shaped vessel	Cloonascragh (Moylough parish)
1957:255	Basel-looped bronze spearhead	Moyne
1932:6430	Bronze Spearhead	Danganbeg

14.3.7 Aerial Photographic Analysis

Inspection of the aerial photographic coverage of the Proposed Wind Farm site and Proposed Grid Connection held by Tailte Éireann (1995–2013), Google Earth (2015–2025), and Bing Maps (2025) revealed that large areas of the Proposed Wind Farm site have comprised bog and pasture since at least 1995. Throughout the lands of the Proposed Wind Farm site a number of the field boundaries depicted on historic mapping have been removed and the landscape has generally been opened up. Several historic field boundaries are visible as cropmarks.

A large, curving anomaly (CH63) is visible immediately to the south, and partially within, the location of the proposed construction compound in Dangan Eighter (Google Aerial 20/03/2018). It is not possible to determine if this feature is anthropogenic or natural in origin without further investigation.

The site of the proposed TDR accommodation works has comprised a pasture field since at least 1995.

14.3.8 Cultural Heritage

Cultural heritage assets can incorporate both archaeological and built heritage remains, which do not have statutory protection or which have not been previously recorded as heritage assets in any known datasets. Cultural heritage can also incorporate more ephemeral aspects of the heritage environment, including folklore. A number of sources were reviewed in order to identify cultural heritage assets within the 2km study area of the proposed turbines, the 50m study area of the Proposed Grid Connection and the 50m study area of the proposed TDR works. These included the historic Ordnance Survey mapping, documentary sources, aerial photographic coverage and field inspection.

A total of 63 cultural heritage sites have been identified within the study areas of the Proposed Project, 54 of which are within 2km of the proposed turbines. A total of 23 cultural heritage sites have been identified within 50m of the Proposed Grid Connection, and one cultural heritage site has been identified within the proposed TDR accommodation area. These are listed below in Table 14-10, and shown in Figures 14-2 to 14-8.

Four sites are within the footprint of proposed works associated with the Proposed Project. CH40, which comprises a post-1892 vernacular building, is within the route of the proposed new road to the south of T5. CH14 comprises a stone retaining wall with a round-arch culvert, which is within the route of the proposed TDR accommodation works to the west of the Horseleap Cross Roads (the junction of the N63, R332 and L2302). CH58 comprises the site of a vernacular building and well (no longer upstanding) and upstanding drystone walls, within the location of the proposed substation. CH63 comprises a curvilinear anomaly of unclear origin identified from aerial photography. The proposed temporary construction compound and new construction site entrance road intersect with the northern end of CH63.

Table 14-10: Cultural heritage sites within the study area

CH No.	Townland	Description	Distance from Project	Nearest Turbine
CH40	Cooloo	Upstanding vernacular house, which is not depicted on historic maps. Post-1892 in date.	0m; proposed new road encroaches on northern side of CH40	T5
CH58	Dangan Eighter	Vernacular building and well depicted on the 1892 OS map. No upstanding remains. Drystone field walls of	0m; within location of proposed substation	T2

		cultural heritage significance identified during site visit.		
CH14	Slievegorm	Stone retaining wall with base batter and round-arch culvert.	Within route of proposed TDR accommodation works; Immediately south of proposed GC; 1.2km south of proposed turbines	T1
CH1	Doonbeg	Building marked 'Smithy' on 1892 OS map. In a ruinous condition.	Immediately east of proposed GC	T1
CH2	Gortbeg	Vernacular stone building marked on 1837 OS map. Upstanding remains.	Immediately south of proposed GC	T1
CH3	Gortbeg	Vernacular outbuildings marked on 1837 OS map.	Immediately north of proposed GC	T1
CH4	Ballina	Vernacular buildings marked on 1892 OS map.	Immediately north of proposed GC	T1
CH5	Feagh West	Vernacular building marked on 1892 OS map.	Immediately north of proposed GC	T1
CH6	Derreen	Ruinous remains of building marked on 1837 OS map and labelled 'Smithy' on 1892 OS map.	Immediately south of proposed GC	T1
CH7	Derreen	Buildings present on 1837 OS map, rebuilt/extended by the time of the 1892 OS map. Labelled 'Court House' on 1892 OS map.	Immediately south of proposed GC	T1
CH8	Danganbeg	Vernacular outbuilding marked on 1892 OS map.	Immediately south of proposed GC	T1
CH9	Danganbeg	Building present on 1837 and 1892 OS maps. Appears to have been rebuilt.	Immediately south of proposed GC	T1

CH10	Danganbeg	Vernacular building depicted on 1892 OS map.	Immediately south of proposed GC	T1
CH21	Dangan Eighter	Building marked on 1837 OS map, replaced by a cluster of vernacular buildings by 1892 OS map. Buildings remain upstanding.	Immediately west of proposed GC; 370m southwest of proposed turbines	T1
CH16	Polladooey	Upstanding gable end wall of building marked on 1837 OS map.	Immediately north of proposed GC; 1.1km south of proposed turbines	T1
CH17	Slievegorm	Ruinous building marked on 1892 OS map.	Immediately north of proposed GC; 1.1km south-southwest of proposed turbines	T1
CH18	Polladooey	'Post Office' marked on 1837 map. Existing building has a plaque dated '1829'.	Immediately north of proposed GC; 1.1km south-southwest of proposed turbines	T1
CH15	Slievegorm	Vernacular buildings first depicted on 1837 OS map. Two buildings marked on 1892 OS map remain upstanding.	Immediately south of proposed GC; 1.2km south of proposed turbines	T1
CH19	Dangan Eighter	Vernacular buildings present on site since 1837 OS map. Current building may retain early features.	Immediately north of proposed GC; 1.4km southwest of proposed turbines	T1
CH11	Danganbeg	Vernacular buildings marked on 1837 and 1892 OS maps may be incorporated into yard.	Immediately north of proposed GC; 1.7km south of proposed turbines	T1
CH63	Dangan Eighter	Curvilinear anomaly identified from aerial photography (Tailte Éireann 2013).	0m; partially within location of proposed compound	T1
CH38	Cooloo	Two lengths of wall on the crest of a hill, constructed by courses of rubble and cement.	200m west of proposed turbines	T6

		Line marked on 1892 OS map.		
CH60	Dangan Eighter	Site of three vernacular buildings depicted on 1892 OS map. No upstanding remains.	305m northwest of proposed turbines	T1
CH61	Dangan Eighter	Site of vernacular building depicted on 1837 OS map, and two buildings depicted on 1892 OS map. No upstanding remains.	345m west of proposed turbines	T1
CH62	Dangan Eighter	Rectangular vernacular building depicted on 1892 OS map. No upstanding remains.	360m southwest of proposed turbines	T1
CH22	Polladooey	Ruinous remains of a vernacular building and outbuilding marked on the 1892 OS map.Several further buildings shown on 1837 and 1892 OS maps, no longer upstanding.	410m south-southeast of proposed turbines	T1
CH42	Elmhill	Vernacular buildings forming a yard, depicted on 1892 OS map.	440m east-southeast of proposed turbines	T8
CH50	Cooloo	Vernacular building marked on the 1892 OS map.	440m south of proposed turbines	T8
CH39	Cooloo	Site of a building marked on the 1837 OS map and several buildings marked on the 1892 OS map. No longer upstanding.	480m north-northeast of proposed turbines	T3
CH59	Dangan Eighter	Site of two vernacular buildings depicted on 1892 OS map. No upstanding remains.	480m northwest of proposed turbines	T1
CH37	Cloonascragh	Three buildings depicted on 1837 OS map, with alterations by the time of the 1892 OS map. Several buildings upstanding in a ruinous state.	500m east of proposed turbines	T7

CH41	Elmhill	Several ruinous vernacular buildings. These are not marked on the historic mapping and are post-1892 in date.	500m northeast of proposed turbines	T8
CH20	Dangan Eighter	Site of vernacular buildings along a former road which survives to the east, extending towards upstanding buildings.	580m southwest of proposed turbines	T1
CH23	Hillbrook Demesne	Upstanding vernacular building marked on 1892 OS map.	750m west of proposed turbines	T3
CH24	Hillbrook Demesne	Upstanding vernacular building marked on 1837 OS map.	850m west of proposed turbines	T3
CH31	Cloondahamper (Blake)	Two vernacular buildings marked on the 1837 OS map, which were extended/rebuilt by the time of the 1892 OS map. Both are upstanding.	900m north-northwest of proposed turbines	T7
CH33	Cloonboo Beg	Vernacular building marked on 1892 OS map.	1.0km north-northeast of proposed turbines	T7
CH34	Cloonboo Beg	Ruinous remains of vernacular building marked on 1892 OS map.	1.0km north-northeast of proposed turbines	T7
CH32	Cloondahamper (Brown)	Two buildings marked on the 1837 OS map, which were extended/rebuilt by the time of the 1892 OS map. Upstanding remains present.	1.0km north-northwest of proposed turbines	T7
CH51	Cooloo	Rectangular buildings marked on the 1837 and 1892 OS maps. Related to 'Cooloo Cottage' to the south.	1.0km south of proposed turbines	T8
CH29	Tigreenaun	Vernacular building marked on 1892 OS map.	1.2km west of proposed turbines	T4

CH45	Gorteenlahard	Vernacular building marked on 1892 OS map.	1.4km east-southeast of proposed turbines	T8
CH46	Gorteenlahard	Vernacular buildings marked on 1837 OS map.	1.4km southeast of proposed turbines	T8
CH57	Brierfield South	'National School' marked on 1837 OS map. Building replaced in 1892 and remains upstanding.	1.4km southeast of proposed turbines	T1
CH25	Tigreenaun	Ruinous vernacular buildings marked on 1892 OS map.	1.4km west of proposed turbines	T3
CH28	Tigreenaun	Vernacular buildings marked on the 1837 OS map. Incorporated into yard at rear of modern house.	1.4km west of proposed turbines	T4
CH35	Cloonboo More	Vernacular building marked on the 1837 OS map. Upstanding.	1.5km north-northeast of proposed turbines	T7
CH30	Cloondahamper (Blake)	Vernacular building marked on 1892 OS map.	1.6km northwest of proposed turbines	T7
CH13	Slievegorm	Vernacular building marked on 1892 OS map.	1.6km south-southwest of proposed turbines	T1
CH43	Trasternagh South	Ruinous remains of vernacular buildings marked on 1837 OS map.	1.7km east of proposed turbines	T9
CH47	Cooloo Mountain	Ruinous vernacular buildings marked on 1837 OS map.	1.8km southeast of proposed turbines	T8
CH48	Cooloo Mountain	Vernacular building marked on 1892 OS map.	1.8km southeast of proposed turbines	T8
CH49	Cooloo Mountain	Vernacular buildings marked on 1837 and 1892 OS map.	1.8km southeast of proposed turbines	T8
CH54	Brierfield North	Buildings marked on 1837 and 1892 OS maps.	1.8km southeast of proposed turbines	T1

		One building from 1892 OS map remains upstanding.		
CH12	Slievegorm	Vernacular building and outbuilding marked on 1837 OS map. Upstanding remains appear to be present.	1.8km south-southwest of proposed turbines	T1
CH26	Tigreenaun	Vernacular building marked on 1892 OS map.	1.8km west-northwest of proposed turbines	T3
CH36	Derrynagran	Cluster of vernacular buildings in former 'Derrynargan' clachan. Some buildings survive and are incorporated into modern yards.	1.9km north-northeast of proposed turbines	T9
CH52	Cooloo Mountain	Vernacular building marked on 1892 OS map.	1.9km southeast of proposed turbines	T4
CH55	Brierfield (Stevens)	Ruinous vernacular buildings marked on 1892 OS map.	1.9km southeast of proposed turbines	T1
CH56	Brierfield (Burke)	Vernacular building marked on 1892 OS map.	1.9km southeast of proposed turbines	T1
CH27	Tigreenaun	Vernacular outbuildings depicted on 1937 OS map. Later extended/rebeuilt by the time of the 1892 OS map.	1.9km west-northwest of proposed turbines	T3
CH44	Trasternagh South	Ruins of vernacular buildings marked on 1837 and 1892 OS maps may be incorporated into modern yard.	2.0km east-northeast of proposed turbines	T8
CH53	Brierfield (Blake)	Vernacular buildings marked on 1837 and 1892 OS map. Several remain upstanding.	2.0km southeast of proposed turbines	T2

14.3.9 Areas of Archaeological Potential

Five Areas of Archaeological Potential are located within the Proposed Wind Farm, all of which comprise streams which the proposed new road crosses. These are the Forty Acres (AAP1), Lecarrow

(AAP2), Dangan Eighter (AAP3 and AAP4) and an unnamed stream (AAP5) that forms the Cooloo/Elmhill townland boundary. The bed and banks of these streams have a general archaeological potential, given the importance of waterways to past communities.

Large portions of the Proposed Wind Farm comprise raised bog, which provides excellent conditions for the preservation of archaeological material. As such, these areas also have a general archaeological potential.

14.3.10 Placename Analysis

Townland and topographic names are an invaluable source of information on topography, land ownership and land use within the landscape. They also provide information on history; archaeological monuments and folklore of an area. A place name may refer to a long-forgotten site and may indicate the possibility that the remains of certain sites may still survive below the ground surface. The Ordnance Survey surveyors wrote down townland names in the 1830's and 1840's, when the entire country was mapped for the first time. Some of the townland names in the Proposed Wind Farm site and Proposed Grid Connection are of Irish origin and through time have been anglicised. The main references used for the place name analysis is Irish Local Names Explained by P.W Joyce (1870) and logainm.ie. A description and possible explanation of each place name within the Proposed Wind Farm and Proposed Grid Connection is provided in Table 14-11 below.

Table 14-11: Place name analysis

Townland	Derivation	Possible Meaning
Abbey	*An Mhainistir*	English name relating to an abbey
Ballina	*Béal an Fheá*	Opening/approach of the wood
Ballinderry	*Baile an Doire*	The place of the oak-wood
Ballykeaghra	*Béal Átha Ciachra*	Mouth of Keighry's ford
Ballynastuckaun	*Baile na Stacán*	The place of the stakes/stumps
Cloonascragh	*Cluain Eascrach*	Meadow of the sandy ridge
Cloondahamper	*Cluain Dá Thiompar*	Meadow of the two... *Thiompar*
Cooloo	*Cúil Lú*	Corner of *Lú*
Danganbeg	*An Daingean Beag*	Fortress (*Beag*/small likely added later to differentiate from other subdivisions)
Dangan Eighter	*An Daingean Íochtair*	Fortress (*Íochtair*/lower likely added later to differentiate from other subdivisions)
Dangan Oughter	*An Daingean Uachtair*	Fortress (Uachtair/upper likely added later to differentiate from other subdivisions)
Derreen	*An Doirín*	Little oak-wood
Doonbeg	*Dún Beag*	Small fort
Elmhill	*Cnoc na Leamhán*	English name relating to elm trees growing on a hill

Townland	Derivation	Possible Meaning
Feagh West	*An Fiodh Thiar*	Wood (*Thiar*/west likely added later to differentiate from other subdivisions)
Garra	*An Gearradh*	A cut/trench
Gortbeg	*An Gort Beag*	Small field
Lecarrow	*An Leithcheathrú*	Half quarter
Lissavally	*Lios an Bhealaigh*	Ringfort of the pass
Moyne	*Maighin*	Small plain
Polladooey	*Poll an Dúigh*	Hole of the black colouring stuff (deriving from a black substance found in bogholes which was used for dying)
Slievegorm	*An Sliabh Gorm*	Blue mountain
Sunhill	*Cnoc na Gréine*	English name

14.3.11 Townland Boundaries

The townland is an Irish land unit of considerable longevity as many of the units are likely to represent much earlier land divisions. The term townland was not used to denote a unit of land until the Civil Survey of 1654. It bears no relation to the modern word 'town' but like the Irish word baile refers to a place. It is possible that the word is derived from the Old English tun land and meant 'the land forming an estate or manor' (Culleton 1999, 174).

Gaelic land ownership required a clear definition of the territories held by each sept and a need for strong, permanent fences around their territories. It is possible that boundaries following ridge tops, streams or bog are more likely to be older in date than those composed of straight lines (ibid. 179). The vast majority of townlands are referred to in the 17th century, when land documentation records begin. Many of the townlands are mapped within the Down Survey of the 1650s, so called as all measurements were carefully 'laid downe' on paper at a scale of forty perches to one inch. Therefore, most are in the context of pre-17th century landscape organisation (McErlean 1983, 315).

In the 19th century, some demesnes, deer parks or large farms were given townland status during the Ordnance Survey and some imprecise townland boundaries in areas such as bogs or lakes, were given more precise definition (ibid.). Larger tracks of land were divided into a number of townlands, and named Upper, Middle or Lower, as well as Beg and More (small and large) and north, east, south and west (Culleton 1999, 179). By the time the first Ordnance Survey had been completed a total of 62,000 townlands were recorded in Ireland.

Although not usually recorded as archaeological monuments in their own right, townland boundaries are important as cultural heritage features. It remains unclear how old some of these land units actually are, though it has been convincingly argued that many may date to at least the medieval period and, in some cases, may be significantly older than this (McErlean 1983; MacCotter 2008).

Six townland boundaries are located within the Proposed Wind Farm site. Townland boundaries crossed by the Proposed Grid Connection have been screened out of the assessment, as the Proposed Grid Connection will be located within the existing road network.

Three of the townland boundaries within the Proposed Wind Farm site comprise streams (TB1, TB2 and TB4), one comprises a ditch (TB6), one is defined by the L6301 local road (TB3). TB5 has been removed.

The townland boundaries are listed below in Table 14-12 and shown on Figures 14-2 to 14-8.

Table 14-12: Townland boundaries within Proposed Wind Farm.

Tb No.	Townland	Description
TB1	Lissavally/Dangan Eighter	Forty Acres stream
TB2	Dangan Eighter/Lecarrow	Lecarrow stream
TB3	Lecarrow/Cooloo	L6301 local road
TB4	Cooloo/Elmhill	Unnamed stream
TB5	Elmhill/Cloonascragh	Boundary removed
TB6	Cloonascragh/Cloondahamper	Ditch, with a crossing at the location of the proposed new road

14.3.12 Field Inspection

The field inspection was carried out on the 3rd–4th April 2024 and 17th July 2025. Inspections were carried out within the Proposed Wind Farm site along the route of the proposed roads and turbine sites, along with associated infrastructure, the route of the Proposed Grid Connection and the site of the proposed TDR accommodation works. The plates are shown in Appendix 14.1.

Proposed Grid Connection

The Proposed Grid Connection extends from the proposed onsite 110kV substation through greenfield for 46m, and then continues along farm tracks to the south over 890m. At this point it joins the route of the proposed new wind farm road, which passes through greenfield for 1.6km, crossing TB1 in the process. TB1 comprises the Forty Acres stream, which is also an Area of Archaeological Potential (AAP1). After emerging from greenfield the Proposed Grid Connection joins the R332, which is follows for 2.3km towards the east.

The Proposed Grid Connection meets a junction with the N63, which it follows in a southwesterly direction. In the townland of Sunhill the route passes immediately south of the decorative gateway to Moyne House and demesne and a post box (BH4) which is set into the Moyne House demesne (DL4) boundary wall (Plates 14-1 – 14-2).

After 4.1km the Proposed Grid Connection meets the L6234 and turns northwest at this junction. After 2.4km it meets the L2128 and continues to the northwest for 840m until it comes to a crossroads known locally as 'Currans Cross'. Here, it passes through Ballina townland along a local road in a westerly direction. It passes immediately to the north of a former schoolteacher's house (BH3). The road comes to a junction with the L2127, where two vernacular houses (AH3 and CH3) are located alongside the road (Plate 14-3). The Proposed Grid Connection continues to the north along the L2127 for a short distance, and then turns to the west, following the L2125. The route passes over a single-arch stone bridge which crosses a disused railway line (BH2; Plate 14-4). The Proposed Grid Connection continues along this road for 2.9km where it turns to the north along the R347. It passes immediately to the east of a cast-iron water pump (BH1) in Doonbeg townland. The Proposed Grid Connection follows the R347

in a northerly direction for 2.5km where it passes Ballinderry House demesne (DL1), defined by pasture and woodland to the immediate west of the Proposed Grid Connection. The route crosses the Grange River over a stone bridge (AH2; Plate 14-5), comprising a single-span bridge constructed of concrete with cut-limestone coping stones. A sundial (AH2) is located on the southwest pier. From the Grange River the Proposed Grid Connection continues to the north for a further 1.4km, where the route joins the L6141 and enters the Cloon 110kV substation in Cloonascragh townland.

In addition to the AH and BH sites described, the Proposed Grid Connection also passes several CH sites. These generally comprise vernacular buildings adjacent to the existing roads, and will therefore not be impacted by the excavation of the Proposed Grid Connection trench.

Proposed Turbine Delivery Route

The site inspection also included an assessment of a section of the proposed TDR where accommodation works are proposed. This consists of a single pasture field to the west of the Horseleap Cross Roads, at the junction of the N63, R332 and L2302 (Plates 14-6 – 14-7). The northern boundary of the field comprises a c. 3m high boundary wall on the southern side of the R332, constructed of irregularly coursed rubble limestone with a top course of limestone rubble (Plate 14-8). A c. 1.5m wide stone-arched culvert (Plate 14-9) is located roughly centrally along the wall, comprising rough-cut limestone voussoirs. The wall is supported by a c. 1m high base batter to the west of the culvert, which extends for c. 40m. The east boundary of the field comprises a mature hedgerow, and the west boundary is defined by the boundary wall and fence of a residential property. At the time of survey, a circular arrangement of loose stones was located in the centre of the field (Plate 14-10). This was not visible on aerial photography, historic mapping or Google Street View imagery of the site from July 2009 – October 2022. On inspection, there were clear clusters of stones, indicating that they had been deposited from a wheelbarrow or digger bucket. Modern materials, including rope and plastic, were mixed with the stones.

Proposed Wind Farm

The inspection of the proposed wind farm, including the position of the turbines, met mast, proposed access tracks, internal cable access tracks, construction compound and proposed substation, commenced in the southwest of the scheme, where the proposed access route joins the R332.

The southern part of the Proposed Wind Farm site contains Turbines 1–4, a proposed met mast, temporary construction compound, peat and spoil repositories and a portion of the Proposed Grid Connection including a 110kV substation and BESS compound. The proposed new road extends from the existing R332, through an existing field boundary. The area between the R332 and the proposed temporary construction compound comprises undulating pasture that rises to the northeast, with field boundaries comprising mature hedgerows and post-and-wire fencing. The proposed new road crosses TB1, the Lissavally/Dangan Eighter townland boundary formed by the Forty Acres stream (Plate 14-11).

The proposed temporary construction compound is located in a level pasture field, bound to the north, south and west by mature hedgerows and to the east by a lane. The proposed temporary construction compound extends into an area of woodland to the north. From the proposed temporary construction compound the proposed new road crosses the lane and passes through a pasture field to the location of Turbine 1. A cluster of vernacular buildings, CH21, is located immediately to the west of the proposed new road. This comprises three ruinous structures set around a yard (Plate 14-12). A large outbuilding is located to the north of this cluster, which comprises roughcast render walls with brick surrounds around door and window openings. The structure has been repaired in places with cement, and the roof level has been raised with cement blocks (Plate 14-13). A former lane passes to the southwest towards the locations of CH20, which are no longer upstanding.

Turbine 1 is located within a level arable field with post-and-wire and hedgerow field boundaries. The Dangan Eighter/Lecarrow townland boundary (TB2) is located 90m to the east of Turbine 1 and comprises a 3m wide stream (Lecarrow stream; Plate 14-14).

The proposed met mast is located 370m to the north-northwest of Turbine 1. This location is accessed via a farm track that leads from the L62312. This section of farm track is proposed for upgrade. The met mast is located within a gently undulating field of pasture, to the east of a well-maintained farm track. A drystone wall is located 6m to the north of the met mast location (Plate 14-15). The section of the Proposed Grid Connection including the 110kV substation and BESS compound are located to the north of the met mast, accessed by an existing lane proposed for upgrade. The 110kV substation and BESS compound are located within four pasture fields, divided by a northwest–southeast drystone wall (CH58), two southwest–northeast drystone walls (CH58) and a north–south hedgerow (Plates 14-16 – 14-17). Two courses of the drystone walls survive, and they measure 0.5m high and 0.3m wide. A vernacular building and a well were depicted on the 1892 OS map, although were not visible.

The proposed access route extends to the northeast from Turbine 1 to Turbine 2, passing through pasture fields, with the land gently climbing to the northeast. Turbine 2 is located immediately to the south of a large area of bogland, with level pasture surrounding the location in all other sides. The proposed access route continues to the north between Turbine 2 and Turbine 3, avoiding the area of bogland and passing through pasture.

Turbine 3 is located within a level pasture field. The field is waterlogged with tussocks of sedge, particularly to the south of Turbine 3. The L6301 local road located to the south of Turbine 3 is the Lecarrow/Cooloo townland boundary. AH85 is located 245m to the south of Turbine 3, although this is a redundant record and non-archaeological. The proposed new road extends through pasture fields to the north of Turbine 3, passing the site of vernacular houses (CH39) and an upstanding vernacular house (CH40). CH40 comprises a four-bay, single storey vernacular building, which post-dates the 1892 OS map (Plate 14-18). The proposed new road continues to the east towards Turbines 4 and 5.

Turbine 4 is located on a natural rise within a gently undulating field of pasture. Several shallow sub-circular depressions, filled with water at the time of survey, are located in the fields surrounding Turbine 4. These may be the result of natural water pooling, or potentially past quarrying activities. An enclosure and children's burial ground (AH86) are located on a natural rise within gently undulating pasture 395m east-northeast of Turbine 4 (Plates 14-19 – 14-21). The enclosure comprises a sub-circular bank, best preserved on the western side. Numerous stones are located within the enclosure, and may represent grave markers. A rectangular enclosure formed by an iron railing encloses a burial.

The northern part of the proposed wind farm contains Turbines 5–9. Turbine 5 is located within an area of bog that has been cut and is lower than the surrounding landscape. The area of bog is divided by drainage ditches. Proposed peat and spoil repositories are located to the east and west of Turbine 5, on adjacent areas of bog. The proposed new road extends to the northwest across bog and pasture towards Turbine 6, and to the northeast through pasture and forestry towards Turbines 8 and 9. Turbine 6 is located on a natural rise within a field of gently undulating pasture. A hill to the west of Turbine 6, which has evidence of quarrying on its southern side, has two lengths of wall (CH38) on its crest, constructed by courses of rubble and cement (Plates 14-22 – 14-23). The wall correlates with a wall depicted on the 1892 OS map.

The proposed access route leading to the northeast of Turbine 5 passes through pasture and forestry, crossing the Elmhill/Cooloo townland boundary (TB4), which comprises an unnamed stream (Plate 14-24). An existing path joins this route at the northern edge of the forestry, and leads to the southeast towards Turbine 8, which is located within a pasture field that rises gradually to the north. A farm is located 100m to the northeast of Turbine 8. Elmhill House (AH91), first depicted on the 1892 OS map, is located on the eastern edge of the farmyard (Plates 14-25 – 14-26). The modern entrance route to the farm follows the entrance avenue to the original Elmhill House depicted on the 1837 OS map (no traces of this house remain). Mature trees flank this entrance avenue. A cluster of vernacular buildings (CH41) were identified 320m to the northeast of Elmhill House on the 1837 OS map. These buildings were not

located, although a single-storey, four-bay structure was identified in this location, which is post-1892 in date (Plate 14-27).

Turbine 9 is located in a level pasture field that rises to the south and east. A coniferous plantation is located to the north and west of Turbine 9. From this location, the proposed new road leads to the northwest towards Turbine 7 across a wide expanse of level bog. The route of the proposed new road was largely inaccessible due to waterlogged ground conditions. Turbine 7 is located at the southern end of a field of rough pasture, in an area of waterlogged ground with wetland grass groundcover. The land rises slightly from the north of the field to the south. The proposed turbine hardstand extends to the southeast into an area of bog.

Other than the cultural heritage (CH) sites described above, no previously unidentified features of archaeological, architectural or cultural heritage significance were identified within the Proposed Wind Farm.

14.4 Likely Effects and Associated Mitigation Measures

Appendix 14-2 presents the results of the assessment of impacts on the archaeological, architectural and cultural heritage resource. Further description of effects and mitigation measures is outlined in Sections 14.4.1 to 14.4.5 below.

Definitions of archaeological and architectural mitigation strategies are outlined in Appendix 14-6.

14.4.1 'Do-Nothing' Scenario

There will no impact on the archaeological, architectural or cultural heritage resource if the Proposed Project does not go ahead.

If the Proposed Project were not to proceed, the existing land-use of peat cutting activities and pastoral agriculture would continue. The opportunity to harness the wind energy resource of County Galway 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.

14.4.2 Construction Phase (Indirect and Direct)

Indirect Effects on the Proposed Project

No indirect effects on archaeological, architectural and cultural heritage resource were identified which would occur during the construction phase of the Proposed Project.

Direct Effects on the Proposed Project

The construction of the Proposed Project will not result in any direct, negative effects on the recorded archaeological or architectural heritage resource as none of these sites are located within the footprint of the development that require excavations and ground works.

Four previously unidentified cultural heritage receptors (CH14, CH40, CH58, CH63) will be directly impacted by the construction of the Proposed Wind Farm:

- CH14, a stone wall and round-arch culvert, are within the route of the proposed TDR accommodation works. Prior to mitigation, these works will have a direct negative (permanent) effect on CH14. The effect will be slight.
- CH40, an upstanding vernacular house, is partially within the route of the proposed new road. Prior to mitigation, construction activities will have a direct negative (permanent) effect on CH40. The effect will be moderate.
- CH58 comprises the site of a vernacular building and well (no longer upstanding) and three drystone field walls, located within the location of the proposed substation. Construction of the substation will have a (permanent) effect on CH58. Prior to mitigation, the effect will be moderate.
- CH63, a curvilinear anomaly identified from aerial photography, is partially within the location of the proposed temporary construction compound and the route of the proposed new road. At this stage it is unknown whether the anomaly is of anthropogenic or natural origin, and its sensitivity is unknown. Construction activities have the potential for a direct, negative (permanent) effect to this potential cultural heritage receptor. Prior to the application of mitigation measures, effects may vary from moderate to significant.

No instream works are required to the watercourses within the Proposed Wind Farm site (AAP1–5) as clear-span watercourse crossings will be used. The watercourses have an enhanced archaeological potential, due to the prehistoric and historic use of watercourses. There are no predicted direct effects to watercourses.

The Proposed Grid Connection passes in close proximity to several archaeological, architectural and cultural heritage sites which are adjacent to the road (AH1; BH1, BH3, BH4; CH1–CH11, CH14–CH19) although no effects are predicted. The Proposed Grid Connection also passes through the Zone of Notification of two archaeological heritage receptors: bridge AH2 and vernacular building AH3. The laying of the cable route has the potential to have direct, negative (permanent) effects on features that may be associated with AH3. Direct effects to bridge AH2 will be avoided through the use of directional drilling although this method involves the excavation of launch and reception pits, which have the potential for direct, negative (permanent) effects to previously unrecorded archaeological features. Prior to the application of mitigation effects to AH2 and AH3 have the potential to range from slight to moderate, depending on the sensitivity of any such archaeological features. Potential effects will be limited as groundworks will be located within the width of the existing R347 and L2114 roads, which are likely to have disturbed potential sub-surface archaeological remains.

The Proposed Grid Connection will cross a further eight watercourses. Instream works are not required, with alternative crossing methodologies including standard formation over, standard formation under and directional drilling. No effects on watercourses along the Proposed Grid Connection are predicted.

The Proposed Grid Connection also passes road bridge BH2. Direct effects will be avoided by the use of directional drilling.

The Proposed Wind Farm road passes through six townland boundaries, five of which have a physical expression (TB1–4, TB6). Three of the townland boundaries are watercourses (TB1, TB2, TB4) and will be crossed by clear-span watercourse crossings. There will be no effects to these townland boundaries. Construction activities will have direct, negative (permanent) effects to TB3 (a road) and TB6 (a ditch with an existing crossing at the location of the proposed new road). The effects will be limited to small sections of the townland boundaries, with sections preserved to either side of the new roads. The effects will be slight.

Much of the Proposed Wind Farm site has been disturbed by turbary peat extraction activities; however, it remains possible that previously unknown archaeological sites and features may survive below the current ground level across the area, particularly in areas of pasture that have not been previously disturbed. Ground disturbances associated with the Proposed Wind Farm, such as the construction of access roads and excavations for turbines bases, compounds and the substation, have the potential to result in direct, negative (permanent) effects on any such remains that may be present.

Prior to the application of mitigation these effects have the potential to range from moderate to significant, depending on the sensitivity of any such archaeological features.

The proposed TDR accommodation area passes through c. 55m of previously undisturbed greenfield adjacent to the west of the Horseleap Cross Roads (the junction of the N63, R332 and L2302). Excavation of the TDR accommodation area has the potential for direct, negative (permanent) effects to previously unrecorded archaeological features. Prior to the application of mitigation measures, these effects may range from moderate to significant, depending on the sensitivity of any such archaeological features.

Mitigation and Monitoring Measures During Construction Phase

Prior to the commencement of construction, a programme of targeted geophysical survey will be carried out at the location of the proposed temporary construction compound to investigate CH63, a curvilinear anomaly identified from aerial photography. The geophysical survey will be carried out under licence to the National Monuments Service of the DHLGH. Dependent on the results of the geophysical survey, further mitigation may be required. Any further mitigation will require agreement from the DHLGH.

Prior to the commencement of construction, a programme of targeted archaeological test trenching will be carried out at the accessible locations of proposed infrastructure, including the proposed turbine hardstands, temporary construction compound, 110kV substation and BESS compound and along the access roads and TDR accommodation area. Archaeological test trenching will also assess the site of previously unidentified cultural heritage receptor CH58. Archaeological test trenching will be carried out under licence to the National Monuments Service of the DHLGH. Dependent on the results of the testing assessment, further mitigation may be required, such as preservation by record or in-situ and/or archaeological monitoring. Any further mitigation will require agreement from the DHLGH.

All interventions that are required along townland boundaries, as part of the construction of the Proposed Project, will be subject to archaeological monitoring, to include a full record of the sections of townland boundaries that are removed. This work will be carried out under licence to the National Monuments Service of the DHLGH.

All topsoil stripping associated with the Proposed Wind Farm, including site investigation, will be subject to archaeological monitoring. This work will be carried out under licence to the National Monuments Service of the DHLGH. If archaeological remains are identified during the course of these works further mitigation may be required, such as preservation by record or in-situ. Any further mitigation will require agreement from the DHLGH.

The excavation of the Proposed Grid Connection within the Zone of Notification of AH2 and AH3 will be monitored. This work will be carried out under licence to the National Monuments Service of the DHLGH. If archaeological remains are identified during the course of these works further mitigation may be required, such as preservation by record or in-situ. Any further mitigation will require agreement from the DHLGH.

Upstanding elements of cultural heritage receptors subject to direct, negative (permanent) impacts (CH14, CH40, CH58) will be surveyed and a written and photographic record compiled prior to the commencement of construction.

Residual Effects

Following the application of mitigation measures the Proposed Project direct, negative (permanent) effects on four previously unidentified cultural heritage receptors (CH14, CH40, CH58, CH63) will not be significant.

Following the application of mitigation measures the Proposed Project will have direct, negative (permanent) effects of slight significance on five Areas of Archaeological Potential (AAP1–5).

Following the application of mitigation measures the Proposed Project will have direct, negative (permanent) effects of slight significance on a bridge (BH2).

Following the application of mitigation measures the Proposed Project will have direct, negative (permanent) effects of imperceptible significance on two townland boundaries (TB3 and TB6).

Following the application of mitigation measures ground disturbance associated with the Proposed Project will have direct, negative (permanent) effects of slight significance on previously unknown sub-surface archaeological remains within the Proposed Wind Farm and the proposed TDR accommodation area.

Significance of Effects

Following the completion of the mitigation measures, there will be no significant negative residual effects on the archaeological, architectural and cultural heritage resource.

14.4.3 Operation Phase (Indirect)

A full assessment of the operational impacts on the archaeological, architectural and cultural heritage resource has been carried out and is included in Appendix 14-2. This has been carried out utilizing the photomontages and Theoretical Zone of Visibility mapping for the development produced as part of the Landscape and Visual assessment (Chapter 14). The assessment assumes a long term effects (rather than permanent) and includes the following:

- Sites of national significance within 10km of the proposed turbine layout
- Archaeological Heritage (AH) sites within 5km of the proposed turbine layout
- Built Heritage (BH) sites within 5km of the proposed turbine layout
- Designed Landscapes (DL) within 5km of the proposed turbine layout
- Cultural Heritage (CH) sites within 2km of the proposed turbine layout

With regards to sites of national significance, no significant negative operational impacts have been identified.

No significant negative operational effects are predicted upon Archaeological Heritage sites, Built Heritage sites, Designed Landscapes or Cultural Heritage sites. Moderate effects are predicted on seven Archaeological Heritage sites (AH86, AH90, AH91, AH92, AH93, AH95, AH96) and eight Cultural Heritage sites (CH21, CH23, CH24, CH31, CH37, CH41, CH42, CH50) due to the proximity of the proposed turbines.

The remaining operational effects upon Archaeological Heritage sites, Built Heritage sites, Designed Landscapes and Cultural Heritage sites vary between imperceptible and slight negative, with a number of sites not subject to any effects due to the fact that the Theoretical Zone of Visibility mapping indicates that the turbines will not be visible from certain locations within the study area.

Mitigation and Monitoring Measures During Operational Phase

It is noted that natural screening, boundaries, buildings and vegetation are not taken into account in the ZTV model and therefore potential visual effects are likely to be less severe. It is noted that indirect effects are not permanent and would be removed following the decommissioning and removal of the turbines.

It is not possible to mitigate indirect effects on the archaeological, architectural and cultural heritage resource, due to the nature and scale of the proposed turbines within the landscape. It is noted that

effects are not permanent and would be removed following the decommissioning and removal of the turbines.

Residual Effects

There will be residual effects on the archaeological, architectural and cultural heritage resource, due to indirect effects on the setting of a number of recorded sites and structures, ranging from imperceptible to moderate significance. Whilst these are long-term effects, they are not permanent.

Significance of Effect

There are no further significant negative effects on the archaeological, architectural and cultural heritage resource.

14.4.4 Operation Phase (Direct)

No direct effects on archaeological, architectural and cultural heritage resource are noted during the operational phase of the Proposed Project.

14.4.5 Decommissioning Phase

The decommissioning of the Proposed Wind Farm will not have any negative effects on the archaeological, architectural or cultural heritage resource as no new ground disturbances will be introduced that may affect sub-surface archaeological remains.

No mitigation is required for the decommissioning phase, as no effects are predicted.

14.5 Cumulative Effects

A review of the proposed and permitted developments within 10km of the proposed project has been carried out in order to identify any potential construction cumulative effects. Given that any archaeological remains identified within the footprint of the proposed project will be preserved in-situ or by record, no negative cumulative construction effects have been identified.

The following proposed or permitted windfarms within 20km of the Proposed Project have been assessed for potential negative operational cumulative impacts upon the archaeological, architectural and cultural heritage resource:

- Permitted Cloonascragh Wind Turbine (no. 1), c. 10.5km west
- Proposed Clonberne Wind Farm (no. 11), c. 5.4km north
- Proposed Laurclavagh Wind Farm (no. 8), c. 17.4km west
- Proposed Gannow Wind Farm (no. 8), c. 18.5km south

No negative cumulative effects have been identified. Whilst the above wind farms will be visible in the wider landscape, no cumulative impacts have been identified that are greater than impacts already predicted as part of each development. No significant negative cumulative impacts have been identified.