

13. CULTURAL HERITAGE

13.1 Introduction

This chapter has been prepared by Dermot Nelis Archaeology to assess and define any likely significant environmental impacts or effects which the construction, operation and decommissioning of the Proposed Development (see full description in Chapter 4) may have on the archaeological, architectural and cultural heritage resource.

The chapter includes an identification of likely significant impacts or effects which may arise and outlines mitigation measures, based on current information, which may be used to avoid, reduce or offset any likely significant adverse effects.

The objectives of this chapter are to:

- Identify all known features of cultural heritage, including architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest (hereafter referred to as the protected resource where appropriate), archaeological heritage and landscape;
- Determine any likely impacts of the Proposed Development on any of these protected resources;
- Identify measures to mitigate any likely significant impacts of the development on the archaeological, architectural, cultural and protected heritage resource;
- Identify unprotected features which are of cultural or heritage interest.

The following key issues are addressed:

- Direct and indirect impacts of the construction of the Proposed Development on the archaeological, architectural and cultural heritage resource;
- Direct and indirect impacts of the operation of the Proposed Development on the protected resources;
- Cumulative impacts of the construction and operation of the Proposed Development on protected resource with other existing, permitted or Proposed Developments or projects.

13.1.1 Proposed Development

The Proposed Development comprises the construction of 20 no. wind turbines, and all associated works. A full description of all elements of the Proposed Development is presented in Chapter 4.

13.1.2 Statement of Authority

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This chapter of the EIAR has been prepared by Dermot Nelis of Dermot Nelis Archaeology. Dermot graduated from Queen's University Belfast, and after gaining extensive fieldwork experience undertook postgraduate studies at the University of Oxford in archaeological consultancy and project management.

Dermot has acted as Senior Archaeologist on several road schemes and has directed large-scale multi-period excavations associated with those developments. He has completed over 190 licensed fieldwork programmes and over 250 archaeological, architectural and cultural heritage desk-based reports,

including assessments for Environmental Impact Statements and Environmental Impact Assessment Reports.

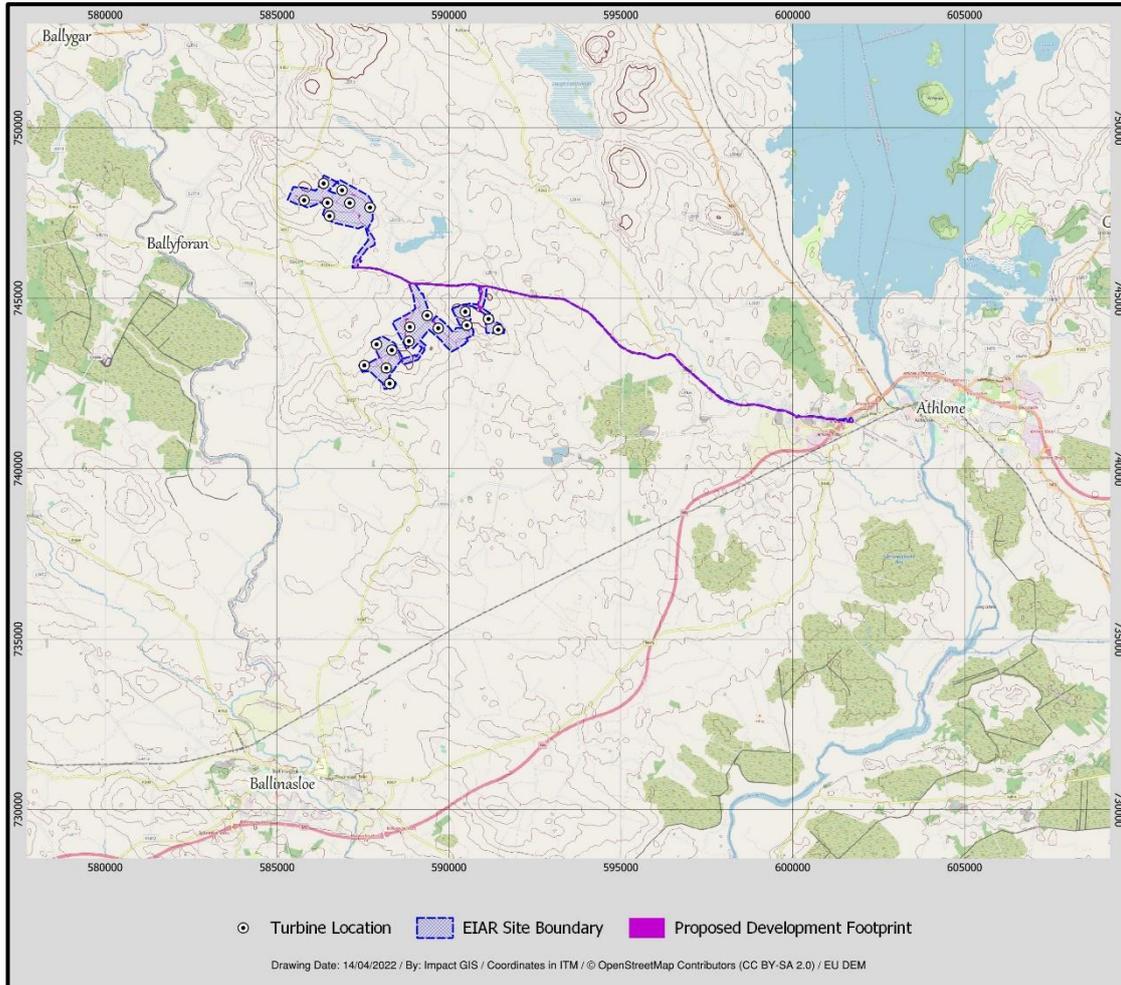


Figure 13-1 Site Location showing the Proposed Development

13.2 Assessment Methodology

13.2.1 Study Area

There is no professional standard for defining the extent of a study area when assessing the likelihood of effects on archaeological, architectural, cultural or protected heritage remains. Based on professional experience and an appreciation of the archaeological, architectural and cultural heritage resource of the surrounding landscape, the following study areas allow for a full assessment of any significant effects that might occur. In addition, the following study areas have all been previously approved by National Monuments Service in separate wind farm planning applications. An assessment has been made of all recorded archaeological, architectural and cultural heritage features within the EIAR Site Boundary.

A 20km study area has been applied from the EIAR Site Boundary to assess the presence of World Heritage Sites or sites included in the Tentative List as consideration for nomination to the World Heritage List. A 10km study area has been applied from the EIAR Site Boundary to assess the presence of National Monuments and sites with Preservation Orders or Temporary Preservation Orders. A 1km study area has been applied from the EIAR Site Boundary to assess the presence of statutorily protected archaeological remains (RMP sites/SMR sites).

A 5km study area has been applied from the EIAR Site Boundary to assess the presence of Protected Structures, Conservation Areas or Proposed Conservation Areas.

A 5km study area has been applied from the EIAR Site Boundary to assess the presence of historic structures recorded on the National Inventory of Architectural Heritage (NIAH), while a 1km study area has been applied from the EIAR Site Boundary to assess the presence of historic gardens or designed landscapes recorded on the NIAH.

As the proposed grid connection will be underground and the majority of cabling will be within the existing road, a 100m study area has been applied around the Grid Connection route. Areas of land take associated with the wind turbine haul route have also been assessed.

13.2.2 Sources of Information

Research has been undertaken in two phases. The first phase comprised a desk review, namely a paper and digital survey of archaeological, historical and cartographic sources. The second phase involved field inspections of the Proposed Development. Each phase is outlined in the following sections.

The following sources were examined and a list of sites and areas of archaeological, architectural, cultural and protected heritage potential was compiled:

- Record of Monuments and Places and Sites and Monuments Record;
- Topographical Files of the National Museum of Ireland;
- Cartographic and documentary sources relating to the study area;
- Aerial photographs of Ordnance Survey Ireland and Bing aerial photography;
- National Inventory of Archaeological Heritage;
- Environmental Protection Agency's, *Guidelines on the Information to be Contained in Environmental Impact Statements (2002) and Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022)*;
- European Commission's Environmental Impact Assessment of Projects- Guidance on the Preparation of the Environmental Impact Assessment Report;
- Galway County Development Plan 2015 – 2021; and
- Galway County Development Plan 2022-2028.

Record of Monuments and Places (RMP) is a list of archaeological sites known to the National Monuments Service. Back-up files of the Sites and Monuments Record (SMR) provide details of documentary sources and field inspections where these have taken place.

Topographical Files of the National Museum of Ireland is the 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 in the discovery of sites of archaeological significance.

Cartographic Sources are important in tracing land-use development within an area of land take, as well as providing important topographical information on sites and areas of archaeological potential. Cartographic analysis of relevant maps has been made to identify any topographical anomalies that may no longer remain within the landscape.

Documentary Sources were consulted to gain background information on the historical and archaeological landscape of the wider development area. All sources used in the preparation of the chapter are referenced in the Bibliography.

Aerial Photography 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 potential to contain previously unidentified archaeological remains.

National Inventory of Architectural Heritage (NIAH) is a section within the Department of Housing, Local Government and Heritage. The work of NIAH involves identifying, recording and evaluating on a non-statutory basis the architectural heritage of Ireland from 1700 to the present day. The NIAH website also contains a non-statutory register of historic gardens and designed landscapes in County Roscommon, and this was assessed to look for the presence of any such features within the Proposed Development or the 1km study area.

Environmental Protection Agency's "*Guidelines on the Information to be Contained in Environmental Impact Statements*" and "*Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*" provide definitions for potential effects on archaeological, architectural, cultural and protected heritage remains. The Significance of Effects as used in this chapter are as per the "*Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*" and are discussed in Table 13-1.

The aim of the European Commission's Guidance document is to provide practical insight to those involved in the preparation of Environmental Impact Assessment Reports.

County Development Plans contain Objectives and Policies on the preservation and management of archaeological, architectural, cultural and protected heritage features. They were consulted to obtain information on sites and features of potential heritage significance within the relevant study areas. As part of the study area extends into County Galway reference has been made to the Galway County Development Plan (2015 – 2021) and the Draft Galway County Development Plan (2022 - 2028).

13.2.3 Field Inspection

Field inspection is necessary to determine the extent, character and condition of archaeological, architectural and cultural heritage features, and can also lead to the identification of previously unrecorded or suspected sites and portable finds through topographical observation and local information.

The site visits took place on 5th and 6th October 2020 and 9th and 10th June 2021. All areas of proposed land take were walked and visually assessed by a Licensed archaeologist. The Grid Connection route was assessed by means of a detailed windshield survey.

Monitoring of site investigations for the Proposed Development site was carried out between November 2020 and January 2021 and took 26 days to complete. No archaeological features or artefacts were revealed as a result of carrying out the monitoring.

Monitoring of site investigations was also carried out in June 2010 and involved the excavation of 21 no. test pits in the vicinity of the proposed Northern Cluster. No archaeological features or artefacts were revealed as a result of carrying out the monitoring.

13.2.4 Significance of Criteria

The likelihood of significant effects can be identified from detailed information about a project, the nature of the area affected, and the range of resources potentially affected. The construction, operation and decommissioning of wind farms can affect the archaeological, architectural, cultural and protected heritage resource of a given landscape in a number of ways:

- Permanent and temporary land-take, associated structures, landscape mounding and their construction may result in damage to or loss of archaeological remains and deposits, or physical loss to the setting of historic monuments and to the physical coherence of the landscape;

- Archaeological sites can be affected adversely in a number of ways: disturbance by excavation, topsoil stripping and the passage of heavy machinery, disturbance by vehicles working in unsuitable conditions, burial of sites thus limiting accessibility for future archaeological investigation;
- Hydrological changes in groundwater or surface water levels can result from construction activities such as de-watering and spoil disposal, or long-term changes in drainage patterns. These may desiccate archaeological remains and associated deposits;
- Visual and noise effects on the historic landscape can arise from construction traffic and facilities, built earthworks and structures, landscape mounding and planting, noise, fences and associated works. These features can impinge directly on historic structures and historic landscape elements as well as their visual amenity value;
- Landscape measures, such as tree planting, can damage sub-surface archaeological features due to topsoil stripping and through the root action of trees and shrubs as they grow;
- Ground consolidation by construction activities or the weight of permanent embankments can cause damage to buried archaeological remains, especially in colluvium or peat deposits;
- Disruption due to construction also offers the potential for adversely affecting archaeological remains. This can include machinery, site offices, service trenches, etc.;
- Although not widely appreciated, positive effects can accrue from permitted developments. These can include positive resource management policies, improved maintenance and access to archaeological monuments and the increased level of knowledge of a site or historic landscape as a result of assessment and fieldwork.

There is no standard scale against which the significance of likely effects on the archaeological and historic landscape may be judged. The severity of a given level of land take or visual intrusion varies with the type of monument, site or landscape features and its environment. Significance of impact or effect can be judged taking the following into account:

- The fact that a structure or feature has been deemed worthy of legislative protection at national, regional or local level;
- The proportion of the feature affected and how far physical characteristics fundamental to the understanding of the feature would be lost;
- Consideration of the type, date, survival/condition, fragility/vulnerability, rarity, potential and amenity value of the feature affected;
- Assessment of the levels of visual, noise and hydrological effects, either in general or site specific terms, as may be provided by other specialists.

For this assessment, the significant effects criteria outlined in Table 13-1 is used. This is as per the “*Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*” (Environmental Protection Agency 2022, Section 3: Page 50).

Table 13-1 Significance of Effects

Level of Effects	Significance Criteria
Imperceptible	An effect capable of measurement but without significant consequences
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences
Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities

Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends
Significant Effects	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment
Profound Effects	An effect which obliterates sensitive characteristics

13.2.5 Legislation and Guidelines

The chapter has been prepared in compliance with all relevant Environmental Impact Assessment (EIA) legislation and guidance (see Chapter 1: Introduction for relevant guidance and legislation).

13.2.5.1 Archaeological Resource

The National Monuments Act, 1930 to 2004 and relevant provisions of the National Cultural Institutions Act, 1997 are the primary means of ensuring the satisfactory protection of archaeological remains, which includes all man-made structures of whatever form or date, except buildings habitually used for ecclesiastical purposes.

A number of mechanisms under the National Monuments Act are applied to secure the protection of archaeological monuments. These include the Record of Monuments and Places, the Register of Historic Monuments, the placing of Preservation Orders and Temporary Preservation Orders on endangered sites and National Monuments in the ownership or guardianship of the Minister for Housing, Local Government and Heritage or a Local Authority.

Two months' notice in writing is required prior to any work being undertaken on or in the vicinity of a Registered Monument. The Register also includes sites under Preservation Orders and Temporary Preservation Orders. All Registered Monuments are included in the Record of Monuments and Places.

The Record of Monuments and Places comprises a list of monuments and relevant places and a map/s showing each monument and relevant place in respect of each county in the State. All sites recorded on the Record of Monuments and Places receive statutory protection under the National Monuments Act 1994.

13.2.5.2 Architectural and Built Heritage Resource

The main laws protecting the built heritage are the Architectural Heritage (National Inventory) and Historic Properties (Miscellaneous Provisions) Act, 1999 and the Planning and Development Act 2000 (as amended). The National Inventory of Architectural Heritage (NIAH) records built heritage structures within all the counties of the State.

Buildings recorded in the RPS can include Recorded Monuments, structures listed in the NIAH, or buildings deemed to be of architectural, archaeological or artistic importance by the Minister. Sites, areas or structures of archaeological, architectural or artistic interest listed in the RPS receive statutory protection from injury or demolition under the 2000 Act.

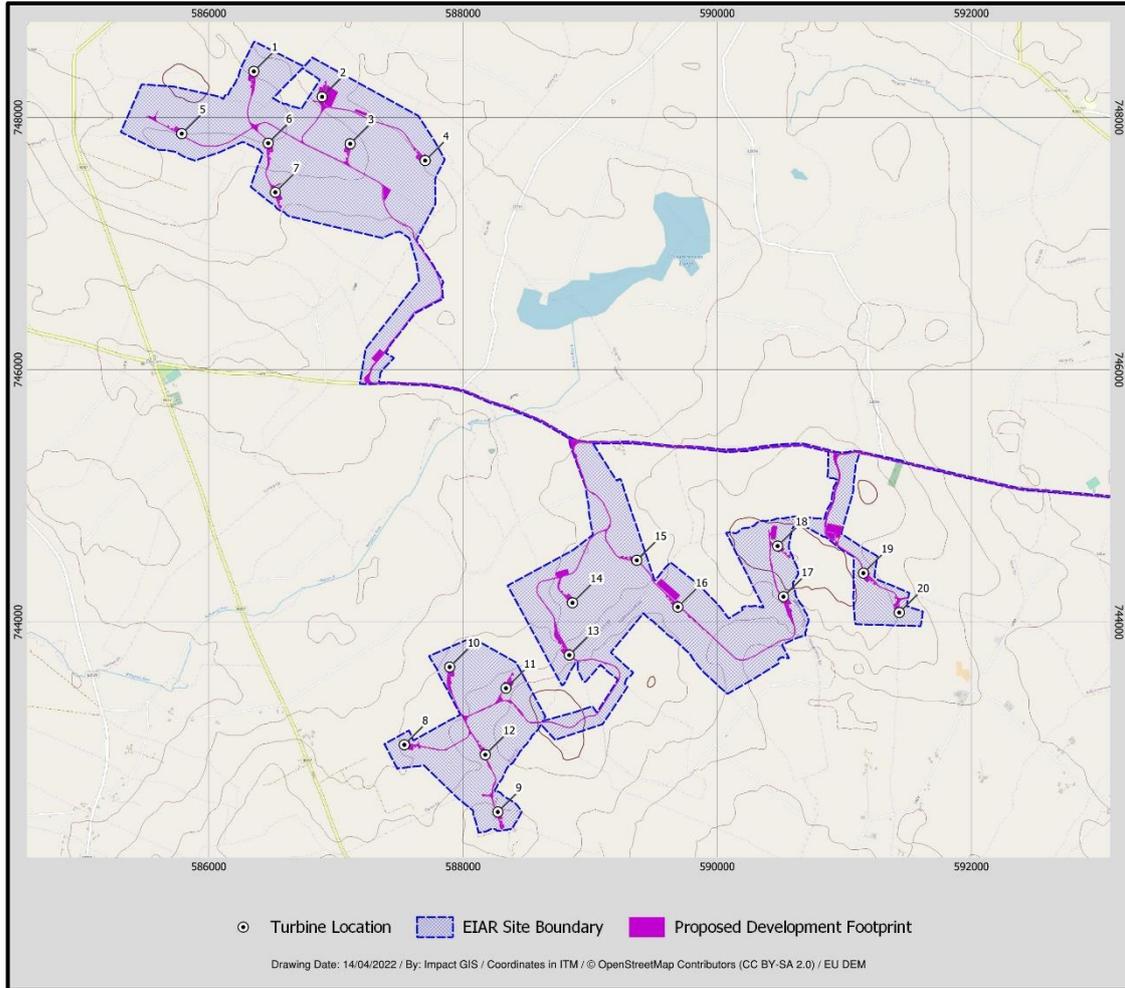


Figure 13-2 Site layout showing the EIAR Site Boundary

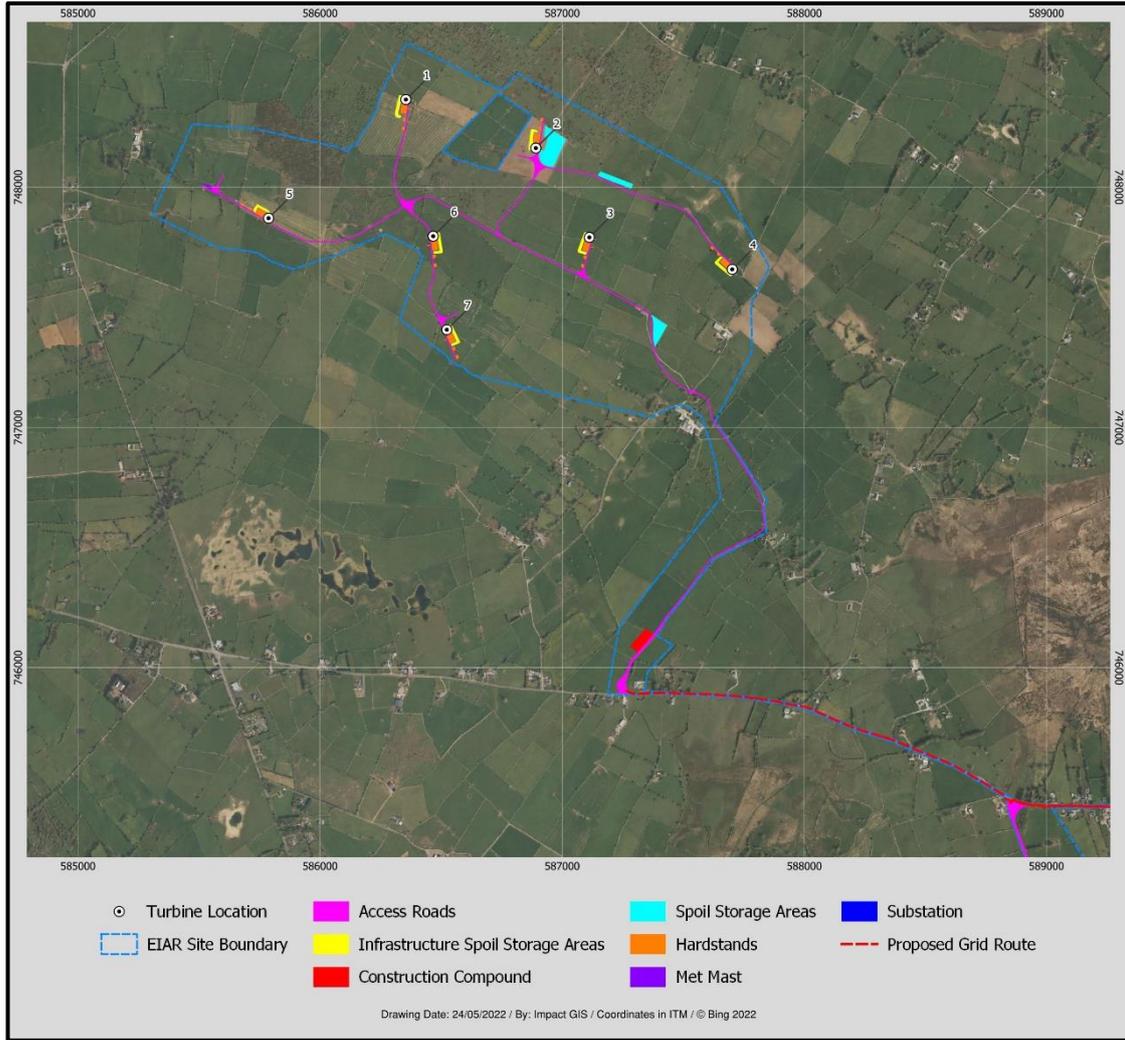


Figure 13-3 Northern Cluster of the Proposed Development, showing Turbines 1 – 7

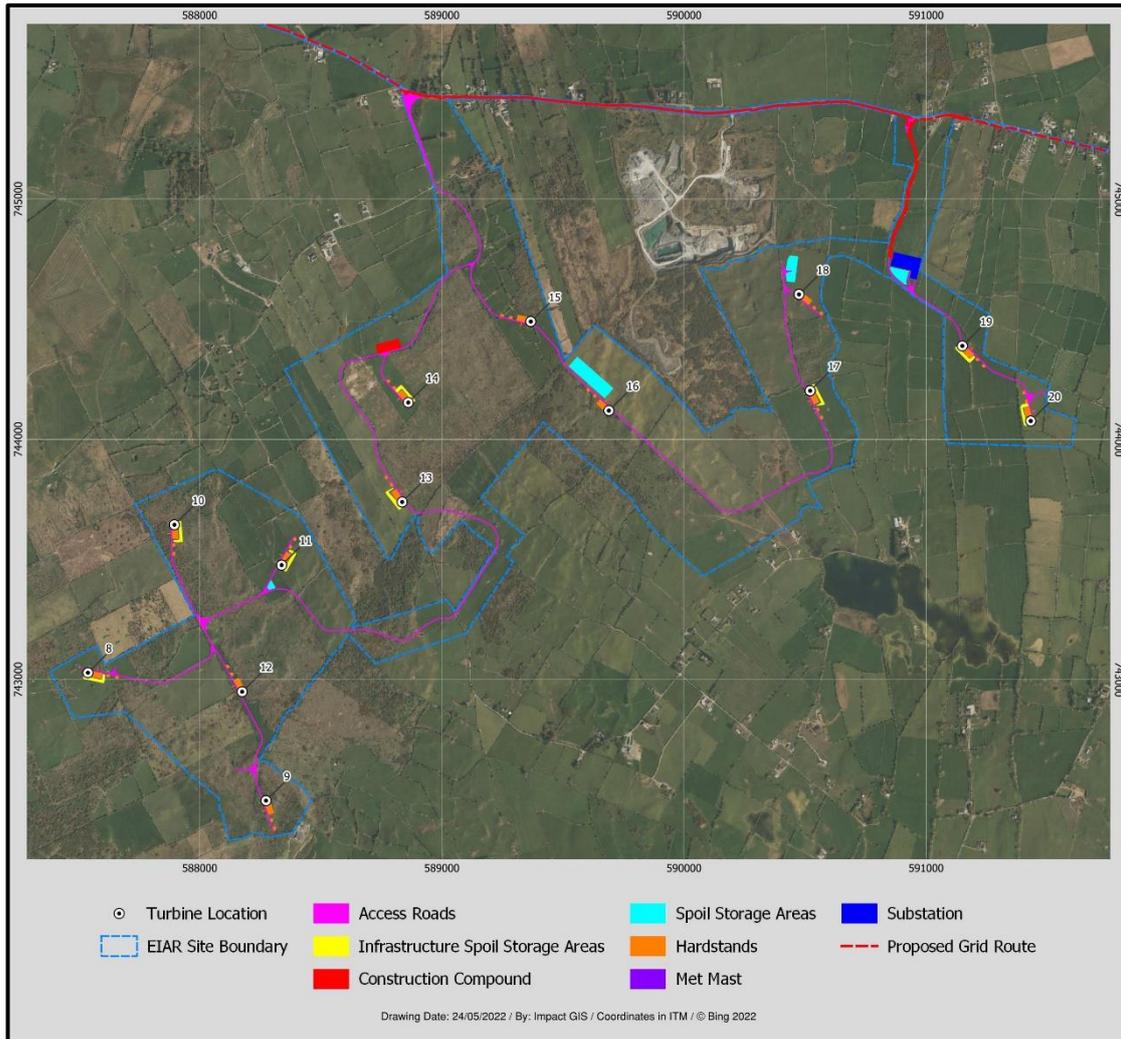


Figure 13-4 Southern Cluster of the Proposed Development, showing Turbines 8 – 20

13.2.6 County Development Plans

13.2.6.1 Roscommon County Development Plan 2022 – 2028

13.2.6.1.1 Archaeological Heritage

It is a policy objective (BH 9.13) of Roscommon County Council (Roscommon County Development Plan 2022-2028, Volume 1) to:

“Secure the preservation (i.e. preservation in situ or, as a minimum, preservation by record) of all archaeological monuments included in the Record of Monuments and Places as established under Section 12 of the National Monuments (Amendment) Act, 1994, and of sites, features and objects of archaeological interest generally. In securing such preservation Roscommon County Council will have regard to the advice and recommendations of the National Monuments Section of the Department of Housing, Local Government and Heritage.”

13.2.6.1.2 Architectural Heritage

It is a policy objective (BH 91) of Roscommon County Council (*ibid.*) to:

“Ensure the protection of the architectural heritage of County Roscommon through the compilation of a Record of Protected Structures, the designation of Architectural Conservation Areas, the safeguarding of historic gardens, and the recognition of structures and elements that contribute positively to the vernacular and industrial heritage of the county.”

It is also a policy objective (BH 9.2) of Roscommon County Council (*ibid.*) to:

“Protect all structures included on the Record of Protected Structures and their settings, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social, or technical interest.”

Section 9.3 of the Roscommon County Development Plan (*ibid.*) contains a list of *Architectural Conservation Areas* from within the county. There are no Architectural Conservation Areas recorded in the Roscommon County Development Plan within the Proposed Development area or the 5km study area.

13.2.6.1.3 Cultural Heritage

The *Roscommon County Development Plan (2022 – 2028)* does not contain any designated lists or sites of cultural heritage importance or significance.

It should be noted that a Historic Landscape Characterisation (HLC) of County Roscommon is included in Section 4.2.4 of the Landscape Character Assessment for County Roscommon, designating 13 No. different historic land-use types. These types identify the effect of human interaction with the landscape and how activities have affected its form and function, as well as noting the period of origin. As detailed in Chapter 12 of this EIAR, the Proposed Development is located in LCA 34 – *Lough Funshinagh, Stone Wall Grasslands and Esker Ridges*. The site and the wider landscape of LCA 34 is designated as ‘*Rectilinear Fields – Stonewalls (18th – 19th Century)*’.

13.2.6.2 Galway County Development Plan 2015 - 2021

Part of the study area considered in this Chapter extends into County Galway, and as such the *Galway County Development Plan (2015 – 2021)* and the *Draft Galway County Development Plan (2022 – 2028)* were assessed to record the presence of any statutorily protected archaeological, architectural, cultural or protected heritage features that may exist within the study area.

13.2.6.2.1 Archaeological Heritage

It is an Objective (ARC 1) of Galway County Council (*Galway County Development Plan 2015, 155*) to:

“Protect archaeological sites and monuments their settings and visual amenity and archaeological objects and underwater archaeological sites that are listed in the Record of Monuments and Places, in the ownership/guardianship of the State, or that are subject of Preservation Orders or have been registered in the Register of Historic Monuments and seek to protect important archaeological landscapes.”

It is also an Objective (ARC 2) of Galway County Council (*ibid.*) that:

*“All planning applications for new development, redevelopment, any ground works, refurbishment, and restoration, etc. within areas of archaeological potential or within close proximity to Recorded Monuments or within the historic towns of County Galway (Ardrahan, Athenry, Dunmore, Eyrecourt, Loughrea and Tuam) will take account of the archaeological heritage of the area and the need for archaeological mitigation.” (*ibid.*)*

13.2.6.2.2 Architectural Heritage

It is an Objective (AH 2) of Galway County Council (*ibid.*, 152) to:

“Ensure the protection and sympathetic enhancement of structures included and proposed for inclusion in the Record of Protected Structures (RPS) that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, together with the integrity of their character and setting.”

The *Galway County Development Plan* (*ibid.*, 156) contains a list of *Architectural Conservation Areas* from within the county. There are no Architectural Conservation Areas recorded in the Galway County Development Plan within the 5km study area.

13.2.6.2.3 Cultural Heritage

The *Galway County Development Plan* (2015 – 2021) does not contain any designated lists or sites of cultural heritage importance or significance.

13.2.6.3 Draft Galway County Development Plan 2022 – 2028

Following a review of the *Draft Galway County Development Plan 2022 - 2028*, it is considered that there have been no substantive changes to objectives or policies relating to the protection of archaeological, architectural or cultural heritage sites.

13.3 Existing Environment

13.3.1 Description of the Proposed Development Area

The following provides a description of the Proposed Development area and a photographic record of same. Where monuments are recorded and referenced in this existing environment section, they are assessed below in Section 13.4. It should be noted that the below Sections 13.3.1 to 13.3.4 detail the existing environment at the Wind Farm site, except in some instances where reference to the Grid Connection and turbine delivery route is made. The majority of the Grid Connection and turbine delivery route environments are detailed in Sections 13.3.5 and 13.3.6 respectively.

The below sections provide a description of the Proposed Development site and notes relevant Recorded Monuments (RMP) within the vicinity of the site infrastructure. All RMP sites with the EIAR Site Boundary are detailed below in Section 13.3.2.3 and shown in Figures 13-7 and 13-8.

13.3.1.1 Access Road at Northern Cluster

The northeast oriented access road (Figure 13-3) off the R363 Regional Road will cross five generally flat dry fields with short grass before approaching field system RMP RO047-044003. The location of RMP RO047-044003 was noted as being gently undulating, dry and with short grass. The low earth and stone boundaries which make up the field system are located west of the proposed access road, and no features associated with the field system will be impacted on by the access road.

A low, largely collapsed stone wall (Plate 13-1) will be partially crossed by the access road leading northwest to the north of RMP RO047-044003. It measures on average 1m high by 1m wide and is not recorded as part of a field system.

RMP RO047-044002 (field system) has been removed as a result of modern farming practices, and as a result the proposed access road in this area will have no impact on any above-ground field boundaries.

The three fields west of RMP RO047-044002 (field system) and east of the north/south road were noted as being gently undulating, dry and with short grass.

The proposed access road will be located a short distance south of RMP RO047-025001 (ringfort), which survives above-ground as a partially truncated oval grass-covered area defined by a slight earthen bank.

The four fields west of RMP RO047-025001 (ringfort) leading to the location of Turbine 3 were noted as being generally flat, dry and with short grass.



Plate 13-1 Stone wall to the north of RMP RO047-044003, looking north west

13.3.1.2 Turbine 1

Turbine 1 (Figure 13-3) will be located in two separate fields, although most of the associated infrastructure will be located in the southern field. The site visit noted this as being a dry, gently undulating field with short grass (Plate 13-2). A northwest/south east oriented stone wall separates the fields, and this was recorded as being randomly built, generally five to six courses high and one to two courses wide (depending on the size of the stone). The stone was on average 0.30m long, while smaller stones were used as packing material to support the lower courses (Plate 13-4). The site visit showed the northern field to be gently undulating, dry and with short grass (Plate 13-3). Views from the proposed location of Turbine 1 are good to north and west, moderate east and poor south.

The access road that will serve Turbines 1, 2, 5 and 6 will be located within the western end of RMP RO047-015005 (field system). The site visit confirmed that eight walls associated with the field system will be crossed by the proposed access roads, and these were recorded as being generally 0.30m – 0.40m high and 2m wide (including collapsed stone) grass-covered non-continuous linear features (Plates 13-5 - 13-9). The location of the field system was noted as being generally flat, dry and with calf-length grass.



Plate 13-2 Location of Turbine 1, looking north



Plate 13-3 Location of Turbine 1, looking south



Plate 13-4 North west/south east oriented wall in the location of Turbine 1, looking north



Plate 13-5 North east/south west oriented wall in middle of Field System RMP RO047-015005, looking east



Plate 13-6 North west/south east oriented wall in middle of Field System RMP RO047-015005, looking south



Plate 13-7 North west/south east oriented wall in middle of Field System RMP RO047-015005, looking south



Plate 13-8 North west/south east oriented overgrown wall at northern end of Field System RMP RO047-015005, looking south



Plate 13-9 East/west oriented wall at southern end of Field System RMP RO047-015005, looking north

13.3.1.3 Turbine 2 and Spoil Storage Areas

Turbine 2, along with the very northwest corner of a spoil storage area (Figure 13-3), will be partially located within RMP RO047-019002 (field system). The site visit showed the southern end of the field system to have been recently cleared as a result of farming practices, and as a result construction of Turbine 2 and its associated activities will have no impact on any above-ground field boundaries associated with RMP RO047-019002. Several low, largely collapsed stone walls are recorded north of Turbine 2 and outside all areas of Proposed Development.

The location of Turbine 2 was recorded as a large, undulating dry field with a calf-length crop. Views from the proposed location of Turbine 2 are moderate to east and west and poor north and south (Plate 13-10).

The north/south access road south of Turbine 2 will cross two flat, dry fields with long grass before turning east towards the location of Turbine 3 where it will cross flat to gently undulating dry fields with short grass.

The east/west oriented access road leading east from Turbine 2 to Turbine 4 will cross dry flat to gently undulating large fields with short grass. The access road will be on the line of an existing farm track as it approaches the location of Turbine 4.

The location of a spoil storage area immediately north of the access road leading to Turbine 4 was recorded as part of a large dry gently undulating field with short grass and natural rock outcropping. A modern largely overgrown concrete pit surrounded by a low stone wall and of no archaeological or architectural significance was recorded approximately 35m north of the spoil storage area. It measures approximately 10m east/west x 7m north/south, and it is interpreted as a modern feature surrounded by reused stone walling (Plate 13-11). An entrance was not recorded.



Plate 13-10 Location of Turbine 2, looking south west



Plate 13-11 Modern largely overgrown concrete pit surrounded by a low stone wall north of a spoil storage area, looking east

13.3.1.4 Turbine 3

Turbine 3 (Figure 13-3) will be located approximately 48m west of RMP RO047-095, while the access road leading north to Turbine 3 will be located approximately 40m west of RMP RO047-095. Turbine 3 and the access road leading north to it will be located in two separate fields, both of which were recorded as being flat and dry underfoot. The southern field contained long grass at the time of the site visit (Plate 13-12), while the northern field had short grass. Views from the proposed location of Turbine 3 are good to north and east, moderate west and poor south. An east/west oriented single (*i.e.* one stone wide) dry stone wall on average five courses high will be truncated by Turbine 3 (Plate 13-13).



Plate 13-12 Location of Turbine 3, looking south



Plate 13-13 East/west oriented wall in the location of Turbine 3, looking north

13.3.1.5 Turbine 4

Turbine 4 (Figure 13-3) will be located in a dry flat field with short grass. Views from the proposed location of Turbine 4 are moderate to north and east and poor to south and west (Plate 13-14). RMP RO047-084 (souterrain) is the closest Recorded Monument to Turbine 4 and is located approximately 65m southwest of the hardstand.



Plate 13-14 Location of Turbine 4, looking east

13.3.1.6 Turbine 5

Turbine 5 (Figure 13-3) will be located in a dry flat field with long grass (Plate 13-15). Views from the proposed location of Turbine 5 are good to east, moderate south, and poor north and west. Turbine 5 will extend slightly into the field to the south, and this area was noted as being dry, flat and with short grass. Turbine 5 will be located approximately 45m southwest of RMP RO047-010001 (ringfort).

The access road leading south west to T5, will be located approximately 20m west of RMP RO047-015004 (ringfort). This monument was noted as being a badly denuded sub-circular grass-covered area measuring approximately 25m north/south x 20m east/west.

A sunken, overgrown concrete-lined feature was noted approximately 25m east of the access road leading to Turbine 5 in the southern end of RMP RO047-015005 (field system), and approximately 10m southwest of RMP RO047-015004 (ringfort). As with other modern agricultural features within the general landscape, it was surrounded by a low stone wall and is of no archaeological or architectural significance.

A meteorological mast is proposed west of Turbine 5, and the site visit revealed this area as being flat, dry and with short grass. An internally overgrown well-constructed and generally well maintained stone-walled feature of no archaeological or architectural significance, measuring approximately 12m north/south x 7m east/west, was noted a short distance outside the EIAR Site Boundary (Plate 13-16). It was not possible to inspect the feature internally due to its very overgrown nature. An entrance was not recorded, and it is possible it represents a similar type of feature to that recorded north of the spoil storage area east of Turbine 2. *i.e.* a modern agricultural pit surrounded by reused stone walling.



Plate 13-15 Location of Turbine 5, looking west



Plate 13-16 Overgrown stone-walled feature outside location of the meteorological mast, looking north

13.3.1.7 Turbine 6

Turbine 6 (Figure 13-3) will be located in a dry gently undulating field with short grass (Plate 13-17). Views from the proposed location of Turbine 6 are good to south and east and poor to north and west. RMP RO047-015005 (field system) is the closest Recorded Monument to Turbine 6 and is located approximately 125m south west of the hardstand.

The access road leading south east from Turbine 6 to Turbine 7 will cross two dry gently undulating fields with short grass.



Plate 13-17 Location of Turbine 6, looking north

13.3.1.8 Turbine 7

Turbine 7 (Figure 13-3) will be located in a dry, gently undulating field with short grass (Plate 13-18). Views from the proposed location of Turbine 7 are good to west and moderate in all other directions. The northern end of Turbine 7 will truncate a north west/south east oriented wall, noted during the site visit as a single (*i.e.* one stone wide) dry stone wall on average five to seven courses high (Plate 13-19). RMP RO047-020001 (ringfort) and RMP RO047-020002 (hut site) are the closest Recorded Monuments to Turbine 7 and are located approximately 185m north east of the turbine hardstand.



Plate 13-18 Location of Turbine 7, looking east



Plate 13-19 North west/south east oriented wall at the northern end of Turbine 7, looking north

13.3.1.9 Access Roads at Southern Cluster

Two access roads will lead south from the R363 Regional Road (Figure 13-4). The eastern-most access road will cross four fields before reaching the location of the proposed substation, all of which were noted as being gently undulating, dry and with short grass.

The western-most access road will cross six fields before reaching the location of Turbine 15. These fields varied from gently undulating, dry and with short grass to having tall grass and natural rock outcropping.

13.3.1.10 Turbine 8

Turbine 8 (Figure 13-4) will be located in a dry, gently undulating field with short grass (Plate 13-20). Views from the proposed location of Turbine 8 are good to north, moderate west and south and poor east. The access road leading to Turbine 8 will cross three fields which were noted as being generally flat or gently undulating and dry with short grass, although an unreclaimed, slightly overgrown area with some protruding rock was also recorded. RMP RO047-058012 (ringfort) and RMP RO047-058018 (hut site) are the closest Recorded Monuments to Turbine 8 and are located approximately 335m north east of the turbine hardstand.



Plate 13-20 West of Turbine 8, looking east at its location

13.3.1.11 Turbine 9

The access road leading to Turbine 9 (Figure 13-4) will truncate the line of RMP RO048-098 (linear earthwork- wall), and in total access roads in the Southern Cluster of the Proposed Development will cross the line of RO048-098 (linear earthwork- wall) in five places.

Turbine 9 will be located in a dry, overgrown, undulating area with frequent rock outcropping (Plate 13-21). Views from the proposed location of Turbine 9 are poor in all directions. RMP RO048-098 (linear earthwork- wall) in the location of the access road leading to Turbine 9 was recorded as being overgrown and collapsed in places, but generally measuring 1.5m high and generally one stone wide (Plate 13-22).

A north west/south east oriented wall, extending south east from RMP RO048-098 (linear earthwork-wall), was noted directly west of Turbine 9 (Plate 13-23). This wall was recorded as being generally 1m high and generally one stone wide.



Plate 13-21 Location of Turbine 9, looking south



Plate 13-22 RMP RO048-098 (linear earthwork-wall) in the location of the access road leading to Turbine 9, looking north west



Plate 13-23 North west/south east wall extending south east from RMP RO048-098 (linear earthwork- wall) directly west of Turbine 9, looking north

13.3.1.12 Turbine 10

Turbine 10 (Figure 13-4) will be located in an overgrown area with frequent rock outcropping. Views from the proposed location of Turbine 10 are moderate to west and poor in all other directions (Plate 13-24). The closest Recorded Monument to Turbine 10 is RMP RO047-058009 (ringfort) which is located approximately 300m west of the turbine hardstand.



Plate 13-24 North of Turbine 10, looking south west at its location

13.3.1.13 Turbine 11

Turbine 11 (Figure 13-4) will be located in an undulating dry field with short grass. Views from the proposed location of Turbine 11 are good to north, west and east and poor south (Plate 13-25). The access road leading north east to Turbine 11 will cross a field with frequent rock outcropping. The closest Recorded Monument to Turbine 11 is RMP RO047-058020 (field system) which is located approximately 60m east of the turbine hardstand.

The access road from Turbine 11 to Turbine 13 will truncate the line of RMP RO048-098 (linear earthwork- wall) in two places.



Plate 13-25 Location of Turbine 11, looking north east

13.3.1.14 Turbine 12

Turbine 12 (Figure 13-4) will be located in an undulating dry field with short grass. Views from the proposed location of Turbine 12 are good to west, moderate north and poor east and south (Plate 13-26). The access road leading to Turbine 12 will cross the same undulating dry field with short grass. The closest Recorded Monument to Turbine 12 is RMP RO048-098 (linear earthwork) which is located approximately 180m south east of Turbine 12.



Plate 13-26 Location of Turbine 12, looking north

13.3.1.15 Turbine 13

Turbine 13 (Figure 13-4) will be located in an undulating dry field with short grass. Views from the proposed location of Turbine 13 are good to north, west and east and poor south (Plate 13-27). The closest Recorded Monument to Turbine 13 is RMP RO048-098 (linear earthwork) which is located approximately 45m south east of the turbine hardstand.

The access road leading east from Turbine 11 to Turbine 13 will cross the line of RMP RO048-097003 (road/trackway). This monument was noted as being a 2m wide lane bordered by drystone walls. No above-ground archaeological features were noted in the location of RMP RO048-097003.



Plate 13-27 Location of Turbine 13, looking north

13.3.1.16 Turbine 14

Turbine 14 (Figure 13-4) will be located in an undulating dry field with short grass. Views from the proposed location of Turbine 14 are moderate to north, west and east and poor south (Plate 13-28). The access road leading to Turbine 14 will be across undulating dry fields with short grass. The closest Recorded Monument to Turbine 14 is RMP RO047-058021 (field system) which is located approximately 120m west of the hardstand.



Plate 13-28 Location of Turbine 14, looking north

13.3.1.17 Turbine 15

Turbine 15 (Figure 13-4) will be located in a gently undulating dry field with short grass. Views from the proposed location of Turbine 15 are good to north, moderate east and west and poor south (Plate 13-29). Turbine 15 will be located immediately north of a stone-walled probable cattle corral. The site visit showed it to be well made and without internal features, and to be generally 1.4m high and generally one stone wide (Plates 13-30 and 13-31). It measures approximately 70m north/south maximum x 70m east/west maximum. A 2m wide entrance is located at the northern end and a 1m wide entrance is located at the southern end. This feature is not recorded on any editions of the historic Ordnance Survey maps. The closest Recorded Monument to Turbine 15 is RMP RO048-097002 (field system) which is located approximately 35m west of the hardstand.

The access road leading east from Turbine 14 to Turbine 15 will be within RMP RO048-097002 (field system). The site visit confirmed that no above-ground features associated with RMP RO048-097002 (field system) are located within the Proposed Development, with the area recorded as having medium-length grass and occasional rock outcropping (Plate 13-32).

The access road from Turbine 15 to Turbine 16 will truncate the line of RMP RO048-098 (linear earthwork- wall).



Plate 13-29 Location of Turbine 15, looking south east to probable cattle corral



Plate 13-30 Inside probable cattle corral near T15, looking west



Plate 13-31 Internal wall of probable cattle corral near T15, looking north



Plate 13-32 RMP RO048-097002 (field system) at location of access road between T14 and T15, looking north east

13.3.1.18 Turbine 16

Turbine 16 (Figure 13-4) will be within RMP RO048-097001 (field system). The location of Turbine 16 was noted as being undulating, dry and with short grass and frequent rock outcropping. Views are good to north and south and poor east and west (Plate 13-33).

A north east/south west oriented non-continuous stone wall was noted towards the middle of the proposed location of Turbine 16. It was recorded as being low and overgrown and on average one course (0.50m) high by one to two courses (0.75m) wide. This is the only feature associated with RMP RO048-097001 (field system) recorded in the location of Turbine 16 (Plates 13-34 and 13-35).



Plate 13-33 Location of Turbine 16, looking north



Plate 13-34 RMP RO048-097001 (field system) at T16, looking east



Plate 13-35 RMP RO048-097001 (field system) at T16, looking west

13.3.1.19 Turbine 17

Turbine 17 (Figure 13-4) will be located in an undulating dry field with short grass. Views are good to south, moderate west and poor north and east (Plate 13-36). The closest Recorded Monument to Turbine 17 is RMP RO048-123 (ringfort) which is located approximately 135m south east of the hardstand.

The proposed access road between Turbine 16 and Turbine 17 will cross undulating dry fields with grass which varied from short to calf-length.



Plate 13-36 North of Turbine 17, looking south at its location

13.3.1.20 Turbine 18

Turbine 18 (Figure 13-4) will be located in an undulating dry field with short to calf-length grass. Views are generally poor in all directions (Plate 13-37). The closest Recorded Monument to Turbine 18 is RMP RO048-098 (linear earthwork) which is located approximately 160m north of the hardstand.



Plate 13-37 North west of Turbine 18, looking south east at its location



Plate 13-38 RMP RO048-098 (linear earthwork- wall) north of T18, looking south

13.3.1.21 Turbine 19

Turbine 19 (Figure 13-4) will truncate a low north/south oriented wall consisting of reclaimed boulders and smaller stone (Plate 13-40). Both fields were noted as being gently undulating, dry and with short grass. Views are good north and poor in all other directions (Plate 13-39). The closest Recorded Monument to Turbine 19 is RMP RO048-098 (linear earthwork) which is located approximately 5m north east of the hardstand.

The access road north west of Turbine 19 will truncate the line of RMP RO048-098 (linear earthwork-wall).



Plate 13-39 South of Turbine 19, looking north west at its location



Plate 13-40 North/south oriented wall in the location of Turbine 19, looking east

13.3.1.22 Turbine 20

Turbine 20 (Figure 13-4) will be located in a flat dry field with short grass. Views to the north are good and poor in all other directions (Plate 13-41). The closest Recorded Monument to Turbine 20 is RMP RO048-098 (linear earthwork) which is located approximately 65m north east of the hardstand.



Plate 13-41 South of Turbine 20, looking north west at its location

13.3.1.23 Additional Areas of Land Take

All areas of land take associated with the proposed electrical substation, meteorological mast, 2 no. construction compounds, 7 no. spoil storage areas, and the infrastructure spoil storage areas located beside 15 of the proposed turbines were assessed as part of the site visits. No archaeological, architectural, cultural or protected heritage features were recorded within any of the additional areas of land take.

13.3.2 Archaeological Heritage

Archaeological Heritage includes World Heritage Sites, sites included in the Tentative List as consideration for nomination to the World Heritage List, National Monuments, sites which are subject to Preservation Orders or Temporary Preservation Orders, sites listed in the RMP/SMR and newly discovered archaeological sites. Each of these are addressed in the following sections.

13.3.2.1 World Heritage Sites

A 20km study area has been applied from the EIAR Site Boundary to assess the presence of World Heritage Sites or sites included in the Tentative List as consideration for nomination to the World Heritage List.

There are no World Heritage Sites within 20km of the EIAR Site Boundary.

There is one site included in the Tentative List as consideration for nomination to the World Heritage List within 20km of the EIAR Site Boundary. This is Clonmacnoise, which is located approximately 17km south east of the Proposed Development. The monument is listed in Table 13-2, is shown in Figure 13-5, and is described below.

Table 13-2: Site included in the Tentative List as consideration for nomination to the World Heritage List within 20km of the EIAR Site Boundary

Name	Description	Townlands	Distance from EIAR Site Boundary
Clonmacnoise	Early Medieval ecclesiastical site	Clonmacnoise	17km

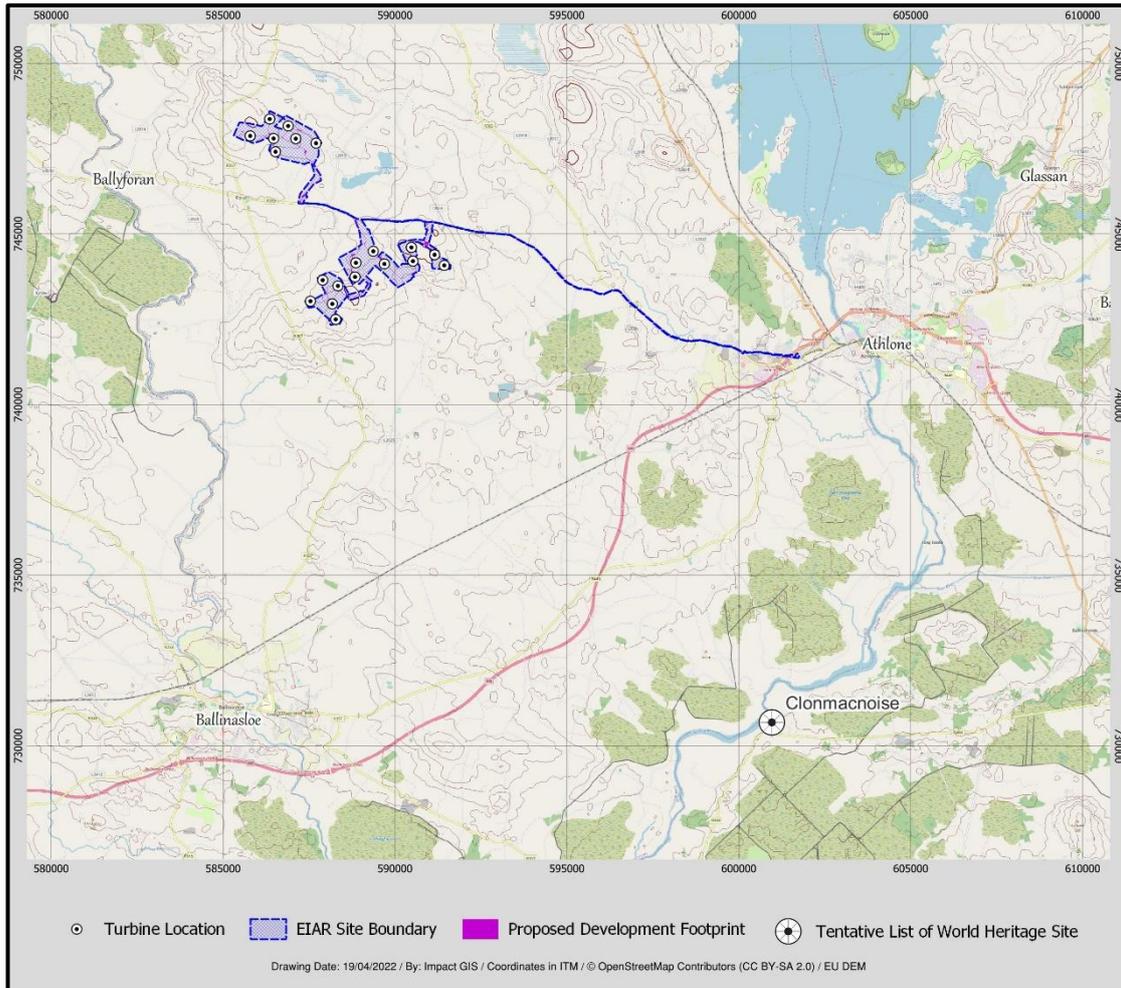


Figure 13-5 Site included in the Tentative List as consideration for nomination to the World Heritage List within 20km of the EIAR Site Boundary

13.3.2.1.1 The Monastic City of Clonmacnoise and its Cultural Landscape, County Offaly

Description of Clonmacnoise and its Cultural Landscape:

“The Monastic City of Clonmacnoise and its cultural landscape is an unparalleled and outstanding example of a relict Early Medieval insular monastic city unobscured by modern building development. It is set within a superlative semi-natural landscape that deepens its spiritual qualities, adding greatly to its authenticity and integrity. The interaction between man and the natural environment in Clonmacnoise is of unique universal value. It represents a significant stage in the development of Early Medieval Christianity in the North Atlantic. Archaeological excavation coupled with exceptional documentary sources has demonstrated that Clonmacnoise was a civitas in reality as well as in name, unlike many other Irish sites, and, moreover, its dates are relatively early in the chronology of urban development outside the boundaries of the old Roman Empire. It is therefore highly significant to our understanding of the development of urbanism generally in Atlantic Europe, as well as clarifying non-Viking urbanisation in an Irish context.” (whc.unesco.org).

13.3.2.1.2 Rathcroghan Archaeological Complex

The Rathcroghan Archaeological Complex is listed as one of the Royal Sites of Ireland which are included in the Tentative List as consideration for nomination to the World Heritage List. The Rathcroghan Archaeological Complex is also recorded in Section 9.8 of the Roscommon County Development Plan (Roscommon County Council 2022, – Volume 1). The Rathcroghan Archaeological Complex is located approximately 36km north of the Proposed Development site.

Chapter 12 (Landscape and Visual, p.19) of the Environmental Impact Assessment Report notes that:

“The Rathcroghan site is located approximately 36 km north of the Proposed Development site at its closest point, far beyond the landscape included within the LVIA Study area. The Proposed Development is not likely to be visible from Rathcroghan and therefore it will cause no significant impact upon the archaeological landscape or its visual amenities and is screened out from assessment in this Chapter.”

As a result of the above and the study area considered as part of this chapter in relation to World Heritage Sites, the Rathcroghan Archaeological Complex has been screened out from assessment in this Chapter.

13.3.2.2 National Monuments

A 10km study area has been applied from the EIAR Site Boundary to assess the presence of 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”. An assessment of all National Monuments in State Care and those subject to Preservation Orders/Temporary Preservation Orders within 10km of the EIAR Site Boundary was undertaken to ascertain any potential impacts or effects on their setting.

There are five National Monuments (at three sites) within 10km of the EIAR Site Boundary. These monuments are listed in Table 13-3, are shown in Figure 13-6, and are described below. No National Monuments are recorded within the EIAR Site Boundary.

Table 13-3 National Monuments within 10km of the EIAR Site Boundary

Nat. Mon. No.	RMP No.	ITM E	ITM N	Type	Townland	Distance from EIAR Site Boundary
467	GA061-023001	578985	740625	Ritual site-holy well	Castlegar East, County Galway	8.68km
467	GA061-023002	578985	740625	Crucifixion plaque	Castlegar East, County Galway	8.68km
487	RO045-151	596877	751485	Ringfort-rath	Carnagh West, County Roscommon	8.28km

682	RO048-113001	596003	744796	Castle- motte and bailey	Ballycreggan, County Roscommon	4.45km
682	RO048-113002	596000	744792	Castle- unclassified	Ballycreggan, County Roscommon	4.45km

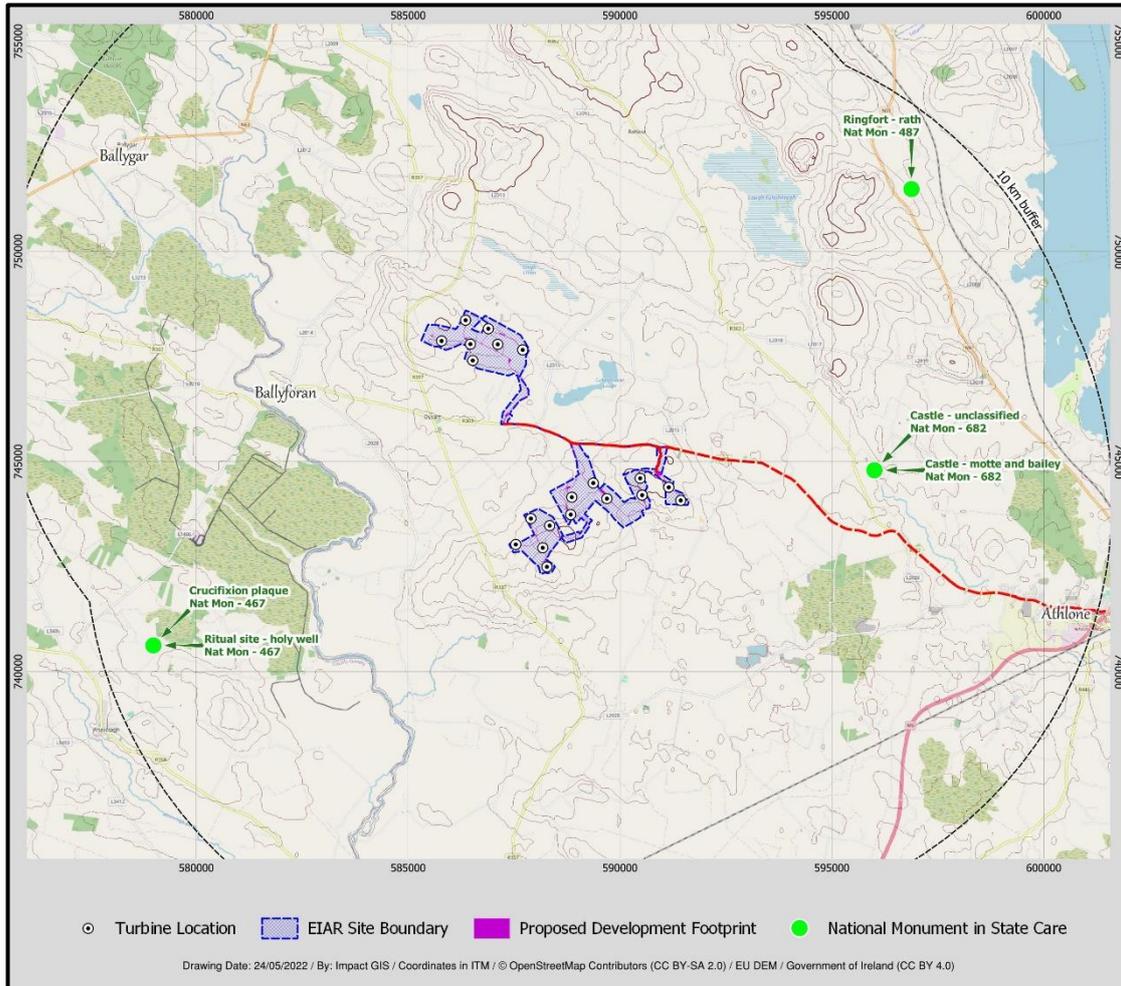


Figure 13-6 National Monuments within 10km of the EIAR Site Boundary

National Monument Number 467, RMP GA061-023001 Holy Well and RMP GA061-023002 Crucifixion Plaque, Castlegar East, County Galway

Description of RMP GA061-023001 Holy Well:

“In the centre of an enclosure (GA061-023003). This is a National Monument in State care (No. 467). It comprises a spring well contained within a small oval drystone surround (NW-SE 1.8m) accessed via a narrow gap at W. The present enclosing wall appears to overlies an older structure, the foundations of which extend beyond it from NNW through N to E. A crucifixion plaque (GA061-023002), of 18th/early 19th-century date, rests against the NE side-wall. O’Donovan records that St Cuan (d. 752) was held in great veneration in the mid-19th century in the area of Ahascragh. A pattern was held there on the 15th October (St Cuan’s feast day) annually and it was said that the water could not be boiled. Egan mentions a ‘Tobar Grealláin’ as being close by but no trace could be found when the area was visited in 1984. St Grellan

was, however, associated with the medieval church (GA074-058—) at Kilcloony.” (www.archaeology.ie).

Description of RMP GA061-023002 Crucifixion Plaque:

“The crucifixion plaque (H 0.6m; Wth 0.44m; T 0.15m) has been placed against the external face of the enclosing wall of the holy well (GA061-023001) at NE. It bears the figure of Christ on the cross and symbols of the Passion, including a ladder, hammer and pincers, are also visible. A narrow border runs around all four sides of it.” (www.archaeology.ie).

National Monument Number 487, RMP RO045-151 Ringfort- rath, Carnagh West, County Roscommon

Description of RMP RO045-151 Ringfort- rath:

“On a slight ENE-facing slope in an undulating landscape. Circular grass-covered area (diam. 34.9m NE-SW; 32m NW-SE) defined by a slight earthen bank (Wth 3.6-6.9m; int. H 0.1-0.2m; ext. H 0.45-0.65m), with slight traces of a fosse (at SW: Wth 2m) SE-SW. There is an entrance (Wth 2.1m) at ENE. The monument is overlain by a NE-SW field bank towards the perimeter at NW. Rath (RO045-152—) is c. 160m to the E.” (www.archaeology.ie).

National Monument Number 682, RMP RO048-113001 Castle- motte and bailey and RMP RO048-113002 Castle- unclassified, Ballycreggan, County Roscommon

Description of RMP RO048-113001 Castle- motte and bailey:

“In the valley of the N-S Cross river, with the stream c. 50m to the W. A natural grass-covered gravel ridge was adapted into a flat-topped oval mound (dims of base 60m NE-SW; c. 50m NW-SE; dims of top 34m NE-SW; 21.5m NW-SE; H 5.3m at NE to 7.5m at SW) by digging a fosse (Wth of top c. 9m; Wth of base 2.4m; D 1.4m) and outer bank (Wth 12.5m; ext. H 2m) SSW-NNW. From N-E a fosse (Wth of top c. 14m; Wth of base 2.4m; D 3.2m) cuts off the tail of the ridge to serve as a roughly crescent-shaped bailey (dims 21m N-S; 15m E-W). Castle (RO048-113002) is on the summit of the motte.” (www.archaeology.ie).

Description of RMP RO048-113002 Castle- unclassified:

“Located in the valley of the N-S Cross river with the stream c. 50m to the W, and on the summit of motte (RO048-13001). A castle ruin is depicted at Ballycreggan on the Strafford map of c. 1636, although placed on the W side of the stream. A quarter at Ballycreggan amounting to 287 acres together with a stone house and a mill were owned by John Mc Robert O Naughten in 1641, but this was divided between the Countess of Fingal and Colonel William Legg by the 1660s. John Mc Robert didn’t hold any other land in Kiltoom parish in 1641 but others with the name Naughten held 1000 acres and shares in other land, but this had been distributed to new owners by the 1660s. The castle is a rectangular structure (ext. dims 18.5m NE-SW; 11.5m NW-SE) defined by the foundations of stone walls obscured by cairn material, but with two internal divisions. There is local knowledge of dances held on this floor in the early twentieth century.” (www.archaeology.ie).

It is noted in Chapter 12 (Landscape and Visual, p.14) of the Environmental Impact Assessment Report that:

“On-site appraisals determined that most visibility of the Proposed Development will be most likely to occur within the rolling agricultural grasslands immediately surrounding both the northern and southern turbine cluster. Field boundaries in the area are delineated by dry stone walls, low hedgerows and treelines which generally afford lesser screening than the denser mature vegetation existent in the low-lying landscape beyond 5km.”

Assessments have been made in respect of all five National Monuments in Section 13.4.4.2 and 13.4.6.2 below. Given the distance of National Monuments from the Proposed Development (the closest National Monument is located 4.45km from the nearest proposed turbine, with the other National Monuments all located at least 8km from the nearest proposed turbine), assessment of potential operational visual impacts on the setting of National Monuments has been confined to ZTV mapping and is discussed in detail in Section 13.4.6.2 (National Monuments) below.

13.3.2.3 Recorded Monuments within the EIAR Site Boundary

There are 38 Recorded Monuments located within the EIAR Site Boundary. These monuments are listed in Table 13-4, are shown in Figures 13-7 and 13-8 and are discussed by site-type below. Recorded Monuments within 100m of the Grid Connection are assessed separately (13.3.5).

Table 13-4 Recorded Monuments within the EIAR Site Boundary

RMP No.	ITM E	ITM N	Type	Townland	Turbine ID	Distance (M)
RO047-009001	585798	747993	Ringfort - rath	Cronin	5	84
RO047-009002	585802	747982	Field boundary	Cronin	5	76
RO047-010001	586124	747591	Ringfort - rath	Cronin	5	60
RO047-010002	586116	747584	Field boundary	Cronin	5	40
RO047-015001	586207	748042	Ringfort - cashel	Cronin	1	273
RO047-015002	586500	748019	Ringfort - cashel	Gortaphuill	6	205
RO047-015003	586495	748023	Ringfort - rath	Gortaphuill	6	210
RO047-015004	586277	747837	Ringfort - cashel	Cronin	6	165
RO047-015005	586324	748024	Field system	Cronin, Gortaphuill	1	115

RO047-015006	586503	747979	Road - road/trackway	Gortaphuill	6	165
RO047-015007	586541	748020	House - indeterminate date	Gortaphuill	6	210
RO047-015008	586584	747980	House - indeterminate date	Gortaphuill	6	190
RO047-019002	587270	748639	Field system	Garrynphort, Gortaphuill	2	0
RO047-020001	586676	747591	Ringfort - rath	Cronin	7	200
RO047-020002	586668	747584	House - indeterminate date	Cronin	7	200
RO047-022	587107	747533	Ringfort - rath	Tullyneeny	3	135
RO047-025001	587449	747250	Ringfort - rath	Tullyneeny	4	450
RO047-026	587702	747313	Cross - wayside cross	Gortaphuill	4	370
RO047-027	587721	747487	Ringfort - rath	Gortaphuill	4	145
RO047-029	587470	747777	Ringfort - rath	Gortaphuill	4	185
RO047-044001	587652	746907	Ringfort - cashel	Cuilleenirwan	4	730
RO047-044002	587708	746869	Field system	Cuilleenirwan	4	670

RO047-044003	587738	746569	Field system	Cuilleenirwan	4	975
RO047-058011	588053	743758	Enclosure	Milltown	11	165
RO047-058012	587902	743210	Ringfort - cashel	Milltown	8 and 10	305
RO047-058018	587895	743206	Hut site	Milltown	8	300
RO047-058021	588786	744048	Field system	Cuilleenoolagh	14	40
RO047-067	585859	747851	Souterrain	Cronin	5	60
RO047-084	587562	747699	Souterrain	Gortaphuill	4	70
RO047-095	587178	747731	Ringfort - rath	Gortaphuill	3	48
RO048-097001	589764	743924	Field system	Cloonacaltry	16	0
RO048-097002	589052	744516	Field system	Cuilleenoolagh	15	35
RO048-097003	588983	743421	Road - road/trackway	Milltown, Skeavally, Boleyduff	13	75
RO048-097005	590291	743851	Ringfort - cashel	Cloonacaltry	17	360
RO048-097008	590159	744937	Field system	Cloonacaltry, Curry	18	190

RO048-097009	590289	743846	Children's burial ground	Cloonacaltry	17	365
RO048-098	589275	744085	Linear earthwork	Cam, Cloonacaltry, Cuilleenirwan, Curry, Milltown, Skeavally, Tawnagh, Tobermacloughlin	9	20
RO048-123	590686	744073	Ringfort - cashel	Cloonacaltry, Feacle	17	110

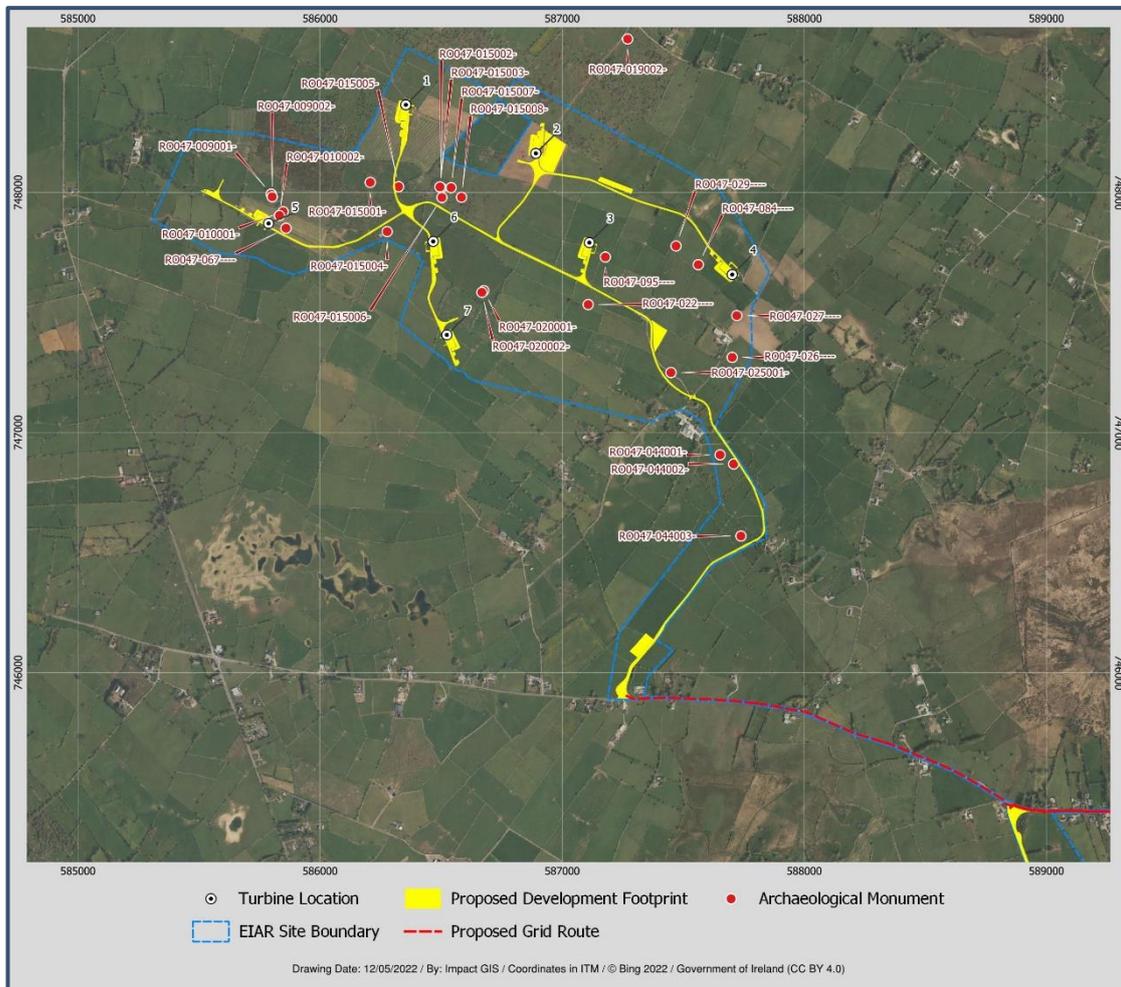


Figure 13-7 RMP Sites within the Northern Cluster of the EIAR Site Boundary

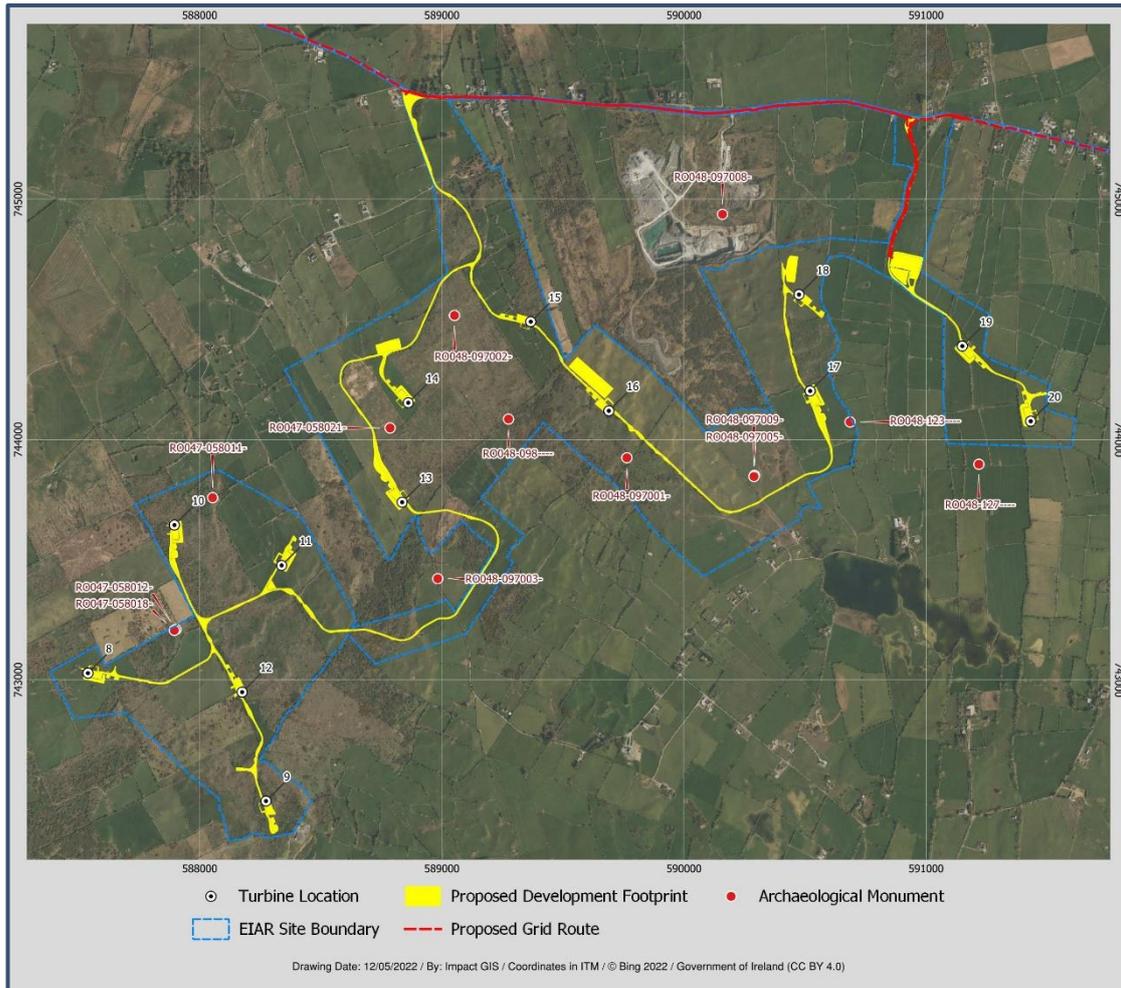


Figure 13-8 RMP Sites within the Southern Cluster of the EIAR Site Boundary

13.3.2.3.1 The Prehistoric Period

There are no monuments or features dating from the prehistoric period recorded within the EIAR Site Boundary.

13.3.2.3.2 The Early Medieval Period

The majority of recorded monuments within the EIAR Site Boundary are represented by ringforts (16), followed by field systems (eight), houses of indeterminate date (three), souterrains (two), field boundaries (two), roads/trackways (two), enclosure (one), children's burial ground (one), hut site (one), linear earthwork (one) and a wayside cross (one).

- Ringforts- raths and cashels
- Enclosures
- Hut sites
- Souterrains
- Field boundaries
- Field systems

Sixteen ringforts (raths/cashels) are recorded within the EIAR Site Boundary. Raths are roughly circular defensive enclosures, constructed to protect farmsteads. They were enclosed by an earthen bank and exterior ditch, and ranged from approximately 25m to 50m in diameter. The smaller sized and single banked type (univallate) was more than likely home to the lower ranks of society, while larger examples

with more than one bank (bivallate/trivallate) housed the more powerful kings and lords. They are regarded as defended family homesteads, and the extant dating evidence suggests they were primarily built between the 7th and 9th centuries AD (Stout 1997, 22-31). Rathes are considered to be the most common indicator of settlement during the Early Medieval period. The most recent detailed study (*ibid.*, 53) has suggested that there is an approximate total of 45,119 potential ringforts or enclosure sites throughout Ireland.

Cashels have the same function, date and plan as raths but differ in that the enclosing element is constructed predominantly or entirely of stone, which is a reflection of the content of the soil and the local geology.

One enclosure is recorded within the EIAR Site Boundary. Enclosures belong to a classification of monument whose precise nature is unclear. Often, they may represent ringforts, which have either been damaged to a point where they cannot be positively recognised, or are smaller or more irregular in plan than the accepted range for a ringfort. An Early Medieval date is generally likely for this site type, though not a certainty.

One hut site is recorded within the EIAR Site Boundary. Hut sites are usually low stone foundations or earthen banks. They can be circular, oval, D-shaped, square or rectangular and can measure from c. 2m – c. 10m in diameter. They range in date from the prehistoric to relatively modern times, though they are frequently found in association with ringforts and cashels. In mountainous areas they are often the remains of settlements associated with booleying or transhumance.

Two souterrains are recorded within the EIAR Site Boundary. Souterrains, deriving their name from the French words *sous* (under) and *terrain* (ground), are underground structures that are often, though not exclusively, found associated with ringforts. They therefore appear to date to the second half of the first millennium AD.

Two field boundaries, both of which are associated with ringforts, are recorded in very close proximity to each other within the Northern Cluster of the EIAR Site Boundary. Neither site is scheduled for inclusion in the next revision of the RMP.

Eight field systems are recorded within the EIAR Site Boundary. Field systems are regarded as a group or complex of fields which are related and may date to any period from the Neolithic onwards. The practice of enclosing fields in Ireland for agricultural and other purposes dates back to the Neolithic period. The enclosed land could have been used for stock-raising, plant husbandry and crop protection. The fields can vary in size and it is possible that many of them are more extensive than currently thought. A wide range of monuments, such as barrows, ringforts, souterrains, hut sites, ecclesiastical remains etc., can be found inside field systems. The field systems within the EIAR Site Boundary are possibly 17th century or later in date.

13.3.2.3.3 **Sites with Religious or Ritual Association**

- Cross-wayside cross
- Children's burial ground

One wayside cross is recorded within the EIAR Site Boundary. Wayside crosses are memorial crosses erected on the side of a road and generally date from the 12th to the 17th century.

One children's burial ground is recorded within the EIAR Site Boundary. Children's burial grounds (cillíní) were used as the designated burial places for unbaptized infants and other members of Irish society who were considered unsuitable for burial in consecrated ground. The evidence from historical and archaeological studies indicates a proliferation in the use of cillíní following the 17th century, and that the tradition continued in use until the mid-20th century.

13.3.2.3.4 **Post-1700 AD Archaeological Features**

- > Houses- indeterminate date
- > Roads/trackways
- > Linear earthworks

Three houses of indeterminate date are recorded within the EIAR Site Boundary. A house of indeterminate date refers to a building used for human habitation when the date of the house is indeterminable.

Two roads/trackways are recorded within the EIAR Site Boundary.

One linear earthwork is recorded within the EIAR Site Boundary. Linear earthworks consist of a substantial bank and fosse, usually forming a major boundary between two adjacent landholdings. Most date from the late Bronze Age and Iron Age (c. 1200 BC - 400 AD), although the one linear earthwork within the EIAR Site Boundary is a stone wall possibly dating to the Post-Medieval period (c. 1550 – 1800 AD).

13.3.2.4 **Recorded Monuments within 1km of the EIAR Site Boundary**

There are 129 Recorded Monuments located within 1km of the EIAR Site Boundary. These monuments are listed in Table 13-5 and are shown in Figures 13-9 and 13-10.

Table 13-5 Recorded Monuments within 1km of the EIAR Site Boundary

RMP No.	Type	Townland	Distance from EIAR Site Boundary (m)
RO048-117001	Cross - wayside cross	Skeavally	13
RO048-124	Ringfort - rath	Cloonacaltry, Feacle	20
RO047-097	Mass-rock	Cronin	38
RO048-127	Ringfort-cashel	Feacle	80
RO047-058020	Field system	Milltown	81
RO048-196	Barrow - mound barrow	Cloonacaltry	94
RO047-096	Ringfort - cashel	Tobermacloughlin	96
RO047-013	Ringfort - rath	Carrowkeel	100
RO048-126	Ringfort - rath	Feacle	105
RO047-103	Ringfort - cashel	Lugboy	107
RO047-016002	Field system	Turrock	130
RO047-014001	Ringfort - rath	Cronin	138
RO047-081	Burial	Turrock	139
RO047-014002	Souterrain	Cronin	142

RO048-125	Ringfort - cashel	Feacle	154
RO047-016001	Ringfort - cashel	Turrock	156
RO047-058013	Enclosure	Milltown	162
RO048-068	Ringfort - cashel	Curry	160
RO048-096	Ringfort - cashel	Curry	170
RO047-016003	Enclosure	Turrock	182
RO047-028	Moated site	Cuilleenirwan	184
RO047-058009	Ringfort - cashel	Milltown	189
RO048-066	Ringfort - cashel	Curry	193
RO047-012003	Cairn - clearance cairn	Carrowkeel	209
RO047-012001	Ringfort - rath	Carrowkeel	216
RO047-012002	Cairn - clearance cairn	Carrowkeel	218
RO048-119008	Earthwork	Skeavally	225
RO048-119004	Sweathouse	Skeavally	235
RO048-119007	Building	Skeavally	256
RO047-018001	Ringfort - rath	Turrock	263
RO048-119003	Enclosure	Skeavally	264
RO048-118	Ringfort - cashel	Boleyduff	274
RO048-119005	House - 17th century	Skeavally	284
RO048-119001	House - 16th/17th century	Skeavally	286
RO048-099009	Bullaun stone	Cam	295
RO048-099001	Church	Cam	295
RO048-099002	Graveyard	Cam	295
RO048-099006	Architectural fragment	Cam	295
RO048-099005	Font	Cam	295
RO048-099004	Graveslab	Cam	295
RO048-099007	Graveslab	Cam	295

RO048-099008	Graveslab	Cam	295
RO048-099003	Ecclesiastical enclosure	Cam	295
RO047-060005	Field boundary	Commeen	300
RO048-119009	Headstone	Skeavally	301
RO047-088	Mound	Bredagh	311
RO047-060006	Graveslab	Commeen	337
RO047-060001	Church	Commeen	339
RO047-060007	Graveslab	Commeen	340
RO047-060003	House - Medieval	Commeen	343
RO047-058019	Headstone	Milltown	346
RO047-060004	Ecclesiastical enclosure	Commeen	357
RO047-060002	Graveyard	Commeen	357
RO048-067	Ringfort - rath	Curry	395
RO047-101	Burial	Cornalee, Cuilleenirwan	427
RO048-128	Ringfort- cashel	Feacle	435
RO047-019004	Ringfort - cashel	Garrynphort	465
RO047-011001	Ringfort - rath	Carrowkeel	466
RO048-194002	House - indeterminate date	Cam	470
RO047-008	Ringfort - rath	Lissaphuca	471
RO047-019005	House - indeterminate date	Garrynphort	471
RO048-065001	Ringfort - rath	Curry	483
RO048-194003	Enclosure	Cam	487
RO047-011002	Enclosure	Carrowkeel	488
RO048-194001	Enclosure	Cam	490
RO047-061	Cross - Wayside cross	Commeen	496
RO048-186	Ringfort - rath	Curry	500

RO048-194004	House - indeterminate date	Cam	500
RO047-019001	Ringfort - rath	Garrynphort	501
RO047-019003	Hut site	Garrynphort	504
RO048-129	Ringfort - cashel	Tawnagh	505
RO048-100	Well	Cam	520
RO048-193	Ringfort - rath	Curry	540
RO047-057002	Burial	Bredagh	544
RO047-057001	Ringfort - rath	Bredagh	544
RO048-120	Ringfort - cashel	Boleyduff, Skeavally	559
RO048-187	Ringfort - rath	Tawnagh	574
RO047-059	Moated site	Bredagh	576
RO047-043	Ringfort - cashel	Bredagh	581
RO048-069001	Enclosure	Cam, Curry	582
RO044-086002	Children's burial ground	Turrock	594
RO048-069002	Mass-rock	Cam	595
RO048-130	Ringfort - cashel	Tawnagh	596
RO044-086001	Enclosure	Turrock	599
RO047-040001	Ringfort - rath	Carrowmore	623
RO048-101002	House - indeterminate date	Cam	640
RO048-101001	Ringfort - cashel	Cam	640
RO048-101003	House - indeterminate date	Cam	640
RO048-131	Ringfort - cashel	Tawnagh	659
RO047-040003	Field system	Carrowmore	665
RO047-042	Ringfort - cashel	Lisnamucklagh	679
RO047-019006	Road - road/trackway	Garrynphort	717
RO047-040002	Ringfort - rath	Carrowmore	723

RO048-121	Ringfort – cashel	Skeavally	731
RO048-064	Ringfort - rath	Curry	740
RO044-083003	House - indeterminate date	Mullaghardagh	758
RO048-104001	Ringfort - cashel	Cam	760
RO048-104002	House - indeterminate date	Cam	760
RO047-058031	Road - road/trackway	Bredagh	768
RO047-007002	Ringfort - cashel	Mullaghardagh	783
RO044-083004	House - indeterminate date	Mullaghardagh	794
RO048-103	Ringfort - unclassified	Cam	796
RO044-083001	Field system	Mullaghardagh	798
RO047-058016	Barrow - unclassified	Bredagh	819
RO047-058017	Barrow - unclassified	Bredagh	826
RO047-058007	Enclosure	Milltown	828
RO050-039002	Field system	Lugboy	842
RO047-058006	Ringfort - cashel	Ballyglass	845
RO050-039003	House - indeterminate date	Lugboy	848
RO050-039001	Ringfort - unclassified	Lugboy	851
RO047-058027	Field system	Bredagh, Turrock, Cooldorragh, Milltown	870
RO048-074002	Burial	Cam	870
RO048-074001	Standing stone	Cam	870
RO044-083005	Enclosure	Mullaghardagh	882
RO047-035002	Field system	Lisleenamanragh	884
RO048-134	Ringfort - cashel	Tawnagh	910
RO047-058002	Ringfort - cashel	Milltown	934

RO047-058028	House - indeterminate date 1	Cooldorragh	940
RO051-101	Road - road/trackway	Tobermacloughlin	944
RO047-079	Ringfort - cashel	Carrowkeel	956
RO048-105	Ringfort - rath	Cornageeha	960
RO047-035001	Ringfort - cashel	Lisseenamanragh	972
RO047-041001	Ringfort - rath	Lisnamucklagh	974
RO047-041003	Field boundary	Lisnamucklagh	975
RO047-058029	House - indeterminate date	Cooldorragh	979
RO047-058030	House - indeterminate date	Cooldorragh	983
RO047-058001	Castle - unclassified	Milltown	987
RO047-058026	Building	Milltown	995
RO044-092	Ringfort - rath	Garrynphort	996

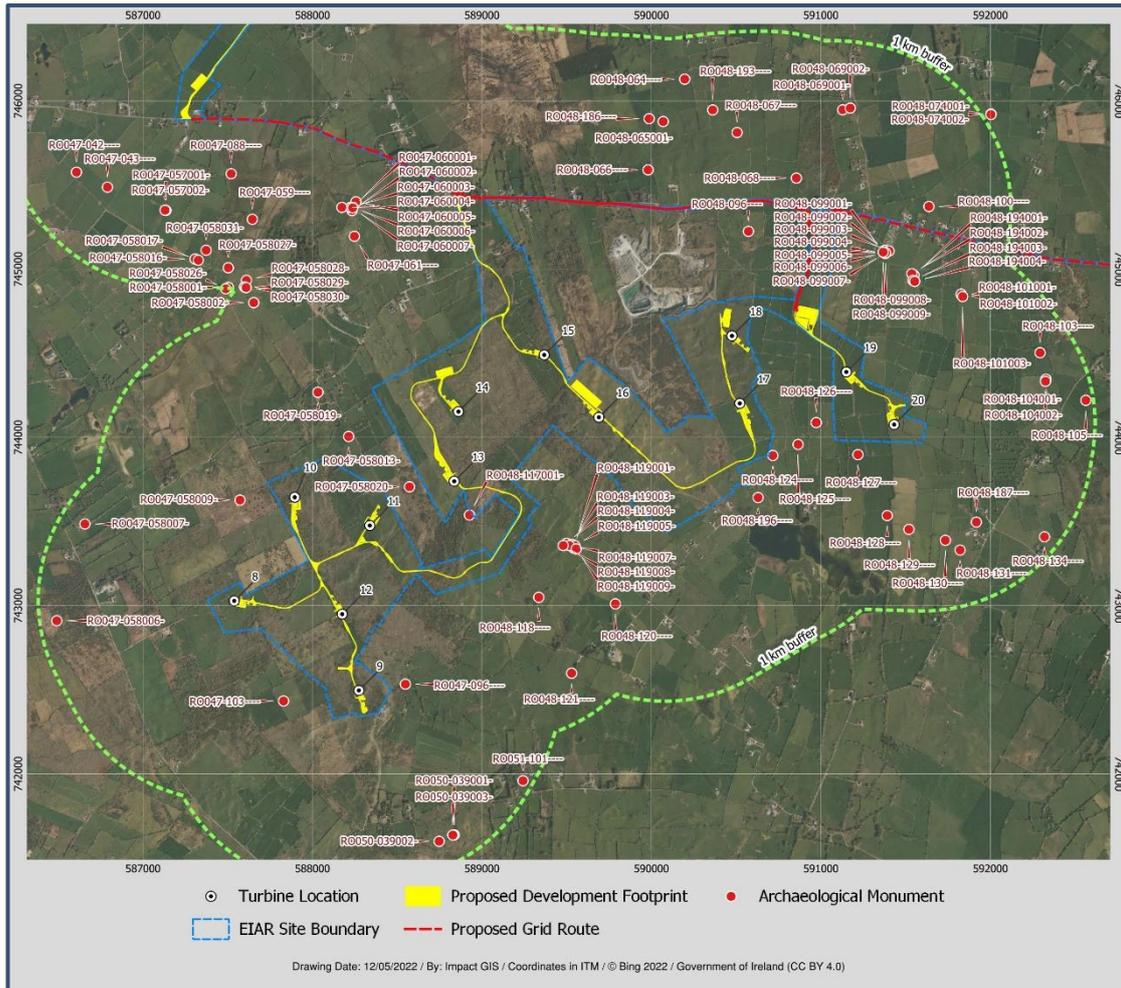


Figure 13-10 RMP Sites within 1km of the Southern Cluster of the EIAR Site Boundary

13.3.2.4.1 The Prehistoric Period

There are six monuments or features dating from the prehistoric period recorded within 1km of the EIAR Site Boundary.

- Barrow- mound barrow
- Barrow- unclassified
- Clearance cairns
- Standing stones

One mound barrow and two unclassified barrows are recorded within 1km of the EIAR Site Boundary. Mound barrows are circular or oval earthen or earth and stone mounds with no external features. Mounds found in association with other barrow types are likely to be mound barrows. They are funerary in nature and contain and/or cover burials. Excavated examples have been dated to the Bronze and Iron Ages (c. 2400 BC - AD 400). Unclassified barrows are an artificial mound of earth or earth and stone, normally constructed to contain or conceal burials. This term is used where it is not possible to identify the specific type of barrow. They are also part of the Bronze/Iron Age burial tradition.

Two clearance cairns are recorded within 1km of the EIAR Site Boundary. Clearance cairns are mounds of stone resulting from field clearance for agricultural purposes. They can date to any period from prehistory onwards. The term cairn is derived from the Irish word “carn” meaning a heap or pile of stones.

One standing stone is recorded within 1km of the EIAR Site Boundary. Standing stones are stones which have been deliberately set upright in the ground, usually orientated on a north/east-south/west axis, although other orientations do occur, and varying in height from 0.5m up to 6m. They functioned as prehistoric burial markers, commemorative monuments, indicators of routeways or boundaries and date from the Bronze and Iron Ages (c. 2400 BC - AD 500), with some associated with Early Medieval ecclesiastical and burial contexts (approximately 5th – 12th centuries).

13.3.2.4.2 The Early Medieval Period

The majority of recorded monuments located within 1km of the EIAR Site Boundary date to the Early Medieval period.

- > Ringforts- raths and cashels
- > Enclosures
- > Field systems
- > Burials
- > Moated sites
- > Field boundaries
- > Souterrains
- > Hut sites
- > Earthworks
- > Castles
- > Medieval houses
- > 16th / 17th century houses
- > 17th century houses

There are 50 ringforts recorded within 1km of the EIAR Site Boundary. For a description of ringforts please see 13.3.2.3.2 above.

There are 10 enclosures recorded within 1km of the EIAR Site Boundary. For a description of enclosures please see 13.3.2.3.2 above.

There are seven field systems recorded within 1km of the EIAR Site Boundary. For a description of field systems please see 13.3.2.3.2 above.

Four burials are recorded within 1km of the EIAR Site Boundary. Burials are described on National Monuments Service's online database (www.archaeology.ie) as an interment or deposition of human or animal remains in an isolated context, not associated with a burial ground or graveyard. They can date to any period from prehistory onwards.

Two moated sites are recorded within 1km of the EIAR Site Boundary. Moated sites are square, rectangular or occasionally circular areas, sometimes raised above the ground, enclosed by a wide, often water-filled, fosse, with or without an outer bank and with a wide causewayed entrance. They date to the late 13th/early 14th centuries and were primarily fortified residences/farmsteads of Anglo-Norman settlers, though they were also built by Gaelic lords.

Two field boundaries are recorded within 1km of the EIAR Site Boundary. For a description of field boundaries please see 13.3.2.3.2 above.

One souterrain is recorded within 1km of the EIAR Site Boundary. For a description of souterrains please see 13.3.2.3.2 above.

One hut site is recorded within 1km of the EIAR Site Boundary. For a description of hut sites please see 13.3.2.3.2 above.

One earthwork is recorded within 1km of the EIAR Site Boundary. An earthwork is an anomalous earthen structure, usually raised and occurring in a variety of shapes and sizes, that on field inspection was found to possess no diagnostic features which would allow classification within another monument category.

One unclassified castle is recorded within 1km of the EIAR Site Boundary. Unclassified castles are castles that cannot be precisely classified and which date from the late 12th to the 16th century AD.

One Medieval house is recorded within 1km of the EIAR Site Boundary. Medieval houses are buildings for human habitation which are broadly dated to the Medieval period (5th – 16th centuries AD).

One 16th / 17th century house is recorded within 1km of the EIAR Site Boundary. Sixteenth / 17th century houses are buildings for human habitation which dates to the 16th / early 17th century AD and which are not tower houses or fortified houses.

One 17th century house is recorded within 1km of the EIAR Site Boundary. Seventeenth century houses are buildings for human habitation which date to the 17th century AD and which are not tower houses or fortified houses.

13.3.2.4.3 Sites with Religious or Ritual Association

- > Church
- > Graveslabs
- > Ecclesiastical enclosures
- > Graveyards
- > Cross-wayside cross
- > Children's burial ground
- > Mass rock
- > Bullaun stone
- > font
- > Architectural fragment
- > headstone

Two churches are recorded within 1km of the EIAR Site Boundary. Churches are described on National Monuments Service's online database (www.archaeology.ie) as buildings used for public Christian worship and can be of any date from c. 500 AD onwards.

Five graveslabs are recorded within 1km of the EIAR Site Boundary. Graveslabs are stones designed to be recumbent and which mark a grave. They date from AD 1200-1700.

Two ecclesiastical enclosures are recorded within 1km of the EIAR Site Boundary. Ecclesiastical enclosures are large oval or roughly circular areas, usually over 50m in diameter, defined by a bank/banks and external fosse/fosses or drystone wall/walls, enclosing an Early Medieval church or monastery and its associated areas of domestic and industrial activity. They date to the Early Medieval period (5th - 12th centuries AD).

Two graveyards are recorded within 1km of the EIAR Site Boundary. Graveyards are described on National Monuments Service's online database (www.archaeology.ie) as the burial area around a church. They date from the Medieval period (5th – 16th centuries) onwards.

Two wayside crosses are recorded within 1km of the EIAR Site Boundary. For a description of wayside crosses please see 13.3.2.3.3 above.

Two mass rocks are recorded within 1km of the EIAR Site Boundary. Mass rocks are rocks or earthfast boulders used as an altar or a stone-built altar when Mass was being celebrated during Penal times (1690s to 1750s AD), though there are some examples which appear to have been used during the Cromwellian Period (1650s AD). Some of these rocks/boulders may bear an inscribed cross.

Two headstones are recorded within 1km of the EIAR Site Boundary. Headstones are described on National Monuments Service's online database (www.archaeology.ie) as an upright stone placed over the head of a grave. They date from 17th century AD onwards.

One children's burial ground is recorded within 1km of the EIAR Site Boundary. For a description of children's burial ground please see 13.3.2.3.3 above.

One bullaun stone is recorded within 1km of the EIAR Site Boundary. The term bullaun (from the Irish word "bullán", which means a round hollow in a stone, or a bowl) is applied to boulders of stone or bedrock with hemispherical hollows or basin-like depressions, which may have functioned as mortars. They are frequently associated with ecclesiastical sites and holy wells and so may have been used for religious purposes. Other examples which do not appear to have ecclesiastical associations can be found in bedrock or outcrop in upland contexts, often under blanket bog, and are known as bedrock mortars. They date from the prehistoric period to the Early Medieval period (5th – 12th centuries AD).

One font is recorded within 1km of the EIAR Site Boundary. Fonts are vessels, usually made of stone, over which baptisms were held. They date from the Medieval period (5th -16th centuries AD) onwards.

One architectural fragment is recorded within 1km of the EIAR Site Boundary. An architectural fragment is a piece of worked wood or carved stone that has been removed from a building. They may be of any date from the Early Medieval period (5th – 12th centuries AD) onwards.

13.3.2.4.4

Post-1700 AD Archaeological Features

- > Houses- indeterminate date
- > Roads/trackways
- > Buildings
- > Sweathouse
- > Well
- > Mound

Twelve houses of indeterminate date are recorded within 1km of the EIAR Site Boundary. For a description of houses of indeterminate date please see 13.3.2.3.4 above.

Three roads/trackways are recorded within 1km of the EIAR Site Boundary. For a description of roads/trackways please see 13.3.2.3.4 above.

Two buildings are recorded within 1km of the EIAR Site Boundary. Buildings are described on National Monuments Service's online database (www.archaeology.ie) as a structure that has or had a roof where there is insufficient evidence to determine function. They may date to any period from prehistory onwards.

One sweathouse is recorded within 1km of the EIAR Site Boundary. A sweathouse is a small, simple, drystone structure, usually with a corbelled roof, used as a sauna. The entrance is usually low so that it can be easily blocked up when in use. They were reputed to cure a wide variety of ailments and were in use from at least the 18th century AD up to the mid-19th century.

One well is recorded within 1km of the EIAR Site Boundary. Wells are described on National Monuments Service's online database (www.archaeology.ie) as constructed features either consolidating

the edges of a natural spring with stones, or the excavation of a vertical bore-hole to reach ground-water at depth with the sides being consolidated with stones or other material. A spring well can have a canopy and steps leading to the water, but a bore-hole can have a mechanical means of raising and lowering buckets.

One mound is recorded within 1km of the EIAR Site Boundary. Mounds are an artificial elevation of earth or earth and stone of unknown date and function which cannot be classified as any other known archaeological monument type on present evidence.

13.3.2.5 Newly Recorded Archaeology within the EIAR Site Boundary

No new above-ground archaeological features (*i.e.* pre 1700 AD) were noted within the EIAR Site Boundary. A number of stone walls which are not protected under the National Monuments Acts (as amended) are located within the EIAR Site Boundary. The site visits showed these features to be generally five to six courses high and one to two courses wide (see Section 13.3.4.1).

13.3.2.6 Potential Sub-Surface Archaeology within the EIAR Site Boundary

Sub-surface archaeology, by its very nature, is not detectable above-ground and can occur within or below the topsoil. Such archaeological features may not be apparent during a visual examination of a site. The excavation of topsoil for the turbine bases, hardstands, access roads, construction compounds, electrical substation, spoil storage areas and internal cabling may directly impact on any new sub-surface sites within the EIAR Site Boundary. Any sub-surface archaeological features which may be revealed will be mitigated by archaeological test trenching and monitoring of construction works in accordance with the requirements of the National Monuments Acts and any planning conditions.

13.3.2.7 Previous Archaeological Fieldwork within the EIAR Site Boundary

Reference to Summary Accounts of Archaeological Excavations in Ireland confirmed that one fieldwork programme has been carried out in townlands located within the EIAR Site Boundary (www.excavations.ie).

An archaeological assessment was carried out in Cloonacaltry and Curry townlands for a proposed quarry development by Roadstone Provinces Ltd. in 2004. The purpose of the assessment was to test the preliminary dating of a complex of disused field boundaries within the 68ha area of the proposed quarry. Historical, cartographic (notably the 1636 Stafford survey of Roscommon) and artefact research, combined with especially commissioned aerial photographic survey and analysis of monument dating and distribution, contributed to the development of a hypothesis that the majority of the field walls in the study area are 17th century or later and that those in Cloonacaltry townland post-date 17th century woodland clearance. A testing programme was formulated with the objective of retrieving evidence to test the hypothesis.

Excavations (Licence Number 04E0626) took place between 4th and 7th May 2004. Fifteen test trenches were excavated at various points to investigate wall sections, wall junctions, and a number of enclosures of varying sizes. The testing results were negative; no archaeological features, apart from the walls themselves, and no artefactual material was recovered. No material or historical evidence to date any of the field enclosures before the Medieval period and most of the enclosures before the Post-Medieval period was noted (www.excavations.ie).

Turbines 16, 17 and 18 and associated access roads, along with two no. spoil storage areas, will be located in Cloonacaltry townland.

Monitoring of site investigations as detailed in Chapter 4, for the Proposed Development within the proposed Northern Cluster and the proposed Southern Cluster was carried out between November 2020 and January 2021 and took 26 days to complete. No archaeological features or artefacts were revealed as a result of carrying out the monitoring.

Monitoring of site investigations was also carried out in June 2010 and involved the excavation of 21 no. test pits in the vicinity of the proposed Northern Cluster. No archaeological features or artefacts were revealed as a result of carrying out the monitoring. In all of the test pits topsoil directly sealed geologically deposited strata.

13.3.2.8 Toponyms

Townland names are an important source in understanding the archaeology, geology, land-use, ownership and cultural heritage of an area. The Proposed Development is located within the following 27 no. townlands.

Table 13-6 Townland names within the EIAR Site Boundary

Townland Name	Meaning
Ballymullavill	Irish name not yet confirmed.
Bellanamullia	Irish name not yet confirmed.
Boleyduff	Irish name not yet confirmed.
Bredagh	Irish name not yet confirmed.
Brideswell	<i>Tobar Bríde</i> . Translates as “ <i>The well of Brid</i> ”.
Cam	<i>Camach</i> . Possibly translates as “ <i>Crooked field</i> ”.
Cloonacaltry	Irish name not yet confirmed.
Cloonakille	Irish name not yet confirmed.
Commeen	Irish name not yet confirmed. Possibly translates as “ <i>Small hollow</i> ”.
Cornageeha	Irish name not yet confirmed.
Cronin	Irish name not yet confirmed.
Cuilleenirwan	Irish name not yet confirmed. Possibly translates as “ <i>Irvine’s little wood</i> ”.
Cuilleenoolagh	Irish name not yet confirmed.
Curry	Irish name not yet confirmed.
Feacle	Irish name not yet confirmed.
Glenrevagh	Irish name not yet confirmed. Possibly translates as “ <i>Grey valley</i> ”.
Gortaphuill	Irish name not yet confirmed. Translates as “ <i>Field of the hole</i> ”.

Knocknanool	Irish name not yet confirmed.
Milltown	<i>Baile mhuillinn. "Town of the mill".</i>
Monksland	<i>Fearann na Manach.</i> Self-explanatory.
Pollalaher	Irish name not yet confirmed.
Rooskagh	Irish name not yet confirmed.
Skeavally	Irish name not yet confirmed. Possibly translates as " <i>Bush or thorn of the town</i> ".
Tawnagh	Irish name not yet confirmed. Translates as " <i>A field</i> ".
Tobermacloughlin	Irish name not yet confirmed. Translates as " <i>Mac Loughlin's well</i> ".
Tullyneeny	Irish name not yet confirmed. Possibly translates as " <i>Hill of the cattle fair</i> ".
Turrock	<i>An Turrac.</i> The attack. A shortened version of the original name <i>Caisleán an Turraic</i> , " <i>The castle of the attack</i> ".

13.3.2.9 Cartographic Analysis

Ordnance Survey Map First Edition 1:10,560 (1838)

The proposed access roads will truncate 18 townland boundaries, six parish boundaries and one barony boundary. Recent research suggests that:-

"hoards and single finds of Bronze Age weapons, shields, horns, cauldrons and gold personal objects can all be shown to occur on boundaries." (Kelly 2006, 28).

The access road leading north east to Turbine 3 will cross the line of a north east/south west oriented farm track. The Northern Cluster site compound will be located along the line of this former farm track. This feature is not recorded on later edition maps and was not noted during the walkover survey. The two field systems (RMP RO047-044002 and RMP RO047-044003) and enclosure (RMP RO047-044001) located in the eastern end of the Northern Cluster in the location of the access road leading north to Turbine 3 are not recorded on the First Edition 1:10,560 map. The site visit confirmed the proposed access road will have no impact on either of these field systems. The access road leading to Turbine 3 will cross a north east/south west oriented farm track which has five structures at its southern end. This road was noted as being *in situ* during the walkover survey. Ringforts RMP RO047-025001 and RMP RO047-095, which are located north of the access road leading to Turbine 3 and a short distance east of Turbine 3 respectively, are not recorded on the First Edition 1:10,560 map. RMP RO047-022 (ringfort) is recorded as "*Tullyneey fort*" on the First Edition 1:10,560 map, and is located south of the access road leading to Turbine 3. RMP RO047-029 (ringfort) is recorded as "*Gortaphuill fort*" on the First Edition 1:10,560 map, and is located south of the access road leading to Turbine 4. Turbine 4 will be located on the line of an east/west oriented farm track as recorded on the First Edition 1:2,500 map. Turbine 2 will be mainly located within RMP RO047-019002 (field system). There are no features associated with this field system recorded on the First Edition 1:10,560 map in the proposed location of Turbine 2. The site visit showed the location of Turbine 2 to have been recently cleared, and no features associated with the field system were recorded. The access road leading west from Turbine 2 will be located south of RMP RO047-015002 (ringfort), RMP RO047-015003 (ringfort), RMP RO047-

015006 (road/trackway), RMP RO047-015007 (probable Post-Medieval house site) and RMP RO047-015008 (probable Post-Medieval house site). None of these features are recorded on the First Edition 1:10,560 map. The access roads leading north to Turbine 1, north east to Turbine 2, south west to Turbine 5 and south east to Turbine 6 will cross a field system (RMP RO047-015005). There are no features associated with this field system recorded on the First Edition 1:10,560 map in the location of the proposed access roads. The area of the field system (RMP RO047-015005) in the location of the proposed access roads is recorded as rough pasture and some rock outcropping on the First Edition 1:10,560 map. The site visit showed the location of the access roads leading to Turbines 1, 2, 5 and 6 to contain several small, low walls. The access road leading west to Turbine 5 will be located a short distance west of RMP RO047-015004 (ringfort). This monument is not recorded on the First Edition 1:10,560 map. Turbine 5 will be located a short distance south west of RMP RO047-010001 (ringfort). This monument is not recorded on the First Edition 1:10,560 map.

The access road in the Southern Cluster will cross the line of RMP RO048-098 (linear earthwork) in five places. This linear feature is recorded as a:

“drystone-built wall (With c. 1m; H c. 1.2-1.6m), well-built, but collapsed in places. It is slightly stronger than other walls in the area, frequently with two flush faces, but there is no evidence of an older wall on its line. It is accompanied at its E end by a laneway (L c. 700m) on its N side. Although this follows the line depicted on the Strafford map there is no conclusive evidence that it is the wall represented.” (www.archaeology.ie).

The site visit recorded the wall in the location of the proposed access roads as being generally c. 1.40m high x 1m wide at the base x 0.50m wide at the top. It is generally well-maintained although partially collapsed in places, and built of un-worked limestone blocks with capping stone. It appears to be two courses wide at the base and one course wide at the top.

The access road between Turbines 10 and 12 will be located a short distance east of RMP RO047-058012 (ringfort) and RMP RO047-058018 (hut site). Neither of these features are recorded on the First Edition 1:10,560 map, which shows the area as cropping rock. Turbine 11 will be located a short distance west of a field system (RMP RO 047-058020). There are no features associated with this field system recorded on the First Edition 1:10,560 map, which shows the area as cropping rock. The access road between Turbine 11 and Turbine 13 will cross the line of a laneway as shown on the First Edition 1:10,560 map, and this linear feature is recorded as RMP RO048-097003. A field system (RMP RO047-058021) is recorded a short distance west of Turbine 14 and immediately east of the access road leading to Turbine 13. This field system is not recorded on the First Edition 1:10,560 map, which records the area as cropping rock. The access road leading east from Turbine 14 to Turbine 15 will cross the northern end of RMP RO048-097002 (field system). The First Edition 1:10,560 map records this area as cropping rock, and the walkover survey confirmed that no features associated with the field system are located within the application site. An Ordnance Survey trigonometrical point is recorded a short distance east of the access road leading south east to Turbine 15. This feature was not recorded during the walkover survey of the area. Turbine 16 will be located within a field system (RMP RO048-097001). There are no features associated with this field system recorded on the First Edition 1:10,560 map in the location of Turbine 16. The field system is recorded as cropping rock on the First Edition 1:10,560 map. The site visit showed the location of Turbine 16 to contain a north east/south west oriented non-continuous low wall. The access road between Turbines 16 and 17 will be a short distance south of RMP RO048-097005 (ringfort) and RMP RO048-097009 (children’s burial ground) and a short distance west of RMP RO048-124 (ringfort). None of these monuments are recorded on the First Edition 1:10,560 map. Turbine 17 will be located a short distance west of RMP RO048-123 (ringfort), which is recorded as a sub-circular feature on the First Edition 1:10,560 map. A small north/south oriented enclosed structure is recorded a short distance west of the access road leading to the onsite electrical substation and outside the area of proposed land take. This structure is not shown on later edition cartographic sources and was not recorded during the walkover survey of the area.

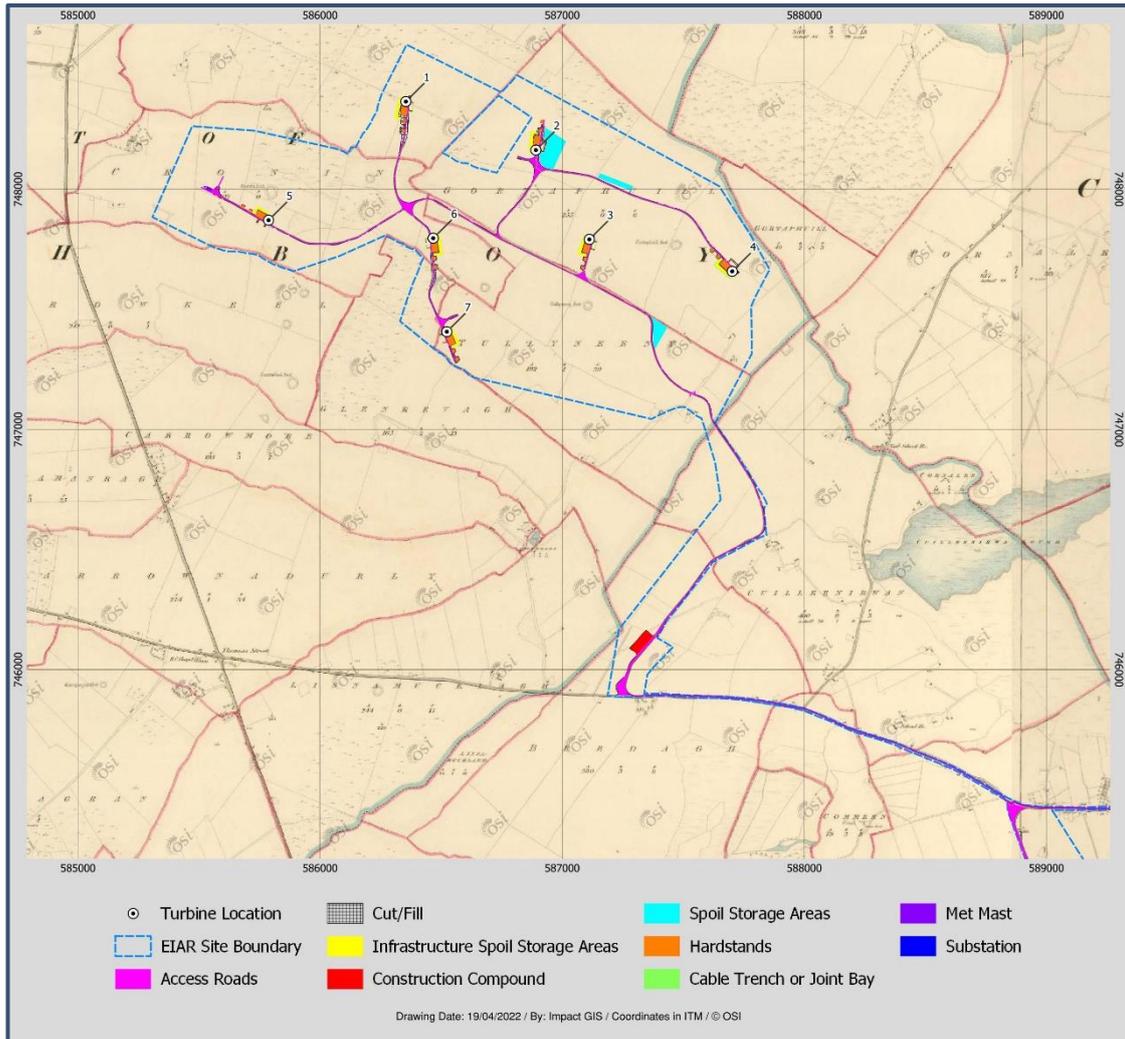


Figure 13-11 Ordnance Survey Map First Edition 1:10,560 (1838), showing Northern Cluster of the EIAR Site Boundary

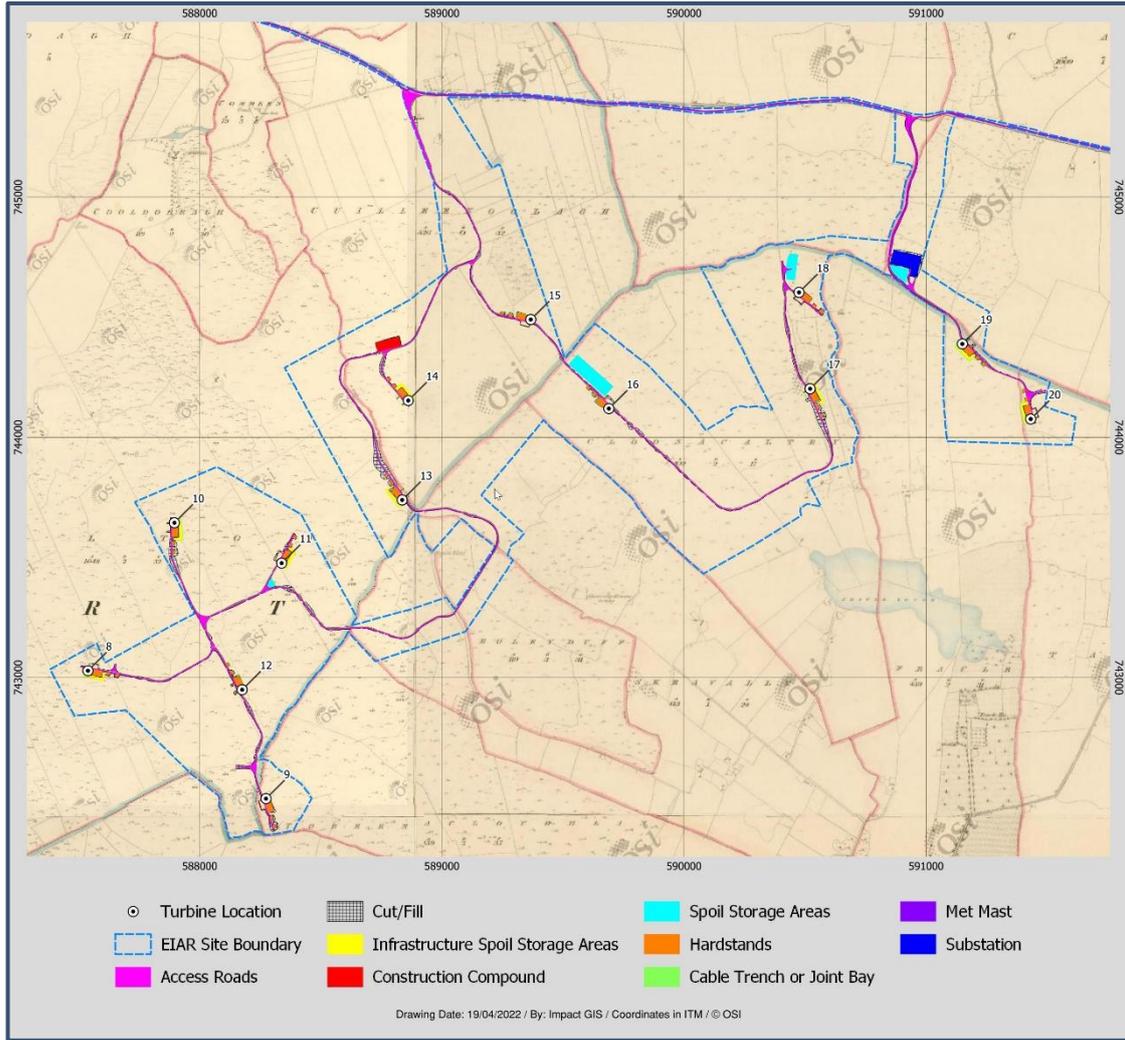


Figure 13-12 Ordnance Survey Map First Edition 1:10,560 (1838), showing Southern Cluster of the EIAR Site Boundary

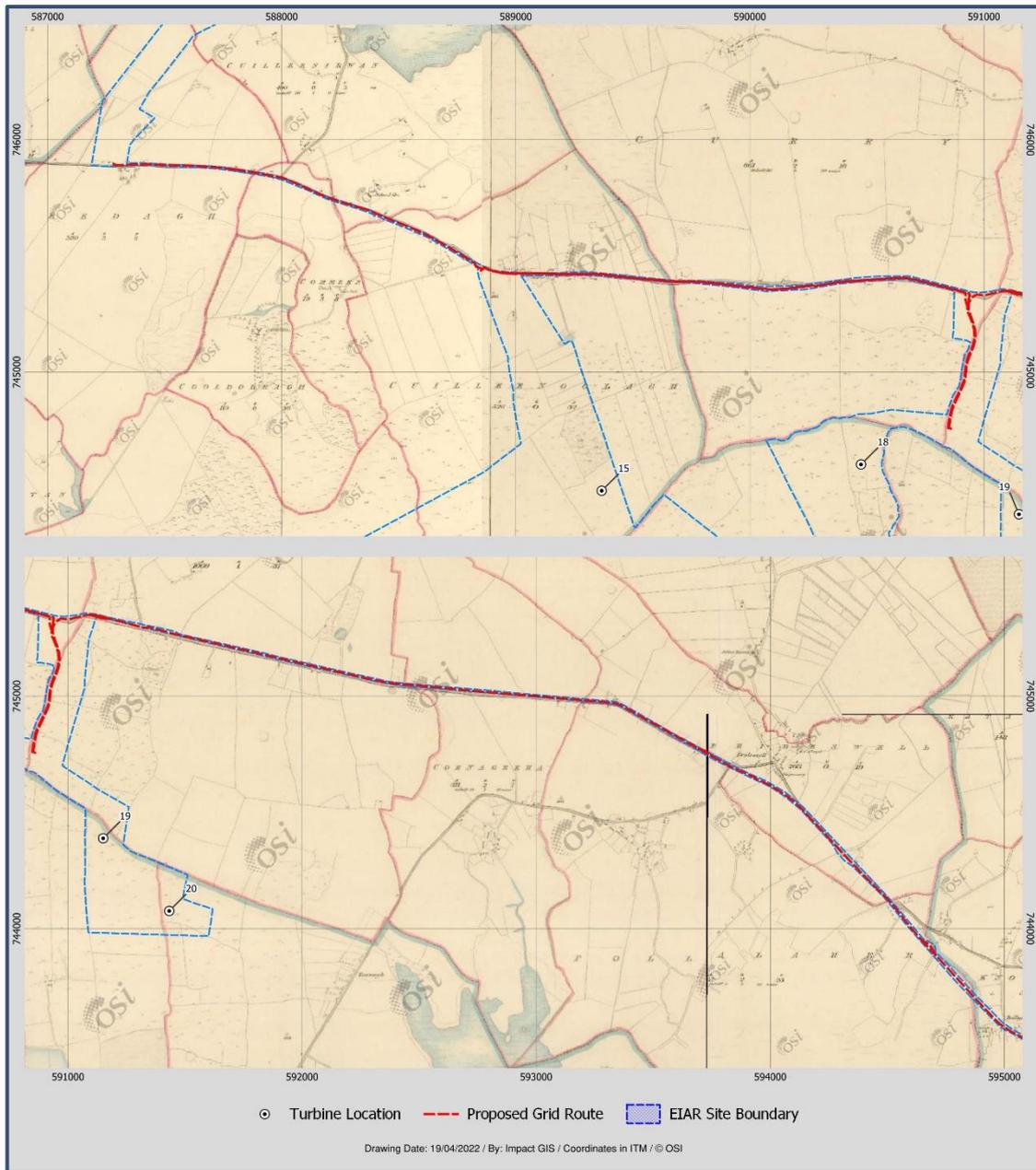


Figure 13-13 Ordnance Survey Map First Edition 1:10,560 (1838), showing western end and middle section of Grid Connection

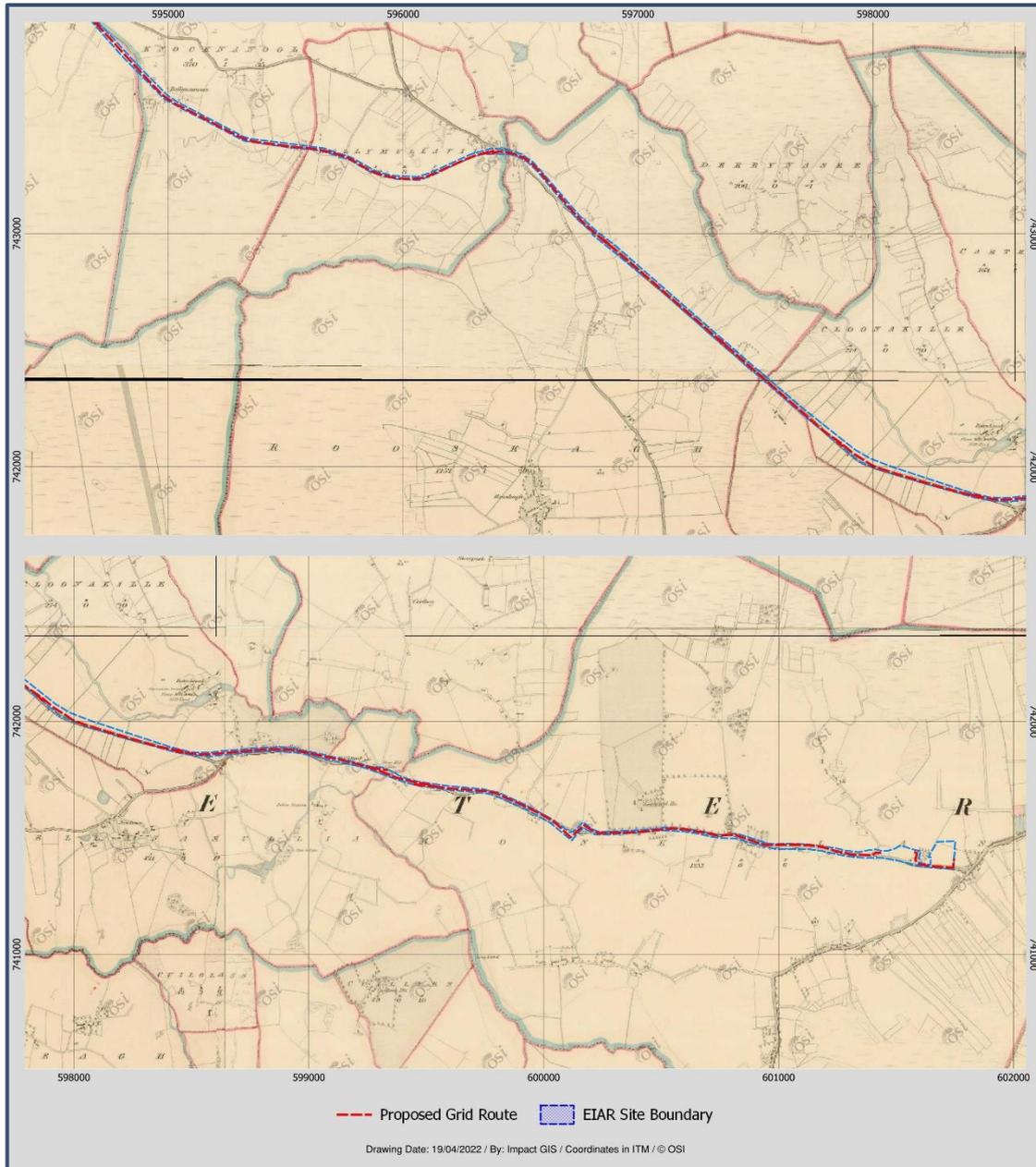


Figure 13-14 Ordnance Survey Map First Edition 1:10,560 (1838), showing middle section and eastern end of Grid Connection

Ordnance Survey Map First Edition 1:2,500 (1888 - 1892)

The First Edition 1:2,500 map generally records a more enclosed landscape in the vicinity of the Proposed Development than was shown on the First Edition 1:10,560 map.

A small, presumably agricultural, east/west oriented structure is recorded at the very southern end of the access road leading to Turbine 3. This structure is not recorded on the First Edition 1:10,560 map, and the walkover survey confirmed it no longer survives above-ground. Ringfort RMP RO047-025001, which is located north of the access road leading to Turbine 3, is recorded for the first time on the First Edition 1:2,500 map. A “Well” is recorded on the First Edition 1:10,560 map a short distance east of the access road leading north west to Turbine 3 and in the location of a spoil storage area. This feature was not shown on the First Edition 1:10,560 map and was not noted during the walkover survey. Gortaphuill fort (RMP RO047-029), which is located south of the access road leading to Turbine 4, is recorded in a much poorer state of preservation than was shown on the First Edition 1:10,560 map.

RMP RO047-010001 (ringfort), which is located north east of the proposed location of Turbine 5, is recorded for the first time on the First Edition 1:2,500 map. A “Well” is recorded north of the access road leading west from Turbine 5 to the meteorological mast on the First Edition 1:10,560 map. This feature was not shown on the First Edition 1:10,560 map and was not noted during the walkover survey of the area.

Turbine 10 will be largely located within a small sub-rectangular enclosed area as recorded on the 1:2,500 map. This area is recorded as cropping rock on the 1:2,500 map and no internal features are noted. An Ordnance Survey Bench Mark is recorded a short distance south of Turbine 11. This structure is not recorded on the First Edition 1:10,560 map. An Ordnance Survey Bench Mark is recorded a short distance south east of Turbine 13. Again, this structure is not recorded on the First Edition 1:10,560 map. A “Sheepfold” is recorded a short distance west of the access road leading north from Turbine 13 to Turbine 14. This structure is not recorded on the First Edition 1:10,560 map. An Ordnance Survey Bench Mark is recorded north east of the spoil storage area east of Turbine 16. This structure is not recorded on the First Edition 1:10,560 map. RMP RO048-124 (ringfort), which is recorded a short distance east of the access road leading to Turbine 17, is recorded for the first time on the 1:2,500 map. A “Sheepfold” is recorded a short distance south of where Turbine 20 will be located. This structure is not recorded on the First Edition 1:10,560 map.

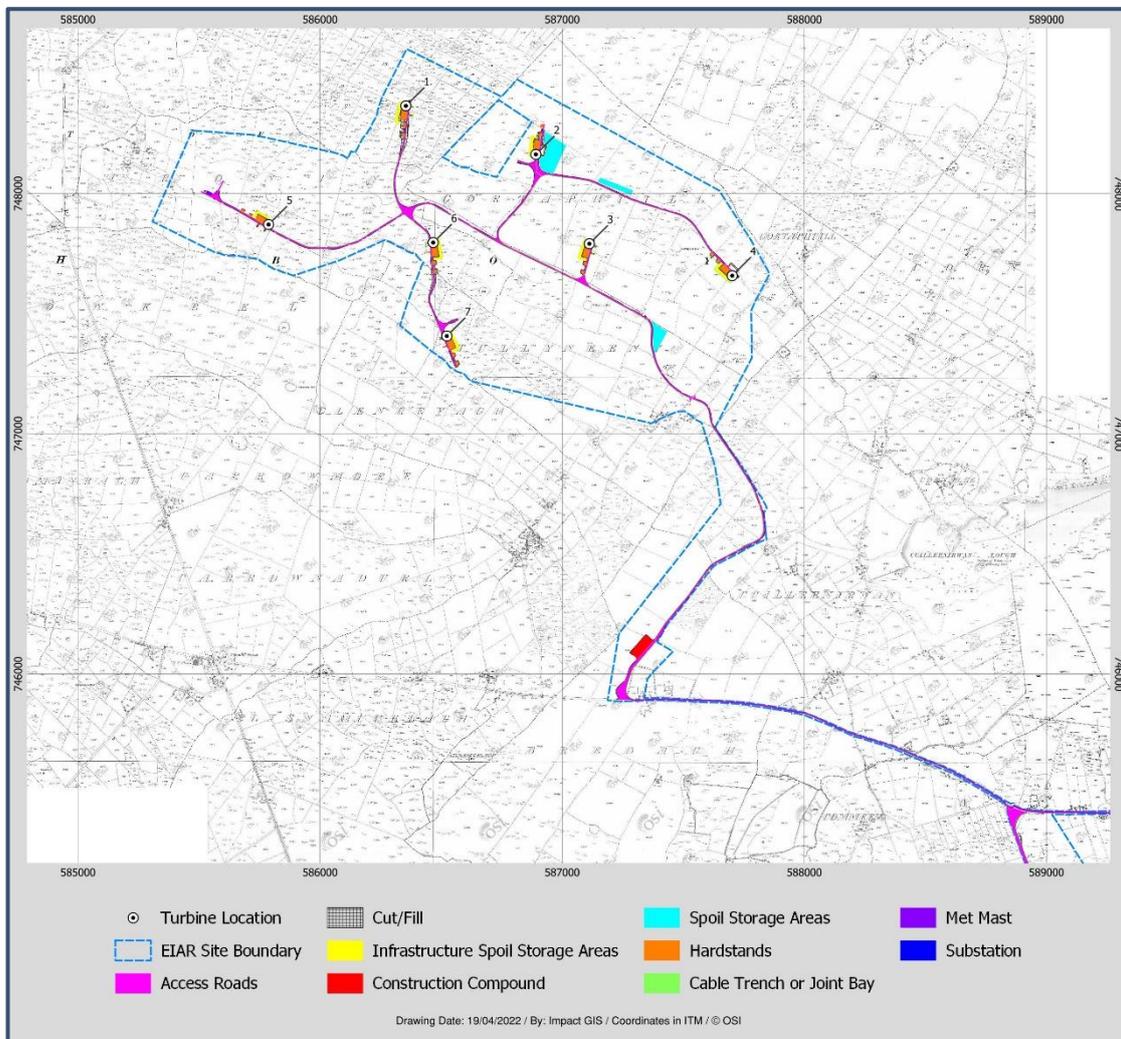


Figure 13-15 Ordnance Survey Map First Edition 1:2,500 (1888 - 1892), showing Northern Cluster of the EIAR Site Boundary

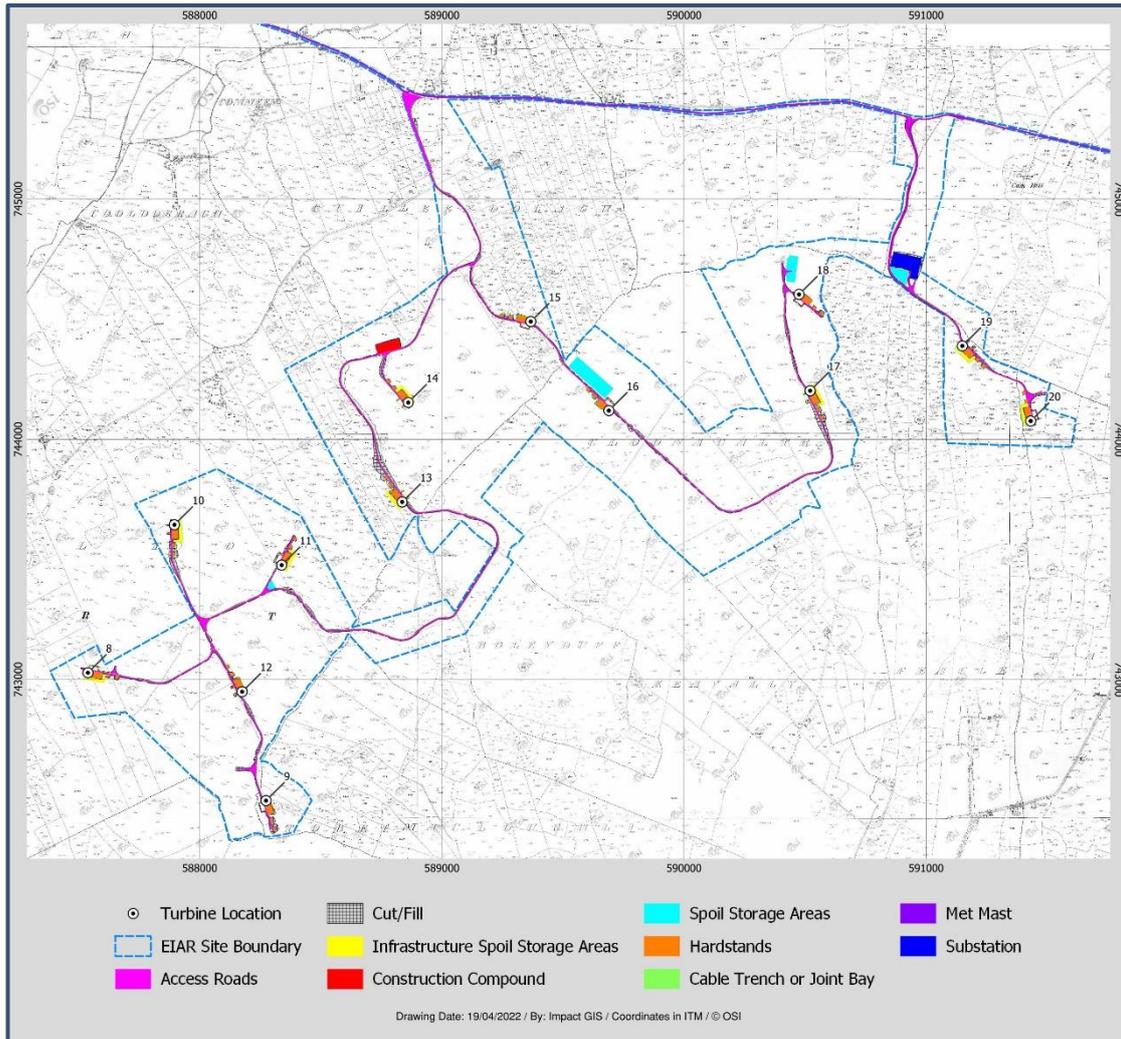


Figure 13-16 Ordnance Survey Map First Edition 1:2,500 (1888 - 1892), showing Southern Cluster of the EIAR Site Boundary

Ordnance Survey Map Third Edition 1:10,560 (1911 - 1913)

The Third Edition 1:10,560 map generally records a very slightly more enclosed landscape in the vicinity of the Proposed Development than was shown on the First Edition 1:2,500 map.

There are no differences recorded within the EIAR Site Boundary between the Third Edition 1:10,560 map and the First Edition 1:2,500 map.

All three Editions of the Ordnance Survey maps record a number of vernacular structures, Ordnance Survey benchmarks, wells, springs, gravel pits, *etc.* in the general vicinity of the proposed Grid Connection.

13.3.2.10 Topographical Files of the National Museum of Ireland

Information on artefact finds and excavations is recorded by the National Museum of Ireland. Location information relating to such finds is important in establishing prehistoric and historic activity in the study area.

There are two finds recorded in the Topographical Files of the National Museum of Ireland from townlands within the EIAR Site Boundary.

A skeleton and sword were found in Milltown townland, but no further information is provided on this site. It is recorded in the RMP as RO047-077, the location of which is not provided.

Fifty five silver coins (NMI ref. 1944:194) were found in Cuilleenoolagh townland in 1944. They were found in one lot and consisted of five shillings and 48 sixpences of Elizabeth I. Some were dated from 1561 to 1593. There is no information regarding the location of this find recorded in the Topographical Files.

There are no entries recorded in the Topographical Files within the land take of the Grid Connection route or the turbine delivery route (www.heritagemaps.ie).

13.3.2.11 Aerial Photography

Aerial photographs held by Ordnance Survey Ireland (map.geohive.ie) and Bing aerial photography (www.bing.com/maps) were consulted to look for the presence of archaeological and architectural remains within the EIAR Site Boundary.

Aerial photography records a similar landscape to that which was noted during the walkover surveys, with the location of Turbines 1 – 7 and the associated access tracks being generally within well maintained fields enclosed by stone walls. The location of Turbines 8 – 20 and the associated access tracks are generally recorded as large areas of reclaimed land enclosed by stone walls interspersed with poor, un-reclaimed land with frequent rock outcropping.

A series of largely regular stone walls are recorded on the 1995 black and white aerial photograph in the location of Turbine 1. These walls are not recorded on the 2000 aerial photograph and the walkover survey confirmed they no longer survive above-ground. Evidence of field clearance can be seen in the southern end of the Northern Cluster between the time of the 1995 black and white aerial photograph and the most recent aerial photography of the area.

There was no evidence of any previously unrecorded archaeological or architectural features recorded on aerial photography within EIAR Site Boundary.

13.3.3 Architectural Heritage

13.3.3.1 Protected Structures within the EIAR Site Boundary

There are no Protected Structures recorded in the Roscommon County Development Plan (2022-2028) within the EIAR Site Boundary.

13.3.3.2 Protected Structures within 5km of the EIAR Site Boundary

There are 19 Protected Structures recorded in the Roscommon County Development Plan (2022-2028) within 5km of the EIAR Site Boundary. These Protected Structures are listed in Table 13-7 and are shown in Figures 13-17 and 13-18.

Table 13-7 Protected Structures within 5km of the EIAR Site Boundary

RPS No.	ITM E	ITM N	Name	Townland	Distance from EIAR Site Boundary

04400100	585296	751784	Church of the Good Shepherd	Carrowntemple	3.35km
04400101	584368	750861	Cloghan Castle	Cloghan	2.81km
04400573	587160	752454	Loobinroe Windmill	Correal	3.93km
04500087	589681	752153	Longfield House	Longfield	4.60km
04700001	583490	745198	Cloonagh House	Cloonagh	3.26km
04700003	585483	746043	St. Patrick's Church	Carrownadurly	1.62km
04700004	586499	743560	Mountsandford Lodge	Milltown	1.00km
04700006	582174	746861	St. Joseph's Roman Catholic Church	Ballyforan	3.35km
04700007	581957	746532	House	Ballyforan	3.66km
04700526	582224	746745	Water Pump	Ballyforan	3.34km
04700527	581598	746347	Ballyforan Bridge	Derryfadda	4.06km
04700575	581135	747179	Foot Bridge	Derreen	4.29km
04800005	589167	748216	Vernacular House	Cornalee	1.42km
04800014	592759	742682	Keoghville House	Carrowkeeran	1.64km
04800024	596486	743275	Thatched Cottage	Rooskagh	4.94km
05000008	587476	738405	Cloonbigny Castle	Cloonbigny	3.97km
05100009	589334	738029	Dundonnell Castle	Dundonnell	4.43km
05100010	589953	738977	Dundonnell Thatched House	Dundonnell	3.72km

05100013	589887	739370	St. Ronan's Church	Bellaneeny	3.34km
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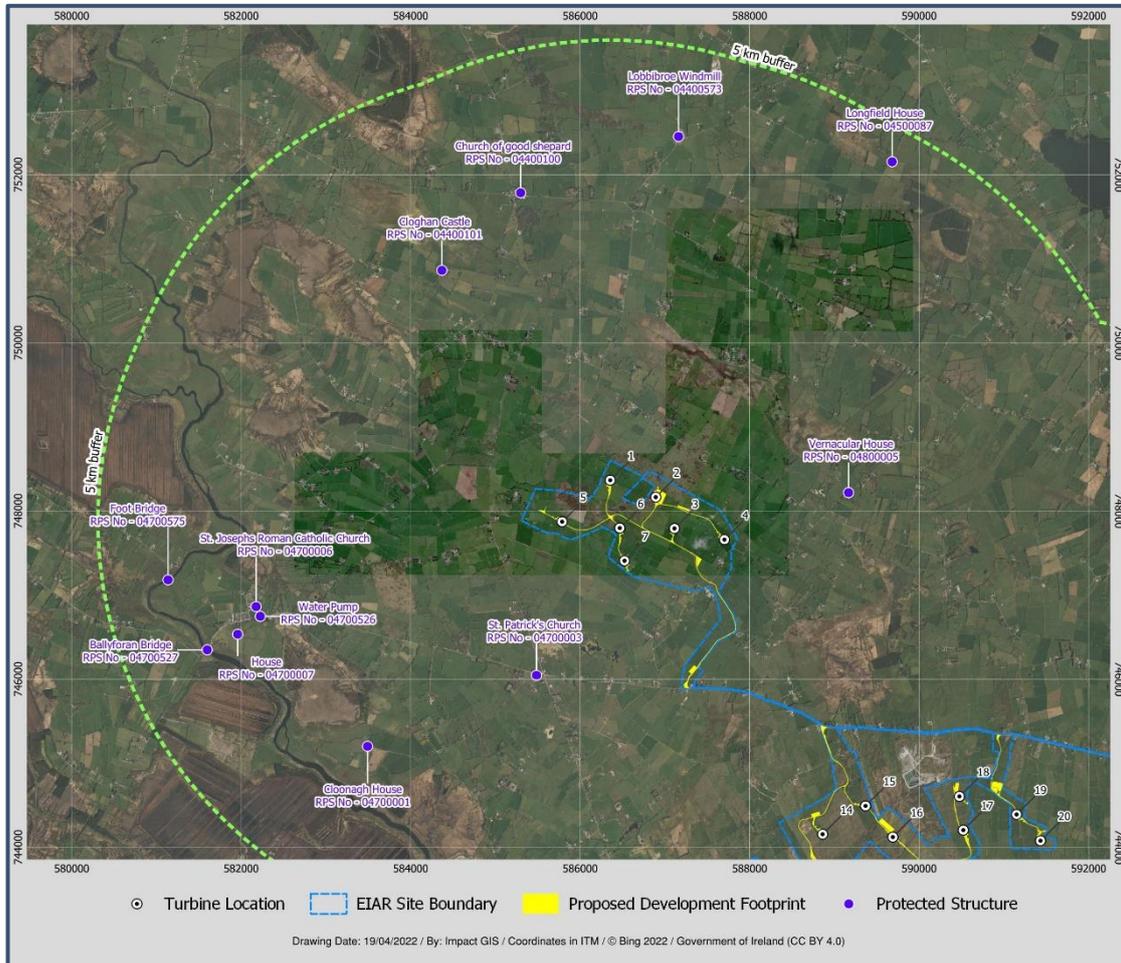


Figure 13-17 Protected Structures within 5km of the Northern Cluster EIAR Site Boundary

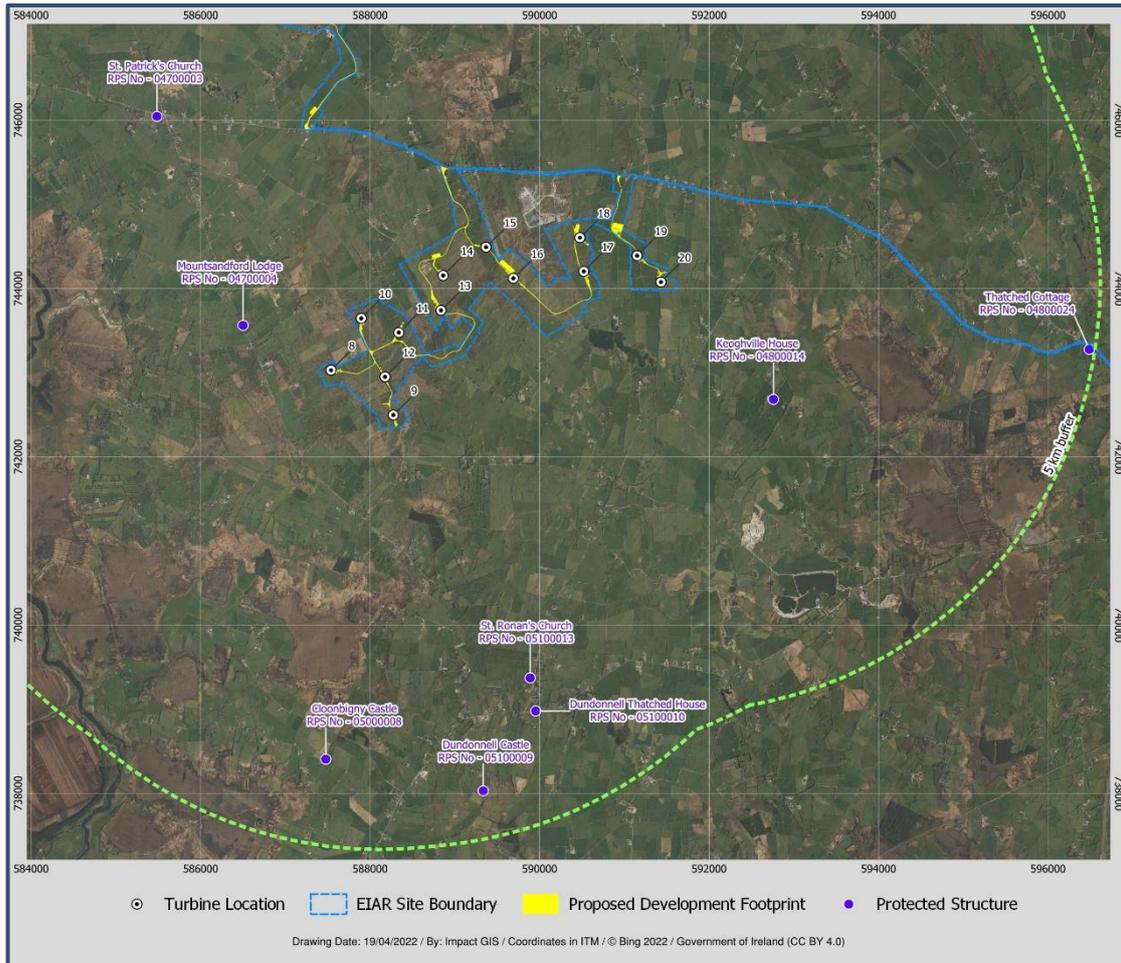


Figure 13-18 Protected Structures within 5km of the Southern Cluster EIAR Site Boundary

There are no Protected Structures recorded in the Galway County Development Plan (2015) within 5km of the EIAR Site Boundary.

13.3.3.3 Conservation Areas within the EIAR Site Boundary

There are no Conservation Areas or Proposed Conservation Areas recorded in the Roscommon County Development Plan (2022-2028) within the EIAR Site Boundary.

13.3.3.4 Conservation Areas within 5km of the EIAR Site Boundary

There are no Conservation Areas or Proposed Conservation Areas recorded in the Roscommon County Development Plan (2022-2028) within 5km of the EIAR Site Boundary.

There are no Conservation Areas or Proposed Conservation Areas recorded in the Galway County Development Plan (2015-2021) within 5km of the EIAR Site Boundary.

13.3.3.5 NIAH Structures within the EIAR Site Boundary

There are no structures recorded on the National Inventory of Architectural Heritage within the EIAR Site Boundary.

13.3.3.6 NIAH Structures within 5km of the EIAR Site Boundary

There are five structures recorded on the National Inventory of Architectural Heritage within 5km of the EIAR Site Boundary. These NIAH Structures are listed in Table 13-8 and are shown in Figure 13-19.

Table 13-8 NIAH Structures within 5km of the EIAR Site Boundary

NIAH No.	ITM E	ITM N	Name	Townland	Distance from EIAR Site Boundary
30404705/ 31821003	581597	746348	Ballyforan Bridge	Derryfadda	4.06km
31821001	582174	746860	St. Joseph's Roman Catholic Church	Ballyforan	3.35km
31821002	582225	746745	Water Pump	Ballyforan	3.34km
31944002	587160	752455	Loobinroe Windmill	Correal	3.93km
31947001	581134	747185	Foot Bridge	Derreen	4.29km

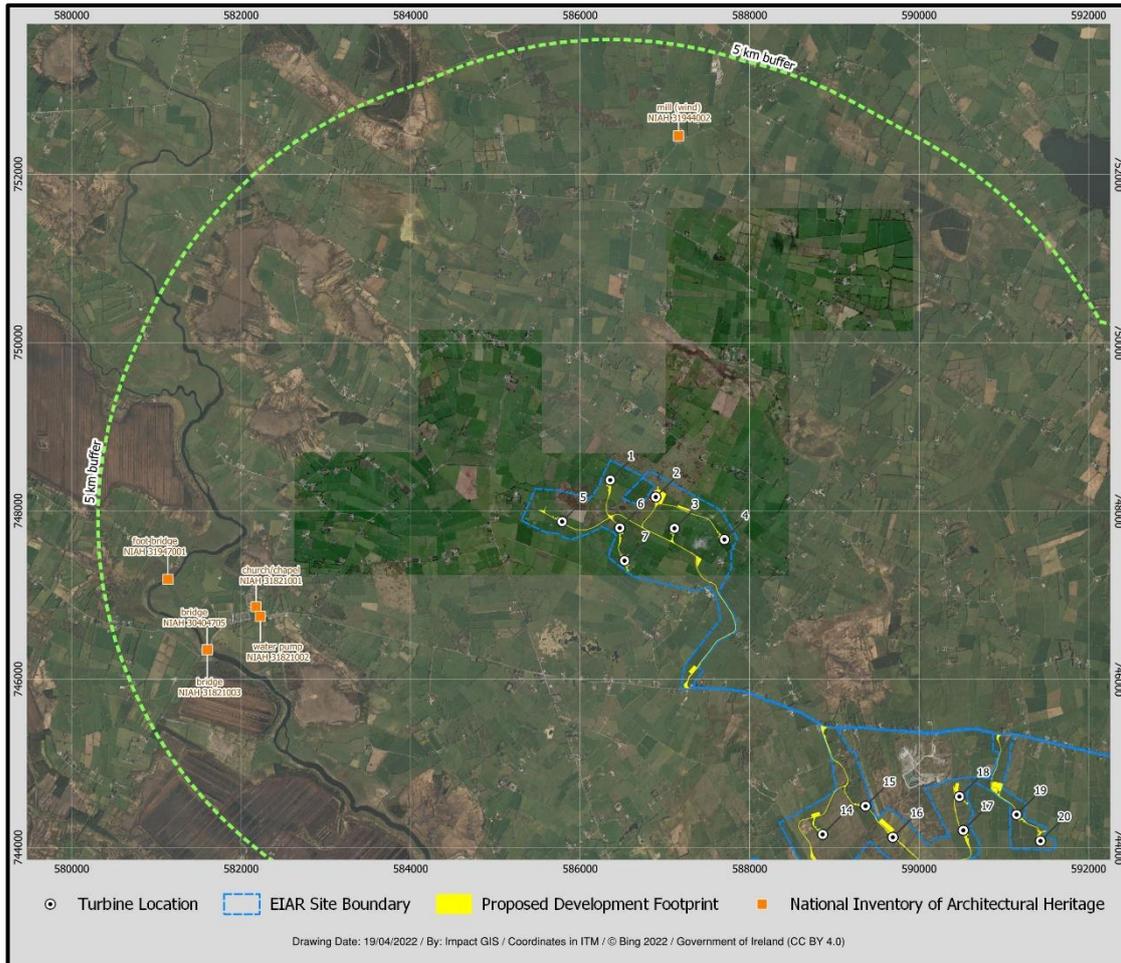


Figure 13-19 NIAH Structures within 5km of the EIAR Site Boundary

13.3.3.7 NIAH Historic Gardens/Designed Landscapes within the EIAR Site Boundary

There are no historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage within the EIAR Site Boundary.

13.3.3.8 NIAH Historic Gardens or Designed Landscapes within 1km of the EIAR Site Boundary

There are two historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage partially within 1km of the EIAR Site Boundary. These historic gardens or designed landscapes are listed in Table 13-9 and are shown in Figure 13-20.

Table 13-9 NIAH historic gardens/created landscapes within 1km of the EIAR Site Boundary

Name and NIAH No.	ITM E	ITM N	Townland	Distance from EIAR Site Boundary
Curraghboy House. 4530	592259	747208	Cam, Carrick, Coolagarry, Curraghboy, Kilcar	0.55km
Feacle House. 4545	591220	742661	Feacle	0.63km

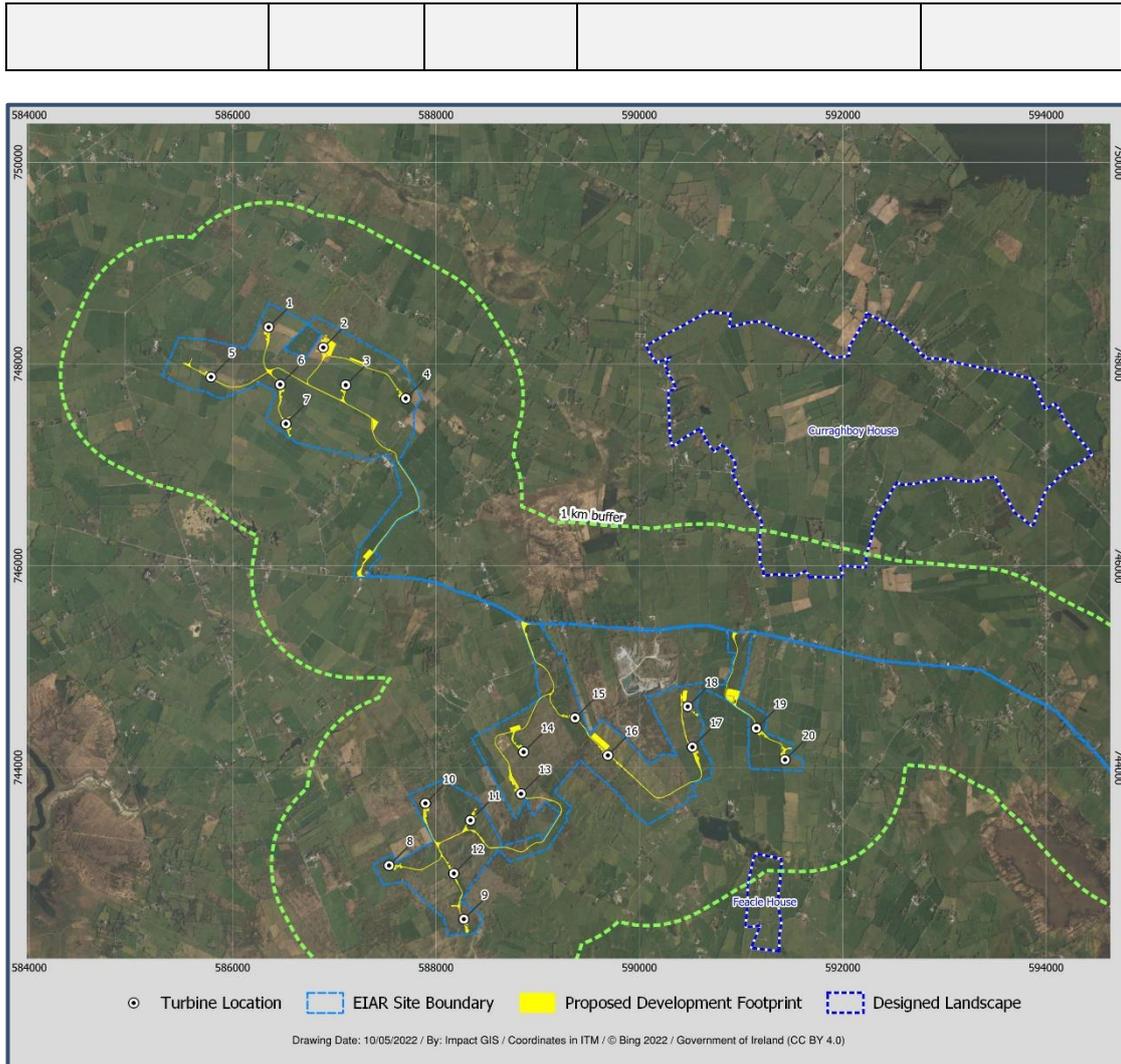


Figure 13-20 NIAH historic gardens or designed landscapes within 1km of the EIAR Site Boundary

13.3.4 Cultural Heritage

13.3.4.1 Cultural Heritage Features within the EIAR Site Boundary

The Roscommon County Development Plan (2022-2028) does not contain any designated lists or sites of cultural heritage importance or significance.

A number of stone walls which are not protected under the National Monuments Acts (as amended) are located within the EIAR Site Boundary. The site visits showed these features to be generally five to six courses high and one to two courses wide (depending on the size of the stone) and randomly built. The stone was on average 0.30m in length while smaller stones were used as packing material generally to support the lower courses.

13.3.4.2 Cultural Heritage Features within 5km of the EIAR Site Boundary

The Roscommon County Development Plan (2022-2028) or the Galway County Development Plan (2015-2021) do not contain any designated lists or sites of cultural heritage importance or significance.

13.3.5 The Proposed Grid Connection

An assessment has been made of any recorded archaeological, architectural, cultural or protected heritage features that may exist within the line of the proposed Grid Connection route or within 100m either side of the proposed Grid Connection.

There are no Recorded Monuments within the line of the proposed Grid Connection.

There are three Recorded Monuments within 100m either side of the proposed Grid Connection. These monuments are listed in Table 13-10 and are shown in Figure 13-21.

Table 13-10 Recorded Monuments within 100m of the proposed Grid Connection

RMP No.	Type	ITM E	ITM N	Townland	Distance from Proposed Grid Connection
RO048-109001	Barrow – ring barrow	594574	744193	Brideswell	92m
RO048-109002	Standing stone	594568	744167	Brideswell	70m
RO048-152	Ringfort - cashel	596061	743309	Ballymullavill	58m

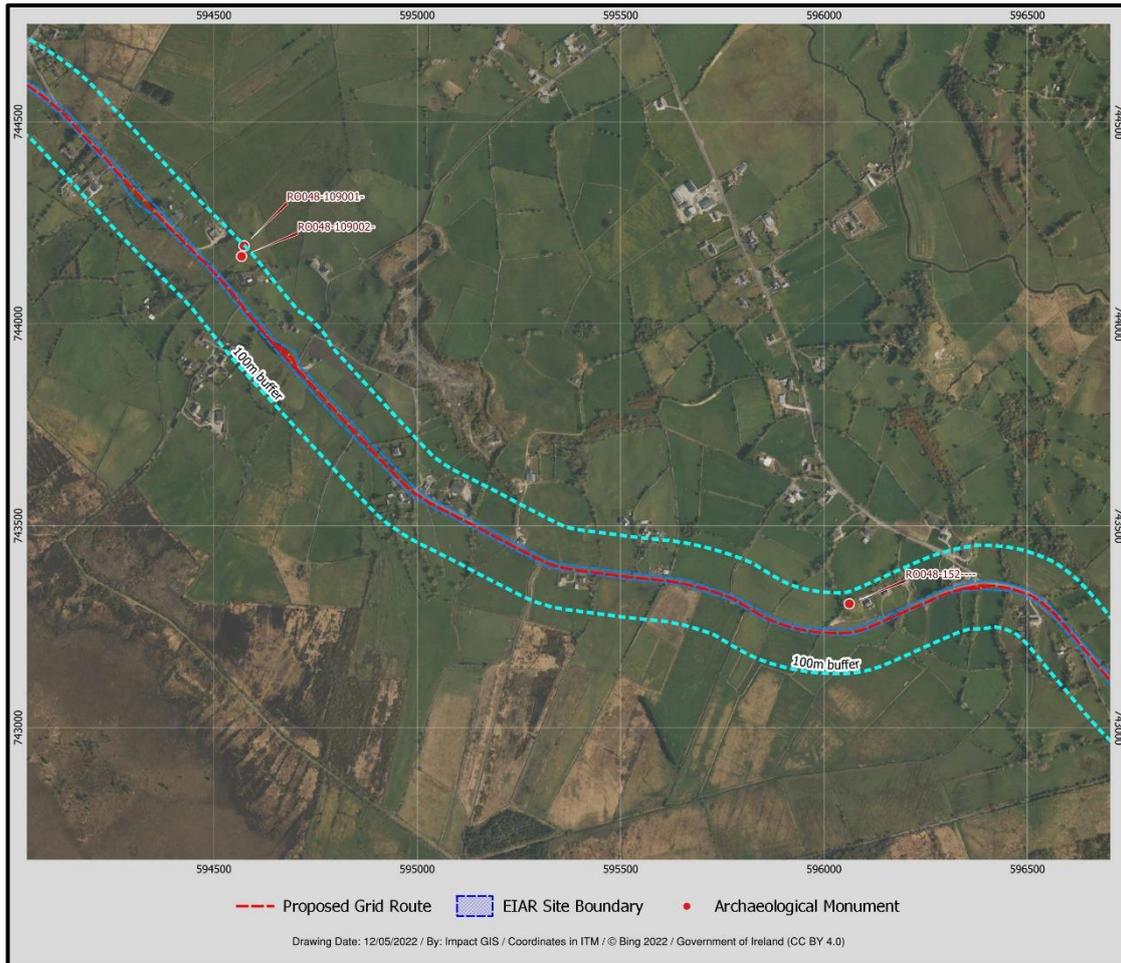


Figure 13-21 Recorded Monuments within 100m of the proposed Grid Connection

There are no Protected Structures recorded in the Roscommon County Development Plan (2022-2028) within the line of the proposed Grid Connection.

There is one Protected Structure recorded in the Roscommon County Development Plan (2022-2028) within 100m either side of the proposed Grid Connection. This Protected Structure is listed in Table 13-11 and is shown in Figure 13-22.

Table 13-11 Protected Structure within 100m of the Proposed Grid Connection

RPS No.	Name	ITM E	ITM N	Townland	Distance from Proposed Grid Connection
04800024	Thatched cottage	596486	743275	Rooskagh	41m

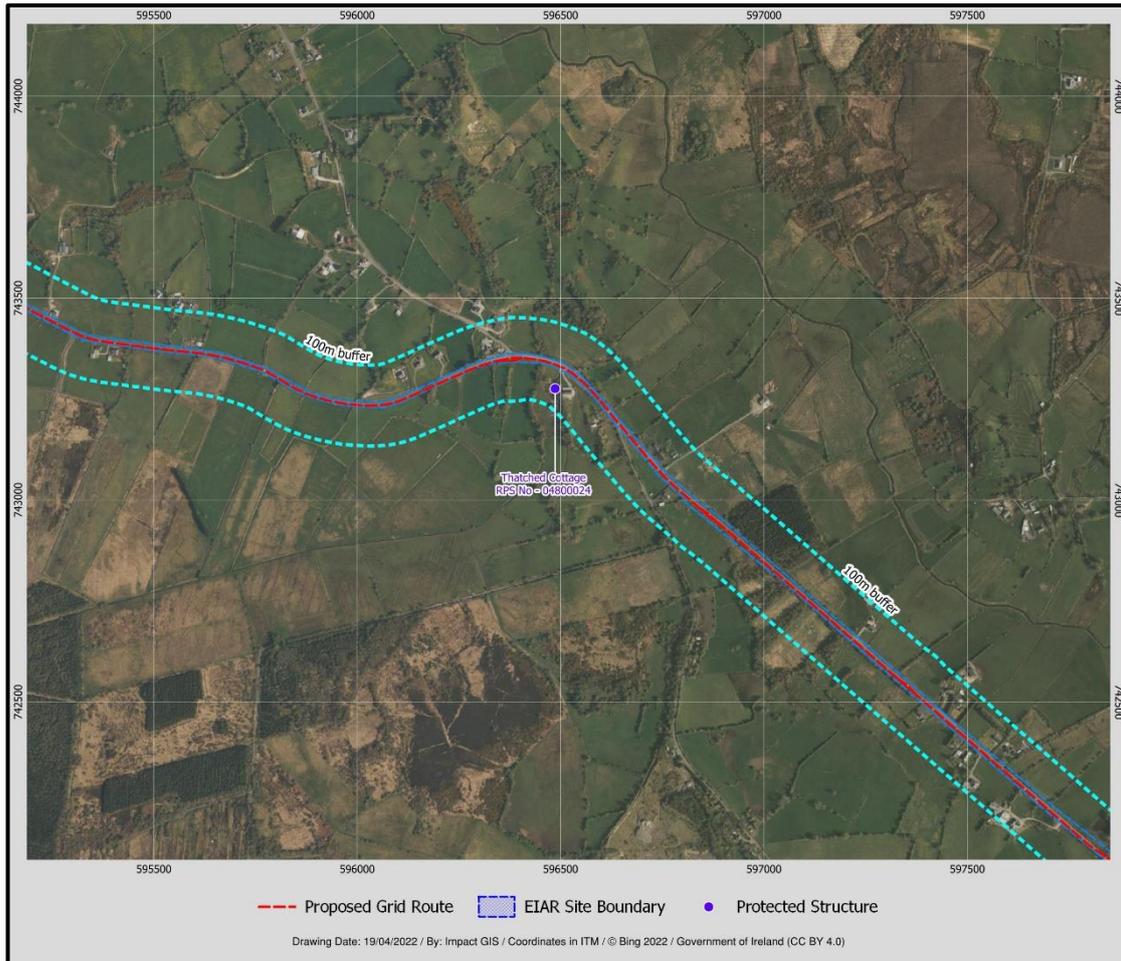


Figure 13-22 Protected Structure within 100m of the proposed Grid Connection

There are no structures recorded on the National Inventory of Architectural Heritage within the line of the proposed Grid Connection or within 100m either side of the proposed Grid Connection.

There are no historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage within the line of the proposed Grid Connection or within 100m either side of the proposed Grid Connection.

All three Editions of the Ordnance Survey maps record a number of vernacular structures, Ordnance Survey benchmarks, wells, springs, gravel pits, *etc.* in the general vicinity of the proposed Grid Connection.

13.3.6 The Proposed Turbine Delivery Route

For the purposes of assessment, the turbine components and other abnormal loads will be transported from Galway Harbour northeast on to the N6 before turning east along the M6 to Junction 13 (Athlone West). The turbines will then travel along the R362 before turning onto the R363. From here, the turbines will travel northwest towards the site. Full details of the turbine delivery route are detailed in Chapter 4, Section 4.4.

Turbine delivery will require minor temporary modifications in a number of places along the route, including the removal of road signs, lamp posts, bollards, *etc.*

A heritage review of the turbine delivery Route Access Survey (Appendix 14-1) has been carried out. An assessment has been made of any recorded archaeological, architectural, cultural or protected

heritage features within 100m of areas identified in the turbine delivery Route Access Survey as requiring Major Amendments. Major Amendments are defined in the Route Access Survey as areas where third party land or road widening will be required. For the proposed turbine delivery route, the amendments relate to temporary surfacing and removal of street infrastructure. No other areas along the turbine delivery will require road widening or ground disturbance, and therefore only those areas requiring Major Amendments have been assessed in this chapter.

There are no archaeological, architectural, cultural or protected heritage features within any areas identified in the turbine delivery Route Access Survey as requiring Major Amendments.

There are no Recorded Monuments within 100m of areas identified as requiring Major Amendments. There are no Protected Structures within 100m of areas identified as requiring Major Amendments. There are no structures recorded on the National Inventory of Architectural Heritage within 100m of areas identified as requiring Major Amendments.

13.4 Likely Significant Effects and Associated Mitigation Measures

All elements of the Proposed Development are assessed as having the potential to affect or impact upon archaeological, architectural or cultural heritage or any protected heritage features either during the construction phase through excavations, or through visual effects during the operational phase.

Construction phase effects may arise as a result of the development of turbine foundations and hardstand areas, access roads, underground cabling and associated activities; each of which will involve the mechanical excavation of topsoil and overburden down to and through geologically deposited strata at their identified locations. Operational phase effects may arise as a result of the visual effects resulting from the presence of the proposed wind turbines and associated infrastructure in the landscape. Decommissioning phase effects may arise as a result of the removal of wind turbines and associated infrastructure.

As a result of carrying out this assessment, the following likely archaeological, architectural, cultural or protected heritage resource direct, indirect, construction, operational, decommissioning, cumulative and residual effects have been assessed.

13.4.1 Mitigation as part of the Iterative Design Process

Numerous turbine layouts have been considered throughout the differing design phases of the proposed project. The current proposed turbine layout utilises far fewer turbines than was previously proposed in earlier design iterations. Most notably, a much lower density of turbines than was proposed in a previous planning application for a wind farm at this site (Pl.Ref: 10/541 and 11/273). Although turbines of a larger tip height are currently proposed than those in the previous planning application, this enables the siting of a lesser number of turbines in the landscape, whilst enabling maximum use of this site as a source of renewable energy production. This multi-phased designed process has had the effect of reducing the number of proposed turbines, and therefore correspondingly reduces the potential for direct impacts on previously unrecorded below-ground archaeological remains and above-ground heritage features.

In addition, the design process has taken full cognizance of all archaeological features recorded on the Record of Monuments and Places. With the exception of six number field systems, a wall and a road/trackway, which are all considered to date to the Post-Medieval period, all above-ground archaeological monuments have been avoided and will be preserved *in situ* as a result of the significance attached within the design process to the archaeological, architectural, cultural or protected heritage resource.

Where it has not been possible to avoid direct impacts on Recorded Monuments, a detailed suite of mitigation measures has been developed to offset negative impacts on the archaeological resource. All mitigation measures will be carried out under Licence to National Monuments Service, which will result in the preservation by record of any archaeological features impacted on as a result of the Proposed Development.

Visual impacts on the archaeological, architectural, cultural or protected heritage resource were considered as part of the early-stage planning process. Alternative turbine layouts were generated for a series of preliminary Zone of Theoretical Visibility (ZTV) maps and photomontages in order to assess the extent to which alternative turbine configurations may give rise to visual effects. These early-stage assessments enabled the choice of suitably sited turbines for the Proposed Development with regard to mitigating any potential adverse landscape and visual effects. For more information on alternative designs, please see Chapter 3 of this EIAR - *Site Selection and Reasonable Alternatives*.

13.4.2 Do Nothing Scenario

If the Proposed Development were not to proceed, there would be no likely effect on the archaeological, architectural, cultural or protected heritage resource and no changes would be made to the current land-use practice. Small-scale agriculture at the site would continue to be managed under the existing farming practices and the opportunity to maximise the generating capacity of the Proposed Development at this location would be lost.

13.4.3 Construction Phase Potential Impact - Indirect

Indirect effects, in terms of archaeology, architectural and cultural heritage are considered to be those effects which happen away from the Proposed Development area. This includes effects on the visual setting of cultural heritage assets in the wider landscape. Since these effects are only possible once the proposed turbines are constructed, they are considered operational effects and are therefore discussed in Section 13.4.5 below. No indirect effects were identified which would occur at the construction stage.

13.4.4 Construction Phase Potential Impact - Direct

Direct effects refers to a “physical impact” on a monument, structure or site. The construction phase of the Proposed Development would consist largely of earthmoving activities, such as topsoil removal. The potential effects on the known and possible archaeological, architectural, cultural and other protected heritage of the area as a result of the Proposed Development is outlined below, along with suggested mitigation measures. Where any potential direct effects will occur, they will be negated through the use of suitable mitigation measures such as exclusions zones (buffer zones) where appropriate, test trenching, monitoring, creation of written and photographic records, compliance with legal requirements, etc.

13.4.4.1 World Heritage Sites

No World Heritage Sites or Sites included in the Tentative List as consideration for nomination to the World Heritage List are located within or adjacent to the EIAR Site Boundary, and therefore no direct effects on these aspects of the archaeological resource are identified. Indirect Operational effects are addressed in Section 13.4.6.1 below.

13.4.4.2 National Monuments

No National Monuments are located within or adjacent to the EIAR Site Boundary, and therefore no direct effects on these aspects of the archaeological resource are identified. Indirect Operational effects are addressed in Section 13.4.6.2 below.

13.4.4.3 Recorded Monuments within the EIAR Site Boundary

There are 38 Recorded Monuments located within the EIAR Site Boundary. These monuments are listed in Table 13-4 and are shown in Figures 13-7 and 13-8.

Of the 38 Recorded Monuments located within the EIAR Site Boundary, eight Recorded Monuments are located within the Proposed Development. These monuments are discussed below.

Where archaeological monitoring is recommended as part of any site-specific mitigation measures, all monitoring will be carried out under licence from the National Monuments Service. If archaeological finds, features or deposits are uncovered during monitoring, the developer will provide all necessary resources for the resolution of such features whether by preservation by record (excavation) or preservation *in situ* in accordance with the requirements of the National Monuments Acts and Planning and other Legislation. National Monuments Service will be informed of such findings to discuss how best to proceed. Once the project is completed, a report on the results of the monitoring will be compiled and submitted to the relevant authorities.

Where archaeological test trenching is recommended as part of any site-specific mitigation measures, all test trenching will be carried out under licence from the National Monuments Service. If archaeological finds, features or deposits are uncovered during test trenching, the developer will provide all necessary resources for the resolution of such features whether by preservation by record (excavation) or preservation *in situ* in accordance with the requirements of the National Monuments Acts and Planning and other Legislation. National Monuments Service will be informed of such findings to discuss how best to proceed. Once the project is completed, a report on the results of the test trenching will be compiled and submitted to the relevant authorities.

In addition to the above, see below for detailed site-specific mitigation measures.

13.4.4.3.1 **RO047-015005 (field system)**

Assessment

The access roads leading to Turbines 1, 2, 5 and 6 will be within RO047-015005 (field system). The site visit confirmed that eight walls associated with the field system will be truncated by the proposed access roads, and these were recorded as being generally 0.30m – 0.40m high and 2m wide (including collapsed stone) grass-covered non-continuous linear features. The location of the field system was noted as being generally flat, dry and with calf-length grass.

Pre-Mitigation Impact

The construction phase will likely have a permanent, direct and moderate negative impact on RO047-015005 (field system).

Proposed Mitigation Measures

- Compliance with regulatory requirements;
- Written and photographic records will be created of any walls which will be impacted on, in advance of groundworks commencing on site;
- All areas where walls will be impacted will be removed by hand (under licence from the National Monuments Service), in advance of groundworks commencing on site;
- Archaeological test trenching in the area of land take associated with RO047-015005, in advance of groundworks commencing on site;
- Archaeological monitoring of all groundworks (under licence from the National Monuments Service) in the location of RO047-015005 (field system). If archaeological

finds, features or deposits are uncovered during archaeological monitoring, the developer will be prepared to provide resources for the resolution of such features whether by preservation by record (excavation) or preservation *in situ* (avoidance). The National Monuments Service will be informed of such findings to discuss how best to proceed. Once the project is completed, a report on the results of the monitoring will be compiled and submitted to the relevant authorities;

- A highly visible buffer zone, which will be agreed in consultation with National Monuments Service, will be established around all parts of RO047-015005 (field system) that is not being required to be removed as part of the construction of the Proposed Development.

Residual Impact

Following implementation of the mitigation measures, there will be a slight residual negative impact on RO047-015005 (field system).

Significance of Effect

The construction stage will not have any significant direct effects on RO047-015005 (field system).

13.4.4.3.2 **RO047-019002 (field system)**

Assessment

Turbine 2 and the access road leading to Turbine 2 will be within RO047-019002 (field system). The site visit showed the southern end of the field system to have been cleared as a result of farming practices, and as a result, construction of Turbine 2 and its associated activities will have no impact on any above-ground field boundaries associated with RO047-019002. Several low, largely collapsed stone walls are recorded north of Turbine 2 and outside all areas of proposed land take.

Pre-Mitigation Impact

Due to farming practices impacting the condition of the field system, the construction phase will not have any direct impact on RO047-019002 (field system), and as a result there will be no impacts on any above-ground remains. Associated below-ground remains may survive within the EIAR Site Boundary and mitigation has been included for this below.

Proposed Mitigation Measures

- Compliance with regulatory requirements;
- Archaeological test trenching in the area of land take associated with RO047-019002 (field system), in advance of groundworks commencing on site;
- Archaeological monitoring of all groundworks (under licence from the National Monuments Service) in the location of RO047-019002 (field system). If archaeological finds, features or deposits are uncovered during archaeological monitoring, the developer will be prepared to provide resources for the resolution of such features whether by preservation by record (excavation) or preservation *in situ* (avoidance). The National Monuments Service will be informed of such findings to discuss how best to proceed. Once the project is completed, a report on the results of the monitoring will be compiled and submitted to the relevant authorities.

Residual Impact

Following implementation of the mitigation measures, no residual impacts will occur.

Significance of Effect

The construction stage will not have any significant direct effects on RO047-019002 (field system).

13.4.4.3.3 **RO047-044002 (field system)**

Assessment

The access road leading from the site entrance to Turbine 3 will be within RO047-044002 (field system). The site visit showed that RO047-044002 (field system) has been removed above-ground as a result of modern farming practices, and as a result the proposed access road in this area will have no impact on any above-ground field boundaries.

Pre-Mitigation Impact

Due to farming practices impacting the condition of the field system, the construction phase will not have any direct impact on RO047-044002 (field system), and as a result there will be no impacts on any above-ground remains. Associated below-ground remains may survive within the EIAR Site Boundary and mitigation has been included for this below.

Proposed Mitigation Measures

- Compliance with regulatory requirements;
- Archaeological test trenching in the area of land take associated with RO047-044002 (field system), in advance of groundworks commencing on site;
- Archaeological monitoring of all groundworks (under licence from the National Monuments Service) in the location of RO047-044002 (field system). If archaeological finds, features or deposits are uncovered during archaeological monitoring, the developer will be prepared to provide resources for the resolution of such features whether by preservation by record (excavation) or preservation *in situ* (avoidance). The National Monuments Service will be informed of such findings to discuss how best to proceed. Once the project is completed, a report on the results of the monitoring will be compiled and submitted to the relevant authorities.

Residual Impact

Following implementation of the mitigation measures, no residual impacts will occur.

Significance of Effect

The construction stage will not have any significant direct effects on RO047-044002 (field system).

13.4.4.3.4 **RO047-044003 (field system)**

Assessment

The access road leading from the site entrance to Turbine 3 will be within RO047-044003 (field system). The location of RO047-044003 was noted at the time of the site visit as being gently undulating, dry and

with short grass. The low earth and stone boundaries which make up the field system are located west of the proposed access road, and no above-ground features associated with the field system will be impacted on by the access road.

Pre-Mitigation Impact

The construction phase will not have any direct impact on RO047-044003 (field system), and as a result there will be no impacts on any above-ground remains. Associated below-ground remains may survive within the EIAR Site Boundary area and mitigation has been included for this below.

Proposed Mitigation Measures

- Compliance with regulatory requirements;
- Archaeological test trenching in the area of land take associated with RO047-044003 (field system), in advance of groundworks commencing on site;
- Archaeological monitoring of all groundworks (under licence from the National Monuments Service) in the location of RO047-044003 (field system). If archaeological finds, features or deposits are uncovered during archaeological monitoring, the developer will be prepared to provide resources for the resolution of such features whether by preservation by record (excavation) or preservation *in situ* (avoidance). The National Monuments Service will be informed of such findings to discuss how best to proceed. Once the project is completed, a report on the results of the monitoring will be compiled and submitted to the relevant authorities;
- A highly visible buffer zone, which will be agreed in consultation with National Monuments Service, will be established around all parts of RO047-044003 (field system) that is not being required to be removed as part of the construction of the Proposed Development.

Residual Impact

Following implementation of the mitigation measures, no residual impacts will occur.

Significance of Effect

The construction stage will not have any significant direct effects on RO047-044003 (field system).

13.4.4.3.5 **RO048-098 (linear earthwork- wall)**

Assessment

The access road in the Southern Cluster of the Proposed Development will cross RO048-098 (linear earthwork- wall) in five places. The site visit recorded the wall in the location of the proposed access roads as being generally *c.* 1.40m high x 1m wide at the base x 0.50m wide at the top. It is generally well-maintained although partially collapsed in places, and built of un-worked limestone blocks with capping stone. It appears to be two courses wide at the base and one course wide at the top.

Pre-Mitigation Impact

The construction phase will likely have a permanent, direct and moderate negative impact on RO048-098 (linear earthwork- wall).

Proposed Mitigation Measures

- Compliance with regulatory requirements;
- Written and photographic records will be created of all locations where the wall will be impacted on, in advance of groundworks commencing on site;
- All areas where the wall will be impacted on will be removed by hand (under licence from the National Monuments Service), in advance of groundworks commencing on site;
- Archaeological test trenching in all locations where the wall will be impacted on, in advance of groundworks commencing on site;
- Archaeological monitoring of all groundworks (under licence from the National Monuments Service) in the location of RO048-098 (linear earthwork- wall). If archaeological finds, features or deposits are uncovered during archaeological monitoring, the developer will be prepared to provide resources for the resolution of such features whether by preservation by record (excavation) or preservation in situ (avoidance). The National Monuments Service will be informed of such findings to discuss how best to proceed. Once the project is completed, a report on the results of the monitoring will be compiled and submitted to the relevant authorities;
- A highly visible buffer zone, which will be agreed in consultation with National Monuments Service, will be established around all parts of RO048-098 (linear earthwork- wall) that is not being required to be removed as part of the construction of the Proposed Development.

Residual Impact

Following implementation of the mitigation measures, there will be a slight residual negative impact on RO048-098 (linear earthwork- wall).

Significance of Effect

The construction stage will not have any significant direct effects on RO048-098 (linear earthwork- wall).

13.4.4.3.6 **RO048-097003 (road/trackway)**

Assessment

The access road between Turbine 11 and Turbine 13 will cross RO048-097003 (road/trackway). The location of this monument was inspected as part of the site visit, and it was noted as being a 2m wide lane bordered by drystone walls.

Pre-Mitigation Impact

The construction phase will likely have a permanent, direct and moderate negative impact on RO048-097003 (road/trackway).

Proposed Mitigation Measures

- Compliance with regulatory requirements;
- A written and photographic record will be created in the location where RO048-097003 (road/trackway) will be impacted on, in advance of groundworks commencing on site;
- Archaeological test trenching in the location where RO048-097003 (road/trackway) will be impacted on, in advance of groundworks commencing on site;

- Archaeological monitoring of all groundworks (under licence from the National Monuments Service) in the location of RMP RO048-097003 (road/trackway). If archaeological finds, features or deposits are uncovered during archaeological monitoring, the developer will be prepared to provide resources for the resolution of such features whether by preservation by record (excavation) or preservation in situ (avoidance). The National Monuments Service will be informed of such findings to discuss how best to proceed. Once the project is completed, a report on the results of the monitoring will be compiled and submitted to the relevant authorities;
- A highly visible buffer zone, which will be agreed in consultation with National Monuments Service, will be established around all parts of RO048-097003 (road/trackway) that is not being required to be removed as part of the construction of the Proposed Development.

Residual Impact

Following implementation of the mitigation measures, there will be a slight residual negative impact on RO048-097003 (road/trackway).

Significance of Effect

The construction stage will not have any significant direct effects on RO048-097003 (road/trackway).

13.4.4.3.7 **RO048-097001 (field system)**

Assessment

Turbine 16 will be within RO048-097001 (field system). A north east/south west oriented non-continuous stone wall was noted towards the middle of the proposed location of T16. It was recorded as being low and overgrown and on average one course (0.50m) high by one to two courses (0.75m) wide. This is the only feature associated with RO048-097001 (field system) recorded in the location of T16.

Pre-Mitigation Impact

The construction phase will likely have a permanent, direct and moderate negative impact on RO048-097001 (field system).

Proposed Mitigation Measures

- Compliance with regulatory requirements;
- Written and photographic records will be created of the wall which will be impacted on, in advance of groundworks commencing on site;
- All areas where the wall will be impacted on will be removed by hand (under licence from the National Monuments Service), in advance of groundworks commencing on site;
- Archaeological test trenching in the area of land take associated with RO048-097001 (field system), in advance of groundworks commencing on site;
- Archaeological monitoring of all groundworks (under licence from the National Monuments Service) in the location of RO048-097001 (field system). If archaeological finds, features or deposits are uncovered during archaeological monitoring, the developer will be prepared to provide resources for the resolution of such features whether by preservation by record (excavation) or preservation in situ (avoidance). The National Monuments Service will be informed of such findings to discuss how

- best to proceed. Once the project is completed, a report on the results of the monitoring will be compiled and submitted to the relevant authorities;
- A highly visible buffer zone, which will be agreed in consultation with National Monuments Service, will be established around all parts of RO048-097001 (field system) that is not being required to be removed as part of the construction of the Proposed Development.

Residual Impact

Following implementation of the mitigation measures, there will be a slight residual negative impact on RO048-097001 (field system).

Significance of Effect

The construction stage will not have any significant direct effects on RO048-097001 (field system).

13.4.4.3.8 **RO048-097002 (field system)**

Assessment

The access road between Turbine 14 and Turbine 15 will be within RO048-097002 (field system). The location of the field system was inspected as part of the site visit, and no above-ground features associated with RO048-097002 (field system) were recorded within the area of land take required for the access road between Turbine 14 and Turbine 15.

Pre-Mitigation Impact

As no above-ground features were recorded within the field system while on site, the construction phase will not have any direct effect on RO048-097002 (field system). Associated below-ground remains may survive within the development area, and mitigation has been included for this below.

Proposed Mitigation Measures

- Compliance with regulatory requirements;
- Archaeological test trenching in the area of land take associated with RO048-097002 (field system), in advance of groundworks commencing on site;
- Archaeological monitoring of all ground works (under licence from the National Monuments Service) in the location of RO048-097002 (field system). If archaeological finds, features or deposits are uncovered during archaeological monitoring, the developer will be prepared to provide resources for the resolution of such features whether by preservation by record (excavation) or preservation in situ (avoidance). The National Monuments Service will be informed of such findings to discuss how best to proceed. Once the project is completed, a report on the results of the monitoring will be compiled and submitted to the relevant authorities;
- A highly visible buffer zone, which will be agreed in consultation with National Monuments Service, will be established around all parts of RO048-097002 (field system) that is not being required to be removed as part of the construction of the Proposed Development.

Residual Impact

Following implementation of the mitigation measures, no residual impacts will occur.

Significance of Effect

The construction stage will not have any significant direct effects on RO048-097002 (field system).

13.4.4.4 Newly recorded features within the EIAR Site Boundary

No new above-ground archaeological features (*i.e.* pre 1700 AD) were noted within the footprint of the Proposed Development. A number of stone walls which are not protected under the National Monuments Acts (as amended) are located within the Proposed Development. These stone walls are described in Section 13.3.4.1. Direct effects and mitigation measures of these cultural and social features are discussed in Section 13.4.4.7 below.

13.4.4.5 Previously unrecorded sub-surface archaeological features within the EIAR Site Boundary

Assessment

Due to the number of above-ground archaeological monuments recorded within the surrounding landscape of the EIAR Site Boundary, the potential for the Proposed Development to contain previously unrecorded sub-surface archaeological features and artefacts is considered to be medium to high, with new infrastructure being located in previously undisturbed ground. The excavation of topsoil for turbine bases, hardstands, access roads, construction compounds, substation, spoil storage areas, internal cabling and grid connection may impact on any new sub-surface sites, if present.

Pre-Mitigation Impact

The construction phase will likely have a permanent, direct and slight negative impact on any previously unrecorded sub-surface archaeological features that may exist within the Proposed Development, and which may be discovered during groundworks.

Proposed Mitigation Measures

- Compliance with regulatory requirements;
- Archaeological test trenching in the location of all proposed turbine bases and hardstands in advance of groundworks commencing on site;
- Archaeological monitoring of any geotechnical/engineering trial pits or investigations (under licence from the National Monuments Service), and a report detailing the results of same;
- Archaeological monitoring of all groundworks during construction (under licence from the National Monuments Service). If archaeological finds, features or deposits are uncovered during archaeological monitoring, the developer will be prepared to provide resources for the resolution of such features whether by preservation by record (excavation) or preservation *in situ* (avoidance). The National Monuments Service will be informed of such findings to discuss how best to proceed. Once the project is completed, a report on the results of the monitoring will be compiled and submitted to the relevant authorities.

Residual Impact

Any archaeological sites or features, if detected, during testing and monitoring will be preserved by record (archaeologically excavated) or preserved *in-situ* (avoidance) and therefore a full record made of same. Following implementation of the mitigation measures, there will be an imperceptible residual

negative impact on any previously unrecorded sub-surface archaeological features that may exist within the Proposed Development and which may be discovered during groundworks.

Significance of Effect

The construction stage will not have any significant direct effects on any previously unrecorded sub-surface archaeological features that may exist within the Proposed Development site and which may be discovered during groundworks.

13.4.4.6 Protected Structures/NIAH Sites/Conservation Areas within the EIAR Site Boundary

Assessment

No built heritage structures which are subject to statutory protection or otherwise are located within the EIAR Site Boundary.

Pre-Mitigation Impact

The construction phase will not have any direct impact on the local built heritage, and as a result there will be no impacts.

Proposed Mitigation Measures

- As no built heritage structures which are subject to statutory protection or otherwise are located within the EIAR Site Boundary, no mitigation measures are required.

Residual Impact

No residual impacts will occur since no negative effects have been identified.

Significance of Effect

As there are no built heritage structures subject to statutory protection or otherwise located within the EIAR Site Boundary there will be no significant effects.

13.4.4.7 Other Cultural Heritage features within the EIAR Site Boundary

Assessment

No new above-ground archaeological features (*i.e.* pre 1700 AD) were noted within the footprint of the Proposed Development. A number of stone walls which do not receive statutory protection under the National Monuments Acts (as amended) are located within the Proposed Development. Proposed access roads will truncate these walls in a number of locations throughout the site.

Pre-Mitigation Impact

The construction phase will likely have a permanent, direct and slight negative impact on any non-statutorily protected stone walls that may be impacted on by the Proposed Development.

Proposed Mitigation Measures

- Compliance with regulatory requirements;
- Written and photographic records will be created of all walls which will be impacted on during construction, in advance of groundworks commencing on site;
- Archaeological monitoring of all groundworks (under licence from the National Monuments Service) in the vicinity of all walls which will be impacted on during construction. If archaeological finds, features or deposits are uncovered during archaeological monitoring, the developer will be prepared to provide resources for the resolution of such features whether by preservation by record (excavation) or preservation *in situ* (avoidance). The National Monuments Service will be informed of such findings to discuss how best to proceed. Once the project is completed, a report on the results of the monitoring will be compiled and submitted to the relevant authorities.

Residual Impact

Following implementation of the mitigation measures, there will be an imperceptible residual negative impact on any non-statutorily protected stone walls that may be impacted on by the Proposed Development.

Significance of Effect

The construction stage will not have any significant direct effects on any non-statutorily protected stone walls that may be impacted on by the Proposed Development.

13.4.4.8 Townland, Parish and Barony Boundaries

Assessment

The proposed access roads will cross 18 townland boundaries, six parish boundaries and one barony boundary.

Pre-Mitigation Impact

The construction phase will likely have a permanent, direct and slight negative impact on any surviving boundaries that may be impacted on by the Proposed Development.

Proposed Mitigation Measures

- Compliance with regulatory requirements;
- Written and photographic records will be created of all boundaries which may be impacted on during construction, in advance of groundworks commencing on site;
- Archaeological monitoring of all groundworks (under licence from the National Monuments Service) in the vicinity of all boundaries which may be impacted on during construction. If archaeological finds, features or deposits are uncovered during archaeological monitoring, the developer will be prepared to provide resources for the resolution of such features whether by preservation by record (excavation) or preservation *in situ* (avoidance). The National Monuments Service will be informed of such findings to discuss how best to proceed. Once the project is completed, a report on the results of the monitoring will be compiled and submitted to the relevant authorities.

Residual Impact

Following implementation of the mitigation measures, there will be an imperceptible residual negative impact on any surviving boundaries that may be impacted on by the Proposed Development.

Significance of Effect

The construction stage will not have any significant direct effects on any surviving boundaries that may be impacted on by the Proposed Development.

13.4.4.9 Recorded Monuments/Protected Structures/NIAH Sites along the proposed Grid Connection

Assessment

There are no Recorded Monuments, Protected Structures, structures recorded on the National Inventory of Architectural Heritage, historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage, or any additional statutorily protected archaeological, architectural, cultural or protected heritage features within the Proposed Development site relevant to the Grid Connection.

There are three Recorded Monuments within 100m either side of the proposed Grid Connection. These monuments are listed in Table 13-10 and are shown in Figure 13-21.

There is one Protected Structure within 100m either side of the proposed Grid Connection. This Protected Structure is listed in Table 13-11 and is shown in Figure 13-22.

There are no structures recorded on the National Inventory of Architectural Heritage within 100m either side of the proposed Grid Connection.

There are no historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage within 100m either side of the proposed Grid Connection.

Pre-Mitigation Impact

The construction phase of the proposed Grid Connection will not have any direct impact on recorded archaeological, architectural, cultural or protected heritage features, and as a result there will be no impacts.

Proposed Mitigation Measures

- Compliance with regulatory requirements;
- A highly visible buffer zone, which will be agreed in consultation with National Monuments Service, will be established around all parts of the three Recorded Monuments within 100m either side of the proposed Grid Connection;
- A highly visible buffer zone, which will be agreed in consultation with National Monuments Service, will be established around all parts of the one Protected Structure within 100m either side of the proposed Grid Connection.

Residual Impact

Following implementation of the mitigation measures, no residual impacts will occur.

Significance of Effect

As there are no recorded archaeological, architectural, cultural or protected heritage features which are subject to statutory protection or otherwise located within the line of the proposed grid connection, there will be no significant effects.

13.4.4.10 Recorded Monuments/Protected Structures/NIAH Sites along the Proposed Turbine Delivery Route

Assessment

Turbine delivery will require minor temporary modifications in a number of places along the route, including the removal of road signs, lamp posts, bollards, *etc.*

There are no archaeological, architectural, cultural or protected heritage features within any areas identified in the turbine delivery Route Access Survey as requiring Major Amendments.

There are no Recorded Monuments within 100m of areas identified as requiring Major Amendments. There are no Protected Structures within 100m of areas identified as requiring Major Amendments. There are no structures recorded on the National Inventory of Architectural Heritage within 100m of areas identified as requiring Major Amendments.

Pre-Mitigation Impact

The proposed turbine delivery route will not require groundworks or road widening in any areas of archaeological, architectural, cultural or protected heritage potential, and as a result there will be no impacts.

Proposed Mitigation Measures

- Compliance with regulatory requirements;
- As the proposed turbine delivery route will not require groundworks or road widening in any areas of archaeological, architectural, cultural or protected heritage potential, no mitigation measures are required.

Residual Impact

No residual impacts will occur since no negative effects have been identified.

Significance of Effect

As the proposed turbine delivery route will not require groundworks or road widening in any areas of archaeological, architectural, cultural or protected heritage potential there will be no significant effects.

13.4.5 Operational Phase Potential Effects - Direct

There will be no direct operational phase effects on the archaeological, architectural, cultural or protected heritage resource.

13.4.6 Operational Phase Potential Effects - Indirect

Indirect effects are where a feature or site of archaeological, architectural, cultural or protected heritage value or their setting is located in close proximity to a Proposed Development. Indirect effects as a result of the operation of wind farms are mainly concerned with impacts on setting. While a Proposed Development may not physically impact on a site, it may alter the setting of a monument or group of monuments or structures.

Potential effects on the visual amenity of a site or area and the significance of same is dependent on a number of factors, such as the sensitivity of the location or “receptor” and the scale or magnitude of the Proposed Development.

Potential operational effects are discussed below according to each cultural heritage asset. Those elements of the Proposed Development which are not capable of having a significant impact on the visual setting of monuments and which are in close proximity to the turbines (such as the on-site substation, access roads, underground cables, temporary construction compounds, spoil storage areas, etc.) are discussed below.

The proposed substation is sited in a location enclosed by localised topography, reducing visibility from receptors in the surrounding landscape to the south, west and north. The substation is only likely to be partially visible within longer distance views from the south east. Any effects on setting are likely to be highly localised, long-term and will be of slight significance

Access roads and hardstands are flat features and will only be visible within the immediate environment of the Proposed Development. The Landscape and Visual Impact Assessment chapter (*ibid.*) confirms that when the construction phase is complete, all overburden storage areas will be filled and shaped to form smooth banks of earth, complementary to the existing landform of the local landscape and in some cases to dress the transition between infrastructure elements and natural land-cover. Considering the restricted visibility, any effects on setting are deemed to be not significant.

Those elements which are deemed to be more likely to impact on visual setting, such as turbines, are discussed below.

13.4.6.1 World Heritage Sites

A 20km study area has been applied from the EIAR Site Boundary to assess the presence of World Heritage Sites or sites included in the Tentative List as consideration for nomination to the World Heritage List.

There are no World Heritage Sites within 20km of the EIAR Site Boundary.

There is one site included in the Tentative List as consideration for nomination to the World Heritage List within 20km of the EIAR Site Boundary. This is Clonmacnoise, and it is assessed in Section 13.4.6.1.1. below. This monument is listed in Table 13-2 and is shown in Figure 13-5.

13.4.6.1.1 **The Monastic City of Clonmacnoise and its Cultural Landscape, County Offaly**

“The Monastic City of Clonmacnoise and its cultural landscape is an unparalleled and outstanding example of a relict Early Medieval insular monastic city unobscured by modern building development. It is set within a superlative semi-natural landscape that deepens its spiritual qualities, adding greatly to its authenticity and integrity. The interaction between man and the natural environment in Clonmacnoise is of unique universal value. It represents a

significant stage in the development of Early Medieval Christianity in the North Atlantic.”
(whc.unesco.org).

Clonmacnoise is located approximately 17km south east of the Proposed Development.

Assessment

The Landscape and Visual Impact Assessment chapter (Chapter 12, Viewpoint 13) considers that all 20 no. proposed turbines will be visible from Clonmacnoise (Figure 13-23), although the towers and lower blade arcs of the turbines will be substantially screened from view by the intervening landform and vegetation. Clonmacnoise is greater than 17km from the Proposed Development, consequently the turbines will be small background features. The Landscape and Visual Impact Assessment chapter (*ibid.*) notes that the visual effects will be significantly mitigated by distance.

Pre-Mitigation Impact

It is assessed that the Proposed Development will have a long-term, reversible and slight operational phase negative visual impact on the setting of Clonmacnoise.

Proposed Mitigation Measures

- As it is not possible to mitigate the indirect impact of turbines in the wider landscape setting, there are no mitigation measures for this slight operational phase negative visual impact. It should be noted that Clonmacnoise is located 17km from the Proposed Development site, consequently the turbines will only be viewed as small background features. In addition, visual effects will be significantly mitigated by distance, along with the intervening landform and vegetation.

Residual Impact

The residual impact will be slight. Following decommissioning, any slight impacts will be reversed.

Significance of Effect

The operational phase will not have any significant negative visual effects on the setting of Clonmacnoise.

13.4.6.2 National Monuments

A 10km study area has been applied from the EIAR Site Boundary to assess the presence of National Monuments. There are five National Monuments (at three sites) within 10km of the EIAR Site Boundary. These monuments are listed in Table 13-3 and are shown in Figure 13-6. As noted above (Section 13.3.2.2), ZTV mapping has been consulted to complete an assessment of potential operational visual impacts on the setting of National Monuments.

ZTV mapping is an important source in assessing potential visual impacts on archaeological, architectural, cultural or protected heritage remains, in that it shows which areas will have theoretical visibility of the proposed turbines and which areas will have no theoretical visibility. As is noted in the Landscape and Visual chapter (Chapter 12), actual visibility on the ground is significantly less than predicted by ZTV mapping due to intervening factors such as on-site screening from natural and man-made features, atmospheric weather and/or localised topography. As such use of ZTV mapping provides a worst-case scenario and has therefore been used to fully address potential operational phase

visual impacts on archaeological, architectural, cultural or protected heritage remains and the wider landscape.

13.4.6.2.1 **National Monument Number 467, RMP GA061-023001 Holy Well and RMP GA061-023002 Crucifixion Plaque, Castlegar East, County Galway**

Assessment

National Monument Number 467 (RMP GA061-023001 Holy Well and RMP GA061-023002 Crucifixion Plaque) is located 8.68km south west of the Proposed Development at Castlegar East, County Galway.

Figure 12-1 (Zone of Theoretical Visibility Map) of the Landscape and Visual Impact Assessment chapter (Chapter 12) considers that all 20 no. proposed turbines have the potential to be visible from the location of National Monument Number 467 (holy well and crucifixion plaque) (Figure 13-23).

Pre-Mitigation Impact

It is assessed the Proposed Development will have a long-term, reversible and slight operational phase negative visual impact on the setting of National Monument Number 467 (holy well and crucifixion plaque).

Proposed Mitigation Measures

- As it is not possible to mitigate the indirect impact of turbines in the wider landscape setting, there are no mitigation measures for this slight operational phase negative visual impact. It should be noted however that National Monument Number 467 (holy well and crucifixion plaque) is located 8.68km from the Proposed Development, consequently the turbines will be viewed as background features within the landscape. In addition, visual effects will be mitigated by the intervening landform and vegetation.

Residual Impact

The residual impact will be slight. Following decommissioning, any slight impacts will be reversed.

Significance of Effect

The operational phase will not have any significant negative visual effects on the setting of National Monument Number 467 (holy well and crucifixion plaque).

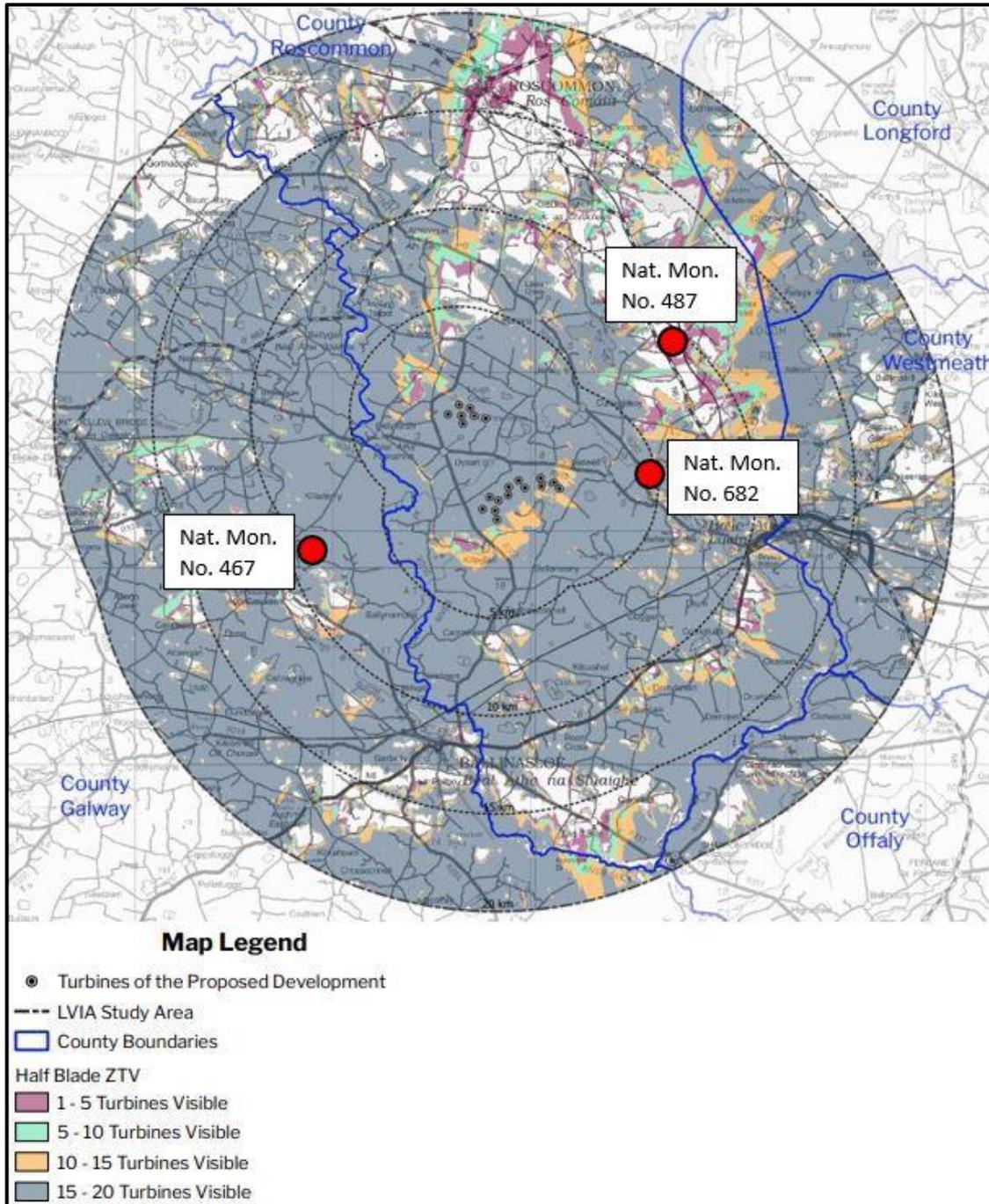


Figure 13-23 Zone of Theoretical Visibility map showing location of National Monuments 467, 487 and 682

13.4.6.2.2 **National Monument Number 487, RMP R0045-151 Ringfort- rath, Carnagh West, County Roscommon**

Assessment

National Monument Number 487 (RMP R0045-151 Ringfort- rath) is located 8.28km north east of the Proposed Development at Carnagh West, County Roscommon.

Figure 12-1 (Zone of Theoretical Visibility Map) of the Landscape and Visual Impact Assessment chapter (Chapter 12) considers that at most 1-5 turbines have the potential to be visible from the location of National Monument Number 487 (ringfort) (Figure 13-23).

Pre-Mitigation Impact

It is assessed the Proposed Development will have a long-term, reversible and slight operational phase negative visual impact on the setting of National Monument Number 487 (ringfort).

Proposed Mitigation Measures

- As it is not possible to mitigate the indirect impact of turbines in the wider landscape setting, there are no mitigation measures for this slight operational phase negative visual impact. It should be noted however that National Monument Number 487 (ringfort) is located 8.28km from the Proposed Development, consequently the turbines will be viewed as background features within the landscape. In addition, visual effects will be mitigated by the intervening landform and vegetation.

Residual Impact

The residual impact will be slight. Following decommissioning, any slight impacts will be reversed.

Significance of Effect

The operational phase will not have any significant negative visual effects on the setting of National Monument Number 487 (ringfort).

13.4.6.2.3 **National Monument Number 682, RMP RO048-113001 Castle-motte and bailey and RMP RO048-113002 Castle-unclassified, Ballycreggan, County Roscommon**

Assessment

National Monument Number 682 (RMP RO048-113001 Castle- motte and bailey and RMP RO048-113002 Castle- unclassified) is located 4.45km east of the Proposed Development at Ballycreggan, County Roscommon.

Figure 12-1 (Zone of Theoretical Visibility Map) of the Landscape and Visual Impact Assessment chapter (Chapter 12) considers that between 10 and 20 no. proposed turbines have the potential to be visible from the location of National Monument Number 682 (motte and bailey and unclassified castle) (Figure 13-23).

Pre-Mitigation Impact

It is assessed the Proposed Development will have a long-term, reversible and moderate operational phase negative visual impact on the setting of National Monument Number 682 (motte and bailey and unclassified castle).

Proposed Mitigation Measures

- As it is not possible to mitigate the indirect impact of turbines in the wider landscape setting, there are no mitigation measures for this moderate operational phase negative visual impact. It should be noted however that National Monument Number 682 (motte and bailey and unclassified castle) is located 4.45km from the Proposed Development and visual effects will be mitigated by the intervening landform and vegetation.

Residual Impact

The residual impact will be moderate. Following decommissioning, any moderate impacts will be reversed.

Significance of Effect

The operational phase will not have any significant negative visual effects on the setting of National Monument Number 682 (motte and bailey and unclassified castle).

13.4.6.3 Recorded Monuments within the EIAR Site Boundary

Assessment

There are 38 Recorded Monuments within the EIAR Site Boundary. These monuments are listed in Table 13-4 and are shown in Figures 13-7 and 13-8.

Given the tall, vertical nature of the proposed turbines and their proximity to Recorded Monuments, it is considered virtually all turbines will be visible from within the EIAR Site Boundary. Figure 12-1 (Zone of Theoretical Visibility Map) of the Landscape and Visual Impact Assessment chapter (Chapter 12) indicates there is virtually full theoretical visibility of the Proposed Development from within the EIAR Site Boundary (Figure 13-23).

Pre-Mitigation Impact

It is assessed, based on ZTV mapping and the distance of proposed turbines to monuments within the EIAR Site Boundary, the Proposed Development will have a long-term, reversible and significant operational phase negative visual impact on the setting of Recorded Monuments located within the EIAR Site Boundary.

Proposed Mitigation Measures

- As it is not possible to mitigate the indirect impact of turbines in the wider landscape setting, there are no mitigation measures for this significant operational phase negative visual impact.

Residual Impact

The residual impact will be significant. Following decommissioning, any significant impacts will be reversed.

Significance of Effect

The operational phase will have a significant negative visual effect on the setting of Recorded Monuments located within the EIAR Site Boundary.

13.4.6.4 Newly recorded features within the EIAR Site Boundary

No new above-ground archaeological features (*i.e.* pre 1700 AD) were noted within the footprint of the Proposed Development. A number of stone walls which are not protected under the National Monuments Acts (as amended) are located within the Proposed Development. Operational phase effects on the setting of these local built heritage features is addressed in Section 13.4.6.8 below.

13.4.6.5 Recorded Monuments within 1km of the EIAR Site Boundary

Assessment

There are 129 Recorded Monuments within 1km of the EIAR Site Boundary. These monuments are listed in Table 13-5 and are shown in Figures 13-9 and 13-10.

Figure 12-1 (Zone of Theoretical Visibility Map) of the Landscape and Visual Impact Assessment chapter (Chapter 12) indicates there will not be full theoretical visibility of the Proposed Development from within 1km of the EIAR Site Boundary (Figure 13-23). There are areas immediately north-west and north of the Northern Cluster where theoretical visibility is limited by topography. Immediately south of the Southern Cluster theoretical visibility is reduced to 10-15 turbines, as the Northern Cluster is obscured from view behind the ridgeline where the Southern Cluster is sited.

Pre-Mitigation Impact

It is assessed, based on ZTV mapping and the distance of proposed turbines to monuments within 1km of the EIAR Site Boundary, that the Proposed Development will have a long-term, reversible and moderate operational phase negative visual impact on the setting of Recorded Monuments located within 1km of the EIAR Site Boundary.

Proposed Mitigation Measures

- As it is not possible to mitigate the indirect impact of turbines in the wider landscape setting, there are no mitigation measures for this moderate operational phase negative visual impact.

Residual Impact

The residual impact will be moderate. Following decommissioning, any moderate impacts will be reversed.

Significance of Effect

The operational phase will not have any significant negative visual effects on the setting of Recorded Monuments located within 1km of the EIAR Site Boundary.

13.4.6.6 Protected Structures/NIAH Sites/Conservation Areas within the EIAR Site Boundary

Assessment

There are no Protected Structures within the EIAR Site Boundary.

There are no structures recorded on the National Inventory of Architectural Heritage within the EIAR Site Boundary.

There are no historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage within the EIAR Site Boundary.

There are no Conservation Areas or Proposed Conservation Areas within the EIAR Site Boundary.

Pre-Mitigation Impact

As there are no Protected Structures/NIAH sites/Conservation Areas within the EIAR Site Boundary, there will be no operational phase visual impacts.

Proposed Mitigation Measures

- As there are no Protected Structures/NIAH sites/Conservation Areas within the EIAR Site Boundary, no mitigation measures are required.

Residual Impact

No residual impacts will occur since no negative effects have been identified.

Significance of Effect

As there are no Protected Structures/NIAH sites/Conservation Areas within the EIAR Site Boundary there will be no significant operational phase visual effects.

13.4.6.7 Protected Structures/NIAH Sites/Conservation Areas within 5km of the EIAR Site Boundary and Historic Gardens within 1km of the EIAR Site Boundary

Assessment

There are 19 Protected Structures within 5km of the EIAR Site Boundary. These Protected Structures are listed in Table 13-7 and are shown in Figures 13-17 and 13-18.

There are five structures recorded on the National Inventory of Architectural Heritage within 5km of the EIAR Site Boundary. These NIAH Structures are listed in Table 13-8 and are shown in Figure 13-19.

There are two historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage within 1km of the EIAR Site Boundary. These historic gardens or designed landscapes are listed in Table 13-9 and are shown in Figure 13-20.

There are no Conservation Areas or Proposed Conservation Areas within 5km of the EIAR Site Boundary.

Pre-Mitigation Impact

It is assessed that the Proposed Development will have a long-term, reversible and slight operational phase negative visual impact on the setting of Protected Structures/NIAH sites within 5km of the EIAR Site Boundary and historic gardens or designed landscapes within 1km of the EIAR Site Boundary.

Proposed Mitigation Measures

- As it is not possible to mitigate the indirect impact of turbines in the wider landscape setting, there are no mitigation measures for this slight operational phase negative visual impact.

Residual Impact

The residual impact will be slight. Following decommissioning, any slight impacts will be reversed.

Significance of Effect

The operational phase will not have any significant negative visual effects on the setting of Protected Structures/NIAH sites within 5km of the EIAR Site Boundary and historic gardens or designed landscapes within 1km of the EIAR Site Boundary resulting in no significant effects.

13.4.6.8 Local Built Heritage

Assessment

No new above-ground archaeological features (*i.e.* pre 1700 AD) were noted within the footprint of the Proposed Development. A number of stone walls which are not protected under the National Monuments Acts (as amended) are located within the Proposed Development. These features are not subject to statutory protection. The features are, however, of local cultural and social heritage value. The proposed turbines will be visible from the features. The stone walls are typical in terms of rural Ireland and are not unique in this regard. A change to the setting in which the features are located will occur in the same way as a modern dwelling or farm building would.

Pre-Mitigation Impact

It is assessed the Proposed Development will have a long-term, reversible and not significant operational phase negative visual impact on the setting of the non-protected stone walls.

Proposed Mitigation Measures

- As noted above (Section 13.4.1), numerous turbine layouts have been considered throughout the differing design phases of the Proposed Development. Through an iterative design process, every effort has been made to ensure infrastructure of the Proposed Development minimises impacts upon the dry-stone walls which demark field boundaries on the Proposed Development site, maintaining the visual aesthetic of the grassland landscape with dry stone walls that currently exists.

Residual Impact

The residual impact will be not significant. Following decommissioning, any not significant impacts will be reversed.

Significance of Effect

The operational phase will not have any significant negative visual effects on the setting of the non-protected stone walls, resulting in no significant effects.

13.4.6.9 Recorded Monuments/Protected Structures/NIAH Sites along the Proposed Grid Connection

Assessment

The proposed Grid Connection will be entirely underground.

There are no Recorded Monuments, Protected Structures, structures recorded on the National Inventory of Architectural Heritage, historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage or any additional statutorily protected archaeological, architectural, cultural or protected heritage features within the Proposed Development site relevant to the Grid Connection.

There are three Recorded Monuments within 100m either side of the proposed Grid Connection. These monuments are listed in Table 13-10 and are shown in Figure 13-21.

There is one Protected Structure within 100m either side of the proposed Grid Connection. This Protected Structure is listed in Table 13-11 and is shown in Figure 13-22.

There are no structures recorded on the National Inventory of Architectural Heritage within 100m either side of the proposed Grid Connection.

There are no historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage within 100m either side of the proposed Grid Connection.

Pre-mitigation impact

As the proposed Grid Connection will be entirely underground, there will be no operational phase visual impacts.

Proposed Mitigation Measures

- As the proposed grid connection will have no operational phase visual impact on the setting of any archaeological, architectural, cultural or protected heritage features, no mitigation measures are required.

Residual Impact

No residual impacts will occur since no negative effects have been identified.

Significance of Effect

As the proposed Grid Connection will have no operational phase visual impact on the setting of any archaeological, architectural, cultural or protected heritage features there will be no significant operational phase visual effects.

13.4.6.10 Recorded Monuments/Protected Structures/NIAH Sites along the Proposed Turbine Delivery Route

Assessment

Turbine delivery will require minor temporary modifications in a number of places along the route, including the removal of road signs, lamp posts, bollards, *etc.*

There are no archaeological, architectural, cultural or protected heritage features within any areas identified in the turbine delivery Route Access Survey as requiring Major Amendments.

There are no Recorded Monuments within 100m of areas identified as requiring Major Amendments.

There are no Protected Structures within 100m of areas identified as requiring Major Amendments.

There are no structures recorded on the National Inventory of Architectural Heritage within 100m of areas identified as requiring Major Amendments.

Pre-Mitigation Impact

The proposed turbine delivery route will not require groundworks or road widening in any areas of archaeological, architectural, cultural or protected heritage potential, and as a result there will be no operational phase visual impacts.

Proposed Mitigation Measures

- As the turbine delivery route will have no operational phase visual impact on the setting of any archaeological, architectural, cultural or protected heritage features, no mitigation measures are required.

Residual Impact

No residual impacts will occur since no negative effects have been identified.

Significance of Effect

As the turbine delivery route will have no operational phase visual impact on the setting of any archaeological, architectural, cultural or protected heritage features there will be no significant operational phase visual effects.

13.5 Cumulative and in combination Effects

Cumulative effects are defined as:-

“The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.” (Environmental Protection Agency 2022, 52).

Cumulative effects encompass the combined effects of developments or activities on a range of receptors. In this case, the receptors are archaeological, architectural, cultural or protected heritage sites. Cumulative effects at the construction and operational phases are considered. The projects considered in relation to the potential for cumulative impacts are detailed in Chapter 2, Section 2.6.2 and those which are relevant to this chapter are detailed below.

Other Wind Farms

There are no existing, permitted or proposed wind farms within the immediate vicinity of the Proposed Development. There are only two existing turbines located within the surrounding landscape of the Proposed Development, as well as two permitted and one proposed turbine. All existing, permitted and proposed turbines have a substantial set back distance (> 8.5 km) from the Proposed Development.

There are three existing, permitted or proposed wind farms within 20km of the Proposed Development:

- Skrine Wind Farm: two turbines- Existing. Located 8.5km north of Turbine 1;
- Derrane Wind Farm: two turbines- Permitted. Located 20km north of Turbine 1; and
- Kilcash Wind Farm: one turbine- Proposed. Located 10.3km north of Turbine 1 and Turbine 2.

Roadstone Quarry

An existing, well-established quarry is located north west of Turbine 18. An archaeological assessment was carried out in 2004 in advance of construction of the quarry. Fifteen test trenches were excavated under Licence to National Monuments Service and no archaeological features, with the exception of above-ground stone walls, or artefacts were recovered. No material or historical evidence to date any of the field enclosures before the Medieval period and most of the enclosures before the Post-Medieval period was noted. Given the lack of significance of archaeological features within the footprint of the quarry, and the length of time the quarry has been operational within the environment of the Proposed Development, it is considered there will be no cumulative effects between the Proposed Development and the existing quarry. As such, the Roadstone quarry has been screened out from assessment of potential Cumulative Effects in this Chapter (Cultural Heritage).

13.5.2 Cumulative Effects (Construction Phase)

It is assessed that there is no likelihood for the Proposed Development to result in cumulative effects on archaeological, architectural, cultural or protected heritage during the construction phase of the development.

The addition of other projects to the Proposed Development was considered in order to assess potential construction phase cumulative impacts. These include the above-mentioned three no. wind farms within 20km of the Proposed Development.

Construction phase cumulative effects are largely concerned with potential direct impacts on unrecorded sub-surface archaeological sites and artefacts which may exist within the area where it is proposed to construct the turbines and associated infrastructure. There is no interaction between archaeological remains which might survive within the Proposed Development and the three no. wind farms within 20km of the Proposed Development. Since potential direct impacts on the archaeological, architectural, cultural and protected heritage resource have been assessed and mitigated, cumulative direct impacts will not occur at the construction stage of the Proposed Development.

In terms of construction phase cumulative impacts with other existing, permitted or Proposed Developments, it is assessed that there are no developments which could act in combination with the Proposed Development to result in direct or indirect construction phase effects.

13.5.3 Cumulative Effects (Operational Phase)

The potential to be able to see more turbines in the wider landscape setting from National Monuments is such that cumulative impacts could occur, since it is not possible to mitigate the effects on setting

arising from turbines at the operational stage. Only National Monuments within 10km of the Proposed Development have been assessed for cumulative effects at the operational phase.

13.5.3.1 National Monuments

There are only two existing turbines (Skirine Wind Farm) located within 10km of the Proposed Development, and these have a tip height of 100m and are located 8.5km north of Turbine 1. Derrane Wind Farm consists of two permitted turbines, which are located 20km north of Turbine 1. Kilcash Wind Farm consists of one proposed turbine, which is located 10.3km north east of Turbine 1 and Turbine 2.

National Monument Number 487 (ringfort) is located approximately 9.5km from the proposed location of Kilcash Wind Farm (one proposed turbine), and is the only National Monument within 10km of the three above-mentioned wind farms. Kilcash Wind Farm is located 10.3km north east of Turbine 1 and 2, and is therefore outside the 10km study area used for the assessment of operational phase visual impacts on National Monuments. Skirine is the only wind farm (two existing turbines) within 10km of the Proposed Development, but it is located approximately 10.7km from National Monument Number 487. There are no National Monuments therefore within 10km of both the Proposed Development and any of the three wind farms. As such, the three wind farms have been screened out for operational phase Cumulative Effects on National Monuments.

Given the distance of Skirine Wind Farm, Derrane Wind Farm and Kilcash Wind Farm from the Proposed Development, along with the extent of existing screening over such intervening distances, the three wind farms (five no. turbines in total) have been screened out for operational phase Cumulative Effects on archaeological, architectural, cultural or protected heritage features.

13.6 Decommissioning Phase

It is assessed that there will be no likely decommissioning phase impacts on the archaeological, architectural, cultural or protected heritage resource. The decommissioning phase will involve removal of wind farm infrastructure from the site. Once the wind turbines have been dismantled and removed, the below-ground turbine foundations will be left *in situ* and covered with topsoil. This naturalisation process will revert the landscape of the Proposed Development to a condition similar to the current landscape baseline. The decommissioning phase will also result in an improvement in the archaeological, architectural, cultural and protected heritage resource as all operational phase visual impacts will be entirely removed through decommissioning of the turbines.

13.7 Conclusion

The results of this assessment, in relation to construction, operation and decommissioning of the Proposed Development, have been set out in the foregoing sections. This assessment has concluded that the Construction Phase will have at worst a permanent, direct and moderate effect on the archaeological, architectural, cultural and protected heritage resource. The Operational Phase will have a long-term, reversible and from imperceptible to significant effect on the archaeological, architectural, cultural and protected heritage resource.

Construction Phase

Direct Effects on Recorded Monuments within the EIAR Site Boundary

There are 38 Recorded Monuments located within the EIAR Site Boundary. Of these 38 Recorded Monuments, eight are located within the footprint of the Proposed Development. Of these eight Recorded Monuments, six take the form of field systems, while there is also a wall (linear earthwork-wall) and a road/trackway. The direct construction impacts on these eight Recorded Monuments will be

mitigated by licensed test trenching, monitoring, buffer zones agreed with National Monuments Service, the creation of pre-construction written and photographic records and compliance with regulatory requirements.

Direct Effects on Sub-surface Archaeological Remains

Due to the number of above-ground archaeological monuments recorded within the surrounding landscape of the EIAR Site Boundary, the potential for the Proposed Development area to contain previously unrecorded sub-surface archaeological features and artefacts is considered to be medium to high. Potential direct construction impacts on any previously unrecorded sub-surface archaeological remains that may exist within the Proposed Development will be mitigated by licensed test trenching and monitoring and compliance with regulatory requirements.

Direct Effects on Protected Structures, NIAH Sites and other Cultural Heritage Features within the EIAR Site Boundary

There are no built heritage structures which have statutory protection or otherwise within the EIAR Site Boundary. A number of stone walls which do not receive statutory protection under the National Monuments Acts (as amended) are located within the proposed site. The direct construction impact on these walls will be mitigated by the creation of pre-construction written and photographic records and licensed monitoring and compliance with regulatory requirements.

Direct Effects on Townland, Parish and Barony Boundaries

The proposed access roads will cross 18 townland boundaries, six parish boundaries and one barony boundary. The direct construction impacts on any surviving boundaries will be mitigated by the creation of pre-construction written and photographic records and licensed monitoring and compliance with regulatory requirements.

Direct Effects on Recorded Monuments, Protected Structures, NIAH Sites along the proposed Grid Connection route

There are no Recorded Monuments, Protected Structures, structures recorded on the National Inventory of Architectural Heritage, historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage, or any additional statutorily protected archaeological, architectural, cultural or protected heritage features within the line of the proposed Grid Connection.

There are three Recorded Monuments within 100m either side of the proposed Grid Connection. There is one Protected Structure within 100m either side of the proposed Grid Connection. There are no structures recorded on the National Inventory of Architectural Heritage within 100m either side of the proposed Grid Connection. There are no historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage within 100m either side of the proposed Grid Connection.

The construction phase of the proposed Grid Connection will not have any direct impact on recorded archaeological, architectural, cultural or protected heritage features, and as a result there will be no impacts.

Direct Effects on Recorded Monuments, Protected Structures, NIAH Sites along the proposed turbine delivery route

Turbine delivery will require minor temporary modifications in a number of places along the route which includes the removal of road signs, lamp posts, bollards, etc.

There are no archaeological, architectural, cultural or protected heritage features within any areas identified as requiring Major Amendments. Major Amendments are defined in the turbine delivery Route Access Survey as areas where third party land or road widening will be required. No other

amendments in the turbine delivery Route Access Survey will require road widening or ground disturbance, and therefore only those areas requiring Major Amendments have been assessed in this chapter.

There are no Recorded Monuments within 100m of areas identified as requiring Major Amendments. There are no Protected Structures within 100m of areas identified as requiring Major Amendments. There are no structures recorded on the National Inventory of Architectural Heritage within 100m of areas identified as requiring Major Amendments.

The proposed turbine delivery route will not require groundworks or road widening in any areas of archaeological, architectural, cultural or protected heritage potential, and as a result there will be no impacts.

Operational Phase

Effects on Setting of World Heritage Sites and Sites included in the Tentative List as consideration for nomination to the World Heritage List

There are no World Heritage Sites within 20km of the EIAR Site Boundary.

There is one site (Clonmacnoise) included in the Tentative List as consideration for nomination to the World Heritage List within 20km of the EIAR Site Boundary. The Proposed Development will have a long-term, reversible and slight operational phase negative visual impact on the setting of Clonmacnoise.

Effects on Setting of National Monuments in State Care

There are five National Monuments (at three sites) within 10km of the EIAR Site Boundary.

It is assessed the Proposed Development will have a long-term, reversible and slight operational phase negative visual impact on the setting of National Monument Number 467 (holy well and crucifixion plaque).

It is assessed the Proposed Development will have a long-term, reversible and slight operational phase negative visual impact on the setting of National Monument Number 487 (ringfort).

It is assessed the Proposed Development will have a long-term, reversible and moderate operational phase negative visual impact on the setting of National Monument Number 682 (motte and bailey and unclassified castle).

Effects on Setting of Recorded Monuments within the EIAR Site Boundary.

There are 38 Recorded Monuments within the EIAR Site Boundary. It is assessed the Proposed Development will have a long-term, reversible and significant operational phase negative visual impact on the setting of Recorded Monuments located within the EIAR Site Boundary.

Effects on Setting of Recorded Monuments within 1km of the EIAR Site Boundary

There are 129 Recorded Monuments within 1km of the EIAR Site Boundary. It is assessed the Proposed Development will have a long-term, reversible and moderate operational phase negative visual impact on the setting of Recorded Monuments located within 1km of the EIAR Site Boundary.

Effects on Setting of Protected Structures, Conservations Areas, NIAH Sites within the EIAR Site Boundary

There are no Protected Structures, Conservation Areas or Proposed Conservation Areas, structures recorded on the National Inventory of Architectural Heritage or historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage within the EIAR Site Boundary. As there are no Protected Structures, Conservation Areas or Proposed Conservation Areas, NIAH sites or historic gardens or designed landscapes within the EIAR Site Boundary, there will be no operational phase visual impacts.

Effects on Setting of Protected Structures, Conservations Areas, NIAH Sites within 5km of the EIAR Site Boundary and historic gardens within 1km of the EIAR Site Boundary

There are 19 Protected Structures, no Conservation Areas or Proposed Conservation Areas, and five structures recorded on the National Inventory of Architectural Heritage within 5km of the EIAR Site Boundary. There are two historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage within 1km of the EIAR Site Boundary. It is assessed the Proposed Development will have a long-term, reversible and slight operational phase negative visual impact on the setting of Protected Structures and NIAH sites within 5km of the EIAR Site Boundary and historic gardens or designed landscapes within 1km of the EIAR Site Boundary.

Effects on Setting of Local Built Heritage

No new-above ground archaeological features (i.e. pre 1700 AD) were noted within the footprint of the Proposed Development. A number of stone walls which are not protected under the National Monuments Acts (as amended) are located within the Proposed Development. It is assessed the Proposed Development will have a long-term, reversible and not significant operational phase negative visual impact on the setting of the non-protected stone walls.

Recorded Monuments, Protected Structures, NIAH Sites along the proposed Grid Connection

There are no Recorded Monuments, Protected Structures, structures recorded on the National Inventory of Architectural Heritage, historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage, or any additional statutorily protected archaeological, architectural, cultural or protected heritage features within the line of the proposed grid connection. As such, there will be no direct construction impacts on any recorded archaeological, architectural, cultural or protected heritage features.

There are three Recorded Monuments within 100m either side of the proposed Grid Connection. There is one Protected Structure within 100m either side of the proposed Grid Connection. There are no structures recorded on the National Inventory of Architectural Heritage within 100m either side of the proposed Grid Connection. There are no historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage within 100m either side of the proposed Grid Connection.

As the proposed Grid Connection will be entirely underground, there will be no operational phase visual impacts.

Recorded Monuments, Protected Structures, NIAH Sites along the proposed turbine delivery route

Turbine delivery will require minor temporary modifications in a number of places along the route, including the removal of road signs, lamp posts, bollards, *etc.*

There are no archaeological, architectural, cultural or protected heritage features within any areas identified as requiring Major Amendments. Major Amendments are defined in the turbine delivery Route Access Survey as areas where third party land or road widening will be required. No other amendments in the turbine delivery Route Access Survey will require road widening or ground disturbance, and therefore only those areas requiring Major Amendments have been assessed in this chapter.

There are no Recorded Monuments within 100m of areas identified as requiring Major Amendments. There are no Protected Structures within 100m of areas identified as requiring Major Amendments. There are no structures recorded on the National Inventory of Architectural Heritage within 100m of areas identified as requiring Major Amendments.

The proposed turbine delivery route will not require groundworks or road widening in any areas of archaeological, architectural, cultural or protected heritage potential, and as a result there will be no operational phase visual impacts.

Cumulative Effects (Construction Phase)

It is assessed that there is no likelihood for the Proposed Development to result in cumulative effects on archaeological, architectural, cultural or protected heritage during the construction phase of the development.

Since potential direct impacts on the archaeological, architectural and cultural and protected heritage resource have been assessed and mitigated, cumulative direct impacts will not occur at the construction stage of the Proposed Development.

In terms of construction phase cumulative impacts with other existing, permitted or Proposed Developments, including three no. wind farms and an existing quarry, it is assessed that there are no developments which could act in combination with the Proposed Development to result in direct or indirect construction phase effects.

Cumulative Effects (Operational Phase)

There are only two existing turbines (Skrine Wind Farm) located within 10km of the Proposed Development, and these have a tip height of 100m and are located 8.5km north of Turbine 1. Derrane Wind Farm consists of two permitted turbines, which are located 20km north of Turbine 1. Kilcash Wind Farm consists of one proposed turbine, which is located 10.3km north east of Turbine 1 and Turbine 2.

National Monument Number 487 (ringfort) is located approximately 9.5km from the proposed location of Kilcash Wind Farm (one proposed turbine) and is the only National Monument within 10km of the three above-mentioned wind farms. Kilcash Wind Farm is located 10.3km north east of Turbine 1 and 2, and is therefore outside the 10km study area used for the assessment of operational phase visual impacts on National Monuments. Skrine is the only wind farm (two existing turbines) within 10km of the Proposed Development, but it is located approximately 10.7km from National Monument Number 487. There are no National Monuments therefore within 10km of both the Proposed Development and any of the three wind farms. As such, the three wind farms have been screened out for operational phase Cumulative Effects on National Monuments.

Given the distance of Skrine Wind Farm, Derrane Wind Farm and Kilcash Wind Farm from the Proposed Development, along with the extent of existing screening over such intervening distances, the three wind farms (five no. turbines in total) have been screened out for operational phase Cumulative Effects on archaeological, architectural, cultural or protected heritage features.

Decommissioning Phase

It is assessed that there will be no likely decommissioning phase impacts on the archaeological, architectural, cultural or protected heritage resource. The decommissioning phase will involve removal of wind farm infrastructure from the site. Once the wind turbines have been dismantled and removed, the below-ground turbine foundations will be left *in situ* and covered with topsoil. This naturalisation process will revert the landscape of the Proposed Development to a condition similar to the current landscape baseline. The decommissioning phase will also result in an improvement in the



archaeological, architectural, cultural and protected heritage resource as all operational phase visual impacts will be entirely removed through decommissioning of the turbines