

## 10. CULTURAL HERITAGE

### 10.1 Introduction

This cultural heritage chapter was prepared by Tobar Archaeological Services Ltd (Tobar). It presents the results of an archaeological, architectural and cultural heritage impact assessment of the Subject Development.

The purpose of this chapter is to assess the potential direct and indirect effects of the Subject Development on the surrounding archaeological, architectural and cultural heritage landscape. The assessment is based on a desktop review of the available cultural heritage and archaeological data, previous field inspection of the Permitted Development footprint and the results of archaeological monitoring of ground works during the construction stage of the Meenbog Windfarm. An assessment of potential effects, including cumulative effects, is presented.

The list below provides terminology used in this rEiAR.

- > **'Site'**: refers to the primary rEiAR study area as shown in green in Figure 1-1.
- > **'Permitted Development'**: means the permitted wind farm development including, wind turbine infrastructure, internal site roads and all supporting infrastructure, including the grid connection, which was granted permission by the Board under Planning Ref: ABP-300460-17 as amended by ABP-303729-19.
- > **'Subject Development'**: means the 25 deviations from the Permitted Development as shown in Figure 1-2, for which substitute consent is being sought.
- > **'Meenbog Windfarm'** means both the Permitted Development and the Subject Development combined.
- > **'November 2020 Peatslide'** means the peatslide or peat movement that occurred on 12th November 2020, during the construction of a permitted access road to turbine T7.

#### 10.1.1 Site Location

The Subject Development site is located in Co. Donegal approximately 8km southwest of the twin towns of Ballybofey and Stranorlar and approximately 12km northeast of Donegal Town. The approximate centre of the site is X 607489 Y 885959 (ITM Coordinates). The Site location is shown in Figure 10.1 below. The Site measures c. 903 hectares and comprises of a mix of coniferous forestry, blanket bog and the partially constructed Meenbog Windfarm. The elevation of the site ranges between approximately 145 metres O.D. and 312 metres O.D.

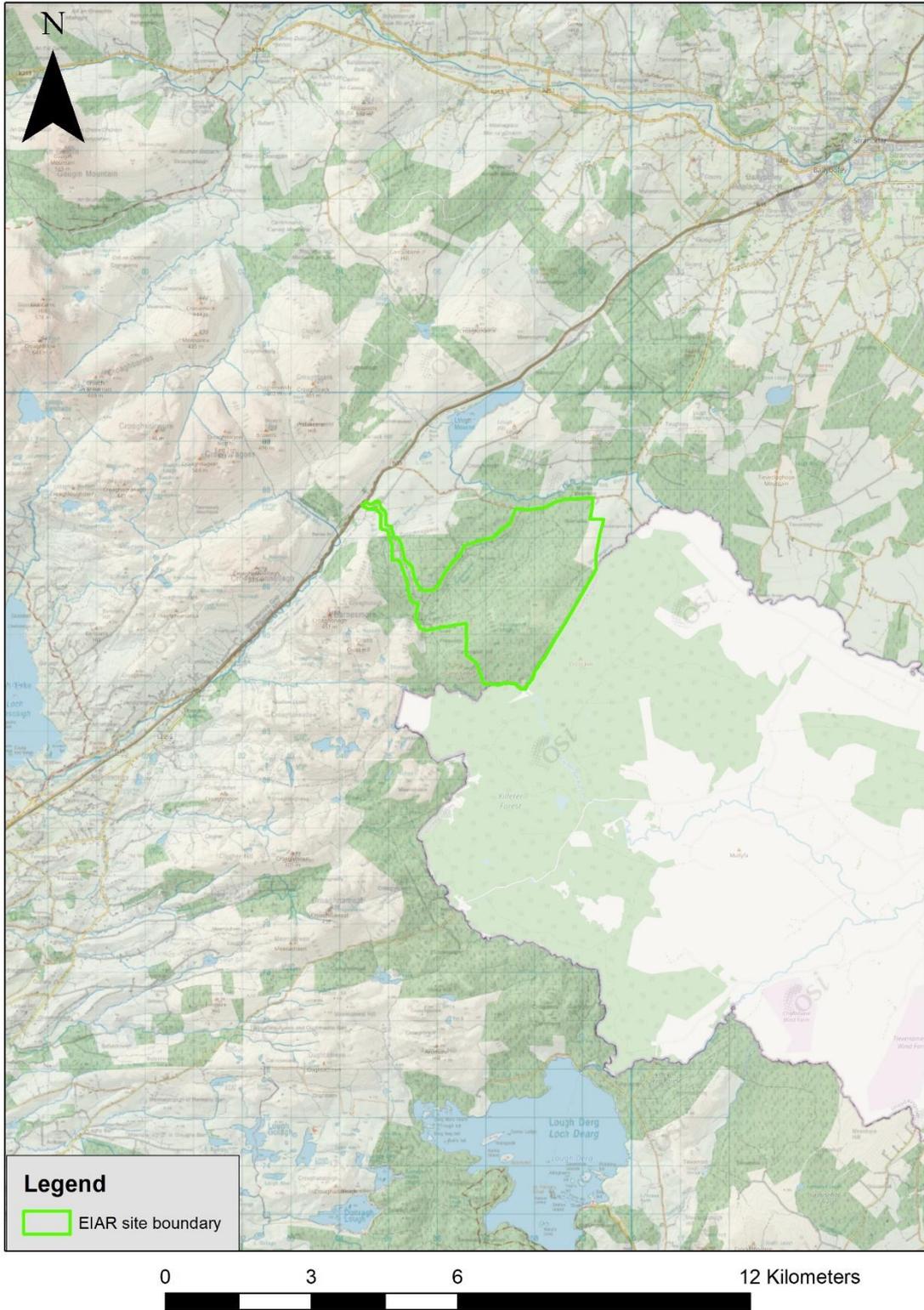


Figure 10.1: Site location map.

## 10.1.2 Statement of Authority

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

## 10.1.3 Relevant Guidance and Legislation

### 10.1.3.1 Guidance

The assessment of the potential effects of the Subject Development on cultural heritage has been carried out in accordance with the various planning policies and strategy guidance detailed in Section 1.6 in Chapter 1 of this rEIAR and the following:

- Architectural Heritage Protection Guidelines for Planning Authorities (Department of Arts, Heritage and the Gaeltacht, 2011).
- Advice Notes on Current Practice (in preparation of Environmental Impact Statements) (Environmental Protection Agency (EPA), 2003).
- Guidelines on the information to be contained on the Environmental Impact Assessment Report (EPA, 2022).
- Department of Arts, Heritage, Gaeltacht and the Islands, 1999, Framework and Principles for the Protection of the Archaeological Heritage, 1999.
- Guidance on Setting and the Historic Environment, Historic Environment Division, February 2018.
- European Commission (2020). Guidance document on wind energy developments and EU nature legislation. Publications Office of the European Union, Luxembourg.
- Planning and Development Act 2000 (as amended).
- DoHPLG (2018). Guidelines for planning authorities and An Bord Pleanála on carrying out Environmental Impact Assessment. Department of Housing, Planning and Local Government, Government of Ireland, Dublin.
- Donegal County Council (2018). Donegal County Development Plan 2018-2024.
- Draft County Donegal Development Plan 2024-2030

### 10.1.3.2 Legislation

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

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

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

given the notice. All proposed works, therefore, within or around any archaeological monument are subject to statutory protection and legislation (National Monuments Acts 1930-2004).

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

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

### 10.1.3.3 Granada Convention

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

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

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

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

### 10.1.3.4 Donegal County Development Plan 2018-2024

The Donegal County Development Plan 2018-2024 (as varied) (“The Development Plan”) outlines a number of policies and objectives relating to archaeology and heritage (see below). The principal aim of Chapter 6 of the plan is to ‘To preserve, protect and enhance the built heritage of the County....’.

#### 10.1.3.4.1 Built Heritage

Donegal County Council, “The Council”, recognises that there are many vernacular buildings that add to the beautiful and rugged landscape synonymous with Donegal but that are not included in the current Record of Protected Structures (RPS). As well as commencing a programme to add such structures to the RPS, where they are on the NIAH, the Council will also work within rural housing policy to encourage the re-use of many of the derelict cottages and buildings (pg. 135).

Objectives relating to built heritage include:

**BH-O-1:** To preserve, protect, enhance and record the architectural heritage of the County.

**BH-O-2:** To further consolidate and protect the built heritage of the County through a systematic programme of additions to the Record of Protected Structures having regard to Ministerial recommendations arising from the NIAH survey of Donegal, the designation of Architectural Conservation Areas, the safeguarding of Historic Gardens, the preparation of Village Design Statements for the County’s 5 Heritage Towns.

Policies relating to built heritage include:

**BH-P-1:** It is a Policy of the Council to conserve and protect all structures (or parts of structures) and sites contained in the Record of Protected Structures that are of special architectural, historic, archaeological, artistic, cultural, scientific, social or technical interest.

**BH-P-2:** It is a policy of the Council to review the RPS on an ongoing basis, and to add structures (or parts of structures) of special interest, including, those recommended by the Minister through the NIAH Survey of Donegal or other buildings which the Council consider to have special interest.

**BH-P-3:** It is a policy of the Council to ensure retention of vernacular and/or historic structures (and parts of structures), including their functional and decorative details, that are sensitive to traditional construction methods and materials and do not have a detrimental impact on the character or appearance of a structure and are in accordance with current conservation guidelines and best practice.

**BH-P-4:** It is a policy of the Council to ensure the repair, reuse and appropriate refurbishment of vernacular and/or historic buildings, which make a positive contribution to the built heritage of the area including those as referred to on the National Inventory of Architectural Heritage.

#### 10.1.3.4.2 Archaeological Heritage

The aim of the Development Plan with regard to archaeological heritage is,

*“To conserve and protect the County’s archaeological heritage for present and future generations while encouraging appreciation and enjoyment of these valuable, non-renewable, cultural resources through sustainable management, sensitive enhancement and appropriate development.”* (pg. 138).

Policies relating to archaeological heritage include:

**AH-P-1:** It is a policy of the Council to protect and enhance the integrity of Archaeological Monuments and their settings and to secure the preservation in-situ of all archaeological monuments included on the Record of Monuments and Places. Preservation by record shall only be considered in exceptional circumstances where the principles of the Department of Arts, Heritage, Gaeltacht and the Islands

publication entitled, 'Framework and Principles for the Protection of Archaeological Heritage' can be satisfied.

**AH-P-2:** It is the policy of the Council to conserve and protect Zones of Archaeological Potential located in the urban areas of Ballyshannon, Donegal Town, Killybegs, Lifford, Ramelton, Rathmullan and St. Johnston as identified in the Record of Monuments and Places.

**AH-P-3:** It is the policy of the Council to protect the character, settings of and views from National Monuments and Recorded Monuments and to manage development which would be considered to (visually or physically) intrude upon or inhibit the enjoyment of the amenities of these sites.

**AH-P-4:** It is the policy of the Council to protect where appropriate, the character and setting of any unrecorded archaeological object or site.

**AH-P-5:** It is the policy of the Council to protect and preserve archaeological sites, their characters and settings which have been identified subsequent to the publication of the Record of Monument and Places.

**AH-P-6:** It is the policy of the Council to protect and conserve historic graveyards identified in the Record of Monuments and Places (including those in the guardianship of Donegal County Council) in cooperation with the National Monuments Service of the Departments of Arts, Heritage, Regional, Rural and Gaeltacht Affairs and encourage their management in accordance with legislation, conservation principles and best practice.

**AH-P-7:** It is the policy of the Council to protect and preserve underwater archaeological sites in rivers, lakes, intertidal and sub-tidal locations.

**AH-P-8:** It is the policy of the Council to protect known battlefield sites and their settings.

### 10.1.3.5 **Draft County Donegal Development Plan 2024-2030**

The Draft County Donegal Development Plan 2024-2030 was published in August 2023 and contains a number of objectives and policies relating to archaeological and architectural heritage as follows:

#### 10.1.3.5.1 **Built and Architectural Conservation – General Objectives and Policies**

**AH-O-1** Conserve, manage, protect and enhance the architectural heritage of Donegal namely Protected Structures, Architectural Conservation Areas, NIAH structures, designed landscapes and historic gardens, vernacular, industrial and maritime built heritage, character and setting of such structures.

**AH-O-2** Promote the sustainable and sensitive re-use of the existing built heritage as a positive response to climate change, and promote the circular economy and climate mitigation and adaptation through proper maintenance, repair and appropriate retrofitting, adaptative re-use and regeneration employing best conservation practice.

**AH-P-1** Seek to ensure best conservation practice through the application of the Guiding Principles of Architectural Conservation as referenced above, where appropriate including in relation to RPS, NIAH, and Vernacular structures and within ACA's. In this regard, the use of specialist conservation professionals, conservation plans and crafts persons shall be encouraged.

**AH-P-2** Protect traditional shopfronts and signage and where required and appropriate, ensure new shopfronts are of a high-quality architectural design.

#### **Protected Structures**

**AH-O-3** Protect all structures and parts of structures on the Record of Protected Structures and to extend the RPS where appropriate.

AH-P-3 a. Protect all structures or parts of structures on the RPS to include protection of the curtilage, attendant grounds; and, b. Require that development proposals directly affecting structures on the RPS are appropriate in terms of architectural treatment, character, scale, and form to the existing protected structure and not detrimental to the special character and integrity of the protected structure and its setting, save to the extent necessary to provide for strategic infrastructure projects including the TEN-T Priority Route Improvement Project, Donegal.

AH-P-4 a. Extend the Record of Protected Structures in order to provide a comprehensive schedule for the protection of structures of special importance in the County during the lifetime of the Plan; and b. Identify structures for inclusion in the Record of Protected Structures based on the criteria set out in the Architectural Heritage Protection, Guidelines for Planning Authorities (2011), the NIAH and Ministerial recommendations.

AH-P-5 Any proposed development that includes proposed works to an RPS structure shall, where appropriate, provide for the works affecting the Structure to be carried out in the first phase of the development to prevent endangerment, abandonment and/or dereliction of the structure.

### National Inventory of Architectural Heritage

AH-P-7 Require that development of structures on the NIAH including the curtilage, attendant grounds and setting of the structure are appropriate in terms of architectural treatment, character, scale, and form, and is not detrimental to the special character and integrity of the structure and its setting, save to the extent necessary to provide for strategic infrastructure projects including the TEN-T Priority Route Improvement Project, Donegal.

AH-P-8 Ensure high quality architectural design of all new development relating to or which may impact on NIAH structures (and their setting) save to the extent necessary to provide for strategic infrastructure projects including the TEN-T Priority Route Improvement Project, Donegal.

### Vernacular Architecture

AH-P-9 Seek to protect, conserve and preserve vernacular structures and enhance the established character, forms, material features, and settings of vernacular buildings that are considered to be intrinsic elements of the character of a place, save to the extent necessary to provide for strategic infrastructure projects including the TEN-T Priority Route Improvement Project, Donegal, including: a. Vernacular and traditional style farmhouse buildings including Clachans and local authority labourer's cottages. b. Vernacular buildings, groupings of buildings on Donegal's Islands. c. Historic thatch structures as a key component of the built heritage of the county.

AH-P-10 Seek to ensure that conversions or extensions to vernacular buildings and the provision of new adjoining buildings shall be of a scale and form that complements the existing building and ensures that the distinctiveness and character of the vernacular form is retained and respected.

## 10.1.3.5.2 Archaeological Heritage

### Sites and Monuments Record

AYH-O-1 To conserve and protect archaeological heritage, achieve a greater public knowledge and appreciation of archaeology, protect existing access to, and where appropriate provide new access and visitor infrastructure for, such heritage.

AYH-P-1 Save to the extent necessary to allow for the provision of strategic infrastructure projects including in particular the TEN-T Priority Route Improvement Project, Donegal: a. conserve and protect all forms of archaeological heritage including:

- i. National Monuments,
- ii. Structures on the Record of Historic Monuments (RHM),
- iii. the Record of Monuments and Places (RMP)
- iv. Sites and Monument Record (SMR),

- v. Historic Graveyards and environs,
  - vi. Historic Towns,
  - vii. Historic battlefield sites,
  - viii. Unrecorded archaeology
  - ix. Industrial and post-medieval archaeology;
  - x. Underwater archaeology and
  - xi. The settings of such heritage in accordance with the publication Framework and Principles for the Protection of Archaeological Heritage (DoAHGI 1999);
- and b. Conserve and Protect Zones of Archaeological Protection located in Urban areas of Ballyshannon, Donegal Town, Killybegs, Lifford, Ramelton, Rathmullan and St. Johnston as identified in the Record of Monuments and Places including requiring the carrying out of archaeological assessment prior to the granting of permission and the imposition of archaeological monitoring planning conditions.

AYH-P-2 Save to the extent necessary to allow for the provision of strategic infrastructure projects including in particular the TEN-T Priority Route Improvement Project, Donegal, protect existing access to, and facilitate appropriate new public access, informational and visitor infrastructure for, archaeological heritage (including signage, parking, pedestrian access, commemorative memorials, and interpretative facilities) where such development would not be detrimental to the character or setting of said heritage where statutory consent has been obtained from the National Monuments Service and where the development would not otherwise negatively impact on traffic safety, local residential amenities, natural environment or the visual or scenic amenities of the area.

AYH-P-3 Save to the extent necessary to allow for the provision of strategic infrastructure projects including in particular the TEN-T Priority Route Improvement Project, Donegal, ensure that development proposals affecting archaeological heritage sites shall: a. Sensitive incorporate archaeological heritage Preserved In Situ in a manner which is compatible with the protection and proper management of such heritage and its setting including adequate safeguards from damage/vandalism and for public safety and suitable informational signage. b. Be accompanied by a long-term management plan that incorporates appropriate protections for the heritage site. c. Provide appropriate informational signage regarding any archaeological heritage which has been identified and Preserved by Record during the course of construction to an agreed standard with Donegal County Council and the National Monuments Service.

AYH-P-4 Ensure that historic graveyards in the ownership or care of the Council are managed and maintained in accordance with legislation, appropriate/best conservation standards, in consultation with the National Monuments Service and the Department of Housing Local Government and Heritage.

## 10.1.4 Statutory Consultations

No responses relating to cultural heritage were received from statutory bodies on foot of the scoping process for this rEiAR.

## 10.2 Assessment Methodology

The assessment of the Cultural Heritage, including archaeology and architecture, of the Subject Development primarily included geographic information system (GIS) mapping and desk-based research in addition to field inspection carried out during the previous assessment of the Site for the Permitted Development.

### 10.2.1 Geographical Information Systems (GIS)

GIS is a computer database which captures, stores, analyses, manages and presents data that is linked to location. GIS is geographic information systems which includes mapping software and its application with remote sensing, land surveying, aerial photography, mathematics, photogrammetry, geography and tools that can be implemented with GIS software. GIS was used to manage the datasets relevant to the archaeological and architectural heritage assessment and for the creation of all the maps in this section of the report. This involved the overlaying of the relevant archaeological and architectural datasets on

georeferenced aerial photographs and road maps (i.e. Economic and Social Research Institute (ESRI)), where available. The integration of this spatial information allows for the accurate measurement of distances of a proposed development from archaeological, architectural and cultural heritage sites and the extraction of information on ‘monument types’ from the datasets. Areas of archaeological or architectural sensitivity may then be highlighted in order to mitigate the potential negative effects of a development on Cultural Heritage.

## 10.2.2 Desktop Assessment

The following sources were consulted as part of the desktop assessment for the Subject Development:

- The Record of Monuments and Places (RMP)
- The Sites and Monuments Record (SMR)
- The Sites and Monuments Record NI (NISMR)
- National Monuments in State Care County Donegal
- The Topographical Files of the National Museum of Ireland
- First edition Ordnance Survey maps (OSI)
- Second edition Ordnance Survey maps (OSI)
- Aerial photographs (copyright of Ordnance Survey Ireland (OSI))
- Excavations Database
- National Inventory of Architectural Heritage (NIAH)
- Record of Protected Structures (RPS)
- County Donegal Development Plan 2018-2024 as varied (“the Development Plan”)
- Draft County Donegal Development Plan 2024-2030

Report on Archaeological Monitoring of a Windfarm Development at Meenbog, County Donegal (Delany, 2023) (the Meenbog Windfarm)

Each of these are discussed in the following sections.

### 10.2.2.1 Record of Monuments and Places, Sites and Monuments Record, Sites and Monuments Record NI, and National Monuments

A primary cartographic source and base-line data for the assessment was the consultation of the Sites and Monuments Record (SMR) and Record of Monuments and Places (RMP) for County Donegal and the Sites and Monuments Record for Northern Ireland (NISMR). All known recorded archaeological monuments are indicated on 6-inch Ordnance Survey (OS) maps and are listed in these records. The SMR/RMP is not a complete record of all monuments as newly discovered sites may not appear in the list or accompanying maps. In conjunction with the consultation of the SMR and RMP the electronic database of recorded monuments and SMRs (ROI) which may be accessed at [www.heritagedata.maps.arcgis.com](http://www.heritagedata.maps.arcgis.com) was also consulted.

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

### 10.2.2.2 Cartographic Sources and Aerial Photography

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

### 10.2.2.3 Topographical Files - National Museum of Ireland

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

#### 10.2.2.4 Archaeological Inventory Series

Further information on archaeological sites may be obtained in the published County Archaeological Inventory series prepared by the Department of Housing, Local Government and Heritage (DHLGH). The archaeological inventories present summarised information on sites listed in the SMR/RMP and include detail such as the size and location of particular monuments, as well as any associated folklore or local information pertaining to each site. The inventories, however, do not account for all sites or items of cultural heritage interest which are undiscovered at the time of their publication. Many sites have been discovered since the publication of the Inventory Series, which have now been added to the Sites and Monuments Record.

#### 10.2.2.5 Record of Protected Structures

The current County Development Plan was consulted for the schedule of buildings (Record of Protected Structures) and items of cultural, historical or archaeological interest which may be affected by the Subject Development. The Development Plan also outlines policies and objectives relating to the protection of the archaeological, historical and architectural heritage landscape of County Donegal. The dataset for the Donegal Record of Protected Structures was added to the base mapping for the Subject Development in order to accurately assess any potential impacts on such structures.

#### 10.2.2.6 Excavations Database

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

#### 10.2.2.7 National Inventory of Architectural Heritage (NIAH)

This source lists some of the architecturally significant buildings and items of cultural heritage and is compiled on a county-by-county basis by the Department of Housing, Local Government and Heritage (DHLGH). The NIAH database was consulted for all townlands within and adjacent to the Site. The NIAH survey has been published and the digital dataset was downloaded on to the base mapping for the Subject Development ([www.buildingsofireland.ie](http://www.buildingsofireland.ie)). The National Inventory of Architectural Heritage (NIAH) is a state initiative under the administration of the Department of Housing, Local Government and Heritage (DHLGH) and established on a statutory basis under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999.

The purpose of the NIAH is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. NIAH surveys provide the basis for the recommendations of the Minister for the Department of Culture, Heritage and the Gaeltacht to the planning authorities for the inclusion of particular structures in their Record of Protected Structures.

#### 10.2.2.8 Previous Assessments

The Site was the subject of a cultural heritage assessment which was carried out by Tobar for the planning application for the Permitted Development. The assessment included desk-based research and a walk-over survey of the Site which was undertaken in 2015 and 2017

#### 10.2.3 Field Inspection

The Site was subject to a walk-over survey in 2015 and 2017. A photographic and descriptive record was made of the Site and any features of interest therein.

## 10.2.4 Assessment of Likely Significant Effects

The likely effects on the existing Cultural Heritage environment are assessed using the criteria as set out in the *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (EPA, 2022) and described in section 1.8 of Chapter 1. The following terminology is used when describing the likely effects of the Subject Development from a Cultural Heritage perspective.

### 10.2.4.1 Types of Impact

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

#### 10.2.4.1.1 Magnitude of Effects (Significance)

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

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

The Meenbog Windfarm as constructed to-date (including the Subject Development) is consistent in terms of the nature, scale, and extent of impacts to the environment as assessed in the EIAR for the Permitted Development, and as assessed in the EIA and AA undertaken by the Board. The deviations which comprise of the Subject Development are minor in scale, occur in similar locations to the previously assessed and permitted plans, do not change the nature or scale of the Permitted Development, and do not materially alter the environmental impacts associated with the Permitted Development.

The Subject Development is detailed in Chapter 3 of the rEIAR.

Given the nature of the deviations which comprise the Subject Development and their location in areas adjacent to the Permitted Development footprint they are not deemed to be as visually prominent as elements such as turbines or substation buildings (previously assessed).

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

Table 10.1: Distance considered according to sensitivity

Cultural Heritage Asset	Distance Considered from the Subject Development
UNESCO World Heritage Sites (including tentative sites)	2km
National Monuments (State Ownership and Preservation Order Sites)	1km
Sites and Monuments and Recorded Monuments, RPS	Within the Site
NIAH structures	Within the Site
Undesignated sites, if relevant	500m

## 10.3 Existing Environment

### 10.3.1 Archaeological, Architectural and Cultural Heritage

A number of documentary and cartographic sources (as listed in Section 10.2 above) were utilised in order to ascertain the potential for the presence of architectural /cultural heritage features on or within the Site. Archaeological heritage includes UNESCO World Heritage Sites and those on the tentative list, National Monuments in State Care and those which are subject to a preservation order, sites listed in the RMP/SMR and NISMR, and newly discovered archaeological sites. Cultural heritage includes items such as buildings, farmhouses, gates, bridges, piers, and stone field boundaries. Each of these are addressed in the following sections. Sub-surface archaeology is also addressed in the assessment.

#### 10.3.1.1 UNESCO World Heritage Sites and those on Tentative List

No UNESCO World Heritage Sites (WHS) or those on the Tentative list are located on or within 2km of the Subject Development. The nearest WHS (Tentative list) comprises the Passage Tomb Landscape of County Sligo which is situated c.61km to the south-west.

#### 10.3.1.2 National Monuments

National Monuments are those recorded monuments which are in the ownership / guardianship of the Minister for Housing, Local Government and Heritage. They are frequently referred to as being in 'State Care'. National Monuments also include those which are subject to a Preservation Order. No National Monuments or those subject to a Preservation Order are located within the Site or within 1km of the Subject Development or the Site. No monuments in State Care NI are located within 1km of the Subject Development.

The nearest monuments in State Care or subject to a Preservation Order are located c. 15km and 11km to the south-west and north-east of the Subject Development Site, respectively.

### 10.3.1.3 **Recorded Monuments**

No recorded monuments (SMR or NI SMR) are located within the Site. The nearest monument TY014-002 is situated c. 1.2km to the south-west of the Site in County Tyrone and comprises a possible crannog detected by aerial photography.

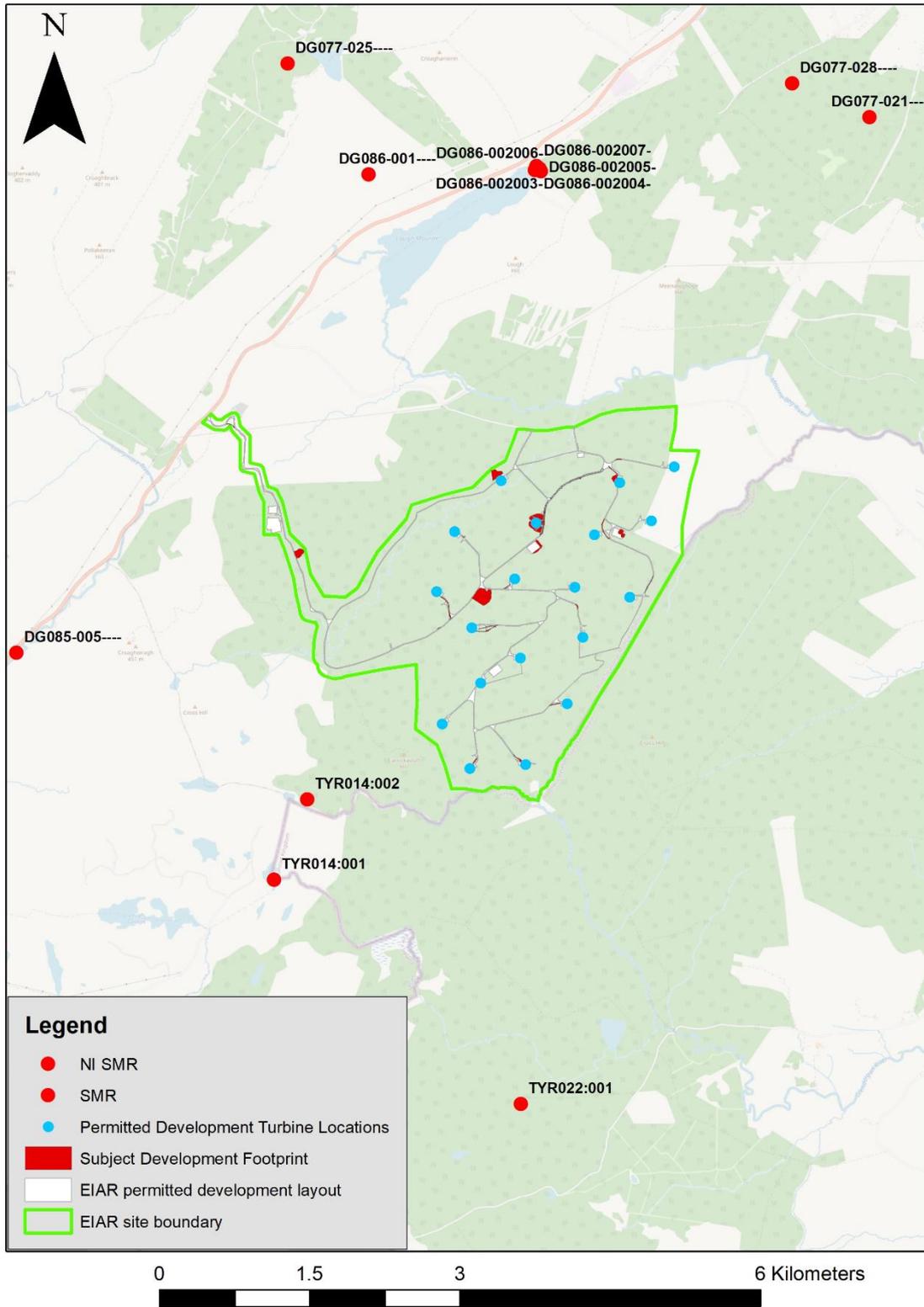


Figure 10.2: Nearest recorded monuments to Site.

### 10.3.1.4 Previously Unrecorded Monuments

No previously unrecorded archaeological monuments were noted within the Site during the walk-over surveys carried out by Tobar in 2015 and 2017.

### 10.3.1.5 Excavations Database

The database of excavations carried out in Ireland ([www.excavations.ie](http://www.excavations.ie)) was consulted for any such licensed work which took place on or adjacent to the Site. One entry was returned for Meenbog and relates to the archaeological monitoring of ground works carried out during the construction of the Meenbog Windfarm. The monitoring was undertaken between November 2019 and November 2020 by Dominic Delaney & Associates under Excavation Licence Number: 19E0739 and in compliance with Condition No. 17 of the grant of planning permission (Ref. ABP-300460-17). No archaeological finds or features were uncovered during the monitoring and the summary of the work as provided on the Database is as follows:

***2020:584 - Meenbog, Donegal***

*County: Donegal Site name: Meenbog*

*Sites and Monuments Record No.: None Licence number: 19E0739*

*Author: Dominic Delany*

*Site type: No archaeology found*

*ITM: E 607502m, N 886075m*

*Archaeological monitoring was carried out during the construction stage of a windfarm development at Meenbog, Co. Donegal, between November 2019 and November 2020. The development involved the construction of 18 turbines, 3 borrow pits, 2 temporary construction compounds, sub-station, met mast, new site roads and upgrades to existing tracks and roads, as well as ducting and ancillary works. There are no recorded monuments, protected structures or items of architectural heritage interest located on the development site. No archaeology was found during monitoring.*

### 10.3.1.6 Topographical Files of the National Museum of Ireland

The topographical files of the National Museum of Ireland were consulted for archaeological finds from the townlands within or adjacent to the Site. No find spots are recorded from within the Site. One find is recorded from Croaghonagh townland, c. 344m north of the Site, as follows:

*Reg: 2006:31*

*Monument: None*

*Finds: Lenght of straw(?) rope*

*Townland: Croaghonagh*

*Parish: Donaghmore*

*Barony: Raphoe*

*Vicinity of:*

*County: Donegal*

*OS 6" sheet: 77 - 47.9 from west, 35.7 from south*

*ITM: 608062, 887955*

*Found in bog, excavated by NMI*

*Found in turf cutting under 50cm of cutaway bog*

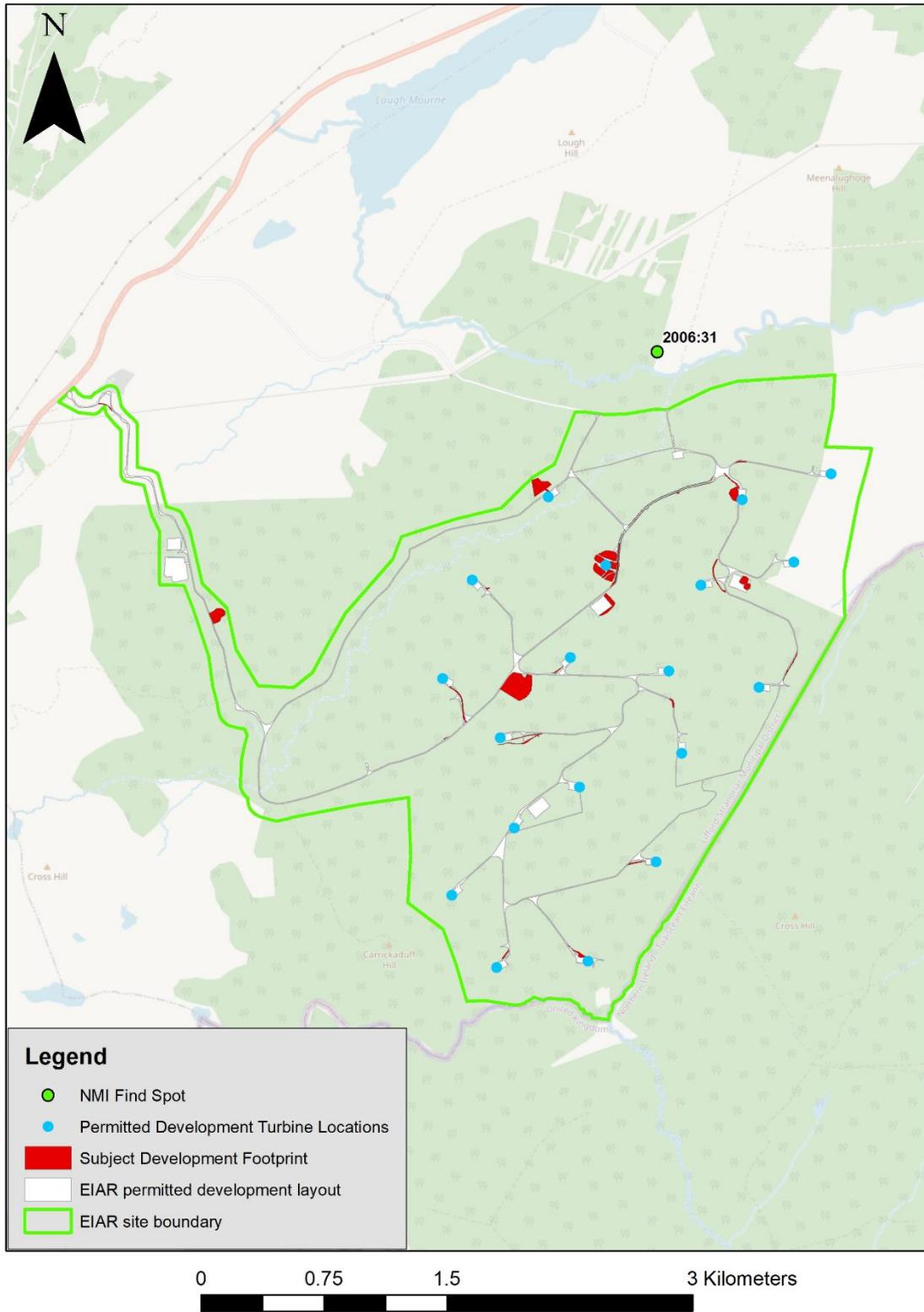


Figure 10.3: NMI find spot at Croaghonagh townland in relation to the Site.

### 10.3.1.7 Sub-Surface Archaeological Potential

All ground works associated with the Meenbog Windfarm were subject to archaeological monitoring between November 2019 and November 2020. The monitoring was carried out by Dominic Delaney & Associates under licence from the National Monuments Service (NMS) (see Section 10.3.1.5 above). No archaeological finds or features were uncovered during monitoring of the works, which included the Subject Development. As ground works for the Subject Development have been completed there is no potential for the uncovering of sub-surface archaeology in those areas.

### 10.3.1.8 Protected Structures and Listed Buildings (NI)

No Protected Structures or Listed Buildings (NI) are located on the Site or in close proximity to same. The nearest RPS structure (Reg. No. 40800911) is situated c. 8.5km to the north-east in Stranorlar while the nearest Listed building (NI) (Ref. HB10/01/014) is c. 4.3km to the south-east in Meenablagh or Fourth Corgary townland.

### 10.3.1.9 NIAH Structures and Historic Gardens

No NIAH structures or Historic Gardens are located within the Site. One NIAH structure (Reg. 40908602) consisting of a stone road bridge is located just outside the northern site boundary but is not in the vicinity of any of the Subject Development. It is described on [www.buildingsofireland.ie](http://www.buildingsofireland.ie) as follows:

#### *Description*

*Single-arched bridge carrying road over the Bunadaowen River the north, built c. 1860. Segmental-headed arch with dressed cut stone voussoirs; squared rubble stone construction to arch barrel. Squared rubble stone construction to spandrels and parapets with rubble stone soldier coping over. Modern blockwork repairs to parapets in places, parapets damaged in places. Tarmacadam deck with grass verges. Located in the rural countryside to the south-west of Stranorlar.*

#### *Appraisal*

*This single-arch bridge retains its early form and character, and is a feature of some rustic appeal in the scenic upland rural landscape to the south-west of Ballybofey. It is robustly-constructed in local rubble stone masonry, and its continued survival and use stands as testament to the quality of its original construction, and of the skill of the masons involved. This particular bridge is distinguished by the high quality dressed stone voussoirs to the arch, which helps to elevate this bridge above many of its type in Donegal. It was probably originally constructed during the mid-nineteenth century (not depicted on Ordnance Survey first edition six-inch map sheet of 1837), a period that saw a great deal of road and bridge-building in Ireland, particularly by the Grand Juries (the forerunners of the County Councils), and later by the Board of Works. This bridge is located on a road that leads to the former back entrance to Meenglass Castle (now demolished), a large and complex Tudor Gothic house, built c. 1840, that was sadly demolished c. 1930. This hints that the construction of this bridge, and the road itself, may have been funded by Lord Henry the Fourth of Lifford (later Lord Viscount Lifford) who built and resided at nearby Meenglass Castle a short distance to the north-east. This unassuming rustic bridge is an addition to both the built heritage of the local area and to the extensive transport heritage of County Donegal.*



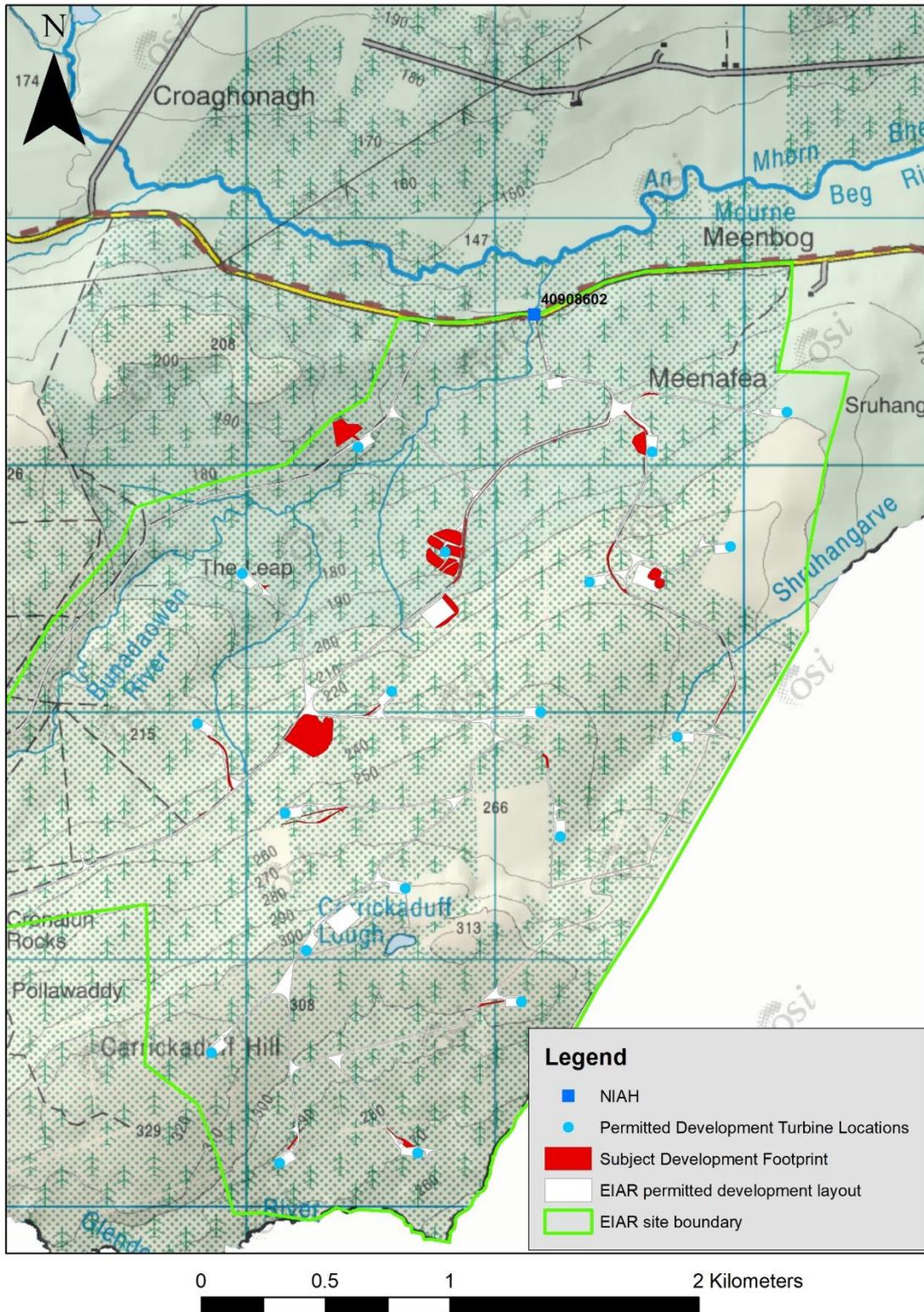


Figure 10.5: NIAH structure Reg. 40908602 to north of the Site.

### 10.3.1.10 Cartographic Evidence and Local Cultural Heritage

The available historic Ordnance Survey maps were consulted for any items of cultural heritage merit that may be located within the Site. The second edition (25 inch) OS maps are not available for the area. Field survey previously carried out by Tobar in 2015 and 2017 also assisted in determining if any local cultural heritage features were located within the Site in the vicinity of the wind farm infrastructure.

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

The early Ordnance Survey maps are an unrivalled source for the period immediately before the Great Irish Famine (1847-50) when the population was at the highest level ever recorded in Ireland. No items of potential cultural heritage merit are indicated on the first edition OS map within the Site and it is depicted as open mountainous land. No items of potential cultural heritage merit were noted within the Site during the previous walk-over surveys by Tobar.

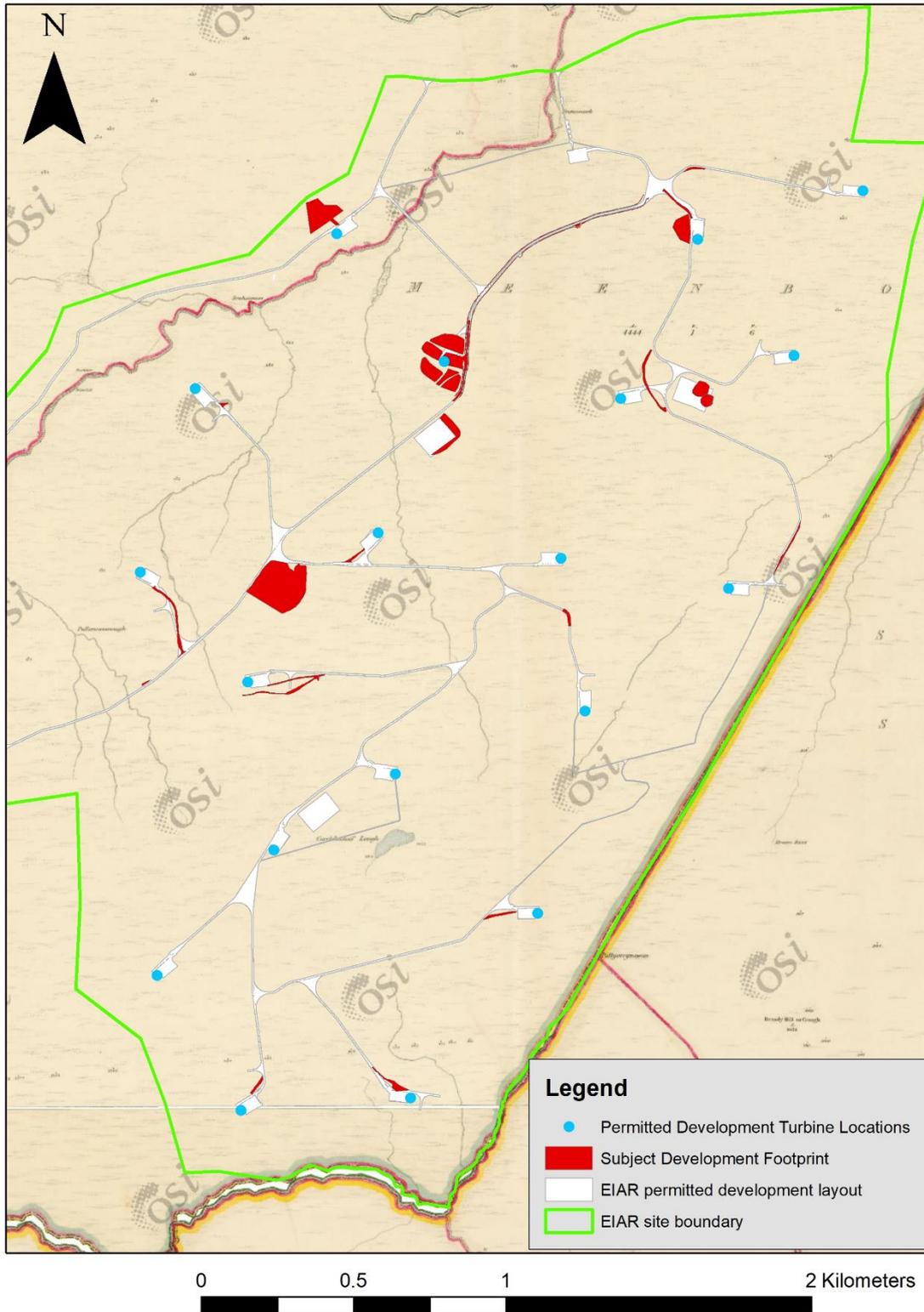


Figure 10.6: Subject Development (eastern side of the Site) on 1<sup>st</sup> edition OS background.

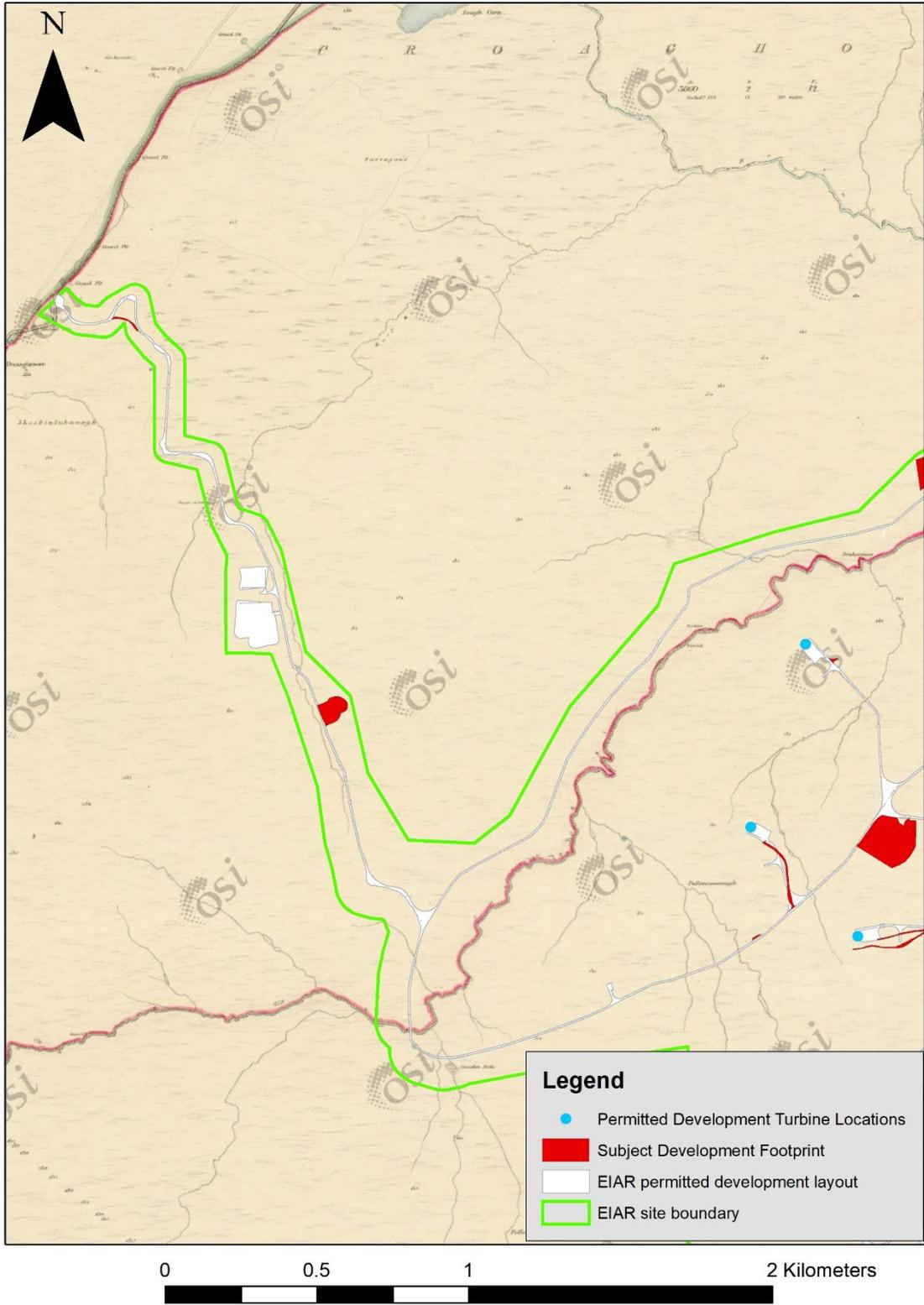


Figure 10.7: Subject Development (western side of the Site) on 1<sup>st</sup> edition OS background.

### 10.3.1.11 Townlands and administrative boundaries

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

Townlands are the smallest land units which were determined and established in the Irish administrative system in the first half of the nineteenth century. Many of the townlands were in existence prior to that. As the Site is located across the townlands of Meenbog and Croaghonagh, townland boundaries between same are also present. The Meenbog Windfarm infrastructure crosses the townland boundaries in a number of places.

Townland names are a valuable source of information, not only on the topography, land ownership and land use within the landscape, but also on its history, archaeological monuments and folklore. Logainm.ie was utilised to ascertain the origin of the townland names within the Site (Table 10.2).

Table 10.2: Townlands within the Site and their meanings.

Townland	Logainm Meaning
MEENBOG (An Mhín Bhog)	Soft misk or field
CROAGHONAGH (Cruach Eoghanach)	The Tyroman rick or round hill

## 10.4 Likely Effects and Associated Mitigation Measures

### 10.4.1 Do Nothing Scenario

Under the Do-Nothing scenario, the 25 deviations that comprise the Subject Development would be removed and restored to the greatest extent practicable. The Meenbog Wind Farm would then be completed in accordance with the current planning permission (ABP Ref: PA05E.300460). This approach may lead to environmental effects due to the potentially extensive groundworks required to remove and restore the existing peat cells, portions of access roads, laybys, and hardstands, and peat containment berm. New access road sections and hardstands would then be constructed in the slightly different, and less optimal, locations shown on the permitted Meenbog Wind Farm plans. Unauthorised borrow pits would be backfilled to the greatest extent possible with spoil and peat and revegetated. Unauthorised peat cells would be dismantled, and the stored peat material would be removed from the site for disposal elsewhere.

The Do-Nothing Scenario would likely have a greater risk of effects on subsurface archaeology than the selected option of regularising the Subject Development. The extensive groundworks required to remove the Subject Development and reconstruct site roads in the originally permitted locations has the potential to negatively effect previously unidentified sub-surface archaeology. The excavation works relating to the Subject Development have been successfully completed without effect on cultural heritage and will not cause any significant effects on cultural heritage by being left in-situ.

### 10.4.2 Construction Phase Potential Effects (Indirect)

Indirect effects, in terms of archaeology, architectural and cultural heritage are considered to be those effects which happen away from the site. This includes impacts on visual setting of any cultural heritage assets in the wider landscape. Since these effects are only possible once development is operational, they are considered operational effects. The Subject Development relates to the construction phase only, and therefore no indirect effects were identified.

### 10.4.3 Construction Phase Potential Effects (Direct)

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

#### 10.4.3.1 UNESCO World Heritage Sites and those on Tentative List

No UNESCO World Heritage Sites (WHS) or those on the Tentative list are located on or within 2km of the Site. No direct effects to such assets as a result of the Subject Development are therefore identified.

#### 10.4.3.2 National Monuments

No National Monuments, monuments in State Care NI or those subject to a Preservation Order are located within the Site or within 1km of same. No direct effects to such assets as a result of the Subject Development are therefore identified.

#### 10.4.3.3 Recorded Monuments

No recorded monuments (SMR or NI SMR) are located within the Site (EIAR boundary). The nearest monument TY014-002 is situated c. 1.2km to the south-west in County Tyrone. No direct effects to this aspect of the archaeological resource as a result of the Subject Development are therefore identified.

#### 10.4.3.4 **Sub-surface Archaeological Potential**

No archaeological finds or features were uncovered by the monitoring archaeologist during the works. As excavation works for the Subject Development have been completed there is no potential for the uncovering of sub-surface archaeology in those areas. No direct effects to sub-surface archaeology as a result of the Subject Development are identified.

#### 10.4.3.5 **Previously Unrecorded Monuments**

No previously unrecorded archaeological monuments were noted within the Site during the walk-over surveys carried out by Tobar in 2015 and 2017. Furthermore, no such sites or monuments were detected during monitoring of ground works for the Meenbog Windfarm. No direct effects to this aspect of the archaeological resource as a result of the Subject Development are therefore identified.

#### 10.4.3.6 **Protected Structures and Listed Buildings (NI)**

No Protected Structures or Listed Buildings (NI) are located on the Site or in close proximity to same. No direct effects to this resource as a result of the Subject Development are identified.

#### 10.4.3.7 **NIAH structures and Historic Gardens**

No NIAH structures or Historic Gardens are located within the Site. One NIAH structure (Reg. 40908602) consisting of a stone road bridge is located just outside the northern site boundary but is not in the vicinity of the Subject Development under assessment. No direct effects to the bridge as a result of the Subject Development are identified.

#### 10.4.3.8 **Features of Local Cultural Heritage Merit**

No items of potential cultural heritage merit were noted within the Site during the previous walk-over surveys, nor were any detected in the areas of the Subject Development during monitoring of ground works during the construction stage. No potential direct effects to such features as a result of the Subject Development are therefore identified.

### 10.4.4 **Operational Phase Potential Effects**

There will be no potential for direct effects in the operational phase of the Subject Development, as all excavation works associated with the Subject Development have been completed. Indirect effects are where a feature or site of archaeological, architectural heritage merit or their setting is located in close proximity to a proposed development. Indirect effects here are mainly concerned with effects on setting of cultural heritage sites.

Given the nature of the Subject Development and its location in areas adjacent to the Permitted Development footprint it is not deemed to be as visually prominent as elements such as turbines or substation buildings (previously assessed). Furthermore as outlined in Section 10.3, no cultural heritage assets are located within the Site, in close proximity to the Subject Development or generally in close proximity to the Site. In this regard, no potential visual effects to the cultural heritage resource as a result of the Subject Development are identified.

### 10.4.5 **Decommissioning Phase Potential Effects**

No more excavation works are envisaged for the Subject Development. As part of the Permitted Development, components of the Subject Development will be left in situ. No further potential direct effects are anticipated in this phase. There will be no indirect effects on cultural heritage, including archaeological and architectural heritage, since the Subject Development will be left in situ during decommissioning.

## 10.5 Cumulative Effects

Cumulative impact is defined as ‘The addition of many small impacts to create one larger, more significant, impact’ (EPA 2022). Cumulative effects encompass the combined effects of multiple developments or activities on a range of receptors. In this case, the receptors are the archaeological monuments and architectural/cultural heritage sites in the vicinity of the Subject Development. The potential cumulative effects between the Subject Development, the Permitted Development, the November 2020 peatslide and remediation works and other relevant plans and/or projects has been considered in terms of effects on cultural heritage.

### 10.5.1 Cumulative Effects (Direct Effects – Construction stage)

The addition of the Subject Development to the Permitted Development and the 2020 Peatslide was considered in order to assess Cumulative Effects. Direct effects for the Subject Development are considered to be confined to within the Site and relate to construction effects.

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

No UNESCO World Heritage Sites, National Monuments in State Care, RPS structures or NIAH sites are located within the Site therefore no direct effects on these resources were identified when considering the Subject Development alone. When the Subject Development is added to the Permitted Development it does not result in direct cumulative effects since none were identified in the first place. The aforementioned cultural heritage assets are located away from the Site and therefore are not capable of being directly affected by the Subject Development. No cumulative effects will occur therefore.

#### 10.5.1.2 Cumulative effects on potential sub-surface archaeology

Archaeological monitoring of ground works during the construction stage of the Permitted Development and the Subject Development was carried out. No sub-surface archaeology was detected during monitoring of the works therefore cumulative effects to this aspect of the archaeological resource are not identified. While it is possible that some unidentified subsurface archaeology could have been impacted by the November 2020 Peatslide this is considered unlikely. Notwithstanding this, there was no direct effects on potential sub-surface archaeology associated with the Subject Development and therefore no potential for cumulative effect in-combination with any other project or event.

### 10.5.2 Cumulative Effects (Indirect Effects – Operational Stage)

Indirect effects on setting occur at the operational stage of the development. In this regard in order to assess overall cumulative effects on archaeology and cultural heritage, the Subject Development is considered in the context of its operation in combination with the Permitted Development.

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

Given the nature of the Subject Development and its location in areas adjacent to the Permitted Development footprint it is not deemed to be as visually prominent as elements such as turbines or substation buildings (previously assessed). Furthermore as outlined in Section 10.3, no cultural heritage

assets are located within the Site, in close proximity to the Subject Development or generally in close proximity to the Site. In this regard, no potential visual effects to the cultural heritage resource as a result of the Subject Development are identified. When considered with the Permitted Development cumulative effects to the setting of the recorded archaeological and cultural heritage resource are not identified.

## 10.6 Conclusion

This Cultural Heritage chapter was prepared by Tobar Archaeological Services Ltd. It presents the results of an archaeological, architectural and cultural heritage impact assessment of the Subject Development. The assessment was based on desktop research, previous field survey, GIS based mapping, and the results of monitoring of ground works (Delany, 2019). Potential direct and indirect effects to the recorded and unrecorded cultural heritage resource as a result of the Subject Development were assessed. No potential direct or indirect effects were identified. Potential cumulative effects were also assessed, no cumulative effects were identified.

## 10.7 References

Aalen, F.H.A. *et al.*, 1997, *Atlas of the Irish Rural Landscape*. Cork University Press, Cork.

Architectural Heritage Guidelines for Planning Authorities (2011)

Department of Arts, Heritage, Gaeltacht and the Islands, 1999, Framework and Principles for the Protection of the Archaeological Heritage, 1999.

Guidelines on the information to be contained in Environmental Impact Statements, EPA 2022.

Guidance on Setting and the Historic Environment, Historic Environment Division, February 2018.

### Other Sources

Sites and Monuments Record, Co. Donegal

Sites and Monuments Record (NI), Co. Tyrone

Record of Monuments and Places, Co. Donegal

1<sup>st</sup> Edition 6 inch OS maps

[www.heritagemaps.ie](http://www.heritagemaps.ie)

[www.heritagedata.maps.arcgis.com](http://www.heritagedata.maps.arcgis.com)

[www.excavations.ie](http://www.excavations.ie)

[www.buildingsofireland.ie](http://www.buildingsofireland.ie)

[www.logainm.ie](http://www.logainm.ie)