

MWP

Environmental Impact Assessment Report (EIAR)

Chapter 10 Cultural Heritage

**Dernacart Wind Farm
110kV Substation and Grid Connection**

Statkraft Ireland

October 2024

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MWP, Engineering and Environmental Consultants

Address: Reen Point, Blennerville, Tralee, Co. Kerry, V92 X2T

www.mwp.ie



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10. Cultural Heritage

10.1 Introduction

This archaeological impact assessment (AIA) was undertaken with regard to a proposal to construct a 110kV substation, wind farm collector cable and access track, and underground 110kV grid connection cable. A full description of the proposed development, development lands and all associated project elements is provided in Chapter 2 of this EIAR. This chapter assesses the impacts on archaeology and wider cultural heritage from elements of the project for which development consent is being sought and all other associated project components including the consented Dernacart Wind Farm.

10.1.1 Competency of Assessor

This assessment has been prepared by Maurice F Hurley DLitt, MA, FSA, MIAI. Maurice has 35 years experience as a professional archaeologist. His career developed in tandem with the changing focus of Irish archaeology and his experience includes pioneering work on projects such as Director of the Cork-Dublin gas pipeline archaeology (published 1987). He was City Archaeologist for Waterford (1987-1991) and later Cork City where he undertook several major excavations, all of which are published. Maurice Hurley was the first Chairman of Institute of Archaeologist of Ireland Archaeologist. He served as a member of the Heritage Council of Ireland from 2000 to 2008, where he was Chair of the committees on archaeology and architecture. He served as a member of the Royal Irish Academy, National Committee for Archaeology (1996-1999).

Since 2005 Maurice Hurley runs his own archaeology consultancy practice. He specialises in the Archaeology/Cultural Heritage components of Environmental Impact Assessments and in urban archaeology, where he has particular expertise on the complex interface between development and archaeology in the planning process. In recent years much of his focus has been centred on renewable energy projects, initially windfarms and more recently solar energy developments.

10.2 Methodology

This study is produced to assess the archaeological and cultural heritage resource of the route and surrounding environs.

The study is informed by documentary and cartographic research and an examination of available aerial photographs and by an inspection of the entire route in early February 2024.

10.2.1 Desk study

Consulted sources include;

- National Monuments Act, 1930 to 2014; (A bill aimed at modernising the legislation governing national monuments and heritage sites has passed all stages in the Oireachtas. The *Historic and Archaeological Heritage Bill 2023*, once enacted, will replace the *National Monuments Act 1930*, and subsequent amending acts. In the meantime, the standing Acts provide for the protection of archaeological sites, monuments,

artefacts and shipwrecks that are listed in the Record of Monuments and Places (RMP). This list is updated as and when previously unrecorded archaeological sites are discovered.

In Counties Offaly and Laois archaeological sites dating from Mesolithic period (7,000 B.C) to more recent historical times (generally 1700AD but some may be of more recent date) are represented in the archaeological record.

- The Planning and Development Acts, 2000 (as amended);
- Heritage Act, 1995 (as amended);
- Frameworks and Principles for the Protection of the Archaeological Heritage, 1999, (formerly) Department of Arts, Heritage, Gaeltacht, and Islands.
- Details of stray finds recorded from the Study Area as detailed on the NMI online database hosted on Heritage Maps were consulted should be noted that this online database is partial only and current to 2010, and additional finds may have been registered for the Study Area in the interim. The finds included on the online NMI database include cremated bone (NMI Reg. No. 1975:264–65), a replica gold brooch (NMI Reg. no. 1983:1) and human remains (NMI Reg. No. E585).
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 2000 and the Local Government (Planning and Development) Act 2000.
- Cartographic review including all editions of the Ordnance Survey maps and aerial photographs;
- Offaly Council Development Plan 2022-2028 and Laois Development Plan 2021-2027.
- The Record of Monument and Places (RMP). These files are based on the pre-existing Sites & Monument Record (SMR) and information from completed county archaeological inventories. As such it records known upstanding archaeological monuments, their location (in cases of destroyed monuments) and the position of possible sites identified as cropmarks on vertical aerial photographs;
- EPA (2022). Guidelines on the information to be contained in Environmental Impact Assessment Reports.

10.2.2 Legislation And Guidelines For The Protection Of Heritage

The Minister of the Department of Housing, Heritage & Local Government has a responsibility to protect the archaeological heritage and to exercise powers of preservation under the National Monuments Acts, taking account of the European Convention for the Protection of the Archaeological Heritage. The protection of the archaeological heritage is provided for using the following four statutory designations:

- National monument in the ownership or guardianship of the Minister for Housing, Heritage & Local Government or a Local Authority.
- National monument subject to a Preservation Order (or temporary Preservation Order). Register of Historic Monuments (RHM).
- Record of Monuments and Places (RMP). National Monuments
- National Monuments in State Care: Ownership and Guardianship

10.2.2.1 National monument in the ownership or guardianship of the Minister for HHLG or a Local Authority

Section 16 of the National Monument Act, 1930 provides that where the Minister is the owner of a National Monument then the Minister shall admit the public to enter on and view such monument upon payment of such (if any) admission charge and subject to such conditions and limitations as the minister shall prescribe. Section 11 of the 1994 Act provides that the Minister may acquire by agreement or compulsorily any monument that is in his or her opinion a National Monument or any part of such monument. The provisions of Section 14 of the 1930 Act regarding prohibition of injury to National Monuments which apply to National Monuments subject to a Preservation Order apply similarly to National Monuments of which the Minister is guardian. Section 12(1) of the 1930 Act provides that the Minister shall maintain a National Monument of which he or she is the guardian. According to the National Policy on Town Defences (2008), within the meaning of the National Monuments Acts, all town defences are considered National Monuments by reason of the historical, architectural, and archaeological interest attaching to them. This status relates as much to their protection as to the nature of consent and management of works on, or close, to them.

10.2.2.2 National Monuments with a Preservation Order or Temporary Preservation Order

Where it appears to the Minister that a monument, considered to be a National Monument, is in danger or is actually being destroyed or falling into decay the minister may by preservation order or temporary preservation order, undertake the preservation of the monument. A temporary preservation order will remain in force for six months and then expire, however it is an indication of additional sites that are considered as being national monuments.

10.2.2.3 National Monument in Local Authority Ownership/Guardianship

Monuments which may be defined as National Monuments are also in the ownership or guardianship of Local Authorities which have similar responsibilities under the National Monuments Acts (1930-2004) to the DAHG. These monuments are not included in any specific dataset. Each Local Authority will make a determination whether the preservation of a monument in its ownership/guardianship, is a matter of national importance because of the archaeological, architectural, historical, traditional or artistic importance attaching to that monument. There are no definitive lists of these sites available; such determinations are generally made on a site-by-site basis as the need arises.

10.2.2.4 Record of Monuments and Places

Archaeological monuments are protected under the National Monuments Acts 1930- 2004. Section 12 (1) of the 1994 Act provides that the Minister shall establish and maintain a record of monuments and places where the Minister believes there are monuments, such record to be comprised of a list of monuments and relevant places and a map or maps showing each monument and relevant place in respect of each county in the State. This is

referred to as the Record of Monuments and Places and monuments are entered into it are referred to as Recorded Monuments. Section 12(3) of the 1994 Act provides that where the owner or occupier (other than the Minister) 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 monument or place, he or she shall give notice in writing to the Minister of the proposal 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. This time will allow the National Monuments Service to consider the proposed works and how best to proceed to further the protection of the monument.

10.2.2.5 The Register of Historic Monuments

The Register of Historic Monuments was established under Section 5 of the National Monuments Act 1987. This list consists of monuments which are known to the Minister and which in the Minister's opinion should be so entered in the Register. Section 5(8) of the 1987 Act provides that where the owner or occupier (not being the Minister) of a historic monument or archaeological area entered in the Register, or any other person, proposes to carry out, or cause or permit the carrying out of, any work, at or in relation to such a monument or area then he or she shall give notice in writing of the proposal to the Minister 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 the notice.

10.2.2.6 Protected Structures

A protected structure is defined in the Local Government (Planning and Development) Act 2000 as any structure or specified part of a structure, which is included in the planning authorities' Record of Protected Structures (RPS). Section 57 (1) of the 2000 Act states that "...the carrying out of works to a protected structure, or a proposed protected structure, shall be exempted development only if those works would not materially affect the character of (a) (b) the structure, or any element of the structure, which contributes to its special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest." The RPS is a schedule of protected buildings and items listed in every County Development Plan and Town Development Plan. RPSs are designated as part of the Development Plan process, either during a review of the county Development Plan or as a variation of the plan. Each owner and occupier of a protected structure is legally obliged to ensure that the structure is protected/ conserved. The protection, unless otherwise stated in the RPS, includes the exterior and interior of the structure, the land lying within its curtilage (boundary), any other structures and their interiors within the curtilage, plus all fixtures and fittings which form part of the interior or exterior of any of these structures. By definition, a protected structure includes the land lying within the curtilage of the protected structure and other structures within that curtilage and their interiors. The notion of curtilage is not defined by legislation, but according to Architectural Heritage Protection Guidelines for Planning Authorities (2004) and for the purposes of this report it can be taken to be the parcel of land immediately associated with that structure and which is (or was) in use for the purpose of the structure. The attendant grounds of a structure are lands outside the curtilage

of the structure but which are associated with the structure and are intrinsic to its function, setting and/or appreciation. The attendant grounds of a country house could include the entire demesne, or pleasure grounds, and any structures or features within it such as follies, plantations, lakes etc.

Moreover, policies for both the archaeological and architectural heritage are conveyed in a series of specific published guidelines. This chapter is prepared having regard to the following guidelines:

- Framework & Principles for the Protection of the Archaeological Heritage, (Department of Arts, Heritage, Gaeltacht & the Islands, 1999).
- Policy & Guidelines on Archaeological Excavation, (Department of Arts, Heritage, Gaeltacht & the Islands, 1999).
- Architectural Heritage Protection, Guidelines for Planning Authorities, (Department of the Environment, Heritage and Local Government, 2004).

10.2.3 Scope of Assessment

This study provides an overview of the cultural heritage features of the proposed substation site and underground cable route, and used the following sources.

10.2.3.1 Record of Monuments and Places (RMP)

This record was established under Section 12 (1) of the National Monuments (Amendment) Act 1994. It lists all monuments and places believed to be of archaeological importance in the County. The numbering system consists of two parts: the first part is the county code (WA for Waterford) followed by the Ordnance Survey map number (six inch to the mile scale); the second part is the number of a circle surrounding the site on the RMP map, e.g. OF033-09 refers to circle 09 on OS sheet 033 for County Offaly. The area within the circle is referred to as the Zone of Archaeological Potential (ZAP) or zone of notification for that site. Its diameter can vary depending on the size and shape of the site but it averages out at approximately 180m. The RMP for Counties Offaly and Laois were published in 1995.

10.2.3.2 Sites and Monuments Record Database of the ASI

The purpose of the Archaeological Survey of Ireland (ASI) is to compile a baseline inventory of the known archaeological monuments in the State. It contains details of all monuments and places or sites known to the ASI which pre-date AD 1700, and a selection of monuments which post-date 1700. The large record archive and databases resulting from the survey are continually updated. This database, complete with maps, is available for consultation via the NMS website at www.archaeology.ie

10.2.3.3 The topographic files of the NMI

The topographical files for the townlands within the study area were searched. The topographic files hold information on finds of archaeological objects sorted by townland and are presented in the Heritage Maps (www.heritagemaps.ie). The online database presents only information to 2010, and additional finds may have been registered in the interim.

10.2.3.4 Offaly Development Plan 2021-2027 and Laois Development Plan 2021-2027

Development Plans outline the County Council's objectives with regard to the preservation of the archaeological, architectural and cultural heritage of the County. The plans also outline the Council's objectives regarding the protection of the archaeological heritage, including the protection of monuments listed in the Sites and Monuments Record and Record of Monuments and Places, by preservation in situ, or in exceptional cases, preservation by record.

Of particular relevance to the site under review is Objective BHP 22 of the Offaly Development Plan wherein it is stated;

It is Council policy to protect the industrial heritage of Offaly, including mills, historic industrial buildings, canals and historic bridges.

Objective AH 4 of the Laois Development Plan states that;

In areas of archaeological potential, where groundworks are proposed, ensure that all works are undertaken to the highest standard and the resultant information made publicly available. Developers will be required to have regard to Archaeology and Development: Guidelines for Good Practice for Developers in planning and executing development in sensitive areas. The Council favours the preservation in-situ of archaeological remains, where areas of archaeological potential are located in town centres or villages, preservation of archaeological remains by record will be considered.

10.2.3.5 National Inventory of Architectural Heritage (NIAH)

The National Inventory of Architectural Heritage was set up under the Convention for the Protection of the Architectural Heritage of Europe or the Granada Convention of 1985. It was established on a statutory basis under Section 2 of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. The work of the NIAH involves identifying and recording the architectural heritage of Ireland, from 1700 to the present day, in a systematic and consistent manner. It is divided into two parts; The Building Survey and Historic Garden Survey (www.buildingsofireland.ie). The main function of both is to identify and evaluate the State's architectural heritage in a uniform and consistent manner, so as to aid to its protection and conservation.

Under Section 53 of the Planning and Development Act 2000, all structures considered of regional, national or international importance within the survey are recommended for inclusion in the Record of Protected Structures by the Minister for Arts Heritage and the Gaeltacht. If this is not adopted by the local authority, the reasons must

be communicated to the Department. The Building and Historic Garden Survey for Counties Offaly and Laois are available online.

10.2.4 Statement on Limitations and Difficulties Encountered

No difficulties were encountered during the assessment process.

10.3 Baseline Environment

10.3.1 Mapping Overview

The mapping to accompany the text is presented as follows; **Figure 10.1** places the site within its geographical location, **Figure 10.2** presents the 10.85km long underground cable (UGC) route. Due to the linear nature of the proposal, the route has been subdivided into six individual units and the key to these is presented on **Figure 10.2**. Working from west to east, detailed maps are presented as follows; **Figures 10.3** and **Figure 10.4** present the western area followed by **Figure 10.5** which is a vertical aerial image on which the archaeological sites listed on the Sites and Moments Record (SMR) are indicated by red dots and structures listed in the National Inventory of Architectural Heritage (NIAH) are indicated by blue dots. **Figure 10.6** corresponds approximately to the area shown on the aerial photograph as it was recorded in the early to mid-nineteenth century on the first edition Ordnance Survey (OS) six-inch scale map.

The mid-section is presented in a similar format with **Figures 10.7** and **10.8** presenting the route and **Figure 10.9** with SMR and NIAH detail and **Figure 10.10** being first edition OS map.

The details of the eastern length are presented in **Figures 10.11** and **10.12**, with the SMR and NIAH information on the aerial image (**Figure 10.13**) and the first edition OS map on **Figure 10.14**.

The rationale for presenting the Site in six units arises from the length of the proposal and the rationale for juxtaposing the aerial image and the first edition OS maps is for ease of explanation with particular emphasis on the re-purposing of the redundant Grand Canal as roadways in the twentieth century. Many of the features of the route relate to the former canal. Inserts showing details from the 1910 edition of the Ordnance Survey maps are overlaid on the first editions maps by way of clarification of the evolution of features that emerged or changed in the latter half of the nineteenth century.

The photographs (**Plates 10.1-10.19**) are laid out from west to east by reference to the subsection maps, i.e. Plates **10.1-10.7** relate to the western length (**Figures 10.3 and 10.4**); **Plates 10.8-10.14** relate to the central portion (**Figures 10.7 and 10.8**) and **Plates 10.15 to 10.19** relate to the eastern section (**Figures 10.11 and 10.12**).

Figure 10.1 Site Location

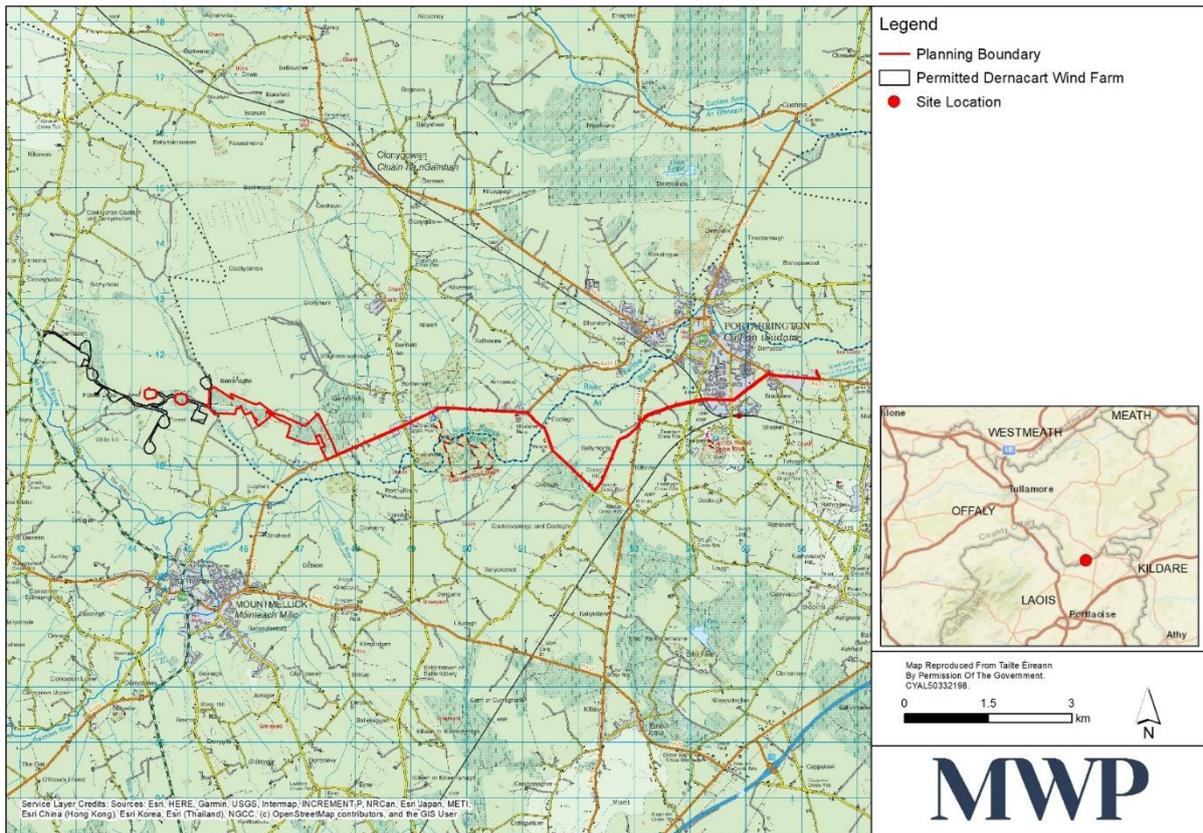
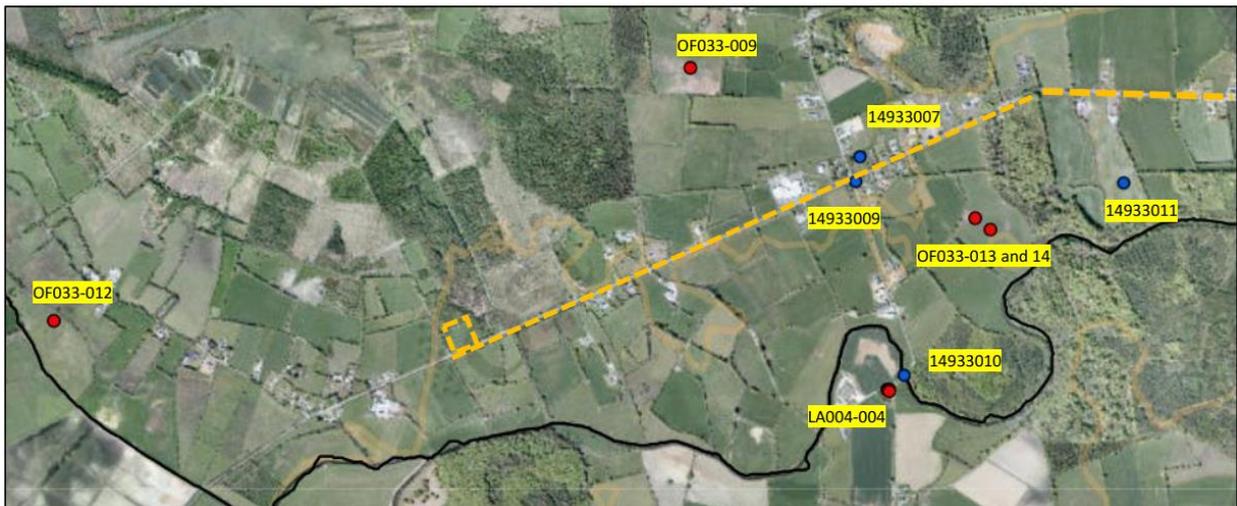


Figure 10.4 Section 2 of UGC route

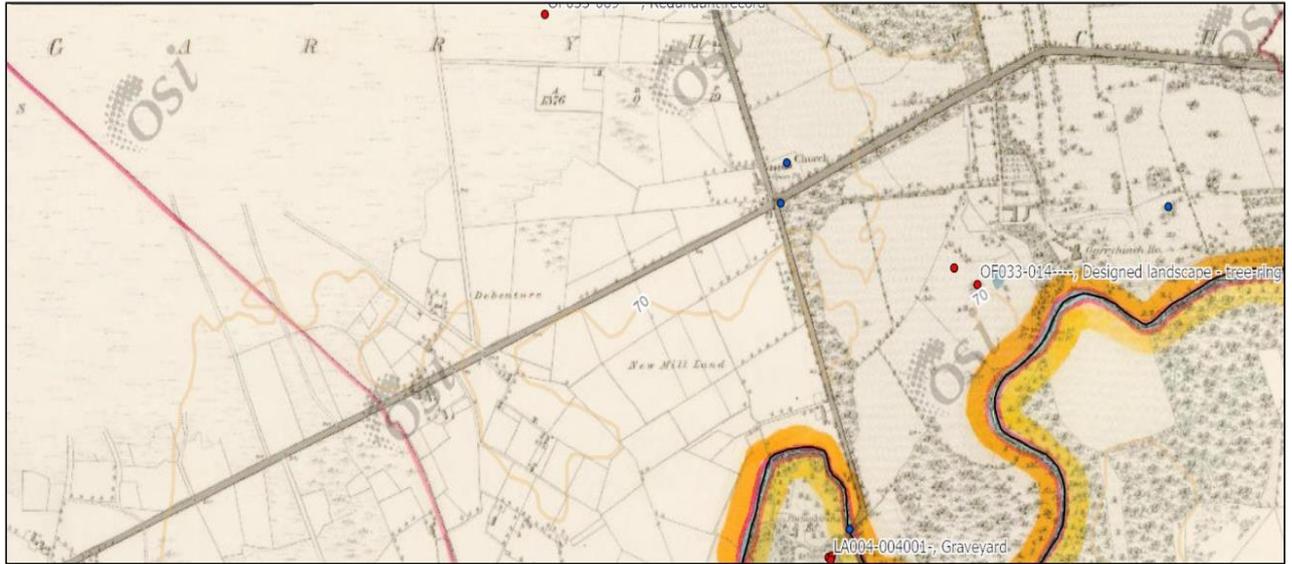


Figure 10.5 Recorded Monuments and Features (within Sections 1 & 2 of the UGC route)



Note: Aerial photograph with the red dots indicating the location of Recorded Monuments and blue dots indicating the location of features/structures listed on the National Inventory of Architecture (NIA), see Table 10.1 and 10.2 for details. The location of the proposed substation and UGC route are shown by the yellow dashed line

Figure 10.6 First edition OS map with the R432 running E-W central to the map



Note: The large area of bogland to the northwest (upper left) can be seen as a relatively featureless area by contrast with the former extensive designed landscape of Garryhinch Demesne

Figure 10.7 Section 3 of UGC route

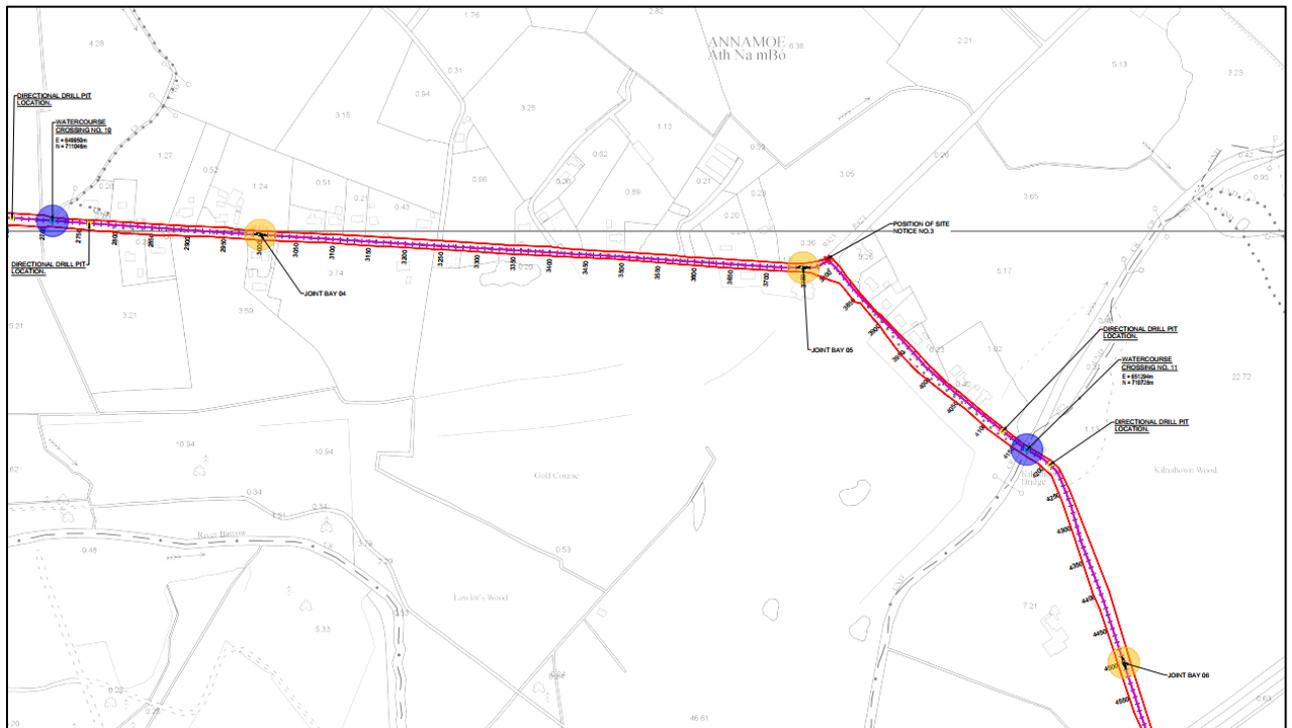


Figure 10.10 First Edition OS map with insert from second edition OS map showing the complicated of roads and canal and aqueduct at Blackhall Bridge

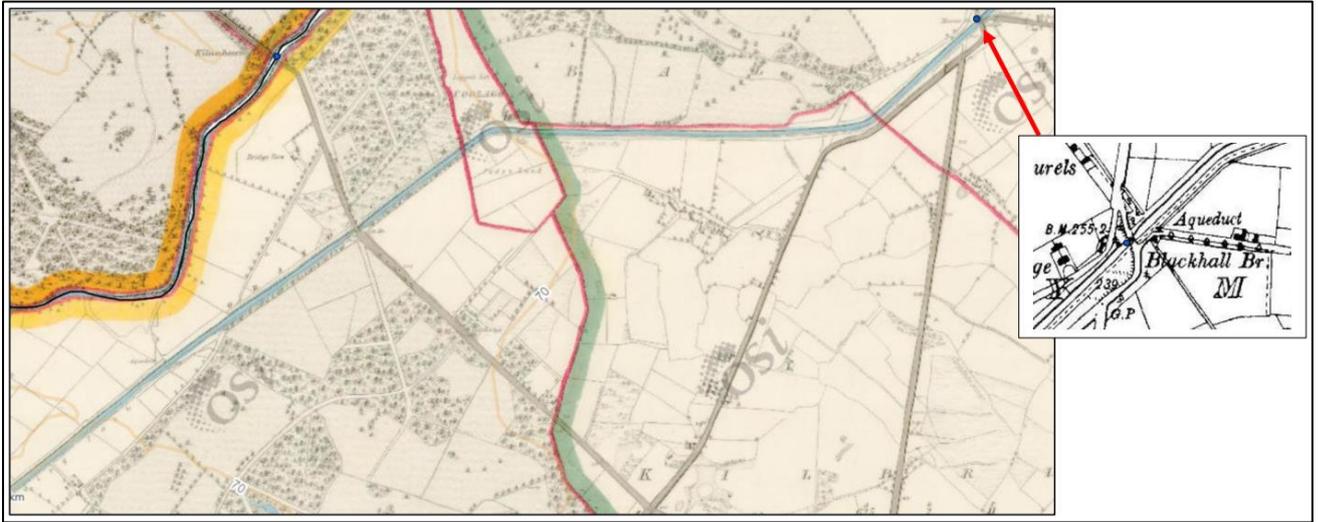


Figure 10.11 Section 5 of UGC route

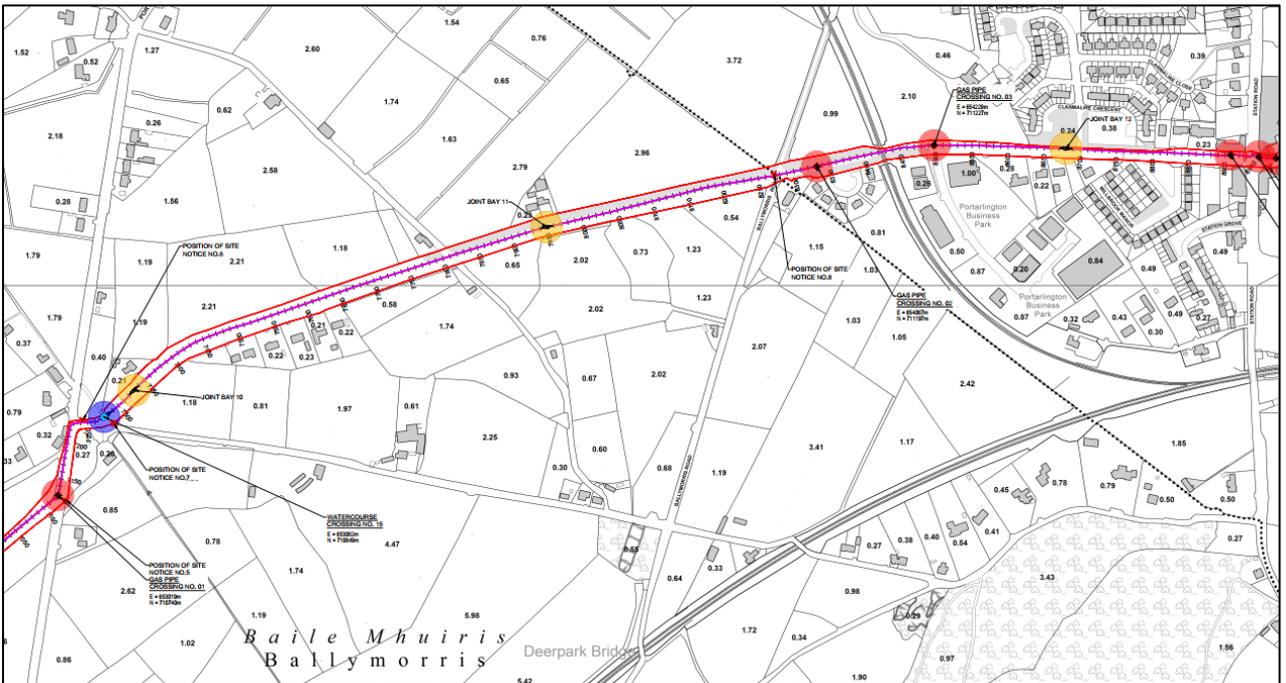


Figure 10.12 Section 6 of UGC route

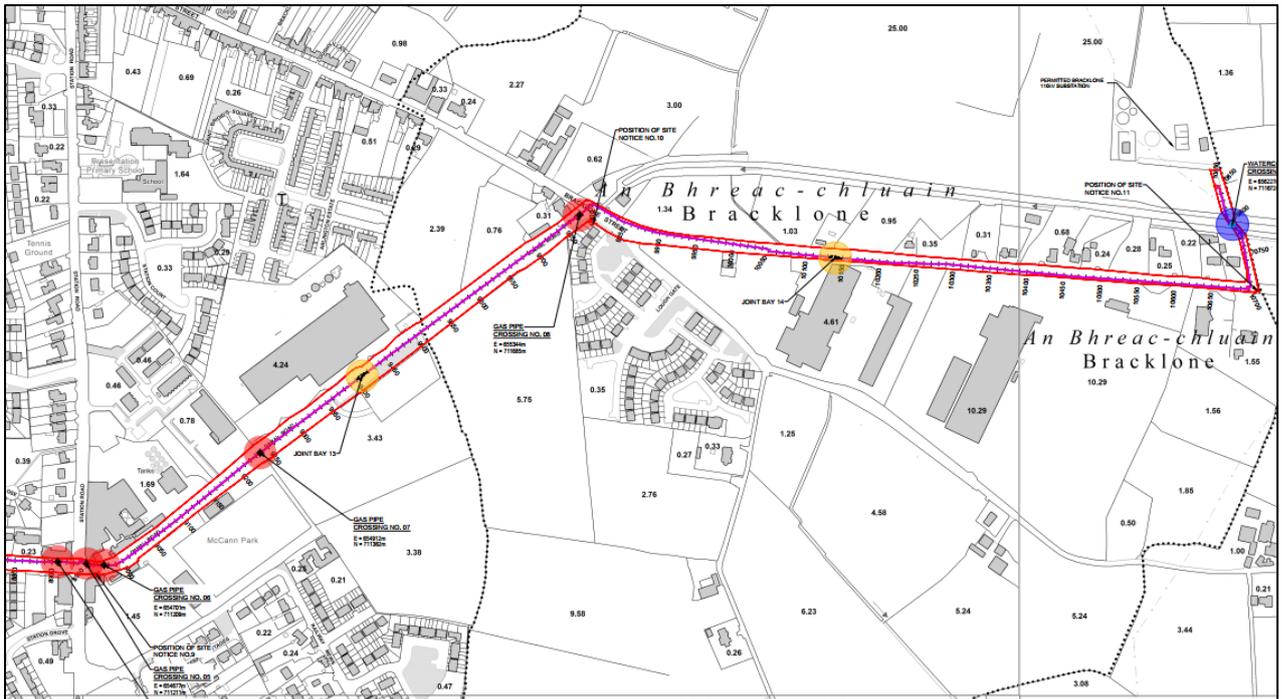


Figure 10.13 Recorded Monuments and Features (within Sections 1 & 2 of the UGC route)



Note: Aerial photograph with the red dots indicating the location of Recorded Monuments and blue dots indicating the location of features/structures listed on the National Inventory of Architecture (NIA), see Table 10.1 and 10.2 for details

Figure 10.14 First edition OS map with inserts from Second edition OS map showing the railway bridge named *Ballymorris Bridge* over the Canal (now Canal Road) and *Lock Bridge and Goods Shed* named at the junction of Canal Road and Lea Road

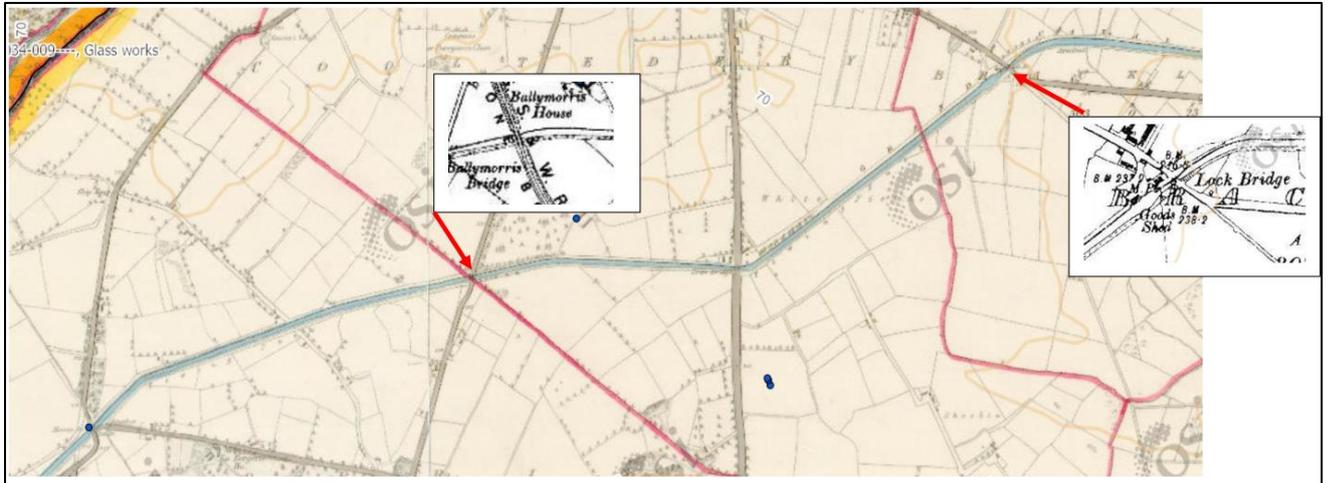


Plate 10.1 Looking NE at the forestry plantation and grassland to the NW of the proposed substation



Plate 10.2. Looking S/SE. The forestry is planted in former bogland and pasture land is on reclaimed bog



Plate 10.3 Deep water-filled ditched and regular drains characterise the forestry areas but much of it impenetrable



Plate 10.4 Looking N from the R423 over the field where the substation is proposed



Plate 10.5 The substation site is flanked by laneways to the east and west with parallel deep water filled ditches and an area of forestry and scrub on the eastern side of the substation site



Plate 10.6 Looking E from Garryhinch Crossroads along the R423 which runs on a low ridge flanked by many houses. Garryhinch Demesne lies to the south of the road (right)



Plate 10.7 The entrance gateway to Clonyhurk Church (NIAH 14933007) and graveyard. A post box (NIAH 1493309) is located in a wall at the opposite side of the road close to the crossroads



Plate 10.8 . Kilnahown Bridge (*NIAH 14933012 and RPS 52-05 Offaly & 825 Laois*) looking S. The low parapet walls have ashlar block coping stones. The bridge spans the River Barrow which is the boundary between Counties Offaly and Laois



Plate 10.9 Looking S from Kilnahown Bridge. The cable trench is likely to be drilled from the adjoining field deep beneath the riverbed, therefore a working area for the drilling is likely to be created in the land beside the roadway



Plate 10.10 Looking N at the NW side to Kilnahown Bridge, where the sub-river cable trench will reemerge or from where it may be drilled.



Plate 10.11 . Looking N from the infilled crossing point of the Grand Canal where a road (left of photo) has been created on the former canal route. A bridge once crossed the canal at this point.



Plate 10.12 . Looking S from the former canal crossing (see Plate 11), where the roadway runs through boggy land now planted with forestry on both sides of the road



Plate 10.13 Blackhall (*NIAH 12800401 and RPS 542*) looking NE, the old bridge over the canal is now redundant. The bridge was conserved and the surrounding area landscaped to enhance the bridge as a millennium project.



Plate 10.14 . Looking W beneath Blackhall Bridge from the infilled canal. The former towpath can be seen as a kerbed area on the left



Plate 10.15 *Ballymorris Bridge* is a railway bridge that once carried the Portarlinton to Tullamore line over Canal Road; the former course of the Grand Canal



Plate 10.16 A late 19th century good warehouse building stand on the northern side of Canal Road looking NW



Plate 10.17 Looking SW. Odlum's Mills (formerly Portarlinton Flour mill) flanks the northern side of Canal Road



Plate 10.18 Lea Road, looking E. The cable trench will run along the road margin

10.3.2 Receiving Environment

The western c. 2.7km of the proposed cable trench route (**Figures 10.3 and 10.4**) runs through an area of former bogland. The first edition OS map (**Figure 10.6**) gives a clear image of the pre-reclamation landscape; fields and houses are concentrated to the north and south of the R423 and the area to the northwest of this road is largely depicted devoid as landscape feature with the cartographic convention for marsh/bog covering a wide area in Derrynacart where the windfarm is proposed. Today, this area is a combination of low-lying grasslands and planted forestry (**Plates 10.1 and 10.2**). The landscape regime is maintained by a rectilinear pattern of land drains. Access to the area is via raised laneways.

The site of the proposed substation (**Plate 10.4**) is flanked by two of these laneways (**Plate 10.5**) and the area of the substation is partly in level pasture and the remainder in woodland. The land to the northwest of the proposed substation site has areas of rough pasture and impenetrable forestry flanked by a series of waterfilled drains (**Plate 10.3**).

The R423 road (**Plate 10.6**) follows a low ridge of mineral soil lying between the extensive bogland to the north and meandering course of the River Barrow to the south (**Figures 10.5 and 10.6**). The road margins in the drier areas have long attracted human settlement and today many domestic houses and businesses line the roadside.

The former Garryhinch Demesne lies to the south of the R423 and an impression of the scale and extent of the parkland is revealed by an examination of the first edition OS map (**Figure 10.6**) where in addition to the house

and outbuildings a variety of other structures such as gate-lodges are set in parkland with tree-lined avenues, while gardens specimen trees, groves and shelter belts characterise the designed landscape. Garryhinch House has long since been demolished, having been burnt in 1914, and the former demesne landscape is now developed as a golf course and the remained is intensively cultivated agricultural land and forestry with only a few vestiges of the former demesne landscape being apparent; amongst the remnants are an isolated ice-house (NIAH 14933011). Another feature within the former parkland of Garryhinch House is a circular area visible on an aerial photograph which is probably a former tree-ring and this element of the designed landscape is designated a Recorded Monument (OF033-014). One of the gateways to Garryhinch House is now the main entrance to Portarlington Golf Club; the gateway entrance has cut-stone low-walls, pillars with conical stone-caps and cast-iron curving railings but the gates have been replaced.

The gateway to Clonyhurk Church (NIAH 14933007) stands near the Garryhinch Crossroads (**Plate 10.7**) at the northeastern side and a post box (NIAH 14933009) is built into a wall on the southern side of the crossroads. Today the Church stands at a distance of 61m from the road surrounded by a lawn; an area that was marked as 'Grave Yard' on the first edition Ordnance Survey map (**Figure 10.6**) and the post box at a distance of c. 5m from the crossroads (see **Table 10.2** for details).

The central part of the proposed route is presented on **Figures 10.7** and **10.8** with the SMR and NIAH detail on **Figure 10.9** and the first edition detail on **Figure 10.10**. Kilnahown Bridge (NIAH 14933012 and RPS 52-05 Offaly & 825 Laois). The River Barrow is the county boundary between Laois and Offaly and therefore Kilnahown Bridge springs from either county and is roughly the midpoint of the study area (**Plates 10.8, 10.9** and **10.10**). The structure is four-arched masonry bridge built of random rubble in c. 1795, it has squared voussoirs and 'V'-shaped cutwaters.

Portarlington Golf Course lies on the northern banks (**Plate 10.10**) of the River Barrow and the cable route will follow the roadway flanking the golf course. To the south of the River Barrow a local road crosses the former route of the Mountmeelick Branch of the Grand Canal (**Figure 10.10**) where today a road junction marks the crossing point (**Plate 10.11** and **10.12**); the canal having long since being filled-in and the road bridge demolished.

To the south of this point the route follows a road through boggy ground (**Plate 10.12**) where today forestry has been planted in the bogland on both sides of the road. The route turns northwards to a junction at the Blackhall Canal bridge (**Figure 10.10** and **Plates 10.13** and **10.14**). While the canal bridge is iconic and the most recognisable Cultural Heritage feature on this length of cable route, a Gate Lodge (NIAH 12800404) to Woodbrook House (NIAH 12800403) stands 360m to the west of the cable route; Woodbrook House was built c. 1820, stands at a distance of c. 840m to the west of the cable route, but neither lodge nor house are visible from the cable route because of the woodland.

The former canal bridge now known as Blackhall Bridge (NIAH 12800401 and RPS 542, Laois) but formerly as Moore's Bridge has been conserved as part of a millennium project and a landscaped area developed to enhance the setting of the bridge. The roadway originally went over this bridge and the canal beneath (see **Figure 10.10**, insert); the towpath on the bank of the infilled canal can be seen beneath the bridge (**Plate 10.14**).

The eastern section of the cable route (**Figures 10.11** and **10.12**) runs from the Blackhall Bridge to Lea Road. The route follows Canal Road (**Plate 10.16**) which is the infilled former course of the canal. Many of the roadways in this area follow the route of the Grand Canal wherein the infilled canal was developed as new roads in the twentieth century (compare **Figures 10.13** and **10.14**).

The former course of the canal therefore has a significant bearing on the transportation network we see in this area today. For this reason, the Grand Canal is of particular relevance to the study area and hence the name 'Canal Road'. The Grand Canal was a significant feature of the area in the nineteenth century; and the shadow of the former canal remains strong, if not instantly recognisable, within the landscape. The Grand Canal, having been laid out after 1770 to link Dublin with the River Shannon, was a catalyst to the growth of many midland towns. The Mountmellick Branch of the Grand Canal was completed in the early nineteenth century (see **Figure 10.10** and **10.14**). The arrival of the railway to Portarlington in 1847 greatly reduced the significance of the canal as a key transport artery for the midlands, nevertheless, the canal continued in use into the early twentieth century for the transport of bulk cargo (see below for detail). Some of the buildings flanking Canal Road relate to its former use as a canal in particular Odum's Flour Mill (**Plate 10.17**) which was developed as Portarlington Flour mill after 1876. Proximity to the canal facilitated the economic success of the flour mill as flour was transported by canal barge from there to Dublin. A stone-built warehouse on the northern side of Canal Road (**Plate 10.18**) is a late nineteenth century goods building first depicted and named on the second edition OS map of 1910 (**Figure 10.14**, insert). A shallow dock or recess on the northern side of the canal adjoined this building.

From the 1840's onwards a railway network was developed throughout Ireland making redundant the existing canal system. The railways were to become the most significant means of transporting people and goods but the canals remained in-use for the transportation of heavy bulk cargos. A railway station was established at Portarlington on the main Dublin to Cork line, while a branch line ran northwest-wards from Portarlington via Tullamore. A railway bridge on the Portarlington to Tullamore line crossed the canal and this bridge still stands crossing over Canal Road (**Plate 10.15**).

A lock and bridge once stood where Canal Road joins Lea Road but today a roundabout mark this location. Lea Road (R32) is a relatively straight and flat road (**Plate 10.19**) running to the south of the former canal and the

cable route runs along this road to the point where it turns north and crosses the infilled line of the Grand Canal to reach the permitted Bracklone Substation (**Figure 10.12**).

10.3.3 Archaeology Background

Peatland areas are a characteristic feature of the Irish midlands. Many areas of former shallow peatland were cut and drained from the seventeenth century onwards and as such converted to agricultural land and the reclamation process was accelerated in the post-famine years of the 19th century when grants became available for large scale reclamation projects. The reclaimed areas of flat land are characterised by rectangular fields defined by straight streams or canals, often with a low bank on one side created from the up-cast. Such a system is apparent in the northwestern part of the site under review (**Plates 10.1-10.4**). The first edition OS map records the area as being largely bog (**Figure 10.6**) but the field layout already existed when the second edition of the OS map was produced in the mid-nineteenth century. Some of the field divisions had already been removed by the early twentieth century.

Southern Co. Offaly and northern Co. Laois is generally flat terrain with occasional glacial ridges (eskers) and hillocks. Peat bogs formerly occupied much of the low-lying ground (basin peats). The slow flowing meandering rivers were significant transport and communication arteries in ancient times. The rivers, especially those flanked by broad areas of bogland, were also significant barriers to overland transport and as such were frequently boundaries between provinces, counties, territories (baronies) and townland; the River Barrow in this area defines the boundaries between Co. Offaly and Co. Laois.

Most of the former bogs in this area of Co. Offaly are either reclaimed for agricultural land or for forestry and this situation characterises the western part of the area under review.

Occasionally pre-bog occupation, can be identified in areas of former bog. Pre-bogland occupation may include lake-shoreline Mesolithic sites, lake settlements (crannogs, Bronze Age to Medieval), transport routes across bogs (toghers or bog roads) which may date from the Bronze Age up to post medieval times.

Mesolithic (7000BC) shoreline-settlements are known to occur on the margins of former lakes which were subsequently covered by peat, examples are known from Lough Boora, Co. Offaly (Ryan 1980, 1981, 1984). Generally, these settlements are located on the upper surface of the mineral soils underlying the bogs which commenced growing since c. 7000BC. The Mesolithic camp sites tend to contain flint artefacts, axe heads as well as burnt mammal fish and bird bones.

By Neolithic times (c. 5000BC), the raised bogs of the midlands had grown considerably and appear to have been unattractive to human occupation.

By the Bronze Age, possible pressure on the population appears to have resulted in the construction of crannogs or lake settlements (Hencken 1936) but most of the crannogs appear to have been constructed in lakes and

marshes as defended homesteads within the Early Medieval period; as such they are mostly contemporary with ringforts. The subsequent draining of lakes, marshes, fens and peat land has resulted in crannogs appearing today as a simple mound in a lake or bog. Within bogs, evidence for crannogs is generally recognisable by the large concentrations of timbers, brushwood, wickerwork, straw and even bracken with possible occurrence of stone and other material used by the occupiers to build a raised platform enclosure and dwellings above the water level. Within reclaimed former bogs such sites often appear as similar to ringforts in the agricultural landscape.

Raised bogs were major obstacles to transport since Neolithic times (5,000BC) and ever since then trackways known as toghers have been constructed to facilitate transport, including both pedestrian and wheeled traffic. A variety of construction techniques have been employed in the construction of these toghers including oak planks resting on long runners (rails) or bunches of brushwood, layers of gravel were sometimes used especially in Co. Offaly. As the bogs continued to grow the many of the toghers were regularly built and replaced and therefore several levels may be represented in a bog.

As the bogs were largely intractable, rivers such as the River Barrow offered the only means of transport but the low-lying land on either side was generally unsuitable for prehistoric settlement as it was liable to flooding and this has resulted in an absence of archaeological monuments from such areas. Marginally higher land close to the banks of navigable rivers took on a significant role as strategic areas such as Lea Castle and the surrounding land in County Laois is one such area which became critical for the Anglo-Norman expansion into the midlands of Ireland. Areas of bogland or marginal land in Counties Offaly and Laois do not seem have been the subject of similar focus of settlement in medieval times.

In medieval times the midlands of Ireland was largely controlled by Gaelic clans; mostly the O'Moores and O'Connors, who had regularly raided the outlying castles and the English- Pale around Dublin. In the mid sixteenth century the English Crown fostered a policy of confiscation of Gaelic lands and sought to settle these with English colonists. The first of these schemes was the Plantation of what was then named King's County (now Offaly) and Queen's County (now Laois), after the new Catholic monarchs Philip and Mary I respectively. The new county towns were named Philipstown (now Daingean) and Maryborough (now Portlaoise). This plantation sought the colonial settlement by way of extending English control in what was seen as hostile regions of Ireland.

The plantation was not a great success because of attacks by the dispossessed Irish making it difficult to attracting people to settle in the new plantation. The nature of the new settlement was thus largely concentrated around military fortifications. The O'Moores and O'Connors had retreated to the hills and bogs and fought a local insurgency against the settlement for many years. In 1578, the English finally defeated the O'Moore clan at Mullaghmast in Laois, having invited them there for peace talks. Rory Oge O'Moore, the leader of rebellion in the area, was hunted down and killed later that year.

In 1775 the idea was first mooted of linking Dublin to the River Shannon by canal. In 1770 a group of noblemen and merchants decided to form a company to undertake the construction of a canal aimed initially at providing

fresh water for Dublin City and a water-bourn transport system to the countryside west of Dublin. The ultimate aim of the project was to link Dublin City to the River Shannon.

Work on the length of canal between Dublin and the River Liffey took place between 1773 & 1779. The canal from the Liffey to Dublin was opened to traffic in February 1779 (Delaney 1995, 21).

In 1783 work began on the Barrow Line, a branch of the Grand Canal leading south. By 1789, work was well advanced on the Monasterevan to Athy length of canal. The canal was opened to Daingean (then Philipstown) in 1797 and a year later to Tullamore. The canal opened up access for agricultural produce and passengers from the midlands to reach Dublin with unprecedented levels of speed, comfort and safety. With the advent of the canals Portarlinton and other midland thrived but ultimately the significance of the canals was eclipsed by the arrival of the railway lines in the mid-nineteenth century. Portarlinton was a significant railway junction.

10.3.4 Recorded Monuments in the vicinity of the Proposed Development

There are no known archaeological sites or monuments within the boundary of the proposed development or in the immediate vicinity. Several Recorded Monuments and Places (RMP) are located in the vicinity, mostly at distances of over 1km from the site boundary.

The nearest known monuments are listed in the **Table 10.1** below. The RMP number, monument classification, townland name and approximate distance from the site boundary are presented below.

Table 10.1 List of Recorded Monument in the vicinity of the proposal, The RMP number, county, townland name monument classification, and approximate distance boundary are given

RMP No.	County	Townland	ITM Co.	ITM Co	Classification	Six-inch map depiction	Distance to UGC
OF033-009	OFFALY	Garryhinch	648264	711139	Redundant record	Not indicated	574m
OF033-012	OFFALY	Barranaghs	646057	710259	Enclosure	Not indicated	760m
OF033-013	OFFALY	Garryhinch	649246	710614	Enclosure	Not indicated	294m

RMP No.	County	Townland	ITM Co.	ITM Co	Classification	Six-inch map depiction	Distance to UGC
OF033-014	OFFALY	Garryhinch	649302	710579	Designed landscape - tree-ring	Indicated	265m
LA005-004	LAOIS	Cooltedery	655309	712251	Castle - motte and bailey	Hachured	558m
LA005-005	LAOIS	Cooltedery	655273	712035	Enclosure	Not indicated	347m
OF034-009	OFFALY	Shanderry	652800	711692	Glassworks	'Glasshouse'	918m
LA004-002	LAOIS	Cooltedery	653449	711911	Redundant Record	Not indicated	833m
LA005-010002 <i>ALSO, NIAH 128005-01 And RPS 546</i>	LAOIS	Ballymorris	654339	710352	Folly (c. 1740), known as the Spire		867m
LA005-06	LAOIS	Lea	657026	712094	Castle	'in ruins'	994

Table 10.2 Information on Structures/buildings listed in the NIAN, each has a unique registration number.

Reg.No.	Original Use	In Use As	Townland	County	Date From	Date To	Rating	Distance to UGC
14933007	church/chapel	church/chapel	Garryhinch	OFFALY	1800	1840	National	61m
14933009	post box	post box	Garryhinch	OFFALY	1880	1900	Regional	5m
14933011	icehouse	n/A	Garryhinch	OFFALY	1780	1820	Regional	309m
14933012	Bridge (Kilnahown)	bridge	Garryhinch	OFFALY	1790	1800	Regional	Adjacent

149330 403	Woodbrook house	house	Coolnavarn oge/Coolag hy	LAOIS	1800	1830	Regional	840m
149330 2-4	Gate Lodge	n/a	Coolnavarn oge/Coolag hy	Laois	1870	1900	Regional	360m
128004 01	Bridge (Blackhall or Moore's)	bridge	Ballymorris	LAOIS	1820	1840	Regional	Adjacent
128005 02	railway station	railway station	Coolterery	LAOIS	1845	1855	National	72m
128005 03	foot bridge	foot bridge	Coolterery	LAOIS	1840	1880	Regional	264m
128005 04	post box	post box	Cooltedery	LAOIS	1880	1900	Regional	264m
128005 54	house	house	Cooltedery	LAOIS	1838	1843	Regional	264m

10.3.5 Stray Finds

Stray finds recorded from the Study Area as detailed on the National Museum of Ireland (NMI) online database hosted on Heritage Maps (<http://www.heritagemaps.ie>) were consulted as part of the study. It should be noted that this online database is partial only and current to 2010, and additional finds may have been registered for the Study Area in the interim. The finds included on the online NMI database include stone axe head (NMI Reg. No. 1979:69) in the townland of Bracklone, c. 1km from the cable route, a saddle quern in the townland of Forestlowe, c 1.5km to the west of the proposed substation. In the vicinity of Lea Castle c. 950m to the northeast several stray finds have been recorded and these include; a medieval knife/dagger, medieval Bronze mirror case, Bronze ring-pin and Bronze sword has been recorded c. 950m to the northeast of the proposal.

10.3.6 Recent Archaeological Work in the Area

The most recent archaeological investigation close to the site of the proposed UCG were archaeological testing in 2023 carried out by Alan Hakes (unpublished report Licence No 23E903), of Maurice F Hurley, Consultant Archaeologist on the permitted Bracklone 110kV Substation (Planning Ref. 20/638). Two area of the eleven trenches excavated contained evidence for burning and a small group of truncated and charred stakes; the function of the stakes was unclear but the form and the lack of associated archaeological features and artefacts suggest a relatively modern date (Hawkes Licence 23E903).

10.4 Assessment of Impacts and Effects

10.4.1 Construction Phase

Direct impacts tend to be mainly physical impacts resulting from the construction process and indirect impacts tend to be mainly visual. Direct impacts on the archaeological heritage are permanent as archaeology is a non-renewable resource.

There are no Recorded Monuments on the site of the substation or on/close to the chosen route.

Some monuments occur in the wider vicinity but two of these are of questionable archaeological identification; both are circular features (enclosures) apparent in aerial photographs and of these, one (OF033-014) is identified as a 'tree-ring' and therefore classified as 'designed landscape' and the other (OF033-013) is a possible 'tree-ring' classified as an 'enclosure'. Both of these features are within the former Garryhinch Demesne lying between the R423 and the River Barrow within a landscape that was once laid out as parkland with numerous belts and clumps of trees in a style fashionable in the later eighteenth century.

Of the buildings listed in the National Inventory of Architectural Heritage those closest to the cable route are bridges; in particular a functioning Kilanhown Bridge (NIAH 14933012) over the River Barrow and Blackhall Bridge (NIAH 12800401), a bridge over the former course of the Grand Canal and now a significance cultural heritage feature within the landscape. Other build features stand at a remove from the cable route, the closest being, a post box (NIAH 14933009) and Clonyhurk Church (NIAH 1433007), the gateway and graveyard which adjoin Garryhinch Crossroads (there is no indication that the graveyard ever exceeded the current curtilage of the churchyard). Other build features in the vicinity include an ice house (NIAH 14933011) with the former Garryhinch Demesne and Woodbrook House (NIAH 12800403) and gate-lodge (NIAH 1280404) at a considerable remove from the proposed route. Ballymossis Bridge, a railway bridge crossing Canal road is not listed in the NIAH but Ballymorris House is listed (NIAH 1280554) but lies over 800m to the north separated from the route by a more modern housing development.

As there will be no direct impact on upstanding known monuments or buildings, the greatest potential impact is on previously unidentified subsurface features and the subterrain build features of the Grand Canal. The risk of inadvertent impact on hitherto unknown buried archaeological material is always a possibility, however the chosen route by its nature on mainly existing roadsides has a limited archaeological potential. Excavation though or beside the infilled course of the Grand Canal has the potential to reveal former elements of the canal structure such as canal walls, towpaths, locks and elements of long since demolished bridges. The infilled Grand Canal is not a Recorded Monument but its cultural heritage significance is acknowledged in the Offaly and Laois Development Plans and therefore specific measures to mitigate potential impacts on this significant element of this industrial archaeological feature of the area should form an integral part of the project (see Mitigation, below).

10.4.2 Operational Phase

Indirect Impacts tend to be mainly visual. The only potential impacts will arise from the substation site. There are no Recorded Monuments in close proximity to the substation site and other archaeological monuments are at sufficient distances to ensure that issues of visual impact do not arise.

There would be no operational impacts on archaeology or cultural heritage associated with the wind farm collector cable and access road and the underground 110kV grid cable.

10.4.3 Decommissioning Phase

As appropriate measures to mitigate potential impact on the cultural heritage and archaeology will have been implemented in the course of the construction phase, no issues pertaining to cultural heritage and archaeology are likely to arise during the decommissioning phase.

10.4.4 Cumulative Impacts and Effects

There will be no cumulative impact arising from the Proposed Development.

Table 10.3: Summary of the Likely Potential Effects on Archaeology and Cultural Heritage

Phase	Impact	Quality of Effect	Significance	Spatial Extent	Duration
Construction	Known Archaeology	Neutral	Imperceptible	Local	Long term
	Unknown Archaeology	Negative	Indeterminable	Local/Regional	Permanent
Operational	Substation visual impact	Neutral	Imperceptible	Local	Long term
Decommissioning	Known Archaeology	Neutral	Imperceptible	Local	Long term
	Unknown Archaeology	Neutral	Imperceptible	Local/Regional	Long term

10.5 Mitigation and Monitoring Measures

10.5.1 Mitigation Measures

It is recommended that the appointed contractor will make provision for archaeological monitoring to be carried out under licence to the Department of Housing, Local Government and Heritage (DHLGH) and the National Museum of Ireland (NMI), and will ensure the full recognition of, and the proper excavation and recording of all archaeological soils features, finds and deposits which may be disturbed in the course of the works. All archaeological issues will be resolved to the satisfaction of the DHLGH and the NMI. The archaeologist should be provided with information on where and when the various elements and ground disturbance will take place.

Mitigation to offset the risk of damage Kilnahown Bridge and Blackhall Bridge (two structures listed in the NIAH), and subsurface elements of the former course of the Grand Canal, in particular will include recording, protection and monitoring of the sensitive fabric prior to and for the duration of the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate heritage specialist engaged by the appointed contractor in accordance with the methodology provided in The Construction Management Plan.

10.5.2 Monitoring Measures (If relevant)

The risk of inadvertent impact on hitherto unknown buried archaeological material can be mitigated by archaeological monitoring of ground works associated with the project. It is recommended that a condition reflecting the suggested mitigation may form part of any grant of planning permission.

10.6 Residual Impacts and Effects

The predicted residual effects as a result of the Proposed Project are likely to be not significant to imperceptible once the recommended mitigation measures have been implemented.

Table 10.4: Summary of Residual Effects on Archaeology and Cultural Heritage

Phase	Impact	Quality of Effect	Significance	Spatial Extent	Duration
Construction	Known Archaeology	Neutral	Imperceptible	Local	Long term
	Unknown Archaeology	Neutral	Not significant	Local/Regional	Long term
Operational	Substation visual impact	Neutral	Imperceptible	Local	Long term
Decommissioning	Known Archaeology	Neutral	Imperceptible	Local	Long term
	Unknown Archaeology	Neutral	Imperceptible	Local/Regional	Long term

10.7 Conclusion

The proposed cable trench route is 13.2km in length, for the most part following the course of existing roads for a length of c. 10.5km with of c. 2.7km off road at the western end (**Figures 10.1 and 10.2**). The route runs through two counties; County Offaly to the north of the River Barrow and County Laois to the south. The cable route crosses the River Barrow at Kilnahown Bridge (NIAH 14933012) with roughly equal distances of the route being to the north and south of the river. Within County Laois, much of the road network where the cable route is proposed follows the former course of the Grand Canal which was subsequently infilled in the process of creating new roads. The roadway in the western and central areas, particularly those in County Offaly, traverse a combination of mineral soil landscape (below c. 80m OD), or marginal bogland as well as the broad floodplain of the River Barrow. There are no Recorded Monuments in the immediate vicinity of the cable trench route (see **Figures 10.5, 10.6, 10.9, 10.10, 10.13 and 10.14**; red dots and **Table 10.1**). There are several built structures recorded in the National Inventory of Architecture in the wider vicinity but few are close to the proposed cable trench route; Kilnahown Bridge and Blackhall (formerly Moore’s) Bridge being the closest (see **Figure 10.5, 10.6, 10.9, 10.10, 10.13 and 10.14**; blue dots and **Table 10.2**). Only a few historic structures stand in the immediate proximity to the route and of these the bridges are the most significant cultural heritage resource that require particular consideration and mitigation relating to the project.

There will be no physical impact by the proposed development on the known recorded archaeology within the boundary limits of the proposed development footprint.

There is a possibility for direct impacts on unknown subsurface archaeology within the boundary limits of the proposed development during the construction phase. However, the risk of inadvertent impact on hitherto unknown buried archaeological material can be mitigated by archaeological monitoring of ground works associated with the project.

10.8 References

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