



Pinewoods Wind Farm Substation

Chapter 10: Cultural Heritage

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10.1 Introduction

This chapter has been prepared to assess any likely significant impacts or effects which the construction, operation and decommissioning of the proposed development 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 adverse effects.

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 proposed development;
- Determine any likely effects of the proposed development on the archaeological, architectural and cultural heritage resource; and
- Identify measures to mitigate any likely effects of the development on the archaeological, architectural and cultural heritage resource.

The following key issues are addressed:-

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

10.1.2 Description of the Proposed Development

In summary, the proposed development comprises the following main components:-

- 1 no. 110kV 'loop in-loop out' air-insulated switchroom (AIS) substation including control buildings, transformers and all ancillary electrical equipment; and
- All associated site development, access and reinstatement works.

The entirety of the proposed development is located within the administrative area of County Laois; while the overall Pinewoods Wind Farm project is located partly within County Laois and County Kilkenny. Additionally, candidate quarries which may supply construction materials are also located within County Kilkenny and Carlow.

A detailed description of the proposed development is provided in **Chapter 3**.

10.1.3 Statement of Authority

Dermot Nelis BA ArchOxon AIFA MIAI

Dermot Nelis 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 170 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.

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 proposed development to assess for the presence of statutorily protected archaeological remains (RMP sites).

In addition, a 3km study area has been applied around the proposed development to assess for 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 Orders, Protected Structures, structures recorded on the National Inventory of Architectural Heritage, Conservation Areas or Proposed Conservation Areas.

A 1km study area has been applied around the proposed development to assess for the presence of any historic gardens or designed landscapes recorded on the National Inventory of Architectural Heritage (NIAH).

10.2.2 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 a field inspection of the proposed development site. Each phase is outlined 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 Laois and County Kilkenny;
- 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;
- Laois County Development Plan (2017 - 2023) and Kilkenny County Development Plan (2014 – 2020);
- National Inventory of Archaeological Heritage; and
- Environmental Protection Agency's *Guidelines on the Information to be Contained in Environmental Impact Statements (2002)* and *Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2017)*.

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 possible archaeological significance. 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 the possibility of previously unidentified archaeological remains.

Laois County Development Plan (2017 - 2023) and **Kilkenny County Development Plan (2014 - 2020)** contain Objectives and Policies 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 Culture, Heritage and the Gaeltacht. 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 Laois, and this was assessed to look for the presence of any such features within the proposed development area or the 1km study area.

Environment Protection Agency's "Guidelines on the Information to be Contained in Environmental Impact Statements" and **"Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports"** provide definitions for likely 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.

A site visit was carried out on 14 May 2020, and all areas of land take associated with the proposed development were walked and visually assessed. In addition, a walkover survey of the permitted Pinewoods Wind Farm site was carried out on 14 May 2020 to assess for any likely cumulative effects between the proposed development and the permitted wind farm. Detailed walkover surveys of the permitted Pinewoods Wind Farm site were also carried out in August 2012 and August 2014 as part of the cultural heritage impact assessment and EIAR/EIS prepared in respect of that development.



Figure 10.1: Aerial photograph of proposed development 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 possibly affected. The construction and operation of electrical substations, and ancillary equipment, and their associated activities can affect the archaeological, architectural and cultural 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 possibility of adversely affecting archaeological remains. This can include machinery, site offices, service trenches, etc; and
- 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 effect 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, 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 10.1** are used.

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 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 Culture, Heritage and the Gaeltacht 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).

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 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 (as amended).

The Planning and Development Act 2000 (as amended) requires Local Authorities to establish a Record of Protected Structures to be included in the County Development Plan. This Plan includes objectives designed to protect the archaeological, architectural and cultural heritage resource during the planning process. 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. 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

Laois is an inland county in the south Midlands covering an area of 1,719 square km, which equates to 2.4% of the national landmass. It is located near the centre of the country and shares borders with Carlow, Kildare, Kilkenny, Offaly and Tipperary. In physical terms, the landmass of Laois consists of a central plain containing most of the productive agricultural land, surrounded by a number of upland areas including the Slieve Bloom Mountains in the north west, Killeslin Plateau in the south east and Cullahill Mountain in the south. There are also significant cutaway peatlands in the county, mainly situated between Portlaoise, Mountrath and Abbeyleix.

During the Mesolithic period (c. 7000-4000 BC) people existed as hunters/gatherers, living on the coastline, along rivers and lakesides. They used flint and other stone to

manufacture sharp tools, and locating scatters of discarded stone tools and debris from their manufacture can sometimes identify settlements.

The earliest evidence for settlement in County Laois 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. While some 1,500 megalithic tombs are recorded in Ireland, they are rare in the Midlands and no definite examples are known in County Laois. Five megalithic structures and seven unclassified megalithic tombs are recorded in County Laois (www.archaeology.ie).

The Bronze Age (c. 2400-600 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.

Bronze Age monuments from County Laois include stone rows and standing stones, cist burials, barrows and *fulachta fiadh* which are one of the most numerous monument types in Ireland with over 4,500 examples recorded (Waddell 2005, 174).

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*.

During this turbulent period roughly circular defensive enclosures known as ringforts 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 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). Cashels are stone built and are generally situated in coastal or mountainous areas.

The ringfort is considered to be the most common indicator of settlement during the Early Medieval period. Detailed study (*ibid.*, 53) has suggested there is an approximate total of 45,119 possible ringforts or enclosure sites throughout Ireland.

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 in general likely for this site type, though not a certainty.

The Early Medieval period is 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 probably 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.

Medieval Ireland is considered a very turbulent time in Irish history as kings battled each other to obtain the power of High King of Ireland, or *Ard Ri*. As early as the middle of the 3rd century, the general area surrounding Portlaoise was ranked as a kingdom and annexed by Conary, King of Ireland, to his native dominion of Munster, instead of being, as formerly, attached to Leinster. In the war waged by Roderic O'Connor, King of Ireland, against Diarmait MacMurrough, King of Leinster, which led to the invasion under Strongbow, the King of Ossory was one of the princes who were specially summoned by the former of those potentates.

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 is scarce and has been found in Cork, Dublin and Waterford, however excavations there 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 suggest 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 eventually benefited the Gaelic Irish and cultural assimilation in some parts would have been significant.

The district now forming Queen's County (the former name of County Laois) was known by the name of Glenmaliere and Leix. Leix was made a county palatine, and on the division of the immense possessions of William, Earl Marshal, between his five daughters, it was allotted to the youngest, who had married William de Braosa, Lord of Brecknock. Their daughter Maud married Roger Mortimer, Lord of Wigmore, and from this connection the imperial house of Austria, and the royal families of Britain, France, Prussia, Denmark, Holland, Sardinia and Saxony derive their descent. Mortimer, preferring to reside on his English estates, employed one of the O'Mores to defend and manage his Irish property. Within 20 years however, O'More had become so powerful that he held it by himself and became one of the fiercest opponents of the English settlers in that part of the Pale. So fully was his authority recognised as lord of the district that he was summoned by the English government

to oppose Bruce and the Scotch. For two centuries after, the district was the seat of an almost incessant war between the O'Mores and the English. During the same period the Mac Gillypatricks, or Fitzpatricks, maintained their independence in Ossory, but generally adhered to the English.

The Later Middle Ages is a period marked by continuous raids by the Irish on the Pale, and retaliation measures taken by the English crown to secure its authority by attempting to control the Irish families living outside its walls. Portlaoise originated as a fort erected in the mid-16th century as part of the English attempts to subdue the territories of the O'Mores and O'Conors during the reign of Edward VI.

In an attempt to limit the devastation caused by raids on the Pale, the region was reduced to shire ground and incorporated under the name of Queen's County. This new arrangement however did not immediately calm the country. For security, a number of affluent families of native Irish, Anglo-Irish and English descent alike erected a type of castle known as a tower house. Though they are not castles in a strict military sense, they are designed primarily to repulse attack while displaying the wealth and status of the family. They are typically tall rectangular crenellated towers, of three to five storeys, with defensive features as well as features to enhance the domestic comfort of the building.

This general area was largely under the control of two powerful Irish families, the O'Conors and the O'Mores. Owen MacRory O'More, the chief of the O'More family, was so powerful that Sir George Carew, President of Munster, accompanied by the Earls of Thomond and Ormonde, was induced to hold a parley with him to bring him back to his allegiance to the English crown and halt his raids. Their attempt however to subdue his family's activities was unsuccessful when they were entrapped in an ambush, and the Earl of Ormonde made prisoner, and detained till a ransom of £3000 was paid. The O'More power was not to last and when their chief was killed shortly after this, in a skirmish with Lord Mountjoy, followers of the O'Mores were driven into counties Cork and Kerry, then nearly depopulated.

At this juncture many English families, to whom grants of the land thus forfeited by the O'Mores had been made, settled in the county. Seven of them, whose founders were most influential in securing the new settlements, acquired the names of the Seven Tribes. The families so called were those of Cosby, Barrington, Hartpole, Bowen, Ruish, Hetherington and Hovenden or Ovington. In 1556 the fort within Laois, known to the English as "*Fort Protector*", was renamed Maryborough in honour of Queen Mary. The fort attracted settlers and a map of 1560 shows a small walled town around a fort. Maryborough (Portlaoise) was granted a market in 1567 and borough status in 1569. In 1580 the town was plundered by John, son of the Earl of Desmond. In 1597 it was burned by Rory O'Mordha and appears to have been burned again the following year. In the reign of Charles I, large grants of land were made to Villiers, Duke of Buckingham, now forming the extensive manor of Villiers. In the same reign, and during the unsettled period of the Commonwealth, the families of Pigott, Coote, Prior, Parnell and Pole settled there; those of Vesey, Dawson, Staples, Burrows and Johnson obtained lands after the Revolution.

There are many theories as to why Portlaoise was chosen in 1556 as the principal town of a new shire. One possibility was that it was built on the site of the Newtown of Leys and that some sort of hamlet may have lingered into the 16th century. This would explain the name of the parish, which almost certainly has a Medieval origin.

The street pattern of the 16th century town is quite unusual and offers no apparent explanation for its form. The form of the 16th and 17th century housing within the town remains unknown.

County Laois had its full share of the calamities of the civil war in 1641, at the beginning of which the insurgents secured Maryborough, Dunamase and other places of strength. The Earl of Ormonde, arriving at Athy from Dublin, detached parties for their relief; on his retreat the whole of the county submitted to General Preston, but was forced again to submit to the royal arms. In 1646 Owen Roe O'Neill seized upon several forts. In 1650 Cromwell's forces entered the county and met with much resistance. In the course of the struggle most of its fortresses were dismantled by his generals, Hewson and Reynolds. During the rebellion of 1699, a victory was gained by the troops of William at a noted togher or bog-pass near Cappard, where they defeated a much superior number of the Irish. After the termination of the war, the country was so harassed by the ravages of the raparees that the resident gentlemen applied to King William to have a force of infantry and dragoons quartered in it, and specified the castle of Lea as one of the principal stations for their reception.

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 the Anglo-Normans centred itself 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. Mottes were raised mounds of earth topped with a wooden or stone tower while the bailey was an enclosure, surrounded by an earthen ditch with a timber palisade, used to house ancillary structures, horses and livestock. There are 11 motte and baileys recorded in County Laois (www.archaeology.ie).

In certain areas of Ireland however 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. As in the case of ringforts, these enclosures protected a house and outbuildings usually built of wood. They appear to have been constructed in the latter part of the 13th century though little precise information is available. There are 61 moated sites recorded in County Laois (*ibid.*).

More substantial stone castles followed the motte and bailey and moated sites in the 13th and 14th centuries. Tower houses are regarded as late types of castle and were erected from the 14th to early 17th centuries. Their primary function was defensive, with narrow windows and a tower often surrounded by a high stone wall (bawn). An Act of Parliament of 1429 gave a subsidy of £10 to "liege" men to build castles of a minimum size of 20 ft in length, 16 ft in breadth and 40 ft in height (6 m x 5 m x 12 m). By 1449, so many of these £10 castles had been built that a limit had to be placed on the number of grants being made available. The later tower houses

were often smaller, with less bulky walls and no vaulting. There are 31 tower houses recorded in County Laois (*ibid.*).

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. They wanted to put a stop to the raids of the Gaelic Irish on the 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 had previously 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 growth in trade. This increase in agricultural productivity led to growth in related industrial development throughout the country.

The planned estate town of Abbeyleix, located approximately 7km north west of the proposed development area, was founded c. 1770 by the second Viscount de Vesci who considered the Oldtown of Abbeyleix to be too close to the river Nore and therefore liable to flooding. He razed the original town and chose a slightly elevated site away from the river which is the location of the modern town.

The proposed development would be located in Knockardagur townland, which is in the barony of Cullenagh and parish of Dysartgallen. Lewis (1837, Vol. 1, 593) records the parish of Dysartgallen as containing, along with Ballinakill, 4,018 inhabitants. He notes that the parish contained 10,557 acres and that:-

"the soil is generally good, and the land in a profitable state of cultivation; there is a small quantity of bog, and grit-stone is quarried for building" (*ibid.*).

10.4.2 Site-Specific Archaeological Background

There are two Recorded Monuments within 1km of the proposed development, each of which is described below (see **Figure 10.2**).

10.4.2.1 RMP LA030-015: enclosure

Centred on a point approximately 780m west of the proposed development area

and indicated on historic cartographic sources, the enclosure takes the form of a circular area measuring approximately 39.2m in diameter and is defined by an earthen bank from south west to north east and elsewhere by a scarp. No other visible surface remains survive.

10.4.2.2 RMP LA030-016: enclosure

Centred on a point approximately 140m north east of the proposed development area, part of a large sub-circular enclosure is visible on aerial photography in this location. No evidence of this monument survives above-ground.



Figure 10.2: Recorded Monuments within 1km of the Proposed Development Area

10.4.3 Cartographic Analysis

10.4.3.1 Ordnance Survey Map First Edition 1:10,560 1841 (Figure 10.3)

A townland boundary is located a short distance west of the proposed development. 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 proposed access track will cross an area shown as “Sheep Walk” on the First Edition map; a sheep walk was a tract of land used for grazing sheep. Three small structures are recorded to the north east of the proposed development and outside all areas of proposed land take. A north/south oriented farm track is recorded

extending from the above-mentioned structures.

There are no archaeological, architectural or cultural heritage features recorded on the First Edition 1:10,560 map within the proposed development area.

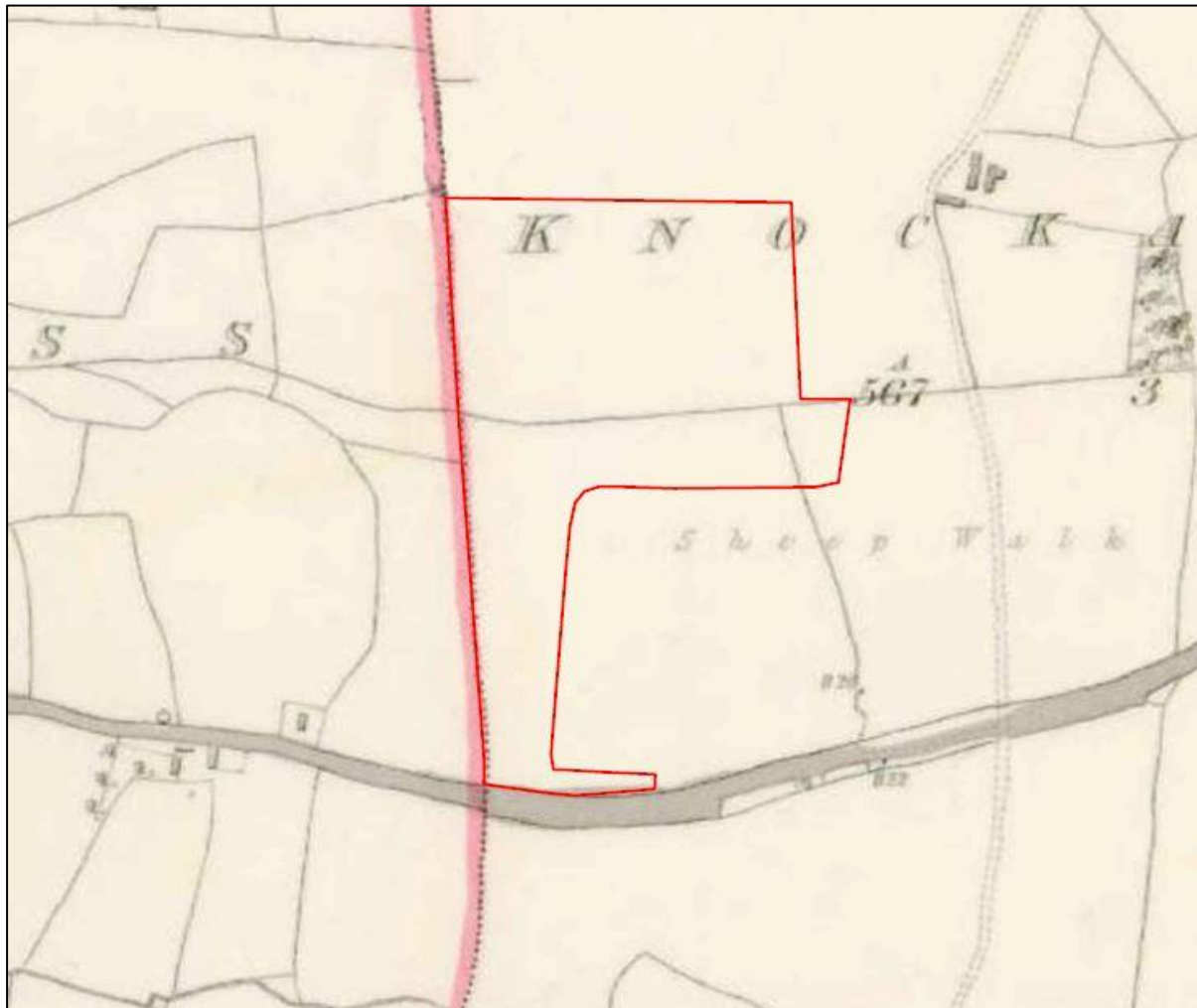


Figure 10.3: Extract from First Edition 1:10,560 map (1841), showing the proposed development area

10.4.3.2 Ordnance Survey Map First Edition 1:2,500 1906-1908 (Figure 10.4)

The "Sheep Walk" which was noted on the First Edition 1:10,560 map is not recorded on the First Edition 1:2,500 map. Four structures in a slightly wooded setting are recorded in the location where three small structures were shown on the First Edition 1:10,560 map, and these structures are recorded as "Cooper's Buildings" on the 1:2,500 map. A "Spring" is recorded immediately east of a north/south access track. A "Spring" is also recorded immediately south of the proposed substation footprint and is related to the Knockardagur stream (see **Chapter 7**).

There are no archaeological, architectural or cultural heritage features recorded on the First Edition 1:2,500 map within the proposed development area.

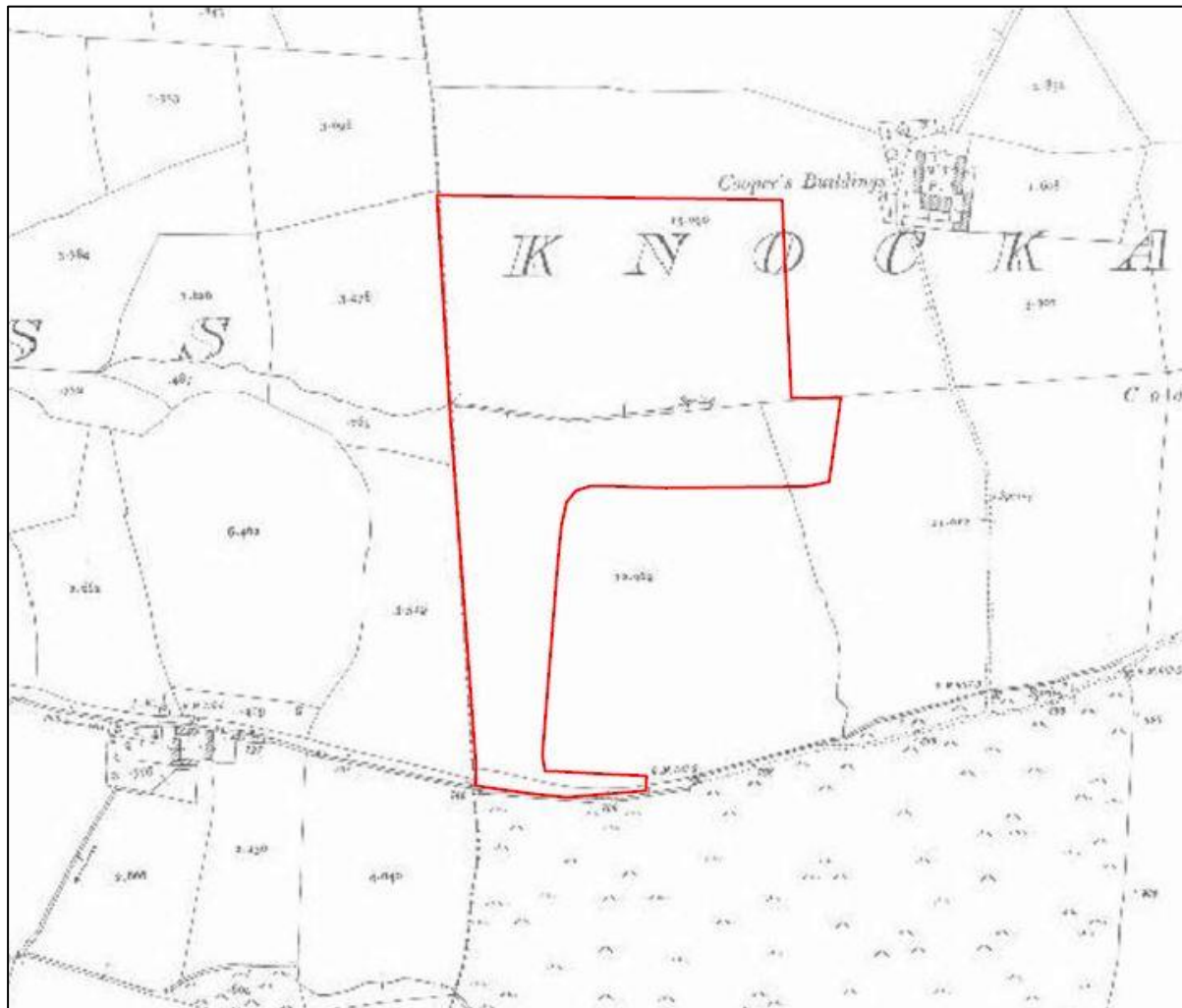


Figure 10.4: Extract from First Edition 1:2,500 map (1906-1908), showing the proposed development area

10.4.3.3 Ordnance Survey Map Third Edition 1:10,560 1908 (Figure 10.5)

There are no differences recorded within the proposed development area between Third Edition 1:10,560 map and the First Edition 1:2,500 map.

There are no archaeological, architectural or cultural heritage features recorded on the Third Edition 1:10,560 map within the proposed development area.

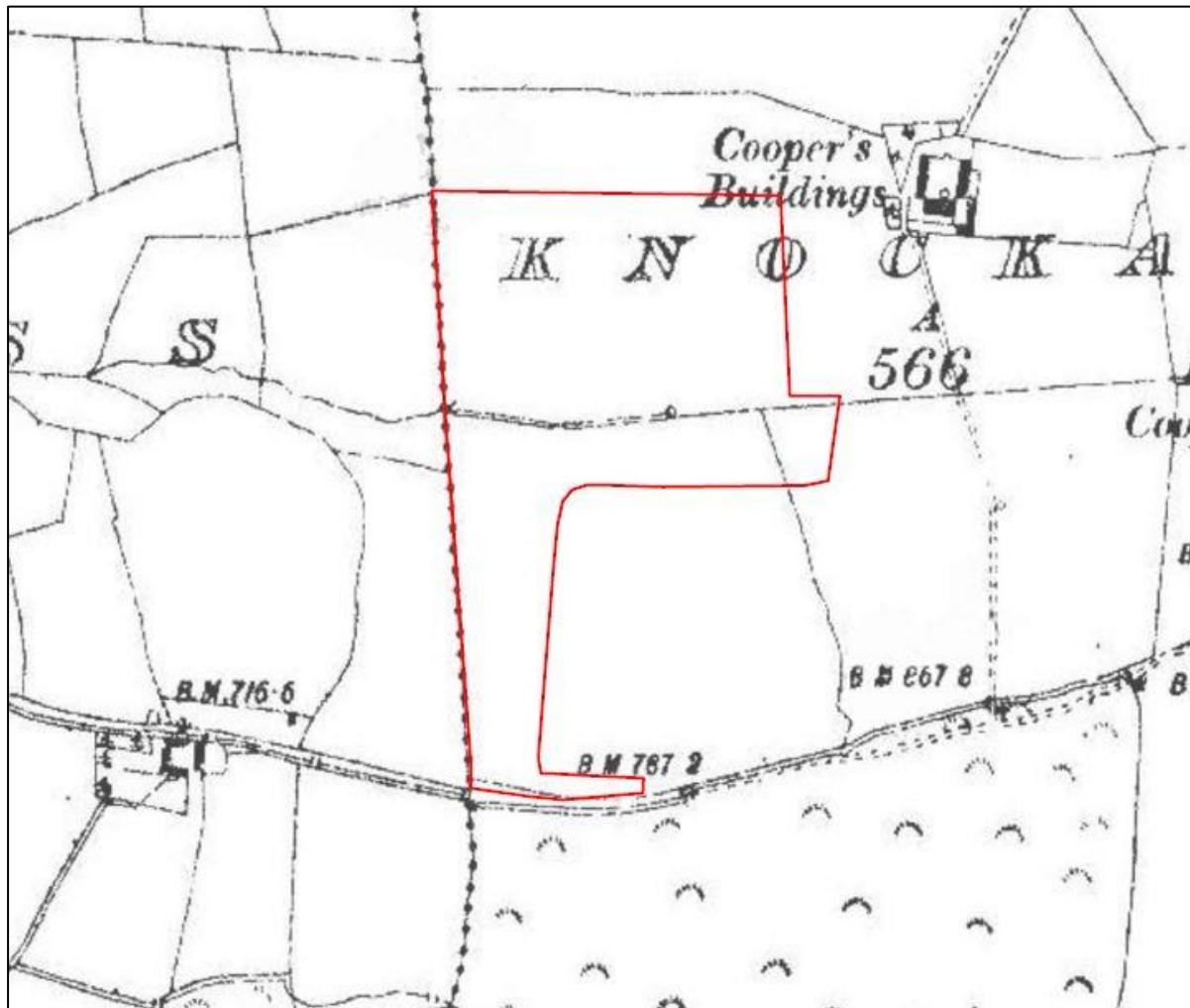


Figure 10.5: Extract from Third Edition 1:10,560 map (1908), showing the proposed development area

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 look for the presence of archaeological and architectural remains within the land take of the proposed development.

Aerial photography records a similar landscape to that which was noted during the walkover survey, with the proposed development located in medium to large fields enclosed by mature field boundaries.

There was no evidence of any archaeological or architectural features recorded on aerial photography within the proposed development site.

10.4.5 Topographical Files of the National Museum of Ireland

Information on artefact finds and excavations from County Laois 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 in the Topographical Files for Knockardagur townland.

Ploughing, on a hillside in the townland of Knockardagur, in approximately 1910 revealed a large flagstone sealing a cist measuring approximately 1.5m long x 0.6m wide x 0.4m deep (no Topographical File reference). The sides of the cist were made of thin flags set on edge and the bottom was floored by small thin flags set on sand. It is noted that in the grave there was:-

“nothing at all but a little skin of dust on the floor and... an earthenware vessel”.

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 townland of Knockardagur or any surrounding townlands.

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 proposed development is located within the following townland:-

Name	Irish	Translation
Knockardagur	<i>Cnoc Ard Ó gCorra</i>	Possibly translates as <i>High hill of the turns</i>

Table 10.2: Toponyms

10.4.8 National Monuments

The Department of Culture, Heritage and the Gaeltacht¹ 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 proposed development site, the 1km study area or the 3km study area.

The Department of Culture, Heritage and the Gaeltacht 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 proposed development site, the 1km study area or the 3km study area.

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 proposed development site, the 1km study area or the 3km study area.

10.4.9 County Development Plans

10.4.9.1 Archaeological Heritage

¹ Or as succeeded following reorganisation of Government Departments.

Laois County Development Plan 2017 - 2023

It is an Objective (OBJ1) of Laois County Council to:-

“Secure the preservation (in-situ or by record) of all sites and features of historical and archaeological interest” (Laois County Council 2017, 149).

It is also an Objective (OBJ3) of Laois County Council to:-

“Ensure that development in the vicinity of a site of archaeological interest shall not be detrimental to the character of the archaeological site or its setting by reason of its location, scale, bulk or detailing” (ibid.).

Table 22 of the Laois County Development Plan (ibid., 150) contains a list of *National Monuments in State Care in Laois*. There are no National Monuments in State Care within the proposed development site, the 1km study area or the 3km study area.

Table 23 of the Laois County Development Plan (ibid.) contains a list of *Monuments protected by Preservation Orders in County Laois*. There are no Monuments Protected by Preservation Orders within the proposed development site, the 1km study area or the 3km study area.

Section 7.9.3 of the Laois County Development Plan (ibid., 151-152) contains a list of *Zones of Archaeological Potential* within the county. There are no Zones of Archaeological Potential within the proposed development site, the 1km study area or the 3km study area.

Mills of County Laois: An Industrial Heritage Survey was published by Laois County Council in 2005. There are no mills recorded in the Industrial Heritage Survey within the proposed development site or the 1km study area (www.heritagemaps.ie).

Bridges of County Laois: An Industrial Heritage Review was published by Laois County Council in 2009. There are no bridges recorded in the Industrial Heritage Review within the proposed development site or the 1km study area (www.heritagemaps.ie).

Kilkenny County Development Plan 2014 – 2020

The 3km study area extends into County Kilkenny and, as such, the Kilkenny County Development Plan (2014) was assessed for the presence of any statutorily protected archaeological features within the 3km study area.

There are no statutorily protected archaeological features recorded in the Kilkenny County Development Plan (2014) within the 3km study area.

10.4.9.2 Architectural Heritage

Laois County Development Plan 2017 - 2023

It is an Objective (OBJ4) of Laois County Council to:-

“Protect all structures listed in the Record of Protected Structures, that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical character or interest in County Laois” (ibid., 144).

Appendix 1 of the Laois County Development Plan (2017) contains the Record of Protected Structures for the county. There are no Protected Structures within the proposed development site.

There is one Protected Structure within the 1km study area:-

RPS No.	Description	Townland	Distance from proposed development site
883	Thatched house	Aghnacross	c. 600m west (although there is no precise location information provided for this structure in the Laois County Development Plan)

Table 10.3: Protected Structure within the 1km Study Site

There is one Protected Structure within the 3km study area:-

RPS No.	Description	Townland	Distance from proposed development site
374	Saint Lazerian's Catholic Church	Graiguenahown	c. 1.6km north east

Table 10.4: Protected Structure within the 3km Study Area

Appendix 2 of the Laois County Development Plan (2017) contains a list of Architectural Conservation Areas for the county. There are no Architectural Conservation Areas within the proposed development site, the 1km study area or the 3km study area.

There are no proposed Architectural Conservation Areas within the proposed development site, the 1km study area or the 3km study area.

Kilkenny County Development Plan 2014 – 2020

The 3km study area extends into County Kilkenny, and as such the Kilkenny County Development Plan (2014) was assessed for the presence of any statutorily protected architectural features within the 3km study area.

There are no Protected Structures recorded in the Kilkenny County Development Plan (2014) within the 3km study area.

There are no Architectural Conservation Areas or proposed Architectural Conservation Areas recorded in the Kilkenny County Development Plan (2014) within the 3km study area.

10.4.10 National Inventory of Architectural Heritage

10.4.10.1 Building Survey

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

There are no structures recorded on the NIAH within the proposed development site or the 1km study area.

There is one structure recorded on the NIAH within the 3km study area:-

NIAH Reg. No.	Description	Townland	Distance from proposed development site
12802409	Saint Lazerian's Catholic Church	Graiguenahown	c. 1.6km north east

Table 10.5: NIAH structure within the 3km Study Area

10.4.10.2 Historic Gardens and Designed Landscapes

There are no historic gardens or designed landscapes recorded on the NIAH within the proposed development site or the 1km study area.

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. The site visit took place on 14 May 2020, and weather conditions were dry and bright.

The footprint of the proposed substation was shown to be located in a large pasture field that slopes steeply downwards from north east to south west (see **Plates 10.1 – 10.3**). It will be situated near the base of the slope where the ground becomes wet underfoot. The location of the proposed substation overlooks the surrounding land to the south and west. An agricultural drain and hedgerow form the western field boundary, which is recorded as a townland boundary on historic cartographic sources. The proposed development will be located either side of an east/west field boundary, which is made up of a hedgerow, low earthen bank and a watercourse².

The location of the proposed access track is mostly flat, with the surrounding ground rising steeply to the north and east where it becomes known locally as Cooper's Hill (see **Plate 10.4**).

RMP LA030-016 (enclosure) is centred on a point approximately 140m north east of the proposed development (see **Plates 10.5 and 10.6**). Part of a large sub-circular enclosure is visible on aerial photography in this location, although no evidence for the monument survives above-ground. The site visit showed the location of the enclosure to be a steeply sloping pasture field, approximately halfway up the slope of Cooper's Hill. No above-ground evidence for the enclosure was noted during the walkover survey.

No archaeological, architectural or cultural heritage features were revealed within the footprint of the proposed development as a result of carrying out the walkover survey.

² Known as the Knockardagur stream.



Plate 10.1: Location of substation, looking north



Plate 10.2: Location of substation, looking west



Plate 10.3: Location of substation, looking south



Plate 10.4: Location of access track, looking south



Plate 10.5: Location of RMP LA030-016 (enclosure), looking north west



Plate 10.6: Location of RMP LA030-016 (enclosure), looking north

10.5 Description of Likely Effects

All elements of the proposed development are assessed as having the ability 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.

Construction phase effects may arise as a result of the construction of the proposed substation, access track and associated activities; each of which will involve the mechanical excavation of all 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 substation in the landscape.

As a result of carrying out this assessment, the following likely archaeological, architectural and cultural heritage direct, indirect, construction, operational, cumulative, residual and decommissioning effects have been identified and assessed. The following sections undertake an assessment of all elements of the development 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 proposed development. As such, it is assessed that there will be no direct construction phase effect on the recorded archaeological resource.

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 development site and which may be discovered during the construction phase.

There are two Recorded Monuments within 1km of the proposed development. It is assessed that there will be no direct construction phase effect on these Recorded Monuments.

Given the proximity of RMP LA030-016 (enclosure) to the proposed development site, it is likely that construction phase noise will be experienced at this feature. However, as this feature does not survive above-ground and given the temporary duration of the construction phase, it is assessed that there will be no significant adverse noise effects on this archaeological monument. Other features are considered to be sufficiently distant such that they will not experience any likely significant noise effects.

Similarly, as a result of construction activities, RMP LA030-016 (enclosure) may experience adverse visual effects. However, given that this feature does not survive above-ground, the short-term temporary nature of the construction phase and the reinstatement of the site following the completion of construction; any such effects are not assessed as likely to be significant.

RMP LA030-015 (enclosure) is considered to be sufficiently distant from the proposed development such that it will not experience any likely significant adverse construction phase effects.

It is concluded, therefore, that the construction phase of the proposed development will not result in a likely significant adverse effect on the archaeological resource.

10.5.1.2 Architectural Resource

There are no protected architectural features within the footprint of the proposed development. Similarly, there are no protected architectural features proximate to the proposed development such that adverse visual or noise effects could be experienced during the construction phase. As such, it is assessed that there will be no significant direct or indirect construction phase effects on the architectural resource.

10.5.1.3 Cultural Heritage Resource

There are no protected cultural heritage features within the footprint of the proposed development. Similarly, there are no protected cultural heritage features proximate to the proposed development such that adverse visual or noise effects could be experienced during the construction phase. As such, it is assessed that there will be no significant direct or indirect construction phase effects on the cultural heritage resource.

10.5.2 Operational Phase

10.5.2.1 Archaeological Resource

RMP LA030-016 (enclosure) is centred on a point approximately 140m north east of the proposed development site. This monument is only recorded on aerial photography and does not survive above-ground. As such, and in consideration of the proposed landscaping and planting associated with the reinstatement of the proposed development site (see **Chapter 9**), it is assessed that there will be no likely significant operation phase visual effect on this Recorded Monument.

RMP LA030-015 (enclosure) is centred on a point approximately 780m west of the proposed development site. It is assessed that there will be a likely long-term, reversible and imperceptible operational phase visual effect on this Recorded Monument.

The low levels of noise predicted to be generated by the proposed development during its operational phase (see **Chapter 11**) are likely to result in a long-term, reversible and imperceptible operational phase effect on RMP LA030-016 (enclosure); however, this effect will not be significant. RMP LA030-015 (enclosure) is considered to be located sufficiently distant from the proposed development such that it will not experience any likely significant adverse noise effects.

There are no additional Recorded Monuments within the 1km study area.

There are no National Monuments in State Care, National Monuments with Preservation Orders or Temporary Preservation Orders, World Heritage Sites or sites included in the Tentative List as being under consideration for nomination to the World Heritage List within the proposed development site, the 1km study area or the 3km study area.

Therefore, it is assessed that the proposed development will not result in a likely significant operational phase effect on the archaeological resource.

10.5.2.2 Architectural Resource

There are no Protected Structures within the proposed development site. There is one Protected Structure within the 1km study area and 1 no. additional Protected Structure within the 3km study area (which is also recorded on the NIAH). It is assessed that there will be a likely long-term, reversible and imperceptible operational phase visual effect on these Protected Structures. It is assessed that, due to the substantial separation distances involved, there will be no operational phase noise effect on these Protected Structures.

There are no Architectural Conservation Areas or any additional statutorily protected architectural features within the proposed development site, the 1km study area or the 3km study area.

Therefore, it is assessed that the proposed development will not result in a likely significant operational phase effect on the architectural resource.

10.5.2.3 Cultural Heritage Resource

There are no protected cultural heritage features within the footprint of the proposed development or the 1km study area. As such, it is assessed that there will be no likely significant 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 3.8)**, the proposed development will form part of the national electricity network and decommissioning of the substation 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 significant effects, including effects of other projects, to create larger, more significant effects" (Environmental Protection Agency 2017, 52).

10.5.4.1 Pinewoods Wind Farm

An Archaeological, Architectural and Cultural Heritage impact assessment was carried out by the writer in 2015 for the then-proposed, and now permitted, Pinewoods Wind Farm. As part of the current report, a re-evaluation of the cultural heritage environment surrounding the permitted Pinewoods Wind Farm site has been undertaken to ascertain if any new monuments or structures have been discovered or given additional protection in the intervening period or if there have been any changes to national, regional or local policies regarding the protection of designated monuments or structures.

The 2015 Archaeological, Architectural and Cultural Heritage impact assessment noted there were no recorded archaeological, architectural or cultural heritage features within the land take of the Pinewoods Wind Farm. The assessment found that:-

- There were two RMP sites within the 1km study area (around each turbine);
- There was one Protected Structure within the 1km study area;
- There were an additional 28 Protected Structures within the 5km study area;
- There were no Architectural Conservation Areas within the 1km study area;
- There was one proposed Architectural Conservation Area within the 5km study

area;

- There was one NIAH structure within the 1km study area;
- There were no historic gardens or designed landscapes within the 1km study area;
- Reference to Summary Accounts of Archaeological Excavations in Ireland revealed that no fieldwork programmes had been carried out in townlands located within the proposed development site;
- There was one entry recorded in the Topographical Files of the National Museum of Ireland for a townland within the area of proposed land take. Reference to cartographic sources failed to identify any unrecorded archaeological features within the development site;
- No archaeological, architectural or cultural heritage features were identified through aerial photography; and
- No archaeological, architectural or cultural heritage features were revealed within any areas of land take as a result of carrying out the walkover surveys.

There are no newly designated RMP sites, National Monuments, sites with Preservation Orders or Temporary Preservation Orders, World Heritage Sites, sites included in the Tentative List as consideration for nomination to the World Heritage List, Protected Structures, Architectural Conservation Areas, Proposed Architectural Conservation Areas or NIAH sites within the permitted Pinewoods Wind Farm site or within the 1km study area since the time of preparing the Pinewoods Wind Farm EIAR/EIS.

Similarly, in the intervening period, there have been no finds added to the Topographical Files of the National Museum of Ireland, nor have there been any fieldwork exercises carried out in any townlands located within the permitted Pinewoods Wind Farm. An evaluation of the most recently available aerial photography (www.bing.com/maps) failed to reveal any previously unidentified archaeological or architectural features within the permitted Pinewoods Wind Farm site.

A walkover survey of the permitted Pinewoods Wind Farm site was carried out on 14 May 2020 to assess any likely cumulative effects between the proposed development and the permitted wind farm, as well as to look for the presence of any previously unrecorded built heritage features. The site walkover confirmed the findings of the review of aerial photography insofar as no additional archaeological, architectural or cultural heritage features were noted within the area of land take associated with the Pinewoods Wind Farm.

10.5.4.2 Other Existing, Permitted and Proposed Developments

The proposed development will be located in close proximity to a number of existing, permitted and proposed developments including forestry, residential dwellings and agricultural developments. While construction of the above-mentioned developments involve excavations, the fact that effects from the developments are unlikely to be experienced beyond their individual site boundary results in limited likelihood of cumulative effects. The construction of these developments and associated excavations may result in an imperceptible direct effect on previously unrecorded archaeological or culturally significant features; however, it is considered that the likelihood of cumulative effects is low.

10.5.4.3 Conclusion

As discussed above, there have been no changes to the existing environment at the Pinewoods Wind Farm site since the preparation of the EIAR/EIS. Similarly, there have been no substantive changes to national, regional or local policy relating to the protection or management of archaeological, architectural or culturally significant features. Therefore, it is concluded that the findings and conclusions of the EIAR/EIS remain valid and fully applicable to the Pinewoods Wind Farm site.

Given that the EIAR/EIS and An Bord Pleanála concluded that the permitted wind farm would not result in any likely significant effects on the historical built environment, the fact that there have been no changes to the existing environment or policy context, and that effects resulting from the proposed development are unlikely to be significant; it follows that cumulative effects between the Pinewoods Wind Farm, the proposed development, and other existing, permitted and proposed developments are unlikely to occur. In the event that any effects do arise, they are highly unlikely to be significant.

10.5.5 Do Nothing Effects

If the proposed development 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 proposed development may result in the discovery of previously unrecorded archaeological features; and, therefore, it is considered that there is a likelihood of interactions between land and soil and archaeological heritage. However, on the basis of this assessment, it is concluded that the level of interaction will likely not be significant.

During the operational phase, it is assessed that the proposed development will likely result in imperceptible visual effects on built heritage features; and, therefore, will result in an interaction between built heritage and landscape. However, this assessment concludes that the level of interaction will not likely be significant.

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 accidents which may occur during either the construction, operational or decommissioning 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 proposed development site.

10.6 Mitigation and Monitoring Measures

10.6.1 Mitigation Measures

Archaeological monitoring of all excavations associated with the construction of the proposed development shall be carried out. Monitoring will be carried out under licence to the Department of Culture, Heritage and the Gaeltacht 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.

10.6.2 Monitoring Measures

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

10.7 Residual Effects

Following implementation of the above-mentioned mitigation measure, it is concluded that there will be no likely residual effects during the construction or decommissioning phases of the proposed development. 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 imperceptible operational phase visual effect on Recorded Monument RMP LA030-015 (enclosure), which is centred on a point approximately 780m west of the proposed development site.

It is assessed that there will be a likely residual, long-term, reversible and imperceptible operational phase noise effect on Recorded Monument RMP LA030-016 (enclosure).

10.7.2 Architectural Resource

It is assessed that there will be a likely residual, long-term, reversible and imperceptible operational phase visual effect on two Protected Structures (one of which is also recorded on the NIAH).

10.8 Summary

The results of this assessment, in relation to construction, operation, decommissioning and cumulative effects have been set out in the foregoing sections. This assessment has concluded that the likely effect on the archaeological, architectural and cultural heritage resource of the proposed development (substation, access track and associated activities) will in general be long-term, reversible and imperceptible.

There will be no likely significant direct or indirect construction or operational phase effect on the recorded archaeological, architectural and cultural heritage resource. However, there will be a likely long-term, reversible and imperceptible visual effect on one Recorded Monument located within the 1km study area, and a likely long-term, reversible and imperceptible noise effect on one Recorded Monument located within the 1km study area. In addition, there will be a likely long-term, reversible and imperceptible visual effect on two Protected Structures (one of which is also recorded on the NIAH).

Following the implementation of the mitigation measure outlined in this chapter, the likely residual effects of the proposed development remains imperceptible, including a likely residual long-term, reversible and imperceptible visual effect on one Recorded Monument located within the 1km study area, and a likely residual long-term, reversible and imperceptible noise effect on one Recorded Monument located within the 1km study area. In addition, there will be a likely residual long-term, reversible and imperceptible visual effect on two Protected Structures (one of which is also recorded on the NIAH).

This assessment has further concluded that the proposed development will not result

in any likely significant cumulative effects with other existing, permitted or proposed developments, including those identified at **Chapter 1**.

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www.laois.ie	Laois County Council
www.logainm.ie	Placenames Database of Ireland
www.map.geohive.ie	Ordnance Survey Ireland aerial photographs

