



Moyvannan Electricity Substation

Environmental Impact Assessment Report

Chapter 10: Cultural Heritage

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10.1 Introduction

This chapter has been prepared to define and assess any likely significant impacts or effects which the construction, operation and decommissioning of the project may have on the archaeological, architectural and cultural heritage resource. The chapter also describes mitigation measures, based on current information, which may be used to avoid, reduce or offset any likely adverse effects identified.

10.1.1 Objectives

The objectives of this chapter are to:-

- identify all known features of archaeological, architectural and cultural heritage importance in the vicinity of the project;
- determine any likely effects of the project on the archaeological, architectural and cultural heritage resource; and,
- identify measures to mitigate any likely adverse effects of the project on the archaeological, architectural and cultural heritage resource.

The following key impacts are addressed:-

- Direct and indirect effects of the construction of the project on the archaeological, architectural and cultural heritage resource;
- Direct and indirect effects of the operation of the project on the archaeological, architectural and cultural heritage resource; and,
- Cumulative effects of the construction and operation of the project on the archaeological, architectural and cultural heritage resource with other existing, permitted or proposed developments or projects.

10.1.2 Description of the Project

The project site is located in rural Co. Roscommon, approximately 8 kilometres (km) northwest of Athlone, c. 6km south of Lecarrow and immediately north/northeast of Brideswell. In summary, the project comprises the following main components as described in full at **Chapter 3**:-

- A 110kV 'loop-in/loop-out' electricity substation;
- Approximately 270m of 110kV underground electricity line between the electricity substation and the Athlone-Lanesborough overhead transmission line and the provision of 2 no. interface masts;
- Approximately 7.5km of underground electricity line between the electricity substation and the permitted Seven Hills Wind Farm grid connection infrastructure; and,
- All associated and ancillary site development, access, excavation, construction, landscaping and reinstatement works, including provision of site drainage infrastructure.

The entirety of the project is located within the administrative area of County Roscommon; while electrical equipment suppliers, construction material suppliers and candidate quarries which may supply aggregates are located nationwide. As there is no likelihood of the works associated with the supply of such materials, including their delivery, resulting in significant cultural heritage effects, areas outside of County Roscommon have, therefore, been screened out from further assessment within this chapter.

10.1.3 Statement of Authority

Dermot Nelis BA ArchOxon AIFA MIAI (Horizon Archaeology) 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 no. licensed fieldwork programmes and over 250 no. archaeological, architectural and cultural heritage desk-based reports, including assessments for Environmental Impact Statements and Environmental Impact Assessment Reports.

10.2 Methodology

10.2.1 Study Area

There is no professional standard for defining the extent of a study area when assessing the likelihood of effects on archaeological, architectural or cultural heritage remains. A 1km study area has been applied around the electricity substation to assess the presence of statutorily protected archaeological remains (RMP sites). In addition, a 2km study area has been applied around the electricity substation to assess the presence of any World Heritage Sites, sites included in the Tentative List as consideration for nomination to the World Heritage List, National Monuments, sites with Preservation Orders or Temporary Preservation Orders, Protected Structures, Conservation Areas, Proposed Conservation Areas, or structures recorded on the National Inventory of Architectural Heritage (NIAH).

As the electricity line will be underground and predominately located within the existing road network, a 100m study area either side of the route has been applied to look for the presence of statutorily protected archaeological, architectural and cultural heritage features.

An assessment has been made of any historic gardens or designed landscapes as recorded on the NIAH that may exist within the project site.

10.2.2 Sources of Information

Research has been undertaken in 2 no. 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 project site. Each phase is described in the following sections.

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

- Record of Monuments and Places of County Roscommon;
- 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;
- *Roscommon County Development Plan 2022–2028*;
- National Inventory of Archaeological Heritage; and

- Environmental Protection Agency *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (2022).

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.

Aerial photographic coverage is an important source of information regarding the precise location of sites and their extent. It also provides initial information on the terrain and its potential to contain previously unidentified archaeological remains.

Roscommon County Development Plan 2022-2028 contains Policy Objectives on the preservation and management of archaeological, architectural and cultural heritage features.

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 project site.

Environment Protection Agency Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022) provides definitions for potential effects on archaeological, architectural and cultural heritage remains.

10.2.3 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.

Site visits were carried out on 7 November 2023 and 4 September 2024, and all areas of land take associated with the electricity substation were walked and visually assessed. A windshield survey of the electricity line route was carried out on 4 September 2024.

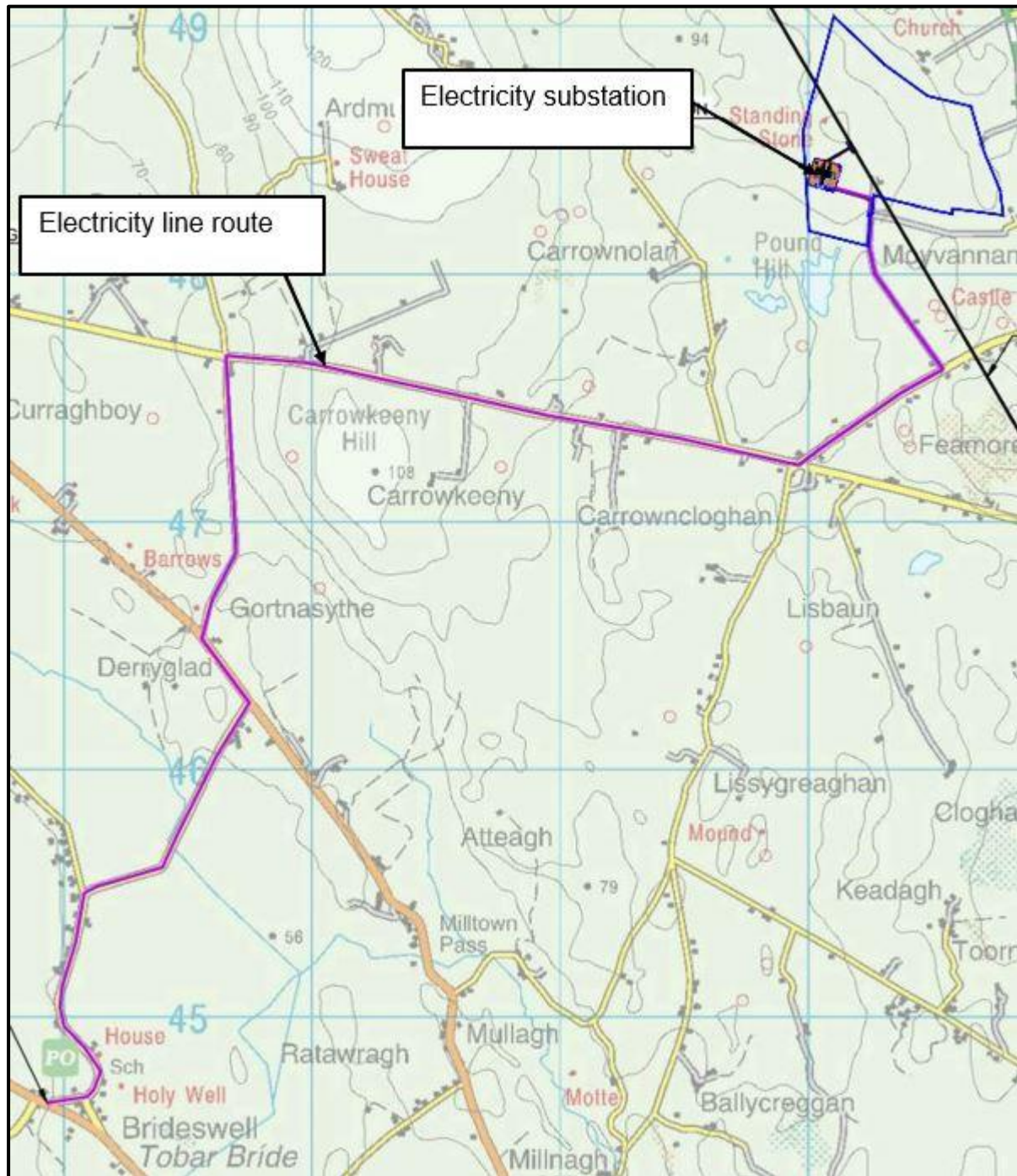


Figure 10.1: Site layout showing electricity substation and route of electricity line

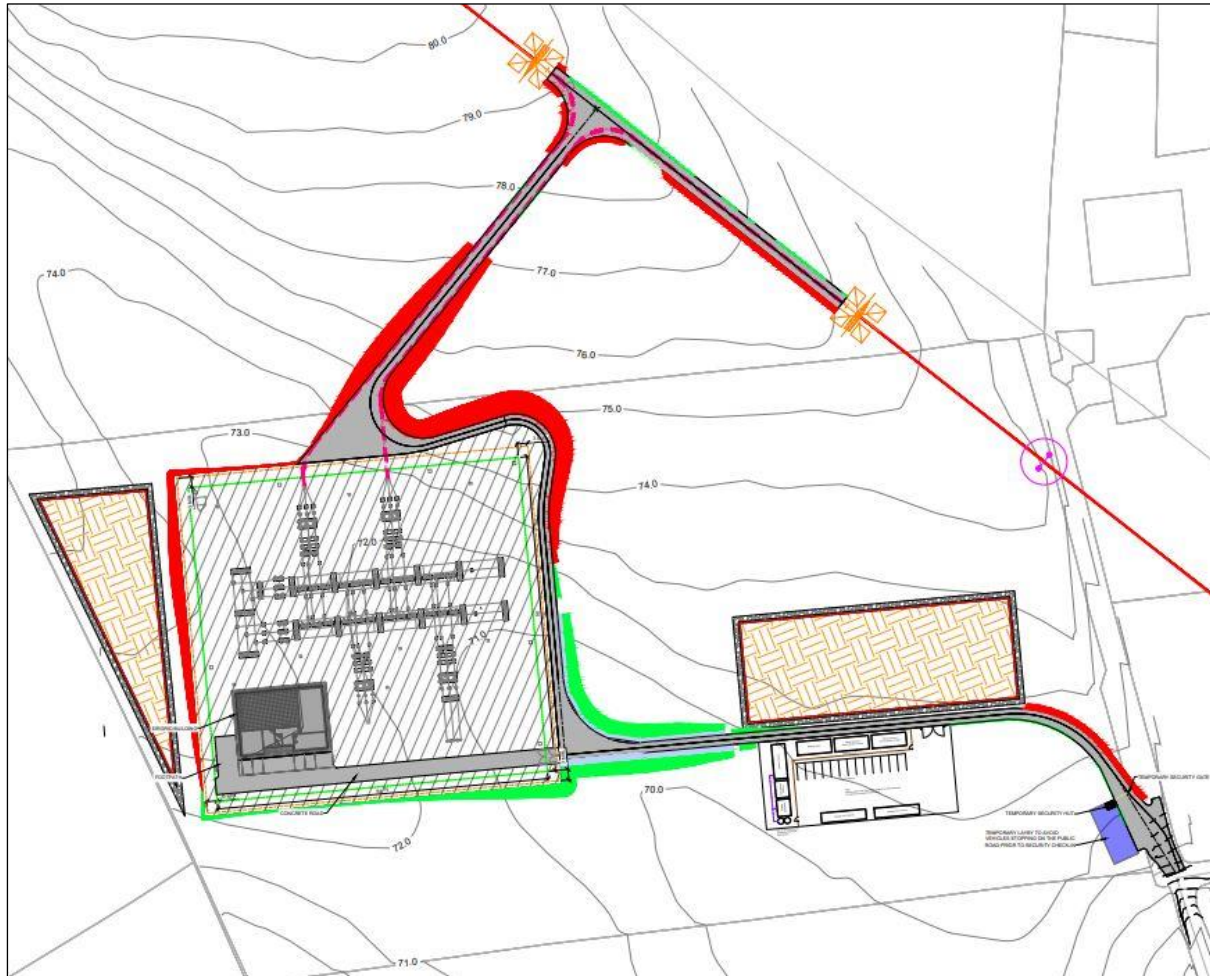


Figure 10.2: Layout of electricity substation site

10.2.4 Significance 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 impacted on. The construction, operation and decommissioning of electricity substations and underground electricity lines can affect the archaeological, architectural and cultural heritage resource of a given landscape in a number of ways:-

- Permanent and temporary land-take by associated structures 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 including disturbance by excavation, topsoil stripping and the passage of heavy machinery, disturbance by vehicles working in unsuitable conditions, and burial of sites through material deposition thus limiting accessibility for future archaeological investigation;
- Hydrological/hydrogeological changes in groundwater or surface water levels can result from construction activities, 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; and
- Although not widely appreciated, positive effects can accrue from 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, visual intrusion or noise impact varies with the type of monument, site or landscape features and its environment. Significance of effects can be judged taking the following into account:-

- 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; and
- Assessment of the levels of visual (refer to **Chapter 9**), noise (refer to **Chapter 11**) and hydrological effects (refer to **Chapter 7**), either in general or site-specific terms, as may be provided by other specialists.

For this assessment, the significant effects criteria outlined in **Table 10.1** are used per the *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (Environmental Protection Agency (2022), Section 3:50).

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.

Table 10.1: Significance of Effects

10.3 Policy and Legislation

10.3.1 Archaeological Resource

The National Monuments Act, 1930 to 2014 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 manmade 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.

The Minister may acquire National Monuments by agreement or by compulsory order. The State or the Local Authority may assume guardianship of any National Monument (other than dwellings). The owners of National Monuments (other than dwellings) may also appoint the Minister or the Local Authority as guardian of that monument if the State or Local Authority agrees. Once the site is in ownership or guardianship of the State, it may not be interfered with without the written consent of the Minister.

Section 5 of the 1987 Act requires the Minister to establish and maintain a Register of Historic Monuments. Historic Monuments and archaeological areas present on the Register are afforded statutory protection under the 1987 Act. Any interference with sites recorded on the Register is illegal without the permission of the Minister. 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.

Sites deemed to be in danger of injury or destruction can be allocated Preservation Orders under the 1930 Act. Preservation Orders make any interference with the site illegal. Temporary Preservation Orders can be attached under the 1954 Act. These perform the same function as a Preservation Order but have a time limit of six months, after which the situation must be reviewed. Work may only be undertaken on or in the vicinity of sites under Preservation Orders with the written consent, and at the discretion, of the Minister.

Section 12(1) of the 1994 Act requires the Minister to establish and maintain a Record of Monuments and Places where the Minister believes that such monuments exist. The Record 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.

Section 12(3) of the 1994 Act provides that:-

“where the owner or occupier (other than the Minister for Arts, Heritage and the Gaeltacht) of a monument or place included in the Record, or any other person, proposes to carry out, or to cause or permit the carrying out of, any work at or in

relation to such a monument or place, he or she shall give notice in writing to the Minister of Arts, Heritage and the Gaeltacht to carry out work and shall not, except in the case of urgent necessity and with the consent of the Minister, commence the work until two months after the giving of notice" (www.archaeology.ie).

The Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 is in the process of being enacted, and will comprehensively modernise and eventually replace the National Monuments Act, 1930 to 2014. The Minister for Housing, Local Government and Heritage issued a Commencement Order (dated 31st May 2024, Statutory Instrument no. 252 of 2024) which outlines specific measures that have come into force, under the Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023. The Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 will streamline and simplify existing systems and processes, and provides for the State to ratify some key international conventions in the area of heritage protection, should the Government decide to do so. There are also proposals for innovative measures, such as the automatic legal protection for finds from archaeological sites, a system of civil enforcement to be used as an alternative to, or to supplement, criminal proceedings, and an appeal process for licence applications.

10.3.2 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 Architectural Heritage Act requires the Minister to establish a survey to identify, record and assess the architectural heritage of the country. The National Inventory of Architectural Heritage (NIAH) records built heritage structures within all the counties of the State. As inclusion in the Inventory does not provide statutory protection, the document is used to advise Local Authorities on compilation of a Record of Protected Structures (RPS) as required by the Planning and Development Act 2000.

The Planning and Development Act 2000 (as amended) requires Local Authorities to establish a Record of Protected Structures to be included in their respective County Development Plans. County Development Plans contain objectives designed to protect the archaeological, architectural and cultural heritage resource during the planning process. Buildings recorded on the RPS can include Recorded Monuments, structures listed on 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 on the RPS receive statutory protection from injury or demolition under the 2000 Act. Damage to or demolition of a site registered on the RPS is an offence. The RPS list is not always comprehensive in every county.

A Local Authority has the power to order conservation and restoration works to be undertaken by the owner of a Protected Structure if it considers the building in need of repair. An owner or developer must make a written request to the Local Authority to carry out any works on a Protected Structure and its environs, which will be reviewed within 12 weeks of application. Failure to do so may result in prosecution.

10.4 Description of the Existing Environment

10.4.1 General Archaeological and Historical Background

Roscommon is an inland county covering an area of 254,900 hectares. The county is largely underlain by Lower Carboniferous limestone and forms part of the central plain of Ireland. The landscape comprises a gently rolling countryside with sizeable areas of level ground. Hill and mountain land is generally confined to the north of the county. Its rolling countryside has mainly been devoted to grazing, with cattle dominating in the north and sheep in the south.

During the Mesolithic period (c. 7,000-4,000 BC) people existed as hunters/gatherers, living on the coastline, along rivers and lakesides. They used flint and other stones to manufacture sharp tools, and locating scatters of discarded stone tools and debris from their manufacture can sometimes identify settlements. The native landscape consisted of woodland with hazel, oak, ash and Scot's pine as the primary species, and Mesolithic hunting groups made no significant impact on the landscape.

The earliest evidence for settlement in County Roscommon dates from the Neolithic period (c. 4000-2400 BC). During this period the population became more settled with a subsistence economy based on crop growing and stock-raising. This period of prehistory in Roscommon is represented by occasional megalithic tombs. Extensive settlement evidence is found at Rathcroghan, near Tulsk (approximately 39km north west of the electricity substation) which is a complex of over 50 monuments ranging from the Neolithic to the Early Medieval period.

The Bronze Age (c. 2,400-600 BC) is characterised by the introduction of metalworking technology to Ireland and coincides with many changes in the archaeological record, both in terms of material culture as well as the nature of the sites and monuments themselves. Though this activity has markedly different characteristics to that of the preceding Neolithic period, including new structural forms and new artefacts, it also reflects a degree of continuity.

The Roscommon Hoard was discovered in 1880 and consisted of approximately 200 bronze fragments which were found somewhere within the county (Waddell 2005, 201). This hoard, although only a small amount of it now survives, has meant the county has given its name to a phase of metal working technology that was present in Bronze Age Ireland.

Bronze Age monuments from County Roscommon include standing stones, barrows and *fulachta fiadh*, which are one of the most numerous monument types in Ireland with over 4,500 examples recorded (*ibid.*, 174). The site of a standing stone, which no longer survives above-ground and whose location is therefore not known with certainty, is recorded (www.archaeology.ie) approximately 150m north of the electricity substation, and approximately 90m north west of a replacement lattice-type interface mast.

During the Iron Age (c. 600 BC-400 AD) new influences came into Ireland which gradually introduced the knowledge and use of iron, although for several centuries bronze continued to be widely used. The Iron Age in Ireland however is problematic for archaeologists as few artefacts dating exclusively to this period have been found, and without extensive excavation it cannot be determined whether several monument types, such as ring-barrows or standing stones, date to the Bronze Age or Iron Age.

The Early Medieval period (c. 400-1169 AD) is depicted in the surviving sources as

entirely rural, characterised by the basic territorial unit known as *túath*. Walsh (2000, 30) estimates that there were at least 100, and perhaps as many as 150, kings in Ireland at any given time during this period, each ruling over his own *túath*.

The Early Medieval period is also characterised by the foundation of a large number of ecclesiastical sites throughout Ireland in the centuries following the introduction of Christianity in the 5th century AD. The early churches tended to be constructed of wood or post-and-wattle, although between the late 8th and 10th centuries mortared stone churches gradually replaced the earlier structures. Many of the sites, some of which were monastic foundations, were probably originally defined by an enclosing wall or bank similar to that found at coeval secular sites. This enclosing feature was possibly built more to define the sacred character of the area of the church than as a defence against aggression. An inner and outer enclosure can be seen at some of the more important sites; the inner enclosure surrounding the sacred area of church and burial ground and the outer enclosure providing a boundary around living quarters and craft areas. Where remains of an enclosure survive it is often the only evidence that the site was an early Christian foundation.

The commencement of Viking raids at the end of the 8th century and their subsequent settlement during the following two centuries marked the first ever foreign invasion of Ireland. Viking settlement evidence has been found in Cork, Dublin and Waterford, and excavations have revealed extensive remains of the Viking towns. Outside these towns, understanding of Viking settlement is largely drawn from documentary and place-name evidence. In addition to Cork, Dublin and Waterford, documentary sources provide evidence for the Viking foundation of the coastal towns of Limerick and Wexford (Edwards 2006, 179). Other indirect evidence which suggests Viking settlement, or at least a Norse influence in Ireland, is represented by upwards of 120 Viking-age coin hoards, possible votive offerings of Viking style objects, and the assimilation of Scandinavian art styles into Irish designs. While the initial Viking raids would have been traumatic, the wealth and urban expansion brought into the country as a result of Viking trading would have benefited the Gaelic Irish, and cultural assimilation in some parts would have been significant.

The arrival of Anglo-Normans in Ireland towards the end of the 12th century resulted in great changes during the following century. Large numbers of colonists arrived from England and Wales and established towns and villages. They brought with them new methods of agriculture which facilitated an intensification of production. Surplus foods were exported to markets all along Atlantic Europe which created great wealth and economic growth. Results of this wealth can be seen in the landscape in the form of stone castles, churches and monasteries.

The political structure of Anglo-Normans centred around the establishment of shires, manors, castles, villages and churches. In the initial decades after the Anglo-Norman invasion a distinctive type of earth and timber fortification was constructed- the motte and bailey. In certain areas of Ireland Anglo-Norman settlers constructed square or rectangular enclosures, now termed moated sites. Their main defensive feature was a wide, often water-filled, fosse with an internal bank. More substantial stone castles followed the motte and bailey and moated sites in the 13th and 14th centuries.

The Anglo-Norman invasion during the 12th century had an impact on County Roscommon, although establishment fell relatively quickly into decline due to harassment by the Gaelic Irish and generally smaller settlement sizes. A castle was

established in Roscommon town which consisted of a rectangular court with strong D-shaped towers at each angle. There was also an impressive gate house in the centre of the eastern curtain wall with a smaller postern in the western wall. The castle was used as a stronghold until 1578 by both the Anglo-Normans and the O'Connors, and after that date windows and other residential features were incorporated into it.

There were other centres of Anglo-Norman power in County Roscommon, including a large castle at Ballintober and the relatively large settlement of Rindoon on the shores of Lough Ree approximately 6.7km north east of the electricity substation. Ballintober castle was probably built by Richard de Burgo at the beginning of the 14th century, using Roscommon castle as an example. It has polygonal corner towers and an external fosse. The gateway is also similar to the castle at Roscommon but on a smaller scale. Remains of the settlement of Rindoon include several houses, the castle and church, the Hospital of St. John, and the defensive wall built to protect the settlement from the landward side. The castle was probably built in 1227 by Geoffrey de Marisco, but very little is known of the town that grew up around its walls. It was stormed by the Irish in 1236 and tolls were levied for the construction of walls around the town. It was raided again in 1315 and it appears this was an event it never recovered from.

The 14th century throughout north west Europe is generally regarded as having been a time of crisis, and Ireland was no exception. Although the Irish economy had been growing in the late 13th century, it was not growing quickly enough to support the rapidly expanding population, especially when Edward I was using the trade of Irish goods to finance his campaigns in Scotland and Wales. When the Great European Famine of 1315-1317 arrived in Ireland, brought about by lengthy periods of severe weather and climate change, its effects were exacerbated by the Bruce Invasion of 1315-1318. Manorial records which date to the early 14th century show that there was a noticeable decline in agricultural production. This economic instability and decline was further worsened with the onset of the Bubonic Plague in 1348.

Before the Tudors came to the throne the kings of England were also the kings of western France and so, during the 14th and 15th centuries, the various lords who ruled in Ireland were largely left to themselves. The Tudors however took more of an interest in the affairs of Ireland, and they wanted to put a stop to the raids of the Gaelic Irish on areas under English rule. To do this, they ruthlessly put down any rebellions and even quashed inter-tribal feuds. English settlers were then brought in to settle their lands. The first of these plantations occurred in the mid-16th century in what is now Laois and Offaly. After the Desmond rising in Munster in 1585 came another plantation, and parts of south western Tipperary were planted at that time.

From 1593 until 1603 there was a countrywide war between the Gaelic Irish, who were supported by the French, and the Elizabethan English. The Irish were finally defeated and with the "Flight of the Earls" in 1607, Ulster, which until then had been independent of English rule, was planted.

Expansion in the agricultural sector following a period of economic growth in Ireland from the mid-1730s led to rising prices and increase in trade. This increase in agricultural productivity led to growth in related industrial development throughout the country.

Nineteenth century Roscommon suffered as a result of overpopulation and poverty, and the people were devastated by the Great Famine. Between 1841 and 1851

the population of Roscommon fell by almost one third, the largest loss of people in any county in Ireland.

All of the project will be located in the barony of Athlone South. The electricity substation and northern portion of the electricity line will be located in the parish of Kiltoom, while the middle and southern portion of the electricity line will be located in the parish of Cam.

Lewis (1837, Vol. I, 247) records the parish of Cam (or Camma) as:-

"containing 4115 inhabitants. It is situated on the road from Athlone to Mount-Talbot, and comprises 10,114 statute acres, as applotted under the tithe act. The land is chiefly under tillage; there are about 648 acres of bog, but no waste land; the system of agriculture is improving; limestone is quarried for agriculture and other uses."

Lewis (*ibid.*, Vol. II, 215) records the parish of Kiltoom (or Kiltomb) as:-

"containing 4514 inhabitants. This parish, which is situated on Lough Ree, comprises 7510 statute acres, as applotted under the tithe act; the soil is light but fertile, and the lands are generally in a profitable state of cultivation; the system of agriculture is improved, and there is a moderate portion of bog. The scenery is pleasingly diversified."

10.4.2 Site-Specific Archaeological Background

There are no Recorded Monuments within the site of the electricity substation.

There are 2 no. Recorded Monuments within 200m of the electricity substation, each of which is described below (**Figure 10.3**).

RMP RO048-037: standing stone

This monument is the site of a standing stone which no longer survives above-ground, and whose location is therefore not known with certainty. The site of the former monument is recorded (www.archaeology.ie) approximately 150m north of the electricity substation, and approximately 90m northwest of an interface mast. A standing stone is marked on a Longfield map dated 1825, where it is described as "Clognegan". The site is situated on the summit of a low north/south esker ridge, but no remains of the standing stone are visible at ground level (www.archaeology.ie).

RMP RO048-038: redundant record

This monument is annotated on the First Edition Ordnance Survey 1:2,500 map and the Third Edition Ordnance Survey 1:10,560 map, where it is shown as a slight sunken feature measuring approximately 20m in diameter. No evidence of an archaeological monument is visible at ground level, and the site was most likely only ever a quarry (www.archaeology.ie). It is centered on a point approximately 190m northeast of the electricity substation, and approximately 120m north of an interface mast.



Figure 10.3: Electricity substation showing location of RMP RO048-037 (standing stone) and RMP RO048-038 (redundant record)

There are an additional 32 no. Recorded Monuments within 1km of the electricity substation. Of these 32 no. Recorded Monuments, 6 no. are classified as redundant records. The remainder include 13 no. ringforts, 2 no. earthworks, 1 no. enclosure, 1 no. souterrain, 1 no. tower house, 2 no. churches, 1 no. graveyard, 1 no. graveslab, 1 no. architectural fragment, 1 no. bullaun stone, 1 no. holy well and 1 no. mass rock (**Figure 10.4**).

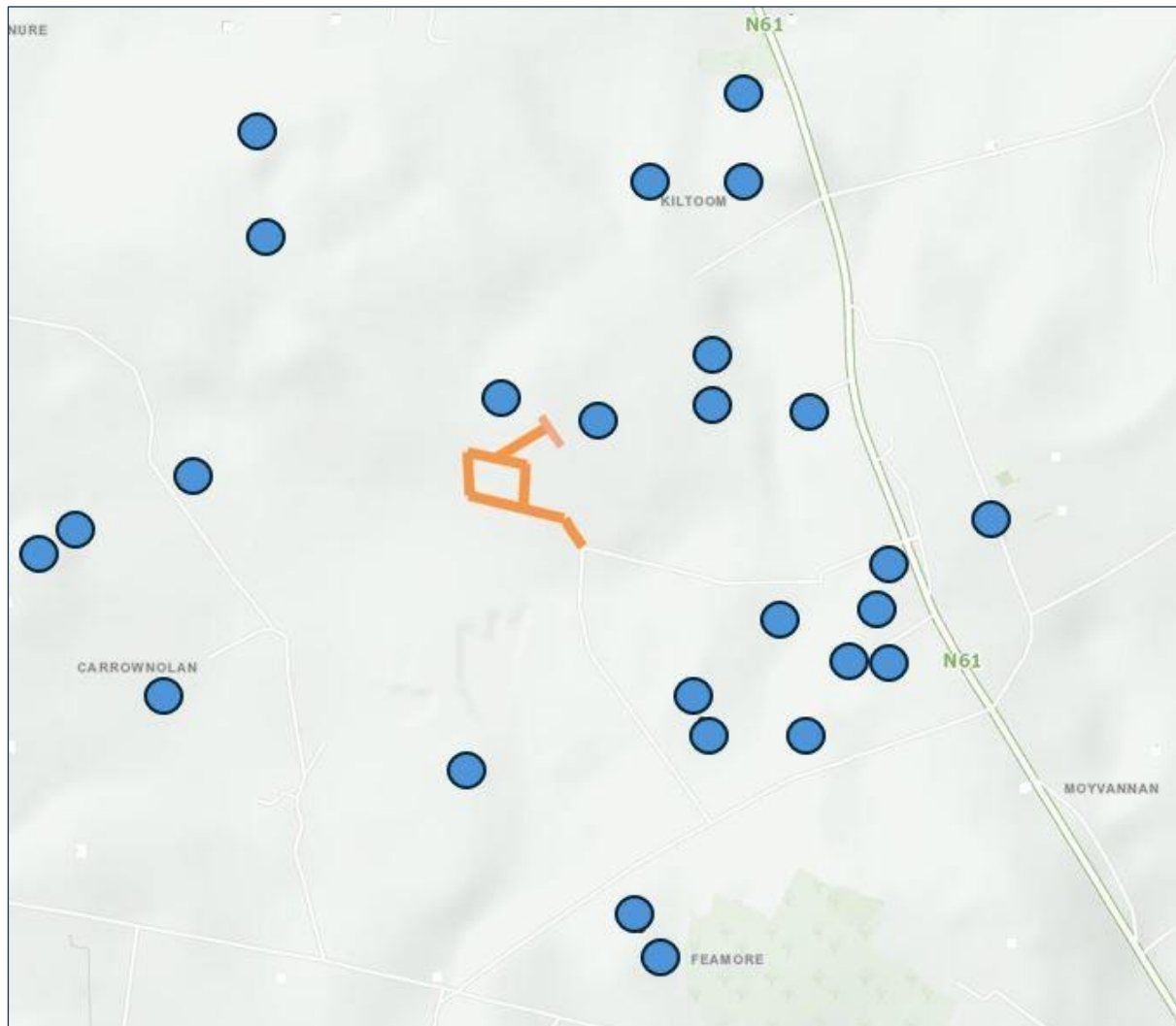


Figure 10.4: Recorded Monuments within 1km of the electricity substation

There are no Recorded Monuments within the confines of the public road corridor within which the underground electricity line will be located.

There are 14 no. Recorded Monuments within 100m either side (i.e. a 200m wider corridor) of the underground electricity line. Of these 14 no. Recorded Monuments, 2 no. are classified as redundant records. The remainder include 1 no. bowl-barrow, 2 no. ringforts, 4 no. penitential stations, 1 no. holy well, 1 no. stoup, 1 no. armorial plaque, 1 no. 17th century house and 1 no. building (bath house) (**Figure 10.5**).

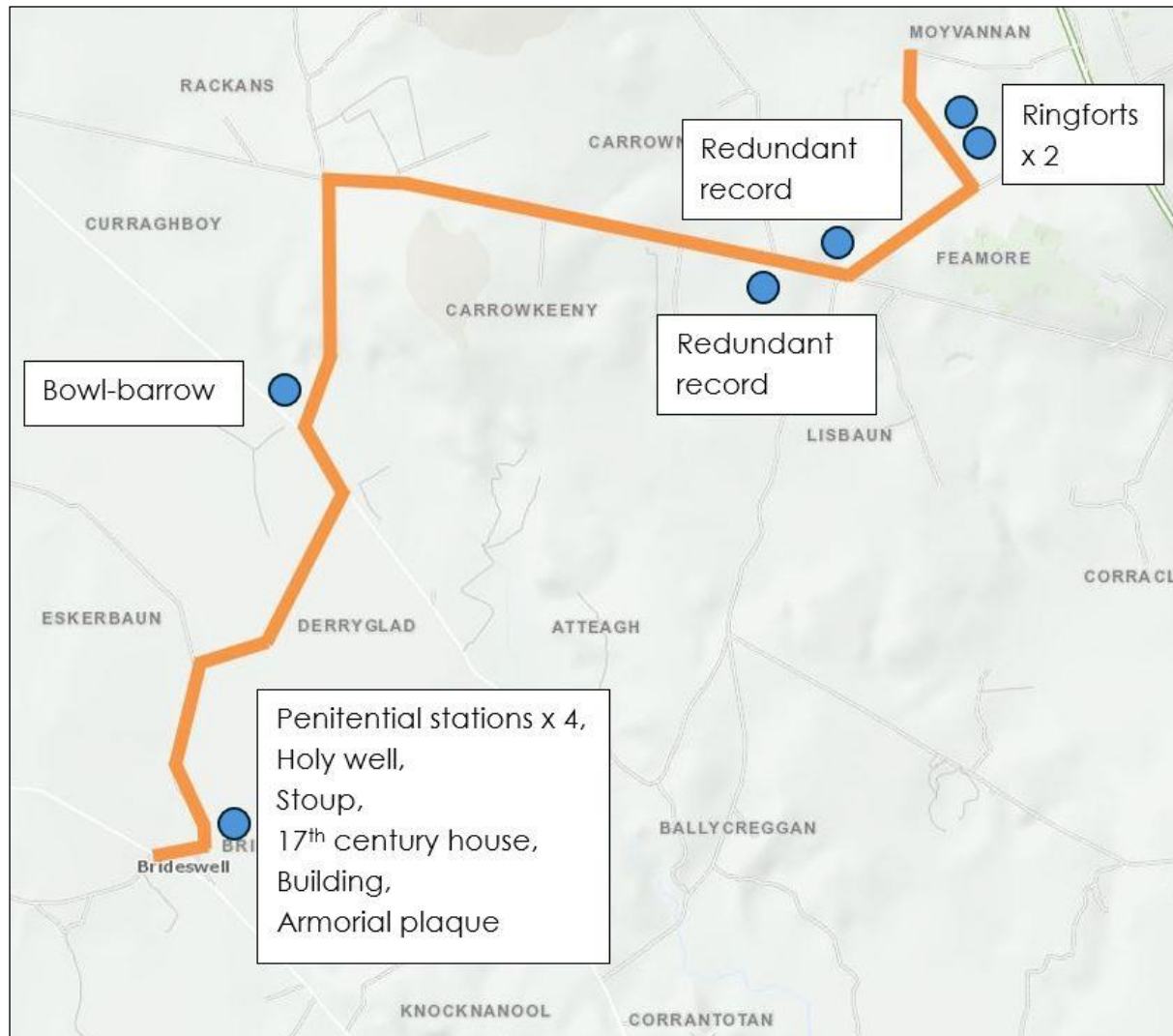


Figure 10.5: Recorded Monuments within 100m of the underground electricity line

Records that do not refer to monuments are designated as redundant records, and are retained in the National Monuments Service archive as they may relate to features that were once considered to be monuments but which on investigation proved otherwise.

Bowl-barrows are circular or oval raised areas (generally over 1m above the external ground level) with an external fosse and sometimes an outer bank. The name 'bowl-barrow' refers to the mound element which is like an inverted bowl. They contain and/or cover burials and were in use from the Bronze Age to the Iron Age (c. 2400 BC-400 AD).

Ringforts are generally circular defensive enclosures which were 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 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). The most recent detailed study (*ibid.*, 53) has suggested that there is an approximate total of 45,119 no. potential ringforts or enclosure sites throughout Ireland.

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.

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.

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.

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.

An armorial plaque is a stone tablet or slab bearing a coat of arms, sometimes accompanied by a date and/or inscription. They date from the late Medieval or Post-Medieval periods (c. 1400-1600 AD) onward.

Tower houses are regarded as a late type of castle and were erected from the 14th to early 17th centuries.

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.

Graveyards are described on National Monuments Service's online database (www.archaeology.ie) as a burial area around a church. They date from the Medieval period (5th-16th centuries) onwards.

Penitential stations can take the form of a stone cairn, mound or small monolith which served as a station where specific prayers were recited. They are often found in association with holy wells or ecclesiastical sites from the Early Medieval period (5th – 12th centuries).

Graveslabs are stones designed to be recumbent and which mark a grave. They date from AD 1200-1700.

The term 'bulláun' (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).

Holy wells are a well or spring, though in some unusual cases a natural rock basin, which usually bear a saint's name and are often reputed to possess miraculous healing

properties. They may have their origins in prehistory, but are associated with devotions from the Medieval period onwards.

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.

A stoup is a basin for holy water, especially on the wall near the door of a church for worshippers to dip their fingers in before crossing themselves.

Buildings are described on National Monuments Service's online database (www.archaeology.ie) as a structure that has or had a roof but where there is insufficient evidence to determine a function. They may date to any period from prehistory onwards.

Seventeenth century houses are buildings for human habitation which date to the 17th century AD and which are not tower houses or fortified houses.

10.4.3 Cartographic Analysis

10.4.3.1 Ordnance Survey Maps: First Edition 1:10,560 (1838) (**Figures 10.6, 10.9 and 10.10**); First Edition 1:2,500 (1888 - 1892) (**Figure 10.7**) and Third Edition 1:10,560 (1911 - 1913) (**Figure 10.8**)

A large part of the road network along which the underground electricity line will be located is recorded on the First Edition 1:10,560 Ordnance Survey map. The electricity line will cross a number of townland boundaries and a parish boundary as shown on the First Edition map. The electricity substation will be located immediately east of a townland boundary. 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).

RMP RO048-037 (standing stone) is not recorded on any editions of the Ordnance Survey maps. The location of the electricity substation is partially recorded as rough pasture or furze and whins on historic cartographic sources.

There are no archaeological or architectural features recorded within the site of the electricity substation on the Ordnance Survey maps.

The historic maps all record the presence of vernacular structures, Ordnance Survey bench marks, wells, gravel pits, etc. in the general vicinity of the electricity line.

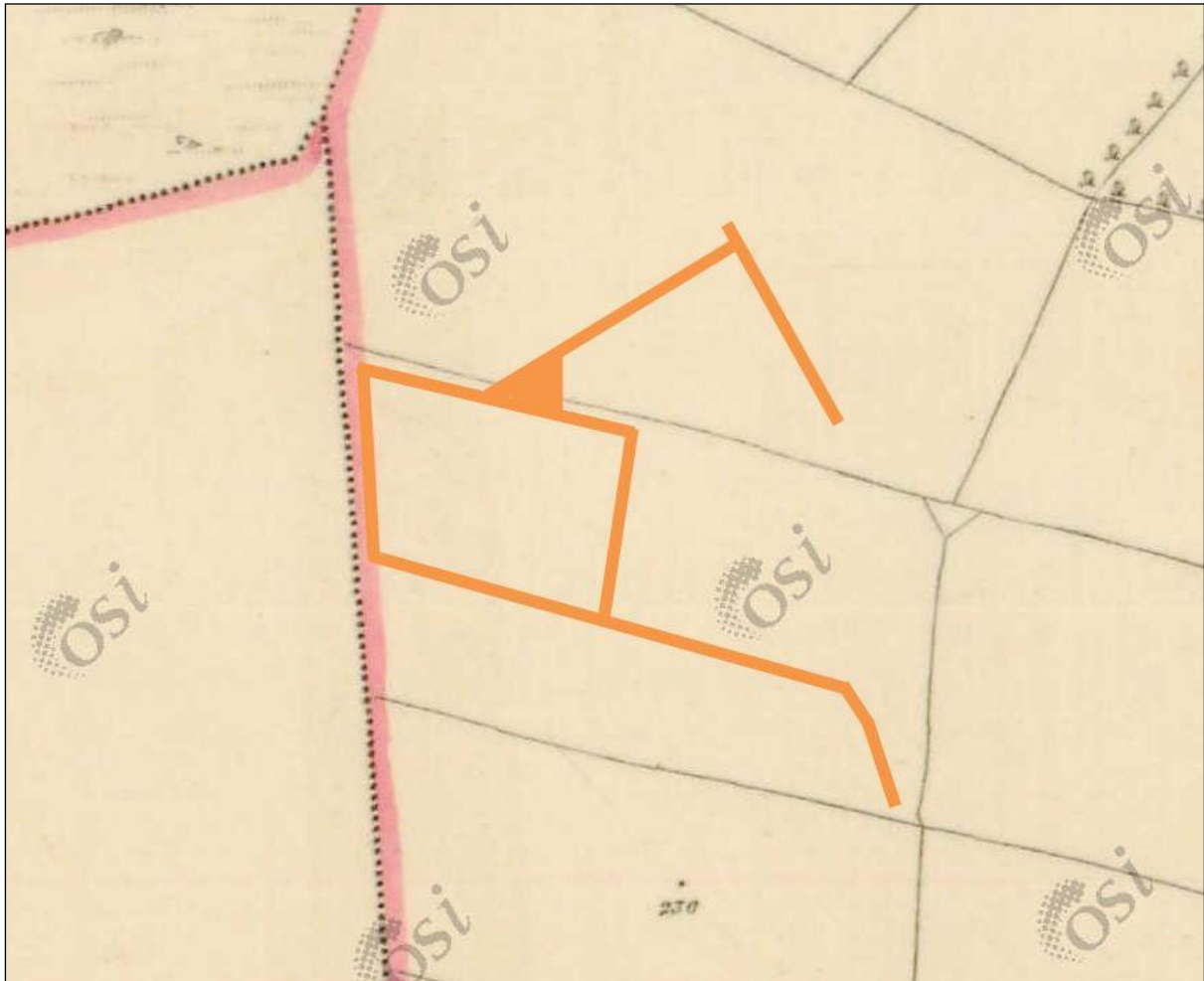


Figure 10.6: Extract from First Edition 1:10,560 Ordnance Survey map (1838), showing electricity substation, access track and underground electricity line between the substation and interface masts

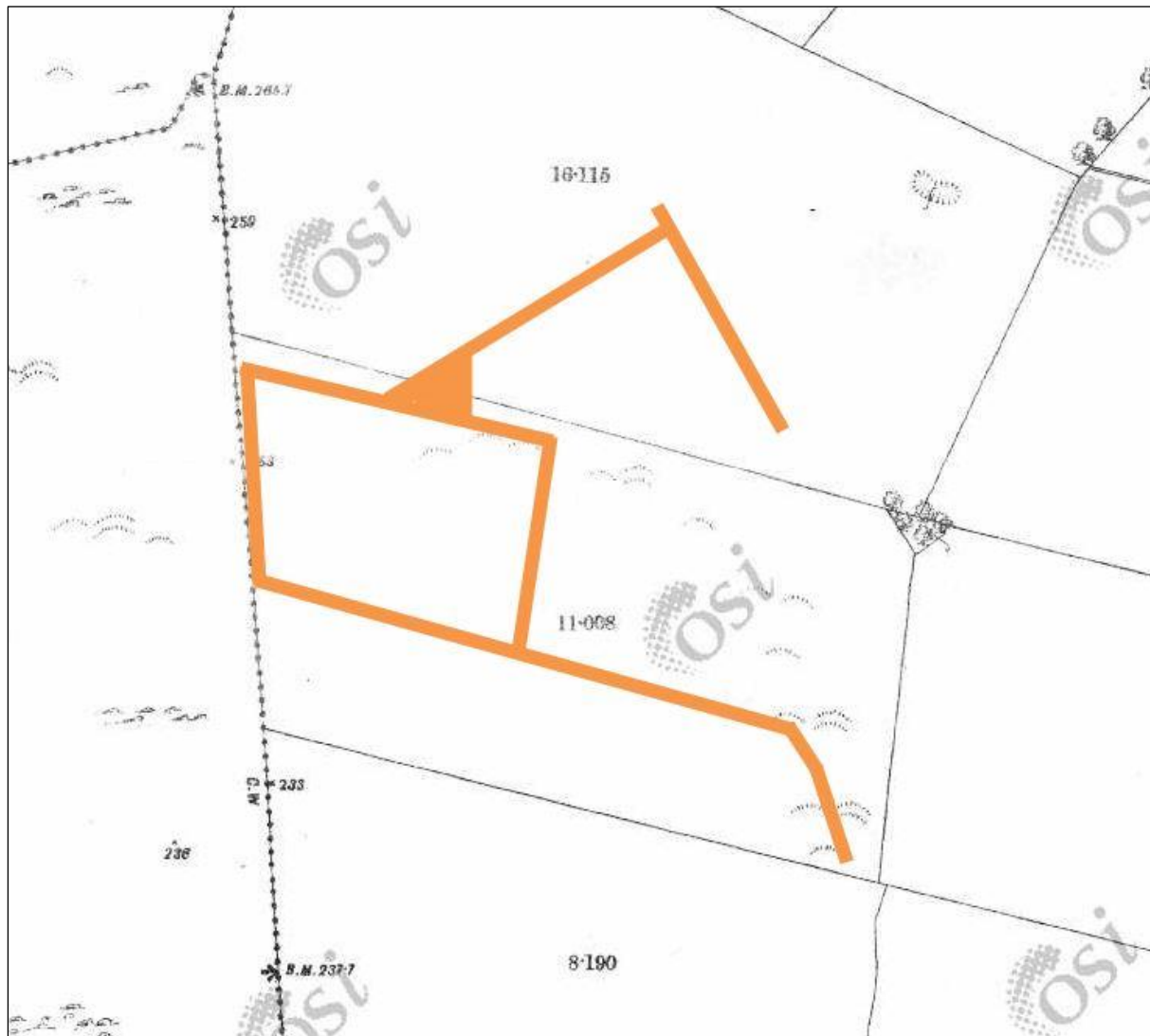


Figure 10.7: Extract from First Edition 1:2,500 Ordnance Survey map (1888 - 1892), showing electricity substation, access track and underground electricity line between the substation and interface masts

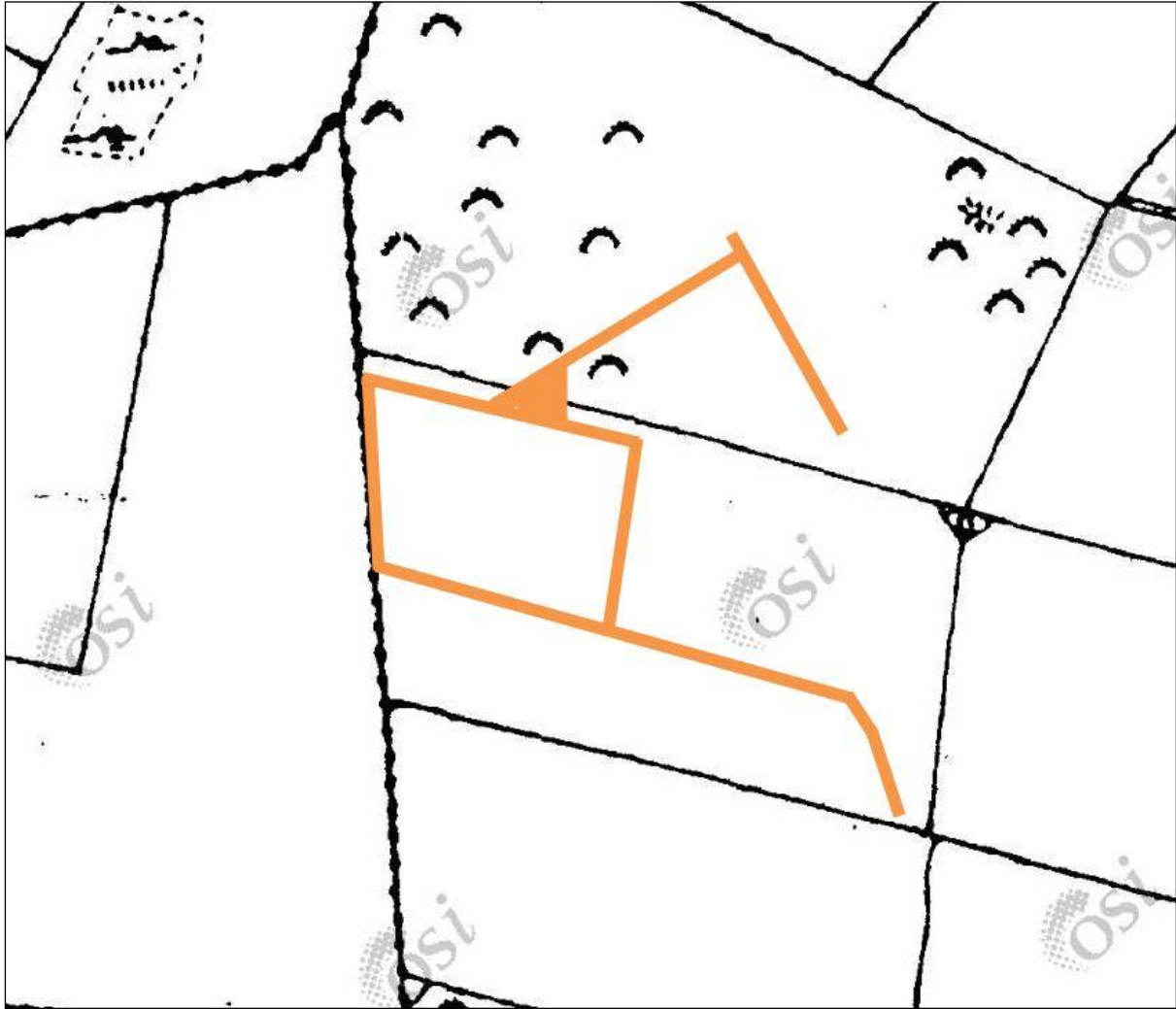


Figure 10.8: Extract from Third Edition 1:10,560 Ordnance Survey map (1911 - 1913), showing electricity substation, access track and underground electricity line between the substation and interface masts

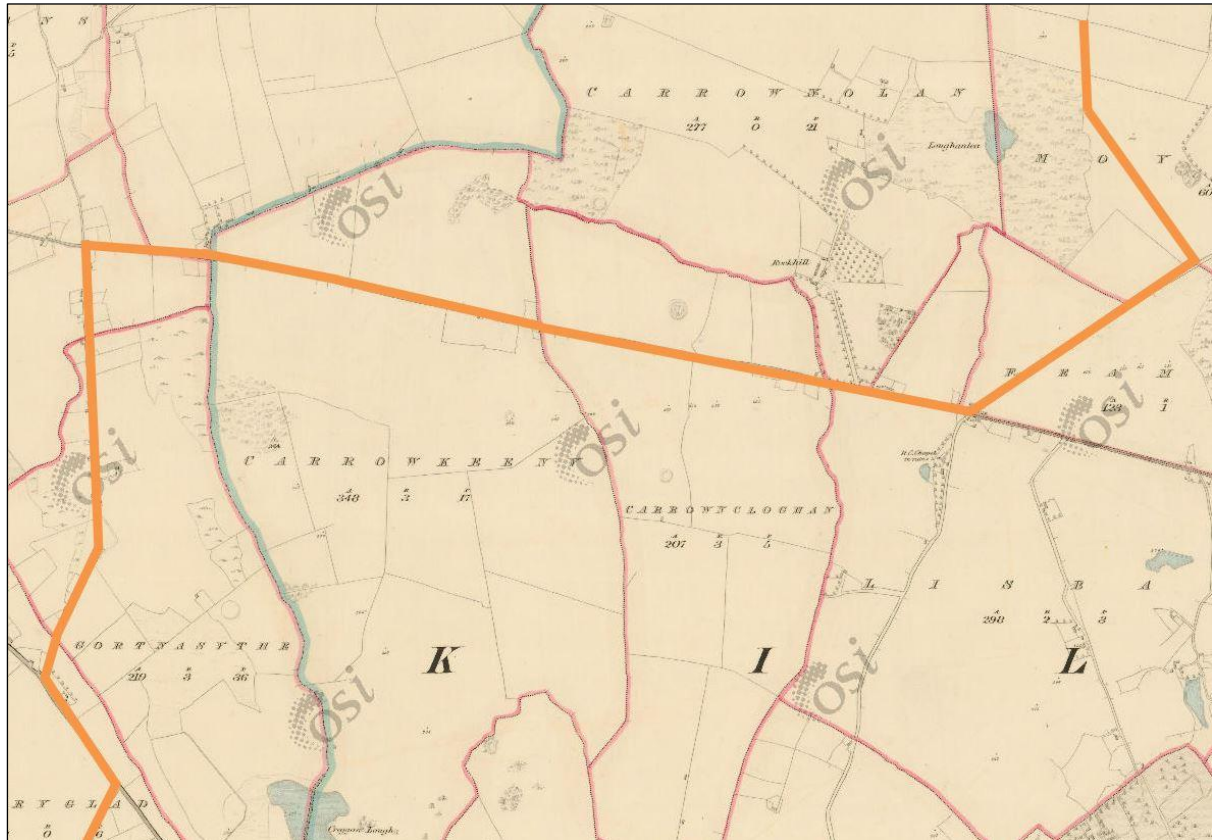


Figure 10.9: Extract from First Edition 1:10,560 Ordnance Survey map (1838), showing northern and middle portion of the underground electricity line

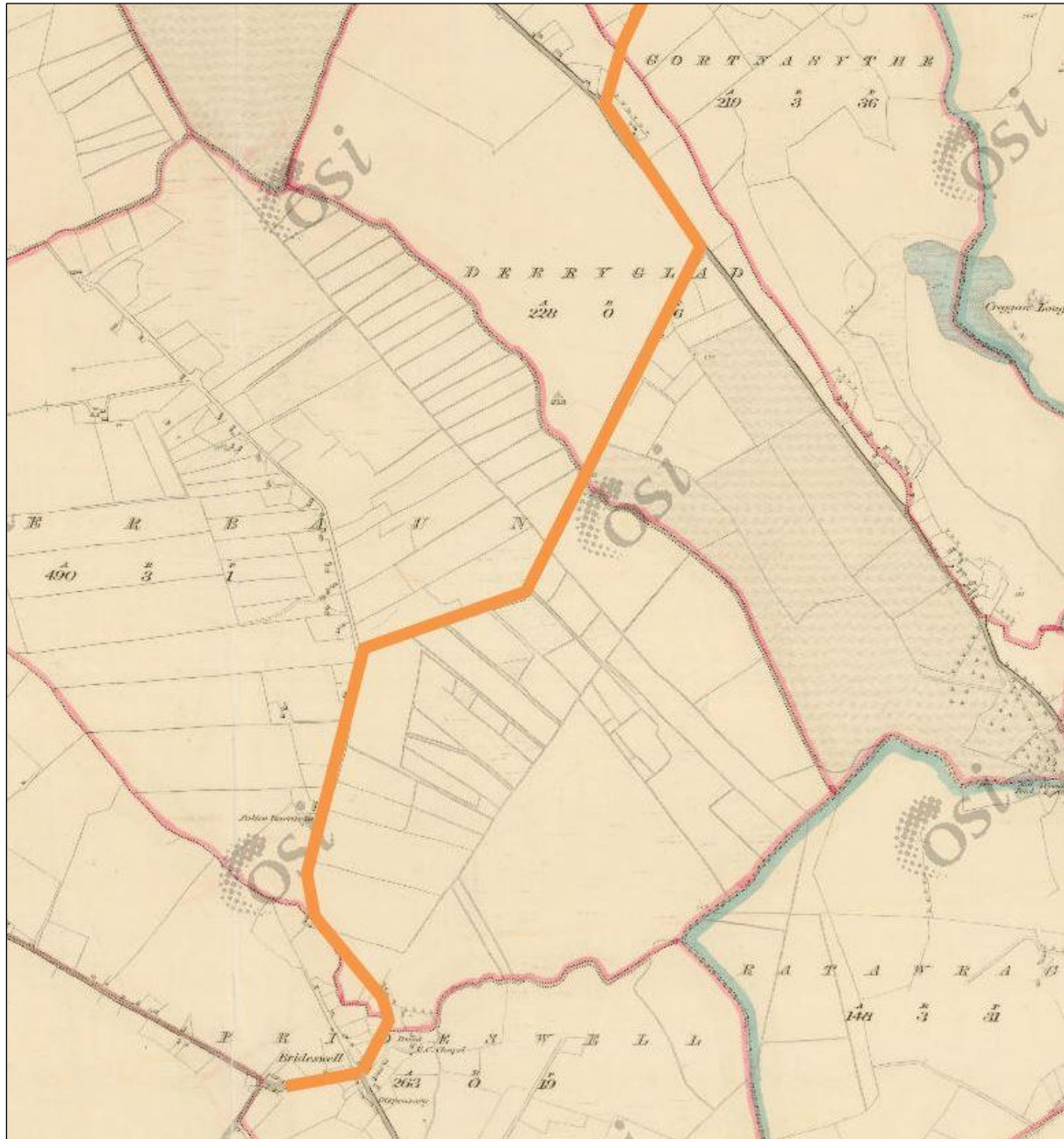


Figure 10.10: Extract from First Edition 1:10,560 Ordnance Survey map (1838), showing southern portion of the underground electricity line

10.4.4 Aerial Photographs

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

Aerial photography shows a similar landscape to that which was noted during the walkover surveys, with the electricity substation being located in a large-sub-rectangular field.

There is no evidence of any archaeological or architectural features recorded on

aerial photography within the electricity substation.

There is no evidence of any archaeological or architectural features recorded on aerial photography within the route of the underground electricity line.

10.4.5 Topographical Files of the National Museum of Ireland

Information on artefact finds and excavations from County Roscommon 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 is one entry recorded for Moyvannan townland, the location of the electricity substation. A quern stone (National Museum of Ireland Register Number 1958:146) was recovered in 1958, but no further information is provided in the Topographical Files.

10.4.6 Previous Archaeological Fieldwork

Reference to Summary Accounts of Archaeological Excavations in Ireland (www.excavations.ie) confirmed that no fieldwork programmes have been carried out within the land take of the project.

Test trenching (Licence Number 09E0496) was undertaken at the site of a proposed single-house development during October 2009 in Moyvannan townland, located c. 640m north east of the electricity substation. According to the files of the Archaeological Survey of Ireland, there is a local tradition of a church site (RMP RO048-041001) for which there is no cartographic evidence located within, or in the immediate vicinity of, that particular development site. The field surface originally included a number of boulders and flagstones, all of which were removed during field-clearance works during the mid-20th century. A beehive quernstone (RMP RO048-041002, now a redundant record) and a bullaun stone (RMP RO048-041003) were recovered during the clearance works. A total of 14 no. trenches of varying lengths and orientations were excavated within the boundaries of the development area, and nothing of archaeological interest was uncovered.

Pre-development test trenching (Licence Number 03E1655) was undertaken in the immediate vicinity of 2 no. Recorded Monuments in advance of a planning application for a quarry development at Carrowkeeney and Gortnasythe townlands, c. 360m east from the underground electricity line. Testing was concentrated in an area north of a ringfort and surrounding an enclosure. Excavation of 13 no. trenches failed to reveal any archaeological features or artefacts.

Pre-development test trenching (Licence Number 04E0458) was undertaken prior to the development of a dwelling house at Gortnasythe townland, c. 170m north east from the underground electricity line. The testing did not reveal any features of archaeological significance.

2 no. fieldwork projects have been carried out in Brideswell townland. Test trenching (Licence Number 04E1521) was undertaken prior to development of 2 no. dwelling houses and associated services, c. 60m south from the underground electricity line. The site is located in the vicinity of a holy well (RMP RO048-108001) which is now backfilled and located at the rear of the development site. 4 no. trenches were mechanically excavated, and no artefacts or features of archaeological significance were uncovered.

Pre-development test trenching (Licence Number 06E0677) was carried out in

Brideswell in advance of construction of a dwelling house within the area of archaeological constraint of RMP RO048–108001 (holy well), RMP RO048–108002 (building) and RMP RO048–108003 (armorial plaque); c. 20m east from the underground electricity line. The development area was located within Brideswell village on a level site located between the village centre and the holy well complex. 3 no. machine-cut test-trenches were excavated across the development site, and no archaeological features or artefacts were recovered.

10.4.7 Toponyms

Townland names are an important source in understanding the archaeology, geology, land-use, ownership and cultural heritage of an area. The electricity substation will be located in Moyvannan townland.

Name	Irish	Translation
Moyvannan	<i>Magh Bhanáin</i>	Possibly translates as Banan's Plain

Table 10.2: Toponyms

10.4.8 National Monuments

The Department of Housing, Local Government and Heritage maintains a database on a county basis of National Monuments in State Care: Ownership and Guardianship. The term National Monument is defined in Section 2 of the National Monuments Act (1930) as:-

"a monument or the remains of a monument the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto."
(www.archaeology.ie).

There are no National Monuments in State Care within the electricity substation site or within 2km of the substation.

There are no National Monuments in State Care within the route of the underground electricity line or within 100m of the electricity line.

The Department of Housing, Local Government and Heritage also maintains a database on a county basis of National Monuments with Preservation Orders or Temporary Preservation Orders. There are no National Monuments with Preservation Orders or Temporary Preservation Orders within the electricity substation site or within 2km of the substation. There are no National Monuments with Preservation Orders or Temporary Preservation Orders within the route of the electricity line or within 100m of the electricity line.

There are no World Heritage Sites or sites included in the Tentative List as being under consideration for nomination to the World Heritage List within the electricity substation site or within 2km of the substation. There are no World Heritage Sites or sites included in the Tentative List as being under consideration for nomination to the World Heritage List within the route of the electricity line or within 100m of the electricity line.

10.4.9 County Development Plan

10.4.9.1 Archaeological Heritage

Roscommon County Development Plan 2022-2028

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."

The Roscommon County Development Plan 2022–2028 does not contain any designated lists or sites of archaeological importance or significance.

10.4.9.2 Architectural Heritage

Roscommon County Development Plan 2022-2028

It is a Policy Objective (BH 9.1) 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."

The Roscommon County Development Plan contains the Record of Protected Structures for the county. There are no Protected Structures recorded in the Roscommon County Development Plan within the electricity substation site. There are 4 no. Protected Structures recorded in the Roscommon County Development Plan within 2km of the electricity substation (3 no. of which are recorded on the National Inventory of Architectural Heritage) (**Figure 10.11**):-

- Kiltoom House (RPS no. 04500763) located c. 510m north east of the electricity substation;
- Moyvannan Castle (RPS no. 04800118) located c. 670m south east of the electricity substation;
- Newpark House (RPS no. 04800576) located c. 1.5km east of the electricity substation; and,
- Vernacular house (RPS no. 04900117) located c. 1.8km south east of the electricity substation.

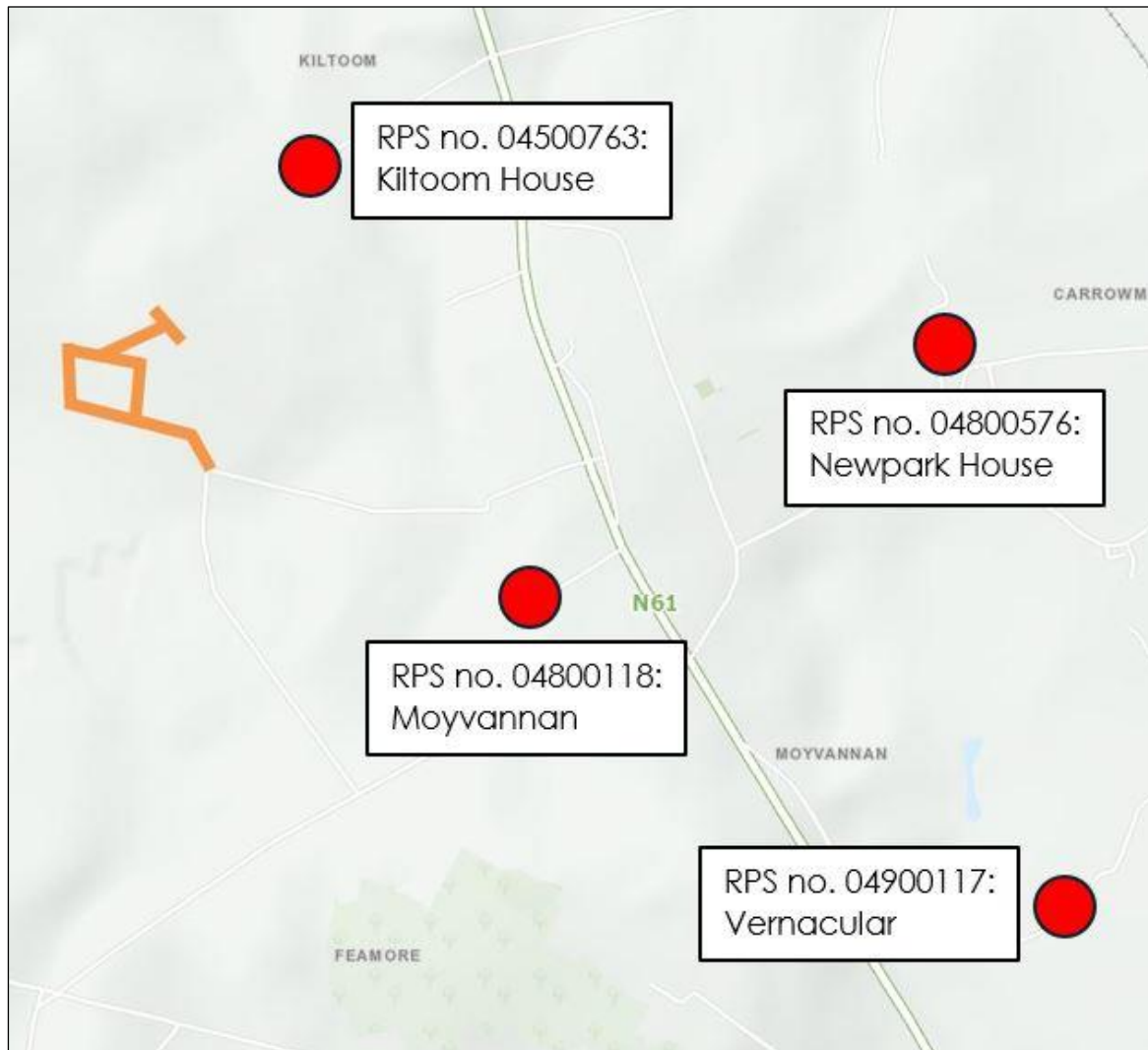


Figure 10.11: Protected Structures recorded in the Roscommon County Development Plan within 2km of the electricity substation

There are no Protected Structures recorded in the *Roscommon County Development Plan* within the route of the electricity line or within 100m of the electricity line.

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 site of the electricity substation or within 2km of the substation. There are no Architectural Conservation Areas recorded in the *Roscommon County Development Plan* within the route of the underground electricity line or within 100m of the electricity line.

10.4.9.3 Cultural Heritage

Roscommon County Development Plan 2022-2028

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

10.4.10 National Inventory of Architectural Heritage

10.4.10.1 Building Survey

The National Inventory of Architectural Heritage maintains a non-statutory register of buildings, structures, etc. recorded on a county basis (www.buildingsofireland.ie).

There are no structures recorded on the National Inventory of Architectural Heritage within the site of the electricity substation. There are 4 no. structures recorded on the National Inventory of Architectural Heritage within 2km of the substation (3 no. of which are recorded as Protected Structures):-

- House (NIAH no. 31946001) c. 1.8km north east of the electricity substation;
- Newpark House (NIAH no. 31948001) c. 1.5km east of the electricity substation;
- Moyvannan Castle (NIAH no. 31948002) c. 670m south east of the electricity substation; and
- House (NIAH no. 31949001) c. 1.8km south east of the electricity substation.

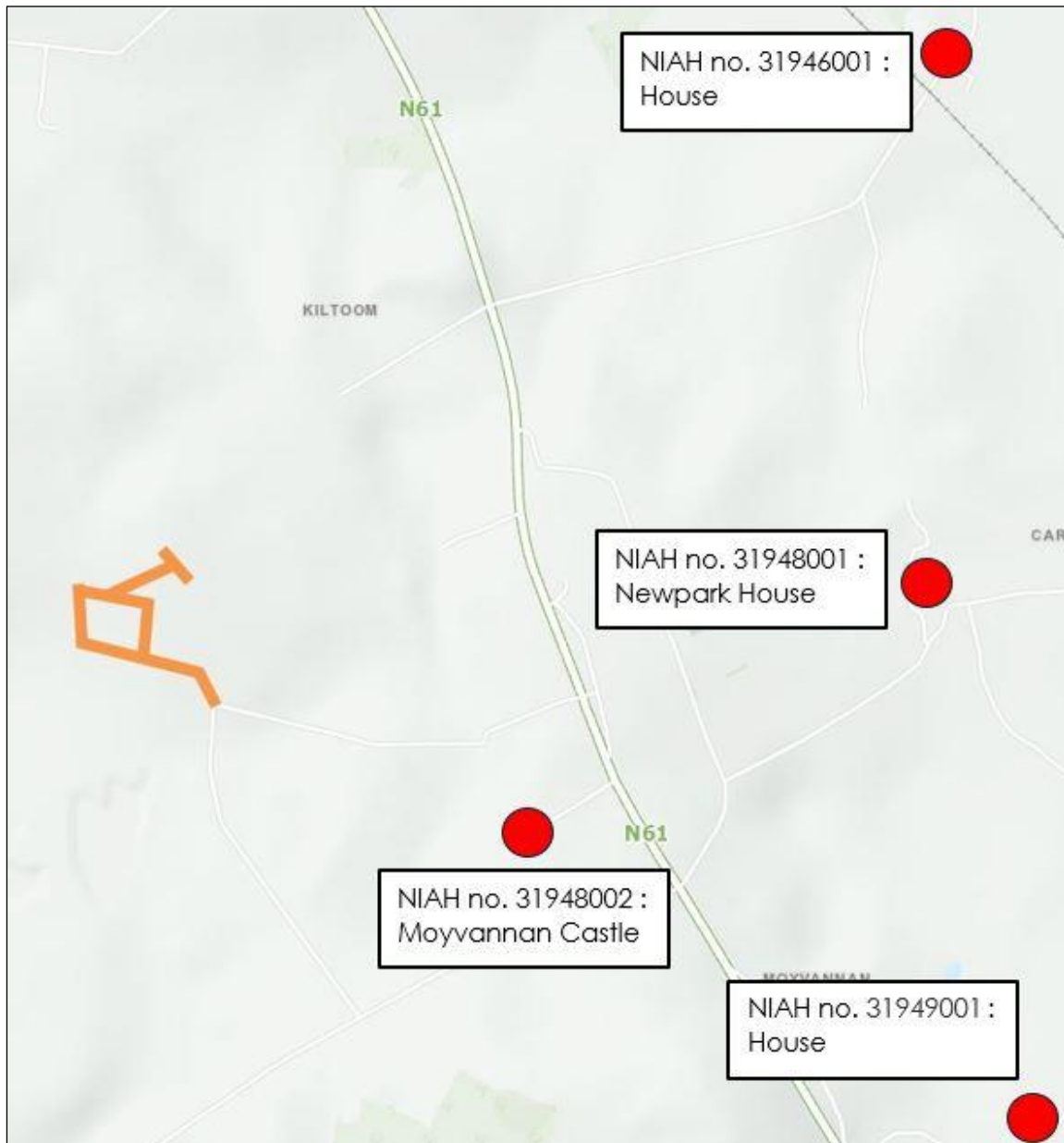


Figure 10.12: Structures recorded on the National Inventory of Architectural Heritage within 2km of the electricity substation

There are no structures recorded on the National Inventory of Architectural Heritage within the route of the electricity line or within 100m of the electricity line.

10.4.10.2 Historic Gardens and Designed Landscapes

There are no historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage within the site of the electricity substation.

There are no historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage within the route of the electricity line.

10.4.11 Site Visit

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. Site visits were carried out on 7 November 2023 and 4 September 2024 when weather conditions were dry and bright. All areas of land take associated with the electricity substation were walked and visually assessed. A windshield survey of the route of the electricity line was carried out on 4 September 2024 in dry and bright weather conditions.

The site of the electricity substation is gently sloping to the south/south west, with approximate ground elevations ranging from c. 80m Above Ordnance Datum (AOD) in the north of the site (interface masts) to c. 69m AOD in the south east (site entrance). The footprint of the electricity substation (overall compound area) will measure approximately 8,500m².

The northern, southern, and western field boundaries of the field in which the electricity substation will be located consist of limestone drystone walls, with an additional hedgerow along the western boundary. The current boundaries reflect those recorded on historic cartographic sources, and the western boundary forms part of the townland boundary with Carrownolan. The location of the electricity substation is currently in use as active pasture for sheep and cattle from the adjoining farm.

Views are clearest along the southern half of the site, while views to the north are limited by the peak of a ridgeline. The local landscape is typical of a glacial landscape, with rolling hills and features such as esker ridges and drumlins being prominent.

There are a number of recorded archaeological sites in the vicinity of the electricity substation, however only one is clearly visible; a cashel (RMP RO048-036) that sits on the top of a north/north west running esker ridge, approximately 550m south of the electricity substation. The location of the cashel is visible in the form of a hump and an outcrop of trees at the top of a ridgeline. The site of a standing stone (RMP RO048-037) is recorded approximately 150m north of the electricity substation and approximately 90m northwest of an interface mast, however no evidence of it exists above ground level. Moyvannan Castle (RMP RO048-048/RPS no. 04800118/NIAH no. 31948002) is located c. 670m south east of the electricity substation, however it is not visible from the location of the substation in part due to the presence of farm buildings.

The electricity line will cross 1 no. watercourse and 2 no. drainage ditches in the townlands of Derryglad and Eskerbaun. The drainage ditches (culverts) and will be crossed via conventional trench excavation methods. The existing watercourse crossing consists of a concrete culvert and a bridge of modern cement block construction, and will be crossed via Horizontal Directional Drilling (HDD). The site visit confirmed that no features of archaeological or architectural significance are located at any of the crossings. As such, no in-stream works are required.

The Recorded Monuments at Brideswell consist of a cluster of features adjacent to Brideswell National School. They consist of a holy well (RMP RO048-108001), a building/bath house (RMP RO048-108002), an armorial plaque (RMP RO048-108003), a stoup (RMP RO048-108005), four no penitential stations (RMP RO048-108004, RMP RO048-108006, RMP RO048-108007 and RMP RO048-108008), and the remains of a 17th century house (RMP RO048-188). The features are all directly adjacent to the roadway and the local school and as such are directly accessible to the public. The 17th century

house consists of one west gable end, with the remaining eastern extent of the house no longer present above ground level. A handball alley has been constructed on the outside (west side towards the road) of the gable end. The remaining features exist in a manicured green space clustered around the school.

No archaeological, architectural or cultural heritage features were revealed within the site of the electricity substation as a result of carrying out the walkover surveys.

No archaeological, architectural or cultural heritage features were revealed within the route of the underground electricity line as a result of carrying out the windshield survey.



Plate 10.1: North east corner of the electricity substation, looking west



Plate 10.2: Northern end of the electricity substation, looking south



Plate 10.3: Western end of the electricity substation, looking east



Plate 10.4: Watercourse crossing, looking north west



Plate 10.5: Holy well (RMP RO048-108001) and building (RMP RO048-108002 bath house), looking east



Plate 10.6: Building (RMP RO048-108002 bath house), containing RMP RO048-108003 (armorial plaque) and RMP RO048-108005 (stoup), looking east

10.5 Description of Likely Effects

All elements of the project are assessed as having the potential to affect or impact upon archaeological, architectural or cultural heritage features either during the construction phase through excavations, or through visual effects during the operational phase. Decommissioning phase effects are not assessed as likely as described below.

Construction phase effects may arise as a result of excavation for the electricity substation, underground electricity line and associated activities; each of which will involve the mechanical excavation of 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 electricity substation in

the landscape.

As a result of carrying out this assessment, the following likely archaeological, architectural and cultural heritage direct, indirect, construction, operational, decommissioning, cumulative and residual effects have been assessed. The following sections undertake an assessment of all elements of the project described in **Chapter 3**.

10.5.1 Construction Phase

10.5.1.1 Archaeological Resource

There are no Recorded Monuments or any additional statutorily protected archaeological features within the footprint of the project (electricity substation and route of electricity line). Accordingly, it is assessed that there will be no direct construction phase effect on the recorded archaeological resource.

There are 2 no. Recorded Monuments within 200m of the electricity substation. There are an additional 32 no. Recorded Monuments within 1 km of the electricity substation. There are 14 no. Recorded Monuments within 100m of the underground electricity line.

It is assessed that there will be a likely permanent, direct and imperceptible construction phase effect on any previously unrecorded archaeological remains that may exist within the project site and which may be discovered during the construction phase.

It is assessed that there will be a likely temporary, reversible and imperceptible construction phase visual and noise effect on the archaeological resource.

It is assessed that there will be a likely permanent, direct and imperceptible construction phase effect on any townland or parish boundaries that may be affected by the project.

There will be no direct or indirect construction phase effect on any watercourses. Two no. drainage ditches (culverts) will be crossed via trenching, and 1 no. watercourse will be crossed via horizontal directional drilling (HDD). As such, no in-stream works are required.

10.5.1.2 Architectural Resource

There are no Protected Structures or structures recorded on the NIAH within the footprint of the project (electricity substation and route of electricity line). It is assessed that there will be no direct construction phase effect on the architectural resource.

There are 4 no. Protected Structures within 2km of the electricity substation (3 no. of which are recorded on the National Inventory of Architectural Heritage). There are 4 no. structures recorded on the National Inventory of Architectural Heritage within 2km of the electricity substation (3 no. of which are recorded as Protected Structures). There are no Protected Structures or NIAH structures within 100m of the electricity line.

It is assessed that there will be a likely temporary, reversible and imperceptible construction phase visual and noise effect on the architectural resource.

10.5.1.3 Cultural Heritage Resource

There are no protected cultural heritage features within the footprint of the project (electricity substation and electricity line) or within 2km of the project. It is assessed that there will be no direct or indirect construction phase effect on the cultural heritage resource.

10.5.2 Operational Phase

10.5.2.1 Archaeological Resource

There are no Recorded Monuments or any additional statutorily protected archaeological features within the footprint of the project (electricity substation and electricity line). There are 2 no. Recorded Monuments within 200m of the electricity substation. There are an additional 32 no. Recorded Monuments within 1km of the electricity substation. It is assessed, based on analysis of photomontages prepared for the project (**Annex 9.2**), that there will be a likely long-term, reversible and not significant operational phase visual effect on the archaeological resource.

It is assessed that there will be a likely long-term, reversible and imperceptible operational phase noise effect on the archaeological resource.

It is assessed that operation of the electricity line will have no likely operational phase effects on the archaeological resource.

10.5.2.2 Architectural Resource

There are no Protected Structures or structures recorded on the NIAH within the footprint of the project (electricity substation and underground electricity line). There are 4 no. Protected Structures within 2km of the electricity substation (3 no. of which are recorded on the National Inventory of Architectural Heritage). There are 4 no. structures recorded on the National Inventory of Architectural Heritage within 2km of the substation (3 no. of which are recorded as Protected Structures). It is assessed, based on analysis of photomontages prepared for the project (**Annex 9.2**), that there will be a likely long-term, reversible and not significant operational phase visual effect on the architectural resource.

It is assessed that there will be a likely long-term, reversible and imperceptible operational phase noise effect on the architectural resource.

It is assessed that operation of the electricity line will have no likely operational phase effects on the architectural resource.

10.5.2.3 Cultural Heritage Resource

There are no protected cultural heritage features within the footprint of the project (electricity substation and underground electricity line) or within 2km of the project. It is assessed that there will be no likely direct or indirect operational phase effect on the cultural heritage resource.

10.5.3 Decommissioning Phase

As set out at **Chapter 3 (Sections 3.2 and 3.7)**, the project will form part of the national electricity network and decommissioning of the project is not proposed. Therefore, decommissioning phase effects will not occur.

10.5.4 Cumulative Effects

Cumulative effects are defined as:-

"The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects" (Environmental Protection Agency 2022, Section 3: 52).

The project will consist of the construction and operation of an electricity substation, including a single-storey control building, within a secure compound. In addition, replacement of 1 no. existing wooden pole-set with 2 no. lattice-type interface masts, each of which will be between 16m and 18m in height, and a below-ground electricity line will be installed.

Construction phase cumulative effects are largely concerned with direct impacts on any unrecorded sub-surface archaeological features or artefacts which may exist within the area where it is proposed to construct the project. There will be no interaction between any archaeological remains which might survive within the project site and any other existing, proposed or permitted developments (refer to **Chapter 1**) within the general area. As likely direct effects on the archaeological, architectural and cultural heritage resource have been assessed and mitigated (in respect of the subject project), cumulative direct effects are not likely to occur during the construction phase of the project.

Given the relatively small-scale nature of the project, the fact that the control building will be single-storey, and that the electricity line will be underground, it is assessed that there will be no cumulative operational effects between the project and any existing, proposed or permitted developments within the general area.

10.5.5 Do Nothing Effects

If the project were not to proceed, there would be no likely effect on the archaeological, architectural or cultural heritage resource.

10.5.6 Interactive Effects

The excavation of soil during the construction of the project may result in the discovery of previously unrecorded cultural heritage features; and, therefore, it is assessed that there is a likelihood for interaction between land and soil and cultural heritage. However, on the basis of this assessment, it is concluded that the level of interaction is not likely to be significant.

During the operational phase, it is assessed that the project will likely result in not significant visual effects on archaeological and architectural heritage features; and, therefore, will result in a not significant interaction between heritage and landscape.

10.5.7 Risk of Accidents

It is assessed that there will be no likely effects on the archaeological, architectural or cultural heritage resource as a result of any unplanned accidents which may occur during either the construction or operational phases.

10.5.8 Worst Case Effects

It is assessed that, under a 'worst-case' scenario, and in the absence of mitigation, there would be a likely permanent and direct construction phase effect on any previously unrecorded archaeological remains that may exist within the project site.

10.6 Mitigation and Monitoring Measures

10.6.1 Mitigation Measures

The following mitigation measures are proposed for the construction phase of the project:-

- Archaeological monitoring of all excavations associated with construction of the electricity substation shall be carried out. Monitoring will be carried out under licence to the Department of Housing, Local Government and Heritage and the National Museum of Ireland. Provision will be made for the full excavation and recording of any archaeological features or deposits that may be exposed during monitoring;
- Archaeological monitoring of all excavations associated with construction of the underground electricity line shall be carried out. Monitoring will be carried out under licence to the Department of Housing, Local Government and Heritage and the National Museum of Ireland. Provision will be made for the full excavation and recording of any archaeological features or deposits that may be exposed during monitoring;
- Archaeological monitoring of all excavations at townland and parish boundaries shall be carried out. Monitoring will be carried out under licence to the Department of Housing, Local Government and Heritage and the National Museum of Ireland. Provision will be made for the full excavation and recording of any archaeological features or deposits that may be exposed during monitoring; and,
- Written and photographic records will be created of any townland and parish boundaries that may be impacted on. The written and photographic records will be created in advance of excavations commencing on site.

No mitigation measures are assessed as required for the operational or decommissioning phases.

10.6.2 Micrositing

Given its proximity to a Recorded Monument (standing stone, which no longer survives above-ground), it is recommended that the micrositing of infrastructure should not be considered at the site of the electricity substation should it result in infrastructure moving closer to the site of the Recorded Monument.

10.6.3 Monitoring Measures

With the exception of the mitigation measures recommended in **Section 10.6.1** which will be implemented in advance of and during the construction phase, there are no future monitoring requirements.

10.7 Residual Effects

Following the implementation of the above mitigation measures, it is assessed that there will be no likely significant residual effects during the construction or decommissioning phases of the project. Residual effects during the operational phase are addressed below.

10.7.1 Archaeological Resource

It is assessed that there will be a likely residual long-term, reversible and not significant operational phase visual effect on the archaeological resource.

It is assessed that there will be a likely residual long-term, reversible and imperceptible operational phase noise effect on the archaeological resource.

It is assessed that there will be no residual operational phase effects on the archaeological resource as a result the underground electricity line.

10.7.2 Architectural Resource

It is assessed that there will be a likely residual long-term, reversible and not significant operational phase visual effect on the architectural resource.

It is assessed that there will be a likely residual long-term, reversible and imperceptible operational phase noise effect on the architectural resource.

It is assessed that there will be no residual operational phase effects on the architectural resource as a result of the underground electricity line.

10.7.3 Cultural Heritage Resource

It is assessed that there will be no likely significant residual effects on the cultural heritage resource.

10.8 Summary

The results of this assessment, in relation to construction, operation, decommissioning, cumulative and residual effects have been set out in the foregoing sections. This assessment has concluded that the effect on the archaeological, architectural and cultural heritage resource of the project (electricity substation and electricity line) will in general be long-term, reversible and, at worst, not significant.

There will be no likely significant direct or indirect construction phase effects on the recorded archaeological, architectural or cultural heritage resource. However, there will be a likely long-term, reversible and not significant operational phase visual effect on the archaeological resource and a likely long-term, reversible and imperceptible operational phase noise effect on the archaeological resource. In addition, there will be a likely long-term, reversible and not significant operational phase visual effect on the architectural resource and a likely long-term, reversible and imperceptible operational phase noise effect on the architectural resource. Following the implementation of mitigation measures outlined in this chapter, the likely residual effects of the project remain, at worst, not significant.

There will be a likely residual, long-term, reversible and not significant operational phase visual effect on the archaeological resource and a likely residual, long-term, reversible and imperceptible operational phase noise effect on the archaeological resource. In addition, there will be a likely residual long-term, reversible and not significant operational phase visual effect on the architectural resource and a likely residual, long-term, reversible and imperceptible operational phase noise effect on the architectural resource.

This assessment has further concluded that the project will not result in any likely significant cumulative effects with other existing, permitted or proposed development; including those identified at **Chapter 1**.

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