

MWP

Chapter 10 Cultural Heritage **Carrownagowan 110kV Grid Connection**

10. Cultural Heritage

10.1 Introduction

This chapter considers the potential effects on relevant cultural heritage assets arising from the proposed development. A full description of the Proposed Development is provided in **Chapter 2** Description of the Proposed Development of this EIAR. The nature and probability of effects on cultural heritage assets arising from the overall project has been assessed. The assessment comprises:

- A review of the existing receiving environment.
- Prediction and characterisation of likely impacts;
- Evaluation of effects significance; and
- Consideration of mitigation measures, where appropriate.

10.1.1 Competency of Assessor

The assessment was undertaken by Faith Bailey and Jacqui Anderson of IAC Archaeology (IAC). Faith is an Associate Director and Senior Archaeologist and Cultural Heritage Consultant with IAC Archaeology. She holds an MA in Cultural Landscape Management (archaeology and built heritage) and a BA in single honours archaeology from the University of Wales, Lampeter. She is a licenced eligible archaeologist, a member of the Chartered Institute of Archaeologists, a member of the Institute of Archaeologists of Ireland and has over 19 years' experience working in the commercial archaeological and cultural heritage sector.

Jacqui works as an Archaeologist and Cultural Heritage Consultant with IAC Archaeology. She holds an MA in Archaeology from University College Dublin and a BA in Archaeology and Classical Studies, also from University College Dublin. She is a member of the Institute of Archaeologists of Ireland and has seven years' experience in the commercial archaeological sector in Ireland. Jacqui specialises in the production of archaeological assessments and EIA across all sectors of development.

10.2 Methodology

10.2.1 Desktop Study

The methodology used for this study included desk-based research of published information and site visits to assemble information on the local receiving environment.

The following sources were examined and a list of heritage assets and areas of archaeological and cultural heritage potential was compiled;

- Record of Monuments and Places for County Clare;
- Sites and Monuments Record for County Clare;
- National Monuments in State Care Database;
- List of Preservation Orders;

- Register of Historic Monuments;
- Topographical files of the National Museum of Ireland;
- Cartographic and documentary sources relating to the receiving environment;
- Clare County Development Plan (2023-2029);
- National Inventory of Architectural Heritage County Clare (Architectural & Garden Survey);
- Aerial photographs;
- Excavations Bulletin (1970—2022); and
- Place name analysis.

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

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

It should be noted that revisions are proposed to the RMP and SMR, with some sites listed as redundant records and proposed for removal and other, newly discovered sites, proposed for inclusion. As the revisions have yet to take place, all current (ie. including those proposed for deleting and proposed for inclusion) RMP/SMR sites are listed as AH sites within this assessment, with the relevant detail provided as to the nature and extent of each site included. It should be noted that sites listed in the RMP are subject to statutory protection whilst those listed on the SMR are not.

National Monuments in the State Care Database is a list of all the National Monuments in the State guardianship or ownership. Each is assigned a National Monument number whether in guardianship or ownership and has a brief description of each monument.

A National Monument receives statutory protection and is described as ‘a monument or the remains of a monument the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto’ (National Monuments Act 1930, Section 2).

The Minister for Housing, Local Government and Heritage may acquire National Monuments by agreement or by compulsory order. The State or Local Authority may assume guardianship of any National Monument (other than dwellings). The owners of National Monuments (other than dwellings) may also appoint the Minister or the Local Authority as guardian of that monument if the State or Local Authority agrees. Once the site is in ownership or guardianship of the State, it may not be interfered with without the written consent of the Minister. There are no National Monuments located within the footprint of the Proposed Development, the closest is located 6km to the southeast.

Preservation Orders List and/or Temporary Preservation Orders, can be assigned to a site or sites that are deemed to be in danger of injury or destruction. Orders are allocated under the National Monuments Act, 1930. Preservation Orders make any interference with the site illegal. Temporary Preservation Orders can be attached under the National Monuments Act, 1954. 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 (DoHLGH). There are no sites that possess Preservation Orders within the Proposed Development, the closest is located 6km to the southeast.

Register of Historic Monuments was established under Section 5 of the 1987 amendment to the 1930 National Monuments Act and requires the Minister to establish and maintain such a record. Historic monuments and archaeological areas included in the register are afforded statutory protection under the National Monuments Act 1987 amendment. The register also includes sites under Preservation Orders and Temporary Preservation Orders. All registered monuments are included in the RMP.

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

Cartographic sources are important in tracing land use development within the Proposed Development and its receiving environment as well as providing important topographical information on areas of archaeological potential and the construction of buildings. Cartographic analysis of all relevant maps has been made to identify any topographical anomalies or structures that no longer remain within the landscape. These include current and former townland and parish boundaries.

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

Documentary sources were consulted to compile background information on the archaeological, architectural and cultural heritage receiving environment of the proposed Project and replacement lands. A full list of references is given in Section 10.7.

Development Plans contain a catalogue of the Register of Protected Structures (RPS), archaeological sites and Architectural Conservation Areas (ACA) within every county. The Clare County Development Plan (2023-2029) was examined as part of this assessment. All protected structures are referred to as Built Heritage sites (BH) as part of this assessment.

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

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

Aerial photographic coverage is an important source of information regarding the precise location of sites and their extent. It also provides information on the terrain and its likely potential for archaeology. Ordnance Survey

aerial photographs (1995, 2000, 2005 and 2013), Google Earth coverage (2006–2022), and Bing Maps were examined for this assessment. All potential archaeological sites identified during cartographic or aerial photographic assessment are referred to as Cultural Heritage (CH) sites within this assessment.

Excavations Bulletin is a summary publication that has been produced every year since 1970. This summarises every archaeological excavation that has taken place in Ireland during that year up until 2010 and since 1987 has been edited by Isabel Bennett. This information is also available online (www.excavations.ie) from 1970–2023. Information from this resource is vital when examining the archaeological content of any area, which may not have been recorded under the SMR and RMP files.

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

10.2.2 Field Inspection

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

The field inspection for the Proposed Development entailed:

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

10.2.3 Scope of Assessment

This chapter of the EIAR determines, as far as reasonably possible from existing records and field studies, the nature of the heritage resource within the footprint of the Proposed Development and within the receiving environment using appropriate methods of study. Standard study areas are used for these types of development across the profession. No current guidance defines the extents of what a study area should be, so professional judgement and precedence is used (for example – all major road schemes/linear projects we work on use a 200-250m study area). A study area, defined as 250m from the boundary of the Proposed Development, was assessed to inform this chapter. The assessment consists of an analysis of existing written, cartographic, photographic and electronic information in order to identify the likely heritage assets (archaeological, architectural and cultural), their interests and significance and the character of the receiving environment, including appropriate consideration of the setting of heritage assets (ClfA 2014). This leads to the following:

- Determining the presence of known archaeological, architectural, and cultural heritage assets that may be directly affected by the Proposed Development
- Assessment of the likelihood of finding previously unrecorded archaeological remains during the construction programme;
- Determining the impact upon the setting of known heritage assets in the receiving environments; and

- Suggested mitigation measures based upon the results of the above research.

10.2.3.1 Assessment Criteria

Determination of the significance of an effect will be made in accordance with the terminology outlined in the EPA Guidelines on Information to be contained in Environmental Impact Assessment Reports (2022, 50).

The quality can vary to include the following:

- Positive Effects: A change which improves the quality of the environment.
- Neutral Effects: No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
- Negative Effects: A change which reduces the quality of the environment.

It should be noted that whilst impact levels and definitions are applied consistently to the cultural heritage resource, impacts on sites that are subject to statutory protection are considered to be more significant than sites/structures not subject to statutory protection.

Table 10-1 Significance of Effects (EPA, 2022, 50)

Significance of Effect	Definitions relating to sites of an archaeological nature
Profound	An effect which obliterates sensitive characteristics.
Very Significant	An effect which, by its character, magnitude, duration or intensity, significantly alters most of a sensitive aspect of the environment.
Significant	An effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the environment.
Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Imperceptible	An effect capable of measurement but without significant consequences.

10.2.4 Statement on Limitations and Difficulties Encountered

There were no difficulties encountered in the compilation of this chapter.

10.3 Baseline Environment

The Proposed Development travels through 25 townlands in County Clare, confined largely to existing roadways. The landscape is primarily rural uplands and pasture to the north of Limerick City and the Shannon Estuary (Figure 10-1).

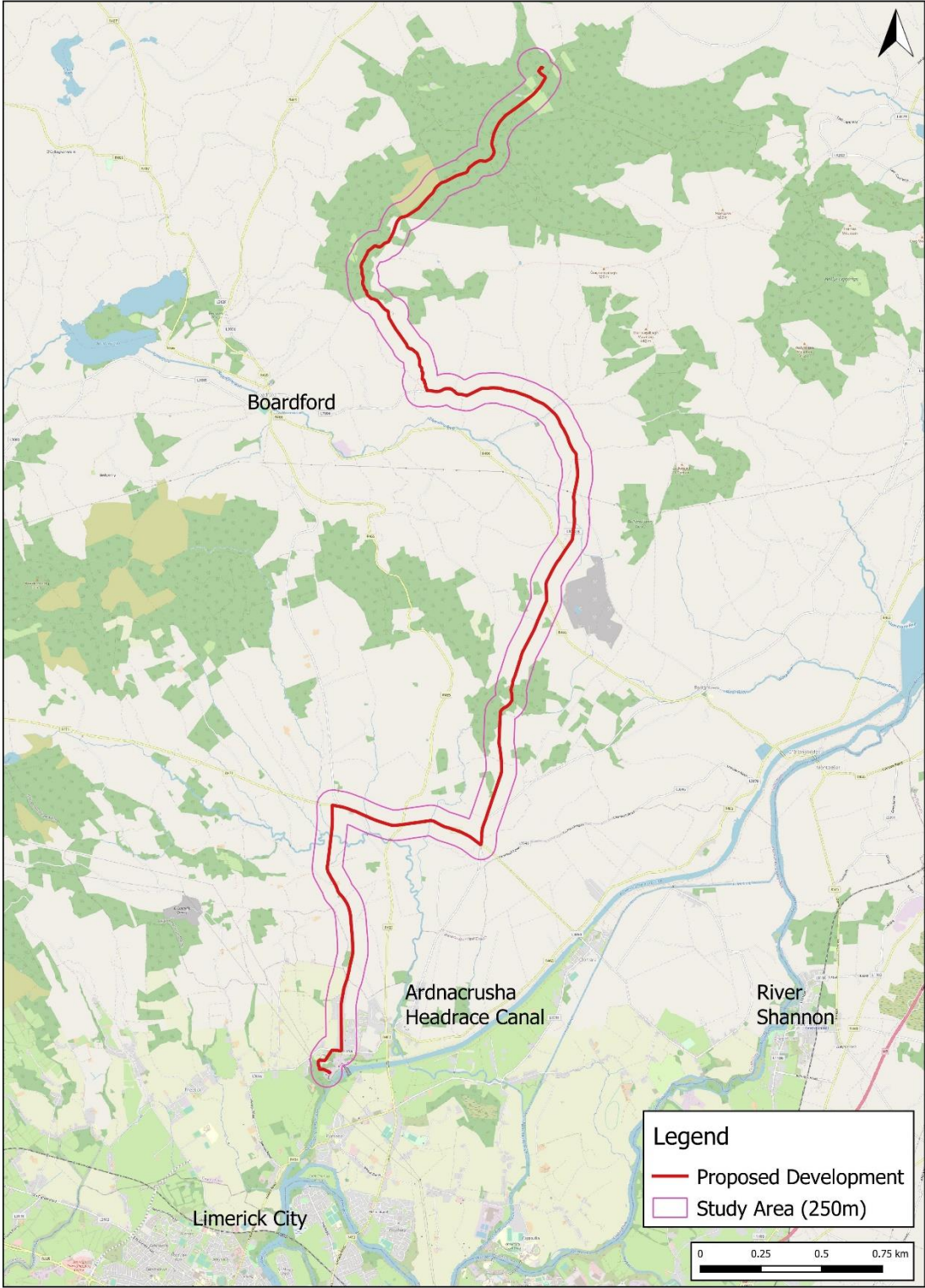


Figure 10-1 Location of the Proposed Development and Study Area

The AH Sites, BH Sites, CH Sites and DL Sites described in this chapter are shown on the following figures (Figures 10-2a-d).

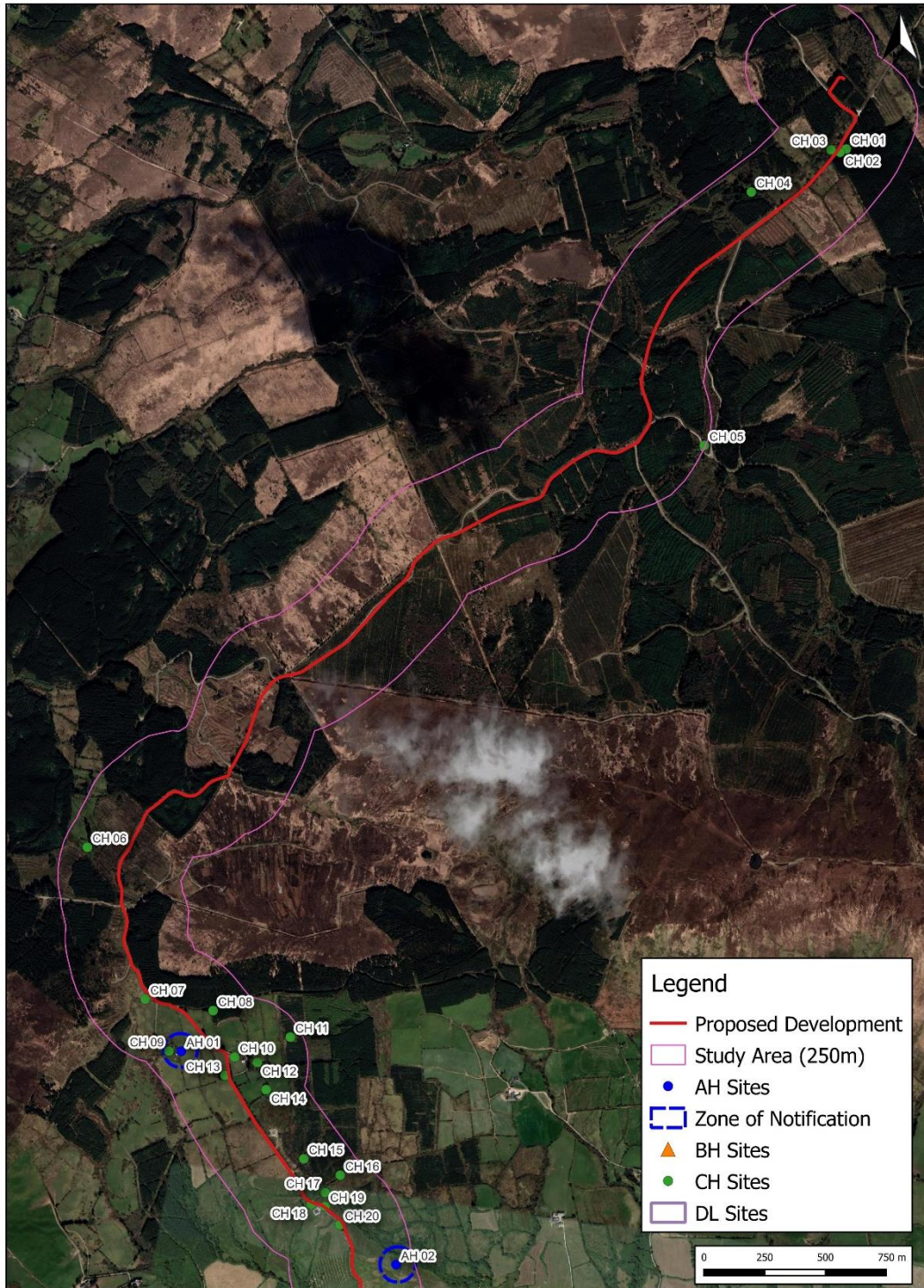


Figure 10-2 a Archaeological, architectural and culture heritage assets within the study area of the Proposed Development

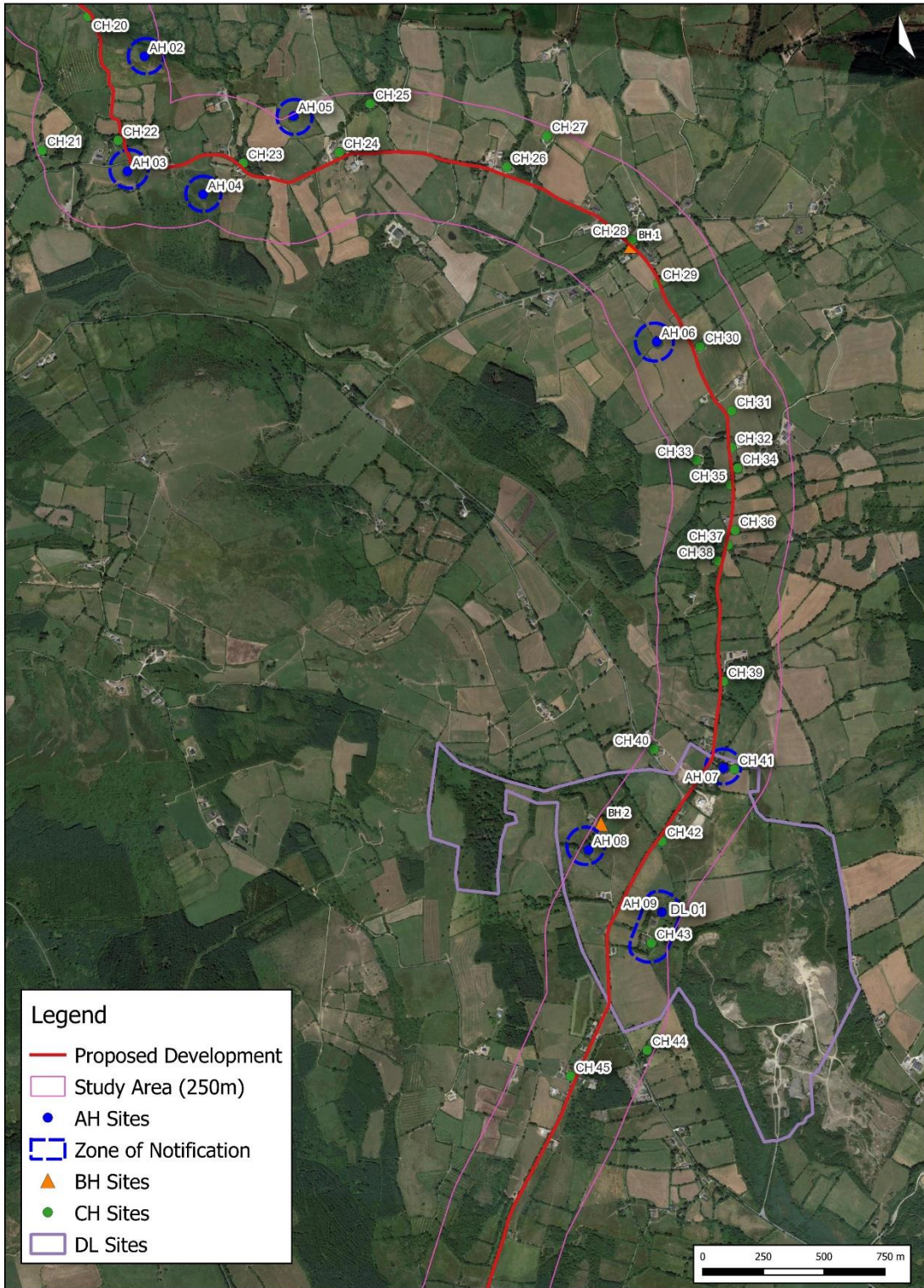


Figure 10-2 b Archaeological, architectural and culture heritage assets within the study area of the Proposed Development

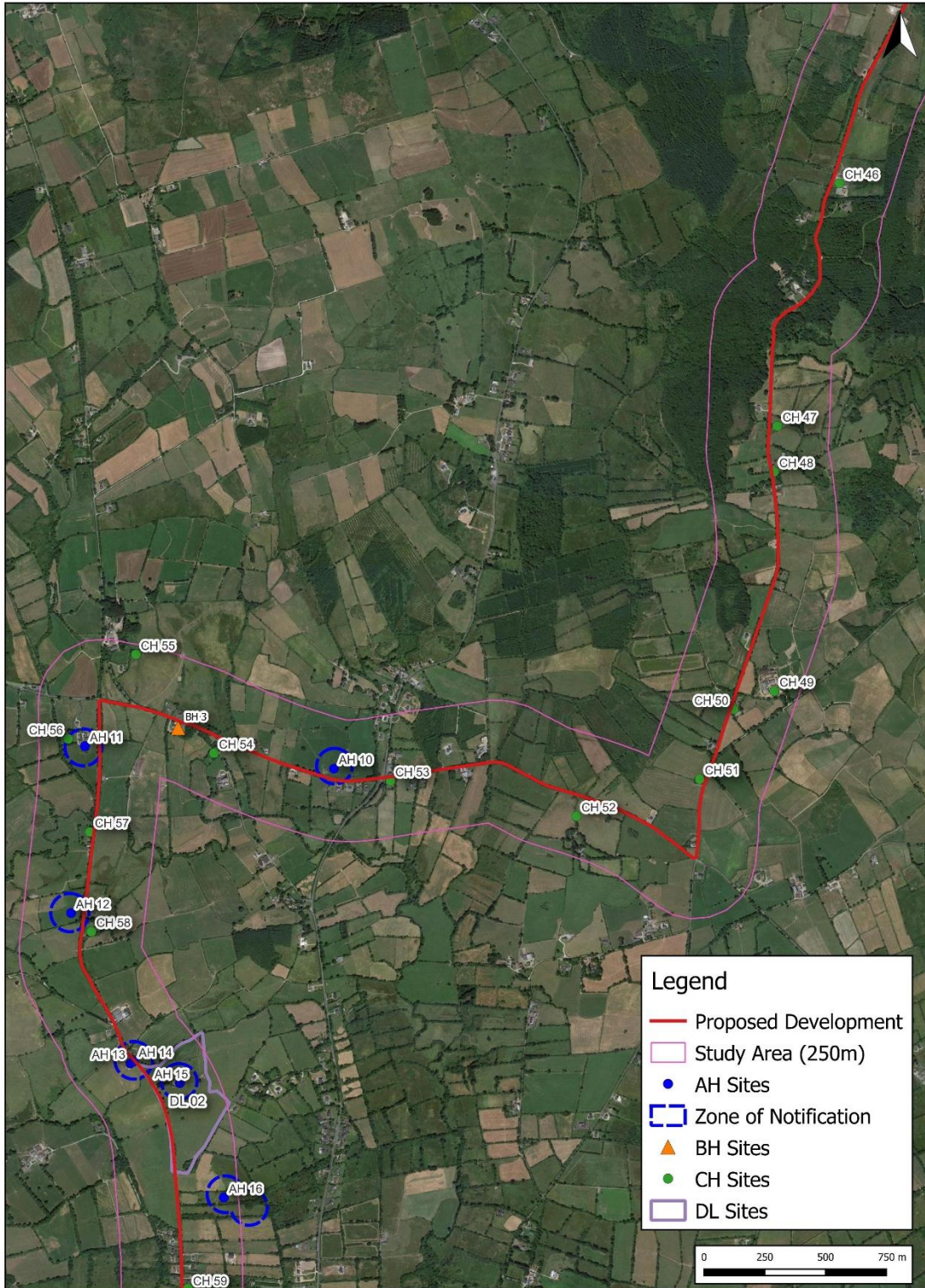


Figure 10-2 c Archaeological, architectural and culture heritage assets within the study area of the Proposed Development



Figure 10-2 d Archaeological, architectural and culture heritage assets within the study area of the Proposed Development

Mesolithic Period (c. 8000–4000 BC)

Until recently, the Mesolithic period was believed to be the first time for which there was evidence of human activity on the island of Ireland; however, recent research by Dowd and Carden (2016) has suggested there may have been a human presence in the southern half of Ireland as early as the Upper Palaeolithic. During the Upper Palaeolithic, most of Ireland would have been beneath extensive glaciation for long periods. It has long been suggested that if humans were present on the island they would have been confined to the southwest (Woodman 1998). Re-examination of a butchered brown bear patella originally found in Alice and Gwendoline Cave in 1903, located c. 27km west of the Proposed Development, revealed evidence of butchery marks and was dated to c. 12,810–12,590 cal BP (Dowd and Carden 2016). Expert zoo-archaeological analysis revealed the patella was butchered with a lithic tool, after a ‘short post-mortem interval’ and therefore the marks could not have been made later than the Upper Palaeolithic (ibid.). Furthermore, it was deemed impossible that the bear patella was deposited by glacial action as it showed no evidence of being weathered (ibid.). Similarly, a second discovery of potential Palaeolithic human activity has been identified from Castlepook Cave, County Cork, in the form of a reindeer bone bearing evidence of butchery. This discovery has been widely circulated in the media (thejournal.ie-Apr2021) but awaits publication. Despite these discoveries, the Mesolithic period (c. 8000–4000 BC) is generally agreed to be the earliest time for which there is clear evidence for prehistoric human colonisation of the island of Ireland (Warren 2022). The possibility remains that these instances of early evidence may relate to brief exploratory trips to southwest Ireland at times when the extent of the ice sheets receded (ibid.)

Lough Derg is located c. 6.4km east of the proposed cable route. There are a large number of prehistoric sites associated with the lake and it would certainly have provided ample resources to a Mesolithic community. During the Mesolithic people hunted, foraged and fished for sustenance, leading transient lifestyles. Coastal and riverine locations were particularly favourable as a result. Lakes and rivers, provided fresh water and fish, as well as attracting animals. It has been suggested that fish and fowl played a larger role in the diets of Irish people during the Mesolithic when compared to their European counterparts as Ireland had a less diverse range of large mammals to hunt (Woodman et al. 1997). Rivers also provided a transport network through a landscape which was heavily forested in places. Due to the mobile nature of the Mesolithic lifestyle, little evidence remains in terms of settlement. Often the only trace of Mesolithic activity are scatters of stone tools and the by-products of their manufacture (debitage). Occasionally, shell middens are also found to date to the Mesolithic period.

There are no Mesolithic sites recorded within the 250m study area of the Proposed Development.

Neolithic Period (c. 4000–2500 BC)

The Neolithic period is marked by the introduction of agriculture to Ireland and the widespread adoption of agriculture as a way of life. Agriculture facilitated a more sedentary lifestyle. Settlement became more permanent, with rectangular timber houses constructed, sometimes with internal divisions and hearths. Significant social change accompanied the transition from Mesolithic to Neolithic. A new-found concern for claims to land on which to farm contributed to the tradition of megalithic tomb construction in the Neolithic. There are four main types of megalithic tomb in Ireland, namely the Court Cairn, Portal Tomb, Passage Tomb and Wedge Tomb; of which the latter style straddles the Neolithic to Bronze Age transition (Waddell 2022). Megalithic tombs were communal burial monuments and ceremonial centres. They are monumental structures that would have required a high level of cooperation and planning to achieve, suggesting complex Neolithic societies.

While there is a wedge tomb (AH 01), located c. 111m west of the Proposed Development in the townland of Cloongaheen West, it is described below as it is more likely to date to the early stages of the Bronze Age. In the wider region Lough Gur, c. 21km to the southeast, is known to have been a focus for settlement throughout the prehistoric period, attesting to the general density of population living in the area during this time (Cleary 2019). Excavations carried out in advance of the Limerick Tunnel Scheme, c. 7km to the southwest have also recorded Neolithic habitation remains (Bermingham et. al. 2013)

Bronze Age (c. 2500–500 BC)

This period is marked by the use of metal for the first time. As with the transition from Mesolithic to Neolithic, the transition into the early Bronze Age was accompanied by changes in society. Wedge tombs represent the final phase of megalithic tomb construction in Ireland, they generally date to the early Bronze Age and are concentrated largely in the west of Ireland. A wedge tomb (AH 01) is recorded in the townland of Cloongaheen West, c. 111m west of the Proposed Development where it runs along a local road. The monument stands in a sloping field situated high up on the southwestern spur of the Slieve Bernagh mountains, at c.230m above Ordnance Datum (aOD). The ground falls sharply to the southeast, where there are extensive views across the Broadford Valley towards the Galty Mountains (De Valera and O Nuallain 1961, 82). The landscape to the north and northeast rises sharply to a height of c.330m aOD, restricting views in this direction. The remains of the wedge tomb are scant and overgrown. The frequency of wedge tombs in the wider landscape indicates a definitive Bronze Age presence in the landscape and there are further examples of this monument type further to the southeast and east of the receiving environment.

As stated above, wedge tomb construction continued into the early Bronze Age, but declined thereafter with burial of the individual becoming favoured over the communal approach of the megalithic tomb tradition. Individuals were cremated or inhumed, sometimes in cemeteries and often accompanied by a pottery vessel.

The most common indicator of Bronze Age activity is the *fulacht fia* or burnt mound. These sites are identifiable as horse-shoe shaped mounds of charcoal-rich material and burnt stone, often in associated with one or more trough features. Their function was to heat water using hot stones in a trough. Traditionally they were interpreted as cooking sites, following experiments in the 1950s which successfully boiled mutton in this manner (O’Kelly 1954). More recently this interpretation has been questioned given that the vast majority of *fulachta fia* sites do not produce significant amounts of animal bone. Alternative interpretations include brewing, (Quinn and Moore 2009), tanning (Waddell 2022) and bathing (Eogan and Shee Twohig 2012). *Fulachta fia* require a water source to fill the trough and are usually located in boggy, marshy land or beside a river or stream. The proposed cable route crosses a number of watercourses, including the Glenomra River, although it is confined to existing roadways in these areas. The nearest recorded burnt mound (CL053-036) to the Proposed Development is located c 494m to the southeast.

Flint arrowheads and axes of possible late Neolithic/early Bronze Age date have been found north of St. Brigid’s Church at *Inis Cealtra* c.10.5km northeast of the Proposed Development; while a number of possible Bronze Age log boats have been discovered near to the islands northeast coast (O’Sullivan and Seaver 2015, 2).

Iron Age (c. 500 BC–AD 400)

There is increasing evidence for Iron Age (c. 800 BC–AD 500) settlement and activity in recent years as a result of development-led excavations as well as projects such as Late Iron Age and Roman Ireland (Cahill Wilson 2014). Yet this period remains distinguishable from the rather rich remains of the preceding Bronze Age and subsequent early medieval period, by a relative paucity within the current archaeological record. The Iron Age in Ireland is problematic for archaeologists as few artefacts dating exclusively to this period have been found and without extensive excavation it cannot be determined whether several monument types, such as ring-barrows or standing stones, date to the late Bronze Age or Iron Age. It is likely that there was significant continuity from the Bronze Age into the Iron Age, with earlier monuments re-used in many cases. There is no recorded evidence of Iron Age activity within the receiving environment of the Proposed Development.

Early Medieval Period (c. AD 400–1169)

The early medieval period is depicted in the surviving sources as entirely rural. It is estimated that there was as many as 150 kings in Ireland during this time, each ruling over the basic territorial unit- the *túath* (Byrne 1973). A *túath* has been described not only as a unit of land but also as a ‘people’ or ‘community of farmers’ (Stout 2017).

If current estimates placing the population of early medieval Ireland at between quarter and half a million people are correct, the king of a *túath* would have ruled between 1,700 and 3,300 subjects (ibid.). Many of these subjects would have lived in ringforts from the 6th century onwards.

Ringforts are described as farmsteads defended by a circular enclosure. The need for defences does imply that boundaries, territories and leadership changed frequently in the early medieval period. This area of modern County Clare lay on the borders of the over-kingdom of *Mumu* in the early medieval period and there were likely frequent raids from the neighbouring Kingdom of Connacht. The enclosure of a ringfort may consist of a single bank and ditch (univallate) or two or more lines of defences (bivallate or multivallate). Traditionally, the occupants of multivallate ringforts are considered to be of higher status, perhaps local leaders (Edwards 1996). One recent study of early medieval settlement enclosures has suggested that there is potential for at least 60,000 such sites to have existed on the island (O'Sullivan et al. 2014, 49), though many have been levelled in recent centuries to facilitate more efficient agriculture. While those sites affected may not be visible at ground level, they commonly survive as sub-surface features. Furthermore, many sites recorded as enclosures may represent ringforts. They may have been recorded as enclosures because they are too denuded to classify or because they do not conform to the accepted shape or measurement ranges of the ringfort. Earthen ringforts are known as raths, while those enclosed by stone walls are termed cashels. The latter type are more common in the west of Ireland where stone is more readily available as a building resource. There are also examples of ringforts which are defended by a combination of earthen and stone-built defences.

A total of 11 enclosures are recorded within the receiving environment of the Proposed Development (AH 02-08, 10-12 and 16). The nearest of these is AH 03, which lies c. 34m south of the Proposed Development where it travels along roadway. If even a portion of these enclosure sites are of early medieval date, it would suggest a successful early medieval population in the area. These enclosures are all located on lower ground, to the south of the mountain. These areas would have been, and still are, far more suitable for farming and settlement than the slopes and peaks of the mountain at the northern extent of the Proposed Development.

This period was also characterised by the introduction of Christianity to Ireland. The new religion was a catalyst for many changes, one of the most important being literacy. Irish was written down for the first time using the ogham script. The ogham alphabet is thought to be based on the Latin alphabet of the later Roman Empire and today the majority of the inscriptions that survive are located on pillar stones or boulders. Monasticism was known in St. Patrick's time (mid-5th century) but it was not until the 6th and 7th centuries that the famous monastic houses such as Glendalough, Bangor, Clonfert, Clonard, Clonmacnoise and Durrow were founded. Located c.10.5km northeast of the Proposed Development is Holy Island, situated on Lough Derg. This island is home to an early medieval ecclesiastical complex which is a National Monument in State Care, with over 200 monuments recorded on the island. The ecclesiastical complex at Holy Island, also known as *Inis Cealtra*, was founded in the 6th century and was an important site of pilgrimage up until the 17th century. The foundation of the complex has been associated with three different saints, *St Mac Reithe/Mac Creiche*; St Colum of Terryglass and St Caimin (McCarthy et al. 2017, 24). The location is significant in that it is located on the borders of the modern counties of Clare, Galway and Tipperary and on the northern border of the *tricha cet* of *Ua mBlait* and the overkingdom of Thomond (MacCotter 2008, 192). The inter-territorial location meant that the island was a place of power and a natural gathering place which could accommodate communication between different kin-groups (O'Leary 2016). Islands were seen as ideal locations for monastic settlements during the early medieval period, being seen as places of mediation between this world and the divine (McCarthy et al. 2017, 3). The island's location on Lough Derg, within the River Shannon also meant that it could avail of a hugely important trade route (ibid.).

Inis Cealtra was a place of pilgrimage for many early medieval people, with the array of monuments and cross inscribed stones and high crosses offering an array of religious symbolism for the pilgrim. The island itself and its monumental features were the sacred space. The monumentality of the built environment would have been imposing in the early medieval period, work would have formed part of the daily life of all living on the island, the

stone structures which we see today date from the 10th/11th centuries. This would have far-reaching influence in the wider landscape, including the vicinity of the Proposed Development. By the 11th century industrial activity including iron-working, bronze-working and bone-working was taking place however, habitation on the island was in decline by the 14th century (McCarthy et al. 2017, 20). Pilgrimage continued during the post-medieval period, with pilgrims usually walking around a monument, such as a church or well, in a clockwise direction for a specific number of times while reciting prayers (McCarthy et al. 2017, 22).

Medieval Period (c. AD 1169–1600)

The piecemeal conquest by the Anglo-Normans of Ireland, which commenced in AD 1169, had a fundamental impact on the Irish landscape. Their presence was strongest in the East of the Country, and it is mainly in this region that land was carved up and granted to the newly arrived lords who participated. The main success of the Anglo-Norman occupation was the welding of scattered territories into a cohesive unit through the introduction of the English form of shire government. The rural landscape became a network of manorial centres; these units would generally contain a castle (motte and bailey), a manorial house and a number of dwellings, with extensive surrounding acreage. Tower houses were the medieval fortified residences of the wealthy landowning class and were constructed by both the Anglo-Normans and Gaelic-Irish during the period c.1400-1650. There are believed to be well over 2,000 tower houses extant in the Irish countryside with a possible maximum of c. 3000 (Sweetman 1995). Excavations of various towers show that the typical house was comprised of a central keep, or large tower, that was defended by sets of walls. These towers generally span four-stories and were rectangular in shape. The internal layout of the towers was usually comprised of a cellar, with the main hall or living room above and one or two stories of living quarters above that. There was a dramatic reduction in scale of these towers when compared to the castles built by the Normans during the 12th, 13th and 14th centuries, which were mainly structures of prestige meant to impress more than defend. These castles were large enough to house lords and their families, as well as the small armies they hired to defend them.

The late 14th century saw the recovery of much of the territory taken by the Normans. This allowed Irish leaders to concentrate on the construction of their own houses. These leaders were intent on building structures that, while different from the Norman castles, still communicated the same amount of prestige. The solution was the tower-house, which, although considerably smaller in scale, still indicated the same status, but at the same time placed a greater emphasis on defence. These castles were not isolated in the landscape but were economic and social centres in the medieval rural community. According to The Civil Survey of the 1650s, cottages, mills, dovecotes, orchards and gardens were associated with many tower houses.

An unclassified castle referred to as a tower house, is located c. 1.9km north of the Proposed Development in the townland of Caherhurley. Very little of the structure survives, with a short section of masonry wall c. 2m high on top of a small outcrop of limestone. The castle was built by the McNamara family and in 1570 John McNamara died in the possession of four stone castles, including Caherhurly. The tower house remained in the possession of the McNamara family until it was sold to James Bourke of Limerick in 1622.

Although no other archaeological monuments dating to the medieval period have been identified within the receiving environment, it is likely that the lower lying areas were settled and farmed, as they would have been during the early medieval period.

Post-Medieval Period (c. AD 1600–1900)

A review of historic mapping has shown that the receiving environment was extensively settled during the 19th century, with a large number of vernacular structures and farmsteads recorded across the landscape. Many of these have been demolished since the early 20th century but associated below-ground remains may survive. This includes 'Trough Castle' (AH 15), a recorded 18th-19th century house, which is located c. 98m east of the Proposed

Development. According to the SMR file, it was built by a member of the O' Donnell, sometime in the 19th century. It is visible on the historic OS map of 1893.

The ending of the Williamite Wars saw the beginning of a comparative politically calm era, which allowed the country's landowners the security to experiment with the latest styles of architecture without the need to refer to defensive matters. Initially, constraints on available resources resulted in mansions of a relatively modest scale and relatively plain appearance. However, as the Irish aristocracy's sense of security grew over the following decades, their greater access to wealth helped foster a shift towards more ostentatious buildings. There are two former demesne landscapes within the receiving environment of the Proposed Development, Ballyquin House (DL 01) and Roo Cottage/Trough Castle (DL 02).

10.3.1 Cartographic Analysis

Down Survey Maps of the Barony of Tullogh, c. 1655

This map was destroyed in 1711 and there are no known copies. Therefore, it is unknown to what extent the area of the Proposed Development was shown on this mapping.

First Edition Ordnance Survey Map of County Clare, 1840-42, scale 1:10,560

This is the first accurate mapping of the area of the Proposed Development in County Clare. The Proposed Development primarily follows existing roadways; however, the northern extent crosses through rough pasture. Kilbane Bridge (BH 01), which the Proposed Development crosses, is shown in the centre of a cluster of structures (CH 28). The Proposed Development passes through the demesne landscape of Ballyquin House (DL 01), along an established roadway at this time. A gate lodge (CH 42) is shown immediately adjacent to the roadway and Proposed Development. The Proposed Development also passes immediately to the west of a small demesne landscape at this time known as Roo Cottage (later Trough Castle, DL 02).

Ordnance Survey Map of County Clare, 1893, scale 1:2,500

There had been little significant change to the area by the time of the 1893 OS map, with the majority of the vernacular structures across the receiving environment still present. A number of additional structures have also been noted. The Proposed Development follows primarily existing roadways. Trough Castle (AH 15) has been built by this time, replacing Roo Cottage.

10.3.2 Aerial Photography

Examination of aerial photography held by Ordnance Survey of Ireland (1995, 2000, 2005, 2013), Google Earth (2006–2022), and Bing Maps has failed to reveal any previously unknown features of archaeological potential within the proposed development or the immediate environs. The Proposed Development primarily follows established roadways.

10.3.3 Previous Archaeological Excavations

A review of the Excavations Bulletin (1970 – 2023) has revealed that no previous archaeological excavations have taken place along the Proposed Development or within the 250m study area to date.

10.3.4 Topographical Files

Information on stray artefact finds from the 250m study area in County Clare has been recorded by the NMI since the late 18th century. Location information relating to these finds is important in establishing prehistoric and

historic activity in the receiving environment. A polished stone axe (NMI Ref: IA/L/1978:1) was found in Ardnacrusha at the southern end of the Proposed Development.

10.3.5 Archaeological Heritage (AH)

There are 16 recorded monuments (AH sites) recorded within the receiving environment, the nearest of which is the church and graveyard at Trough (AH13 and AH14) situated c. 5m to the west of the route as it runs along a local road. The Proposed Development passes through the Zones of Notification (ZON) for recorded monuments AH03, AH07, AH10, AH11, AH12, AH13 and AH14 (Table 10-2, Figures 15.2a-d). These zones function as a tool to illustrate where Section 12 notification is required under the National Monuments Act. Section 12 is not applicable to this development as the project is proceeding through the statutory planning process. Details of each site are included in **Appendix 10-1**. None of the 16 sites are designated as National Monuments in State Care or have Preservation Orders associated with them. **Appendix 10-4**, Volume III provides legislative context to the protection of archaeological remains.

Table 10-2 Archaeological assets within receiving environment of the Proposed Development

AH No	RMP No	Description	Townland	Dist. from the Proposed Development	Statutory Protection
AH 01	CL044-018	Megalithic–tomb – wedge tomb	Cloongaheen West	111m west	Yes
AH 02	CL044-022	Enclosure	Cloongaheen West	173m east	Yes
AH 03	CL044-020	Enclosure	Cloongaheen West	34m south	Yes
AH 04	CL044-023	Enclosure	Cloongaheen West	144m south	Yes
AH 05	CL044-026	Enclosure	Cloongaheen East	242m north	Yes
AH 06	CL044-060	Enclosure	Kilbane, Killeagy (Goonan)	119m west	Yes
AH 07	CL044-061	Enclosure	Ballyquin More	61m east	Yes
AH 08	CL044-058	Enclosure	Ballyquin Beg	216m west	Yes
AH 09	CL044-072	House – 16 th /17 th century	Ballyquin More	170m east	Yes
AH 10	CL053-004	Enclosure	Aharinaghbeg	43m north	Yes
AH 11	CL053-003	Enclosure	Cloghera	61m west	Yes
AH 12	CL053-031	Enclosure	Trough	53m west	Yes
AH 13	CL053-032002	Graveyard	Trough	5m west	Yes
AH 14	CL053-032001	Church	Trough	5m west	Yes
AH 15	CL053-051	House – 18 th /19 th century	Roo West	98m east	Yes

AH No	RMP No	Description	Townland	Dist. from the Proposed Development	Statutory Protection
AH 16	CL053-033	Enclosure	Roo West	190m east	Yes

10.3.6 Designed Landscapes (DL)

Two designed landscapes have been identified within the receiving environment, only one of which is recorded by the NIAH Garden Survey (Table 10-3, Figures 15-2a-d). Details are recorded in Appendix 10-3, Volume III.

Table 10-3 Designed landscapes within the receiving environment of the Proposed Development

DL No	NIAH No	Description	Townland	Dist. from the scheme	Statutory Protection
DL 01	CL-58-R-622697	Demesne landscape of Ballyquin House (BH 2), whose main features are unrecognisable but with some peripheral features visible.	Ballyquin Beg	0m	No
DL 02	–	Small demesne landscape of Trough Castle (AH 40) consisting of one open field with sporadic planting on the first edition OS map and a small cottage (Roo Cottage).	Roo West	Immediately east	No

10.3.7 Built Heritage Assets

There is one Protected Structure located along the route of the Proposed Development and two located within 250m, as listed in Table 10-4 (Figures 15.2a-d). Two of these structures are also included in the NIAH Building Survey. Full details of all built heritage structures are given in Appendix 10-2, Volume III. Appendix 10-5, Volume III provides legislative context to the protection of the built heritage resource.

Table 10-4 Built heritage assets within the receiving environment of the scheme

BH No	RPS/NIAH No	Description	Townland	Dist. from the Project	Statutory Protection
BH 01	188/ 20404407	Kilbane Bridge	Kilbane	0m	Yes
BH 02	427	Glenomra House	Ballyquin Beg	207m west	Yes
BH 03	102/ 20405305	Church of the Mother of God	Cloghera	17m south	Yes

10.3.8 Cultural Heritage Assets

Cultural heritage assets can incorporate both archaeological and built heritage remains which are not subject to statutory protection or which have not been previously recorded as heritage assets in any known datasets. A number of sources were reviewed in order to identify cultural heritage assets within the receiving environment. These included the historic Ordnance Survey (OS) mapping, aerial photographic coverage and field inspections.

A characteristic of the post-medieval landscape are the vernacular buildings that represent the homes of farmers and workers. ‘Vernacular architecture’ is a term used to describe traditional buildings constructed using locally available materials and according to local/regional styles i.e. the homes and workplaces of the ordinary people. This is in contrast to formal architecture, such as the grand estate houses of the gentry, churches and public

buildings, which were often designed by architects or engineers. The majority of vernacular buildings are domestic dwellings. Examples of other structures that may fall into this category include shops, outbuildings, mills, limekilns, farmsteads, forges, gates and gate piers. There are multiple examples of vernacular structures, including houses and limekilns, located within the receiving environment of the project and these have been classified as Cultural Heritage (CH) sites and are listed in the **Table 10-5** and shown on **Figures 15.2a-d**.

Table 10-5 Cultural heritage assets within the receiving environment of the scheme

CH No	Description	Map Edition	Dist. from Project	Statutory protection
CH 01	Vernacular structure	First Edition OS (1840-2)	23m east	No
CH 02	Lime kiln	OS (1893)	11m east	No
CH 03	Vernacular structure	OS (1893)	23m northwest	No
CH 04	Vernacular structure	First Edition OS (1840-2)	125m northwest	No
CH 05	Vernacular structure	OS (1893)	244m southeast	No
CH 06	Vernacular structure	First Edition OS (1840-2)	151m west	No
CH 07	Vernacular structure	First Edition OS (1840-2)	31m west	No
CH 08	Vernacular structure	First Edition OS (1840-2)	96m east	No
CH 09	Vernacular structure	First Edition OS (1840-2)	150m west	No
CH 10	Vernacular structure	First Edition OS (1840-2)	5m west	No
CH 11	Vernacular structure	First Edition OS (1840-2)	200m east	No
CH 12	Vernacular structure	First Edition OS (1840-2)	41m east	No
CH 13	Vernacular structure	First Edition OS (1840-2)	20m west	No
CH 14	Vernacular structure	First Edition OS (1840-2)	107m east	No
CH 15	Vernacular structure	First Edition OS (1840-2)	73m east	No
CH 16	Vernacular structure	First Edition OS (1840-2)	154m east	No
CH 17	Vernacular structure	First Edition OS (1840-2)	61m east	No
CH 18	Vernacular structure	First Edition OS (1840-2)	6m east	No
CH 19	Vernacular structure	First Edition OS (1840-2)	14m east	No
CH 20	Vernacular structure	First Edition OS (1840-2)	2m west	No
CH 21	Vernacular structure	First Edition OS (1840-2)	226m west	No
CH 22	Vernacular structure	First Edition OS (1840-2)	49m east	No
CH 23	Group of vernacular structures	First Edition OS (1840-2)	19m north	No
CH 24	Group of vernacular structures	First Edition OS (1840-2)	26m north	No
CH 25	Group of vernacular structures	First Edition OS (1840-2)	206m north	No
CH 26	Group of vernacular structures	First Edition OS (1840-2)	35m north	No
CH 27	Vernacular structure	First Edition OS (1840-2)	212m north	No
CH 28	Kilbane Village	First Edition OS (1840-2)	20m northeast	No
CH 29	Vernacular structure	First Edition OS (1840-2)	5m west	No
CH 30	Site of vernacular structure	First Edition OS (1840-2)	31m east	No
CH 31	Site of vernacular structure	First Edition OS (1840-2)	27m east	No
CH 32	Site of vernacular structure	First Edition OS (1840-2)	11m east	No

CH No	Description	Map Edition	Dist. from Project	Statutory protection
CH 33	Farmstead	First Edition OS (1840-2)	136m west	No
CH 34	Site of farmstead	First Edition OS (1840-2)	25m east	No
CH 35	Site of vernacular structure	First Edition OS (1840-2)	8m west	No
CH 36	Site of vernacular structure	First Edition OS (1840-2)	23m east	No
CH 37	Site of vernacular structure	First Edition OS (1840-2)	8m east	No
CH 38	Vernacular structure	First Edition OS (1840-2)	16m west	No
CH 39	Site of group of vernacular structures	First Edition OS (1840-2)	11m east	No
CH 40	Site of vernacular structure	First Edition OS (1840-2)	219m west	No
CH 41	Site of vernacular structure	First Edition OS (1840-2)	103m east	No
CH 42	Site of gate lodge	First Edition OS (1840-2)	19m east	No
CH 43	Structure associated with Ballyquin House	First Edition OS (1840-2)	186m east	No
CH 44	Site of group vernacular structures	First Edition OS (1840-2)	224m east	No
CH 45	Site of vernacular structure	First Edition OS (1840-2)	19m west	No
CH 46	Vernacular structures	First Edition OS (1840-2)	34m east	No
CH 47	Site of lime kiln	OS (1913)	37m east	No
CH 48	Group of vernacular structures	First Edition OS (1840-2)	13m east	No
CH 49	Site of Ballyvourher	First Edition OS (1840-2)	149m east	No
CH 50	Vernacular structure	First Edition OS (1840-2)	15m east	No
CH 51	Site of vernacular structure	First Edition OS (1840-2)	19m west	No
CH 52	Group of vernacular structures	First Edition OS (1840-2)	87m south	No
CH 53	Site of group of vernacular structures	First Edition OS (1840-2)	19m south	No
CH 54	Ruins of Smithy	OS (1893)	69m south	No
CH 55	Site of vernacular structure	First Edition OS (1840-2)	208m north	No
CH 56	Ruins of vernacular structure	First Edition OS (1840-2)	129m west	No
CH 57	Ruins of vernacular structure	First Edition OS (1840-2)	15m west	No
CH 58	Site of vernacular structure	First Edition OS (1840-2)	38m east	No
CH 59	Site of vernacular structure	First Edition OS (1840-2)	24m east	No
CH 60	Ruins of vernacular structure	First Edition OS (1840-2)	19m east	No
CH 61	Site of group of structures (smithy)	First Edition OS (1840-2)	11m west	No
CH 62	Site of vernacular structure	First Edition OS (1840-2)	78m east	No

10.3.9 Analysis of place-name and townland evidence

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

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

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

Townland and topographic names are an invaluable source of information on topography, landownership and land use within the landscape. They also provide information on history; archaeological monuments and folklore of an area. A place name may refer to a long-forgotten site and may indicate the possibility that the remains of certain sites may still survive below the ground surface. The Ordnance Survey surveyors recorded townland names in the 1830s and 1840s, when the entire country was mapped for the first time. Some of the townland names in the receiving environment are of Irish origin and through time have been anglicised. The main references used for the place name analysis is Irish Local Names Explained by P.W Joyce (1870) and the Place Names Database of Ireland. A description and possible explanation of each townland name in the environs of the proposed road development are provided in the table below.

Table 10-6 Placename analysis of townland names within the receiving environment

Placename	Origin	Derivation	Possible Meaning
Aharinaghmore	Irish	<i>Achadh Roighneach Mór</i>	Bracken Field (Likely divided into Mór and Beag at a later date)
Aharinaghbeg	Irish	<i>Achadh Roighneach Beag</i>	Bracken Field (Likely divided into Mór and Beag at a later date)
Ballybrack	Irish	<i>An Baile Breac</i>	The Speckled Homestead
Ballydonaghan	Irish	<i>Baile Uí Dhonnacháin</i>	Homestead of Donnacháin
Ballykeelaun	Irish	<i>Béal an Chaoláin</i>	Mount of the creek
Ballymacdonnell	Irish	<i>Baile Mhic Dhónaill</i>	Homestead of Dónaill
Ballymoloney	Irish	<i>Baile Uí Mhaolomhnaigh</i>	Homestead of Uí Mhaolomhnaigh
Ballyquin Beg	Irish	<i>Baile Uí Chuinn Mór</i>	Homestead of Uí Chuinn (Likely divided into Mór and Beag at a later date)
Ballyquin More	Irish	<i>Baile Uí Chuinn Beag</i>	Homestead of Uí Chuinn (Likely divided into Mór and Beag at a later date)
Barbane	Irish	<i>An Barr Bán</i>	The white/grassy top
Caherhurly	Irish	<i>Cathair Urthaile</i>	The stone fort of Ó hUrthaile
Carrownagowan	Irish	<i>Ceathrú na nGaibhne</i>	The smith’s quarterland
Castlebank	English	-	-
Cloghera	Irish	<i>Clochdoire</i>	Stoney place
Cloongaheen East	Irish	<i>Cluain Gaoithín</i>	Gaoithín’s meadow (Likely divided into East and West at a later date)
Cloongaheen West	Irish	<i>Cluain Gaoithín</i>	Gaoithín’s meadow (Likely divided into East and West at a later date)

Placename	Origin	Derivation	Possible Meaning
Cloonsheera	Irish	<i>Cluain Sílré</i>	Sílré's meadow
Cloonyconry Beg	Irish	<i>Cluain Uí Chonaire Beag</i>	Meadow of Uí Chonaire (Likely divided into Mór and Beag at a later date)
Coolderry	Irish	<i>Cúl Doire</i>	Oakwood thicket
Drummin	Irish	<i>An Dromainn</i>	The ridge
Fahy More South	Irish	<i>An Fhaiche Mhór Theas</i>	The great green
Glenlon North	Irish	<i>Gleann Luain Thuaidh</i>	Glen of the blackbirds (Likely divided into North and South at a later date)
Glenlon South	Irish	<i>Gleann Luain Theas</i>	Glen of the blackbirds (Likely divided into North and South at a later date)
Gortatrasa	Irish	<i>Gort an tSleasa</i>	The side fields
Inchalughoge	Irish	<i>Inse Luchóige</i>	River meadow of the mouse
Kilbane	Irish	<i>An Choill Bhán</i>	The white/grassy wood
Killeagy	Irish	<i>Coill Eagáí</i>	Wood of (unknown)
Killokennedy	Irish	<i>Cill Ó gCinnéide</i>	Kennedy's church
Knockdonagh	Irish	<i>Cnoc Dhonncha</i>	Donncha's Hill
Lakyle	Irish	<i>An Leathchoill</i>	The half wood
Leitrim	Irish	<i>Liatroim</i>	The grey ridge
Mountrice	English	-	-
Roo East	Irish	<i>Ruaigh Thoir</i>	Reddish land (Likely divided into East and West at a later date)
Roo West	Irish	<i>Ruaigh Thiar</i>	Reddish land (Likely divided into East and West at a later date)
Shannaknock	Irish	<i>An Seanchnoc</i>	The old hill
Springmount	English	-	-
Tooreen	Irish	<i>An Tuairín</i>	Little paddock
Trough	Irish	<i>An Triúch</i>	A cantred or district

10.3.10 Areas of Archaeological Potential

Townland boundaries can be of considerable antiquity, some pre-dating the Norman invasion, and can indicate areas of archaeological potential. The Proposed Development crosses a large number of townland boundaries, however, there will be no impact to these boundaries given that the Proposed Development is confined largely to existing roadways.

Particular geological areas are also considered to have higher archaeological potential, specifically areas of peat and alluvium. The northern extent of the Proposed Development is located on an area of mountain blanket bog which has the potential to preserve archaeological features. In addition, riverine environments provided valuable resources for populations in the prehistoric and historic periods and are considered to be areas of higher archaeological potential. The Proposed Development crosses a number of watercourses; however, it is confined to existing roadways at these locations.

10.3.11 Field Inspection

The Proposed Development primarily follows established narrow local roadways. The northern extent of the Proposed Development runs through a short section of commercial forestry within an upland area before following established forestry laneways in a southerly direction. Where it deviates from forestry tracks, it crosses areas that have been planted with commercial trees or which have been recently felled. The process of felling results in ground disturbance across the forested area.

In the townland of Cloongaheen West, to the north of AH 03, the Proposed Development will leave the small local road and cross three small fields to the east of CH 22 (site of a structure marked on the first edition OS map). The fields are under pasture and occupy a moderate south facing slope. They are surrounded by mature hedges, which have been present since at least the first edition OS map. Where the Proposed Development reaches the L-3022-8 road it passes through the ZON of AH 03. This is listed as an enclosure, the edge of which may be c. 8m south of the Proposed Development – downslope. There are no obvious archaeological remains, with the exception of a circular waterlogged area characterised by the growth of sedge grasses. From this point, the Proposed Development turns east to travel along the local road.

In the village of Kilbane is Kilbane Bridge (BH 1), which is a Protected Structure and is located along the route of the Proposed Development. The bridge, built c.1820, consists of a single-arch rubble stone road bridge with cut-stone voussoirs, over Kilbane Stream. The bridge survives well but is largely obscured by vegetation (Plate 10.1). The Proposed Development will cross the stream by means of directional drilling and will not affect the bridge nor its foundations.

The Proposed Development continues in a southerly direction along the local road and then passes through the ZON associated with AH 07. This site comprises a ringfort that is well preserved, located to the east, adjacent to some more recent farm structures. At this point it also passes through the demesne associated with Ballyquin House (DL 01). Today the landscape has lost the majority of its designed features and exists as a pastoral agricultural landscape.

In the townland of Ballybrack the Proposed Development remains within the local road and turns west. In Aharinabeg it passes through the ZON (via the existing road) to the south of recorded enclosure AH 10. Slight further to the west, it turns south (along the road) and passes through the ZON associated with AH 11 (enclosure), within the townland of Cloghera. AH 12 (enclosure) is located to the south and the Proposed Development passes through the eastern portion of the ZON via the road.

As the road and the Proposed Development travels further to the south it passes to the immediate east of a recorded graveyard (AH 13), which contains the remains of a church (AH 14). The graveyard is surrounded by a mortar and stone wall and contains multiple grave stones and memorials. Its ground level is higher than the adjacent road, indicating longevity of use.

To the south of AH 10, the Proposed Development will run along the road to the immediate west of the demesne landscape associated with Roo Cottage/ Trough Castle (DL 2). The western edge of the demesne is characterised by a stone wall that separates the demesne from the road. Two recessed entrances are located along this section of the road, one of which remains in use but has been rebuilt. A date plaque of 1873 (relating to Trough Castle) is located within this wall. The southern entrance is no longer in use but is well preserved, comprising a wide recessed entrance with dressed stone gate pillars and wrought iron gate (vehicular and pedestrian). The poorly preserved remains of a gate lodge are located opposite the recessed entrance, which forms part of the former demesne landscape. The house itself is listed as AH 15 and is now in ruins.



Plate 10-1 BH 1, facing northeast

The Proposed Development continues in a southerly direction via the existing road, before passing through a more suburban landscape, characterised by modern residential development. It then terminates Within the Ardnacrusha complex and to the west of the Ardnacrusha Power station. No previously unrecorded sites or areas of archaeological potential were noted during the course of the field inspection.

10.4 Assessment of Impacts and Effects

10.4.1 Construction Phase

The construction of the Proposed Development will not result in any direct negative impacts on previously recorded, or unrecorded, sites of archaeological significance. The Proposed Development will pass (via the roadway) through the ZON's associated with monuments AH03, AH07, AH10, AH11, AH12, AH13 and AH14. It is possible that archaeological features associated with these monuments may extend beneath the road and thus ground disturbances associated with the excavation of the cable trench have the potential to result in a direct, negative and permanent impact on same. Impacts, prior to the application of mitigation, may range from moderate negative to profound negative, dependent on the nature, extent and significance of any such remains that may be present.

Where the Proposed Development crosses lands that are undeveloped, it is possible that archaeological features survive within these areas with no surface expression. Ground disturbances associated with the excavation of the cable trench have the potential to result in a direct, negative and permanent impact on any archaeological remains that may be present. Impacts, prior to the application of mitigation, may range from moderate negative to profound negative, dependent on the nature, extent and significance of any such remains that may be present.

There is one Protected Structure, BH 1 Kilbane Bridge, located along the route of the Proposed Development. However, this structure will be avoided as the cable will be laid beneath the adjacent stream bed (minimum depth of 1.5m). As such, there will be no impacts upon this structure during the construction phase nor to the channel and banks of the watercourse.

No remaining sites of built heritage or cultural heritage significance will be negatively impacted by the construction of the Proposed Development due to the distance of the Proposed Development from these assets.

10.4.2 Operational Phase

There is no predicted impacts to the archaeological, architectural and cultural heritage resource as a result of the operation of the Proposed Development due to the type of development i.e. an underground cable. Minor excavations of replaced soils, subsoils, trench backfill material will be required along the Proposed Development if a fault occurred during the operational phase. These works will be temporary and of short duration. No impacts to archaeological, architectural and cultural heritage resource are anticipated as the excavations would occur on previously disturbed ground.

10.4.3 Do-Nothing

If the Proposed Development were not to proceed, there would be no impacts on the archaeological, architectural and cultural heritage resource.

10.4.4 Cumulative Impacts and Effects

Proposed, permitted and existing developments within the study area of the Proposed Development have been reviewed (**Appendix 1-5**, Volume III) in order to assess the potential for cumulative impacts. No cumulative impacts upon the archaeological, architectural and cultural heritage resource have been identified. This is due to the fact that no negative operational impacts are predicted and the fact that mitigation measures laid out in **Section 10.5** will result in the preservation by record, or in-situ, of any archaeological remains that may be encountered during the construction of the Proposed Development.

The Proposed Development has the potential to interact with the proposed Fahey Beg Wind Farm Development Grid Connection in two locations and in one location within Ardnacrusha with the Drummin Solar Farm Grid Connection (**Figure 1-2** and **1-3**, **Chapter 1**).

As outlined in **Chapter 1**, each project that progresses with a grid connection located within the public road network will have to apply to the local authority for a road opening licence, where timelines will be agreed, and connections sequenced. Early engagement with the local authority will allow them to decide on how the sections of public road are managed during the laying of the underground grid trenching, so as to avoid disruption. In the event that the Fahy Beg underground grid and the Proposed Development construction works need to be done at similar times within the public road network then the Local Authority through the Road Opening Licence process will agree the best solution. The solution may be to close a short section of road and do a traffic diversion, or it may dictate each developer stagger the duration of the overlap on the public road so as to control and manage impacts locally; thereby avoiding any significant cumulative effects.

Any interaction with these developments and the Proposed Development within Ardnacrusha substation will be controlled by the Ardnacrusha Eirgrid Station Manager who will implement their own traffic management measures thereby avoiding potential cumulative impacts.

10.5 Mitigation and Monitoring Measures

10.5.1 Mitigation Measures

A definition of mitigation measures is provided in **Appendix 10-6**, Volume III.

10.5.1.1 Construction Phase

All excavations within the ZONs for monuments AH03, AH07, AH10, AH11, AH12, AH13 and AH14 will be monitored by a suitably qualified archaeologist. All excavations across previously undisturbed greenfields will also be monitored by a suitably qualified archaeologist. If any features of archaeological potential are discovered during the course of the works the DoHLGH will be informed immediately and further mitigation will be required, such as preservation in-situ or by record. Any further mitigation will require the approval of the DoHLGH.

10.5.1.2 Operational Phase

No mitigation is required during the operational phase.

10.6 Residual Impacts and Effects

Following the implementation of the above mitigation measures, there will be no significant negative residual impacts on the archaeological, architectural or cultural heritage resource.

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