

10 CULTURAL HERITAGE

10.1 INTRODUCTION

This archaeological and wider cultural heritage chapter presents the results of an assessment of the impacts of a proposed development known as the Kilcumber Bridge 110kV substation, situated c.6km south west of Edenderry in Co. Offaly (**Figure 10-1**). The assessment was undertaken on behalf of Malachy Walsh and Partners, (MWP) and forms a constituent element of a wider Environmental Impact Assessment Report (EIAR) with regard to a planning application to construct the proposed development. The proposed development consists of a 110kV substation and grid connection, refer to **Chapter 2 Description of Proposed Development** for full details.

The assessment is a combination of desk-based research and the results of field walking to identify areas of archaeological / historic architectural / and wider cultural significance, likely to be impacted by the proposed substation. A description of the potential impacts is presented, and a number of mitigation measures are recommended where appropriate.

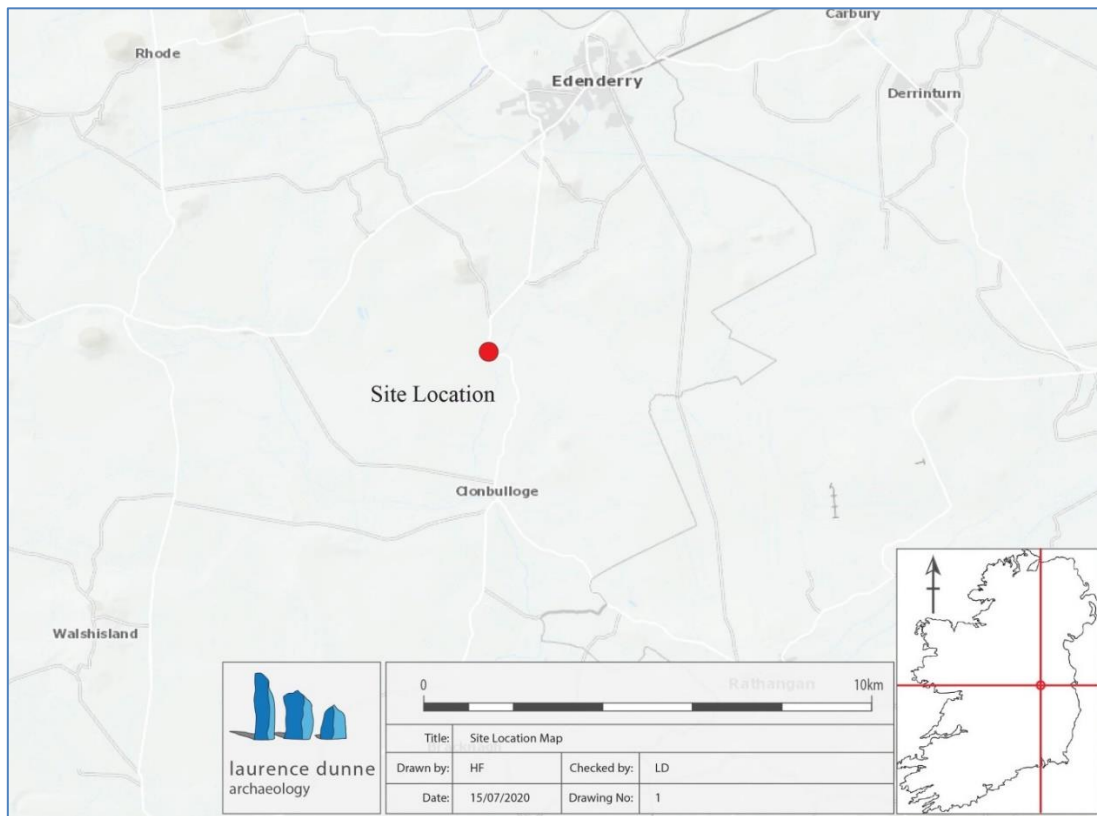


Figure 10-1: Kilcumber Bridge 110kV substation location.

10.2 SCOPE OF ASSESSMENT

10.2.1 General

This assessment report essentially comprises of three main parts viz: - (1) desk-based research of a 1.5 km radius study area encompassing the proposed development; (2) archaeological inspection of the location site of the proposed development; (3) mitigation of archaeological and wider cultural heritage impacts.

10.2.2 Statement on Limitations and Difficulties Encountered

No particular difficulties were encountered in preparing the assessment.

10.2.3 Conventions, Legislation and Guidelines

This AIA report was undertaken with due regard to:

- (National Monument Act, 1930, amended 1954, 1987, 1994 and 2004
- Heritage Act, 1995
- The Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous) Provisions Act, 1999.
- European Convention on the Protection of the Archaeological Heritage (the 'Valletta Convention') ratified by Ireland in 1997.
- Council of Europe Convention on the Protection of the Architectural Heritage of Europe (the 'Granada Convention') ratified by Ireland in 1997.
- Framework and Principles for the Protection of the Archaeological Heritage, 1999, Department of Arts, Heritage, Gaeltacht and the Islands.
- The Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous) Provisions Act, 1999.
- The conservation principles as set out by International Council on Monuments and Sites (ICOMOS) in the Venice and Burra Charters.
- The Architectural and Archaeological Heritage Objectives as detailed in the County Offaly Development Plan 2014-2020, Built Heritage Section.
- The publication in 2004 of the Architectural Heritage Protection-Guidelines for Planners by the Department of the Environment Heritage and Local Government (DoEHLG).
- The Advice Series-*A Guide to the Care of Older Buildings* published by the Architectural Heritage Advisory Unit of the DoEHLG, 2007-2011.
- The Handbook of the National Inventory of Architectural Heritage (NIAH) of March 2013.
- The publication in 2004 of the Architectural Heritage Protection-Guidelines for Planners by the Department of the Environment Heritage and Local Government (DoEHLG).

10.2.4 Competency of the Assessor

Laurence Dunne is an archaeologist licensed by the National Monuments Service since 1996. In that time, he has completed an extensive and diverse range of projects, the vast majority of which are development driven. Projects range from small scale single house constructions to large scale residential and major commercial developments, wind and solar farms, roadways, water and sewerage schemes, pipelines, inter-connector telecom and electrical cabling both terrestrial and undersea, coastal defence and channel deepening projects, dive surveys and shipwreck excavations. In a renewable energy context, he has completed numerous archaeological / cultural heritage sections for Environmental Impact Statements (EIS), Archaeological Impact Assessments (AIA, Licensed Excavations and Monitoring in Ireland relating to renewable energy. These include over 30 wind farms and 21 solar farms, battery storage compounds - many of which included assessments for linear grid cable connection routes.

10.3 METHODOLOGY

This assessment report was completed using a combination of (1) desk-based research of all available archaeological, historical, cultural and cartographic sources; (2) inspection of the limits of the proposed Kilcumber Bridge 110kV substation site.

10.3.1 Field Inspection

In that regard an initial inspection of the development site was undertaken in early May 2019 by two archaeologists. The site was re-inspected in November 2020 due to design revisions. Targeted low flown UAV imagery was also undertaken (see Aerial Imagery below).

10.3.2 Desk-based Assessment

The desk-based assessment is defined as a programme of study of the historic and prehistoric environment within a specified area or site that addresses agreed research and / or conservation objectives. It consists of an analysis of existing written, graphic, photographic and electronic information in order to identify the likely heritage assets, their interests and significance and the character of the study area.

This report comprises of three main components *viz*: - (1) a determination of the archaeological and wider cultural heritage asset of a c.1.5km radius study area encompassing the proposed Kilcumber Bridge 110kV substation; (2) an assessment of the proposed impacts by the construction of the proposed development on the cultural asset; (3) mitigation measures to offset direct or potential impacts.

The desk-based research included an assessment of a wide range of available archaeological, historical, cultural and cartographic and aerial photographic sources including:

- Sites and Monuments Records / Record of Monuments and Places

The Sites and Monuments Records (SMR) and Record of Monuments and Places (RMP) compiled by the Archaeological Survey of Ireland of the National Monuments Service (NMS) comprises lists, classifications of monuments and maps of all recorded monuments with known locations and zones of archaeological notification. The electronic database of recorded monuments can be accessed at www.archaeology.ie.

- Topographic Files of the National Museum of Ireland

The National Museum of Ireland (NMI) Topographic Files of artefacts found in Ireland by townland were examined as well as the online searchable browser database of artefacts on the Heritage Maps produced by the Heritage Council, www.heritagemaps.ie.

- Excavation Bulletin

The Excavations Bulletin and its online database which contains summaries of all archaeological excavations carried out in Ireland since 1970, was also examined. The information it contains are vital when examining the archaeological content of any area, which may not have been recorded under the SMR and RMP files. The Bulletin information is also available online (www.excavations.ie) from 1970-2020.

- Placename Studies

Placenames (Logainmneacha) are an important aspect of understanding the history and topography of a location particularly when used in association with the Ordnance Survey Name Books (OSNB). The general or baseline placename research source is an online GIS portal (www.logainm.ie).

- Historic Ordnance Survey mapping.

Several historic maps were examined including: the 17th century Down Survey Map and the 19th / 20th century historic Ordnance Survey Maps.

- Aerial Imagery

Aerial photographic coverage provides an initial information on the terrain and its likely archaeological potential and is an important source of information regarding the precise location of sites and their extent. A variety of aerial photography was examined including aerial orthophotos from the National Monuments Service, Ordnance Survey of Ireland websites, Bing Maps and Google Earth.

- National Inventory of Architectural Heritage (NIAH).

The purpose of the NIAH is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. The NIAH includes surveys of structures and designed landscapes of heritage value. This source lists some of the architecturally significant buildings and items of cultural heritage and is compiled on a county by county basis by the Department of the Culture, Heritage and the Gaeltacht. The NIAH database was consulted for all townlands within and adjacent to the study area.

- Offaly County Development Plan 2014-2020

The Offaly County Development Plan 2014-2020 was consulted for the schedule of buildings (Record of Protected Structures - RPS) and items of cultural, historical or archaeological interest which may be affected by the proposed substation. The townlands within and surrounding the study area were searched in the database of protected structures in the development plan to assess the proximity and potential impact of the proposed development on such structures. The development plan also outlines policies and objectives relating to the protection of the archaeological, historical and architectural heritage landscape of County Offaly.

10.4 EXISTING RECEIVING ENVIRONMENT

10.4.1 Location

The proposed Kilcumber Bridge 110kV substation complex comprises of a number of various structures including: Eirgrid compound and substation building, all of which are located in Ballykilleen townland. The proposed Kilcumber Bridge 110kV substation will be connected to the grid by a 400m 110kV overhead line (OHL) that will extend through the Cloncreen and Ballinowlart North townlands.

The proposed substation site is situated immediately adjacent to the R401 secondary road to the north east, opposite the Edenderry Power Plant and c.60m to the north west of Figile River (**Figure 10-2**). In that context, the proposed overhead line will be carried on new towers and will cross the river to the south of the site boundary c.180m south of Kilcumber Bridge. Full details are provided in **Chapter 2, Description of the Proposed Development**.

The site itself comprises of generally level pasture that was most likely reclaimed from bogland.

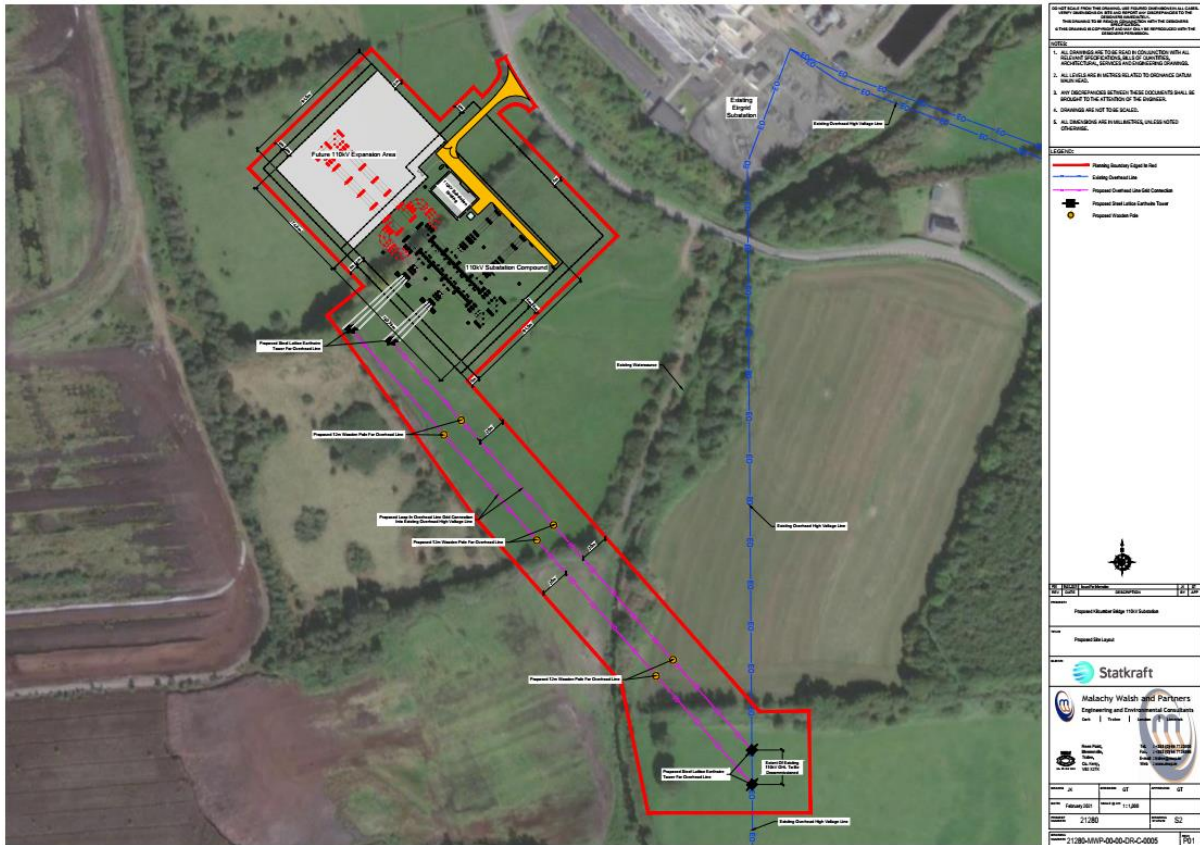


Figure 10-2: Site layout.

10.5 PLACENAMES

The medieval cantred of Offaly is descended from the ancient kingdom of the *Uí Failge* whose origins date from the at least the 6th century. The kings of the *Uí Failge* are recorded several times in the annals up to the arrival of the Anglo / Normans and may also have been kings of Leinster (MacCotter 2008, 174).

Townlands comprise the smallest unit of land division in the Irish landscape and many may preserve early Gaelic territorial boundaries that pre-date the Anglo-Norman conquest. The layout and nomenclature of the Irish townlands were recorded and standardised by the work of the Ordnance Survey in the 19th century. The Irish roots of townland names often refer to natural topographical features, but some name elements may also give an indication of the presence of past human activity within the townland. For instance, placename elements such as *lis*, *dun* and *rath* indicate the presence of a ringfort; while *kill* and *temple* suggest an association with a church site.

The OHL traverses over the Cloncreen townland, but no intrusive works are planned there. In the context of this study, the substation and grid connection will be located within two townlands: Ballykilleen and Ballinowlart North. Ballykilleen from Irish *Bhaile an Chillín* can be translated as the ‘townland of the church’ – *baile* – townland or homestead; *cillín* - little church; Ballinowlarth North from Irish *Bhaile an Abhalloirt Thuaidh* - *baile* - townland, homestead. The second element of the word *Abhalloirt* is not fully understood, one possibility recorded in 1837 gives it as *Abhail-Ghoirt* which might possibly be translated as the river of the brackish water (*abha* – river and *goirt*-brackish water). Both townlands are situated within the barony of Coolestown – ‘*Baile an Chúlaigh*’ which means

Cowley's or Cooley's town. According to Lewis (1837, 595b) during the 16th century Edenderry was named Cooley's town from the family who had a castle there (www.logainm.ie).

In a topographical context the proposed Kilcumber Bridge 110kV substation will be situated by the Figile River-*Abhainn Fhiodh Gaible* that is translated as the 'river of the wood' (*fiodh* - wood) (www.logainm.ie). However, logainm do not include the word *gaibhle* which to this author is the genitive of the word *gabhal* that translates as forked. Ultimately if one accepts that *fiodh* is derived from *fea* or *féith* it does not follow that this means wood as fé has several meanings of which withy, reed, osier are more appropriate given the local toponymy. In which case the more likely meaning of Figile River is possibly the 'forked reedy river'. The Figile River is furthermore recorded as the Cushaling River that also gives its name to the townland of the same name. Cushaling or *Cois Loinge* is a toponym and may refer to an ancient routeway 'along the river or pond'.

Kilcumber itself-*Coill Chomhair* most likely translates as the wood of the confluence (ibid).

10.6 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

10.6.1 General

There are no recorded monuments in the Sites and Monuments Records (SMR) of the National Monuments Service (NMS) online database within the boundary limits of the proposed development (www.archaeology.ie accessed on the 04-12-2020). However, in the wider c.1.5km radius study area encompassing the proposed substation (**Figure 10-3**), the SMR denotes is a cluster of 107 sites in the townland of Ballykilleen, generally situated c.0.8km NW of the proposed substation. With the exception of four sites, the vast majority of this cluster (103) were made redundant in 2011 and will not be included in the next revision of the SMR (ibid). The cluster of sites and the outlying enclosure OF019-003 were inspected in the course of the field work to establish possible cultural visual impacts by the proposed substation. However, field inspection revealed that none of these sites have a visible relict presence on the ground (**Plate 10-2** and see Section 10.8 below).

Ultimately, the four recorded archaeological monuments within the 1.5km radius study area comprise: -

1. Enclosure OF019-003 situated c.1.6km to the N of the proposed Kilcumber Bridge 110kV substation
2. Road-unclassified togher, OF019-009, c.1.2km to the N
3. Road-Class 1 togher, OF019-041, c.1.3km to the NW
4. Road, Class 3 togher, OF019-076, c.1.3km to the NNW

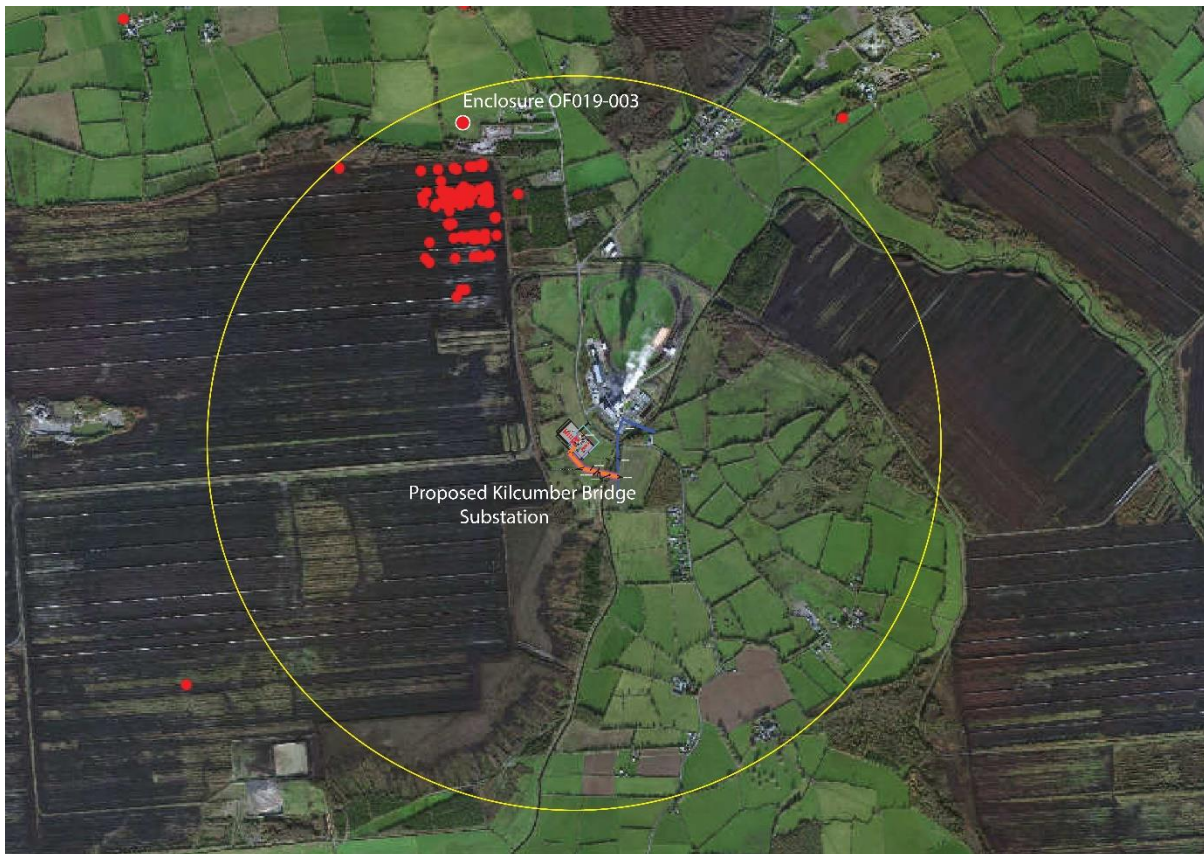


Figure 10-3: Recorded monuments of the wider 1.5km study area in proximity to the proposed substation.

10.7 PREHISTORY

The earliest evidence of human activity in Co. Offaly was discovered on the shore of Lough Boora (OF023-005) near Birr, c.55km to the SW of the proposed substation. The site at Lough Boora was excavated in 1977 by Dr. Michael Ryan and produced large numbers of artefacts including: microliths, cores, polished stone axeheads etc. dating to the Early Mesolithic period (Middle Stone Age) c.8,000 BC. Charcoal from hearths associated with the microliths produced four radiocarbon dates ranging from 7160-6260 Cal. BC. Other dates associated with environmental work at the site suggest that developing peat began to seal the habitation site around 6000BC (www.archaeology.ie; Ryan 1980).

10.8 ARCHAEOLOGY OF THE STUDY AREA IN PROXIMITY TO THE PROPOSED SUBSTATION

A cluster of 107 sites was recorded below a large hilltop enclosure on Ballykilleen Hill in Clonreen Bog in 2002. The area, situated close to Edenderry Power Station, was discovered by the Irish Wetland Archaeology Unit (IWAU) of University College Dublin (UCD) on peatland owned and operated by Bord Na Móna (**Figure 10-3 & Plate 10-1**). Several of the sites from the bog have been dated, with results ranging from the Early Neolithic, c.3500 BC, to the Late Bronze Age, c.600 BC. The majority of the sites appear to date to the Middle to Late Bronze Age. However, in 2011 these sites were re-assessed by the National Monuments Service (NMS) resulting in the vast majority (104) being made redundant and accordingly will not appear in subsequent revisions of the Record of Monuments & Places (RMP, www.archaeology.ie accessed 07-12-2020). Ultimately, of the current four recorded monuments within the study area, three are classified as toghers.

10.8.1 Toghers

Toghers otherwise referred to as ancient roads or bog-trackways were constructed across bogs and marshes and are often built of wood or stone or a combination of both. There are three general classes of togher, many of which have been dated with results known from differing archaeological periods, from the Neolithic to the Medieval period.

- The earliest ancient road in this study area is a Class 1 togher, OF019-041, that was radiocarbon dated to the Early Neolithic period, 3630-3143 cal. BC (ibid). The Class-1 type togher is situated within the Ballykilleen cluster of redundant sites c.1.30km to the NNW of Kilcumber Bridge. The SMR notes that *'The site (L 131.42m; Wth 1.39m; D 0.11m) is orientated NNW-SSE It is composed of longitudinal mixed brushwood with occasional transverses positioned above and below them. There is some variation in the density of the material used and in the width (Wth 0.42-1.32m) and depth (D 0.05-0.17m) of the site. At four of the sightings one or two pegs, set at 40-80°, secure the togher. At one point it is double pegged, i.e. one peg at one edge and, 0.64m away, two additional pegs placed side by side. One of these has some tearing and is cut to a wedge point, which has distinct stone toolmarks. At one location it lies in moderately humified Sphagnum peat with fibrous roots and some Eriophorum. This site has been radiocarbon dated to 3630-3143 cal. BC (Wk-11729). SMR OF019-108---- is 0.48m above is above this site 16m from the S end and SMR OF019-044---- is c. 0.2m above it 46m from the N end. SMR OF019-043---- is 4.8m E of the same part of the site'* (ibid).
- A second ancient road, OF019-009 recorded as an unclassified togher in the SMR, is *'situated on flat marshy land running alongside bogland. This site was not marked on any edition of the OS 6-inch maps. Trackway of split oak timbers discovered in field recently ploughed S of Ballykilleen fort (OF011-035----). The togher was traceable northwards towards the fort and consisted of split oak timbers on brushwood'* (ibid).
- The third ancient road, OF019-076, is classified as a Class 3 togher in the SMR. *'The site (L 3.88m min.; Wth 2.25m; D 0.31m) is orientated NNW-SSE and In the drain face, it consists of mixed brushwood, roundwoods and two pegs set at an 80° angle. The brushwood and roundwoods are laid longitudinally and are densely packed but occur in two distinct groups, 1.04m apart. At the W edge of the site, a peg appears to support and delimit the structure. To the E side a peg is situated 0.3m below the main body of the site but this may be due to machine damage. The site lies in moderately humified Sphagnum peat with a large amount of Eriophorum and some ericaceous remains'* (ibid).



Plate 10-1: Access track to the bog in Ballykilleen



Plate 10-2: View from SE of Bord Na Mona land at Ballykilleen (cluster of 104 sites, Figure 10-3).

10.8.2 Enclosure

The fourth recorded monument within the 1.5km radius study area comprises of an enclosure, OF019-003 (**Figure 10-3**). This monument is not depicted on 1st or 2nd Edition OSi maps but according to the SMR there are *'faint indications of an enclosing bank around a roughly oval area (max. dims. c. 40m E-W). Site shows on aerial photo (GSI N 454/5) as a slight earthwork enclosure'* (ibid).

None of the four recorded sites within the 1.5km radius study area have a coherent above ground physical or relict presence.

10.9 CARTOGRAPHIC RESEARCH

10.9.1 Down Survey Maps 1655

In the mid-17th century Ireland was in ruins, over 20% of the population was dead after twelve terrible years of war starting in 1641 at the outbreak of the Catholic Confederation Wars and ultimately resulting in victory for the English armies under Oliver Cromwell in 1652. Cromwell immediately set about an immense project of social engineering underpinned by a massive transfer of landownership from the native Catholics to English Protestants. For this to happen the land had to be accurately mapped and surveyed and this enormous undertaking was given to Wm. Petty who was surgeon-general in the English army. This was the largest land survey of its kind anywhere in the world at the time and was largely undertaken between 1655-1658 and was known as the Down Survey. The survey to measure all the forfeited land was necessary in order to facilitate its re-distribution to the ownership of the English Protestant grantees comprising merchant adventurers and also as payment to English soldiers (www.downsurvey.tcd.ie). For this to happen, an act known as the Act of Settlement of Ireland was passed on the 12th August 1652 that divided the defeated Catholic Royalists into eight different classes. The leaders of the first six classes not only forfeited their lands but were also sentenced to death. The seventh class represented swordsmen under the rank of gentlemen who forfeited two-thirds of their land while the eighth class were those who remained neutral and if Catholic, they lost one third and if Protestant they lost one twentieth. The forfeiting landowners were commanded to appear at Loughrea immediately after Christmas 1653 and to bring with them their Certificates of Transplantation issued by the Cromwellians.

The Down Survey records that the townland of Ballykilleen is located in Coolestown Barony in Kings County (Offaly) (**Figures 10-4, 10-5** and **Table 1**).



Figure 10-4: Extract from Down Survey map of the barony of Coolestown (www.downsurvey.tcd.ie).

The Down Survey record that ‘the Barony of Coolestowne in the Kings Countie Is bounded on the East and South with the County of Kildare, on the West with the Barrony of Phillipstowne and with the Barrony of Warrenstowne in the North. The quality of the soyle thereof is for the most part ffertile and shereing the industrious husbandmans paines and expectations with plentious cropp, it consisting of arrable pasture and woodland, the timber standing thereupon being a convenient covert for cattle in extremity of heate and cold, profitable to the adjacent inhabitants and at all times a decoration and ornament to the said Barony. It is watered with a notable river called Ihny on the South and Weste parte and with the no less famous River Boyne which abounds with Eales and Troutes, on the Northeast parte the which with some other small rivulets smoothly glide through the hearte of this Barrony refreshing the islands with these pleasant streames and discharge themselves into the River Inny aforsaid. Some few red boggs there are but not any considerable. There are contained within this Barony the parrishes of Monasteroris and Ballinekill, parte of the Parish of Rathangan called Moyligh and the Parish of Clonsast. There are noe townes corporate or other speciall or remarkable observations in the same save what are expressed in the descriptions of the aforesaid parrishes’ (www.downsurvey.tcd.ie).

Table 1: Down Survey data on the Ballykilleen and Ballinowlart North townlands.

Townland	Down Survey Name	Parish	1641	1670	Additional info
Ballykilleen	Ballykillin	Monasteroris & Ballinekill	Protestant Sir William Colley of Dendery	Protestant Sir George Blundell & Possibly Capt Henry Sankey	Unprofitable land: 60 plantation acres. Profitable land: 150 plantation acres
Ballinowlart North	Clonebolge & Cloonemoore	Rathangan	Fitzgarratt, Thomas (Catholic)	Purefoy, Lt Col William (Protestant)	-

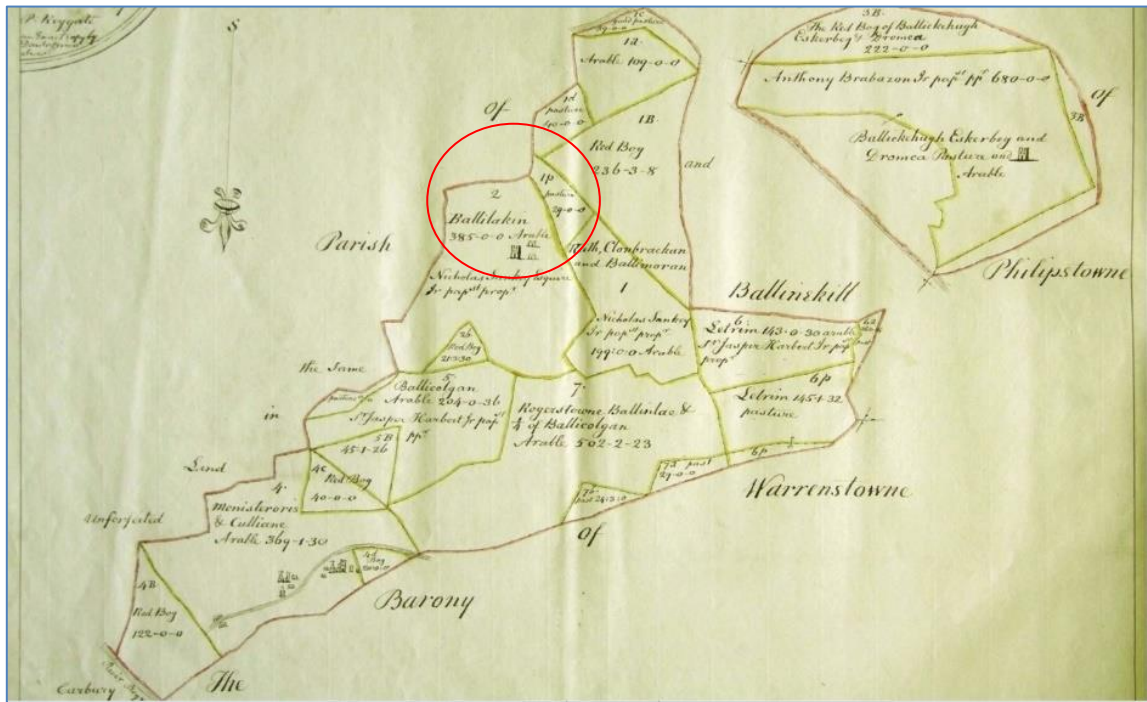


Figure 10-5: Extract from Down Survey map of Monesteroris & Ballinekill parish. Note Ballyleakin Castle encircled (www.downsurvey.tcd.ie).

10.10 HISTORIC ORDNANCE SURVEY MAPS

10.10.1 Archaeology

Examination of the proposed substation site on the pre-famine 1st Edition OSi 6” map revealed no archaeological monuments within the study area (Figures 10-6, 10-7).

10.10.2 Built Heritage

In an historic architectural context, Kilcumber Bridge (which gives its name to the proposed substation), is situated c.70m to the NE of the proposed substation complex and c.180m N of the proposed overhead power line grid connection.

Kilcumber Bridge is recorded in the National Inventory of Architectural Heritage (NIAH), Reg. No. 14919004, (Figure 10-6, 10-7 and Plate 10-6). It is also listed in Record of Protected Structures (RPS) in County Offaly Development 2014-2020.

On the pre-famine 1st Ed. OSi 6” map Kilcumber Bridge is denoted with five-breakwaters extending over the Figile River (Figure 10.6). The NIAH describe the bridge as a ‘Double-arched road bridge, built c.1850, carrying the Edenderry Clonbullogue (road?) over the River Figile. Roughly dressed coursed limestone blocks to piers, abutments and cutwaters. C-shaped cutwaters with string course to upstream and downstream. Rusticated limestone block string course. Segmental profile arches. Voussoirs rusticated. Spandrels of squared random rubble. Parapets coped with roughly dressed limestone blocks. Middle spandrel upstream and parapet rebuilt in mass concrete with missing string course at this point. The stonework of Kilcumber bridge is executed to a high standard. Despite later concrete repairs, the bridge is of significance. It is the only example on the River Figile which has an association with the Board of Works and Barrow drainage scheme. It may also be on the site of an earlier late eighteenth-/early nineteenth-century bridge’ (www.buildingsofireland.ie).

There will be no impact by the proposed development on Kilcumber Bridge.

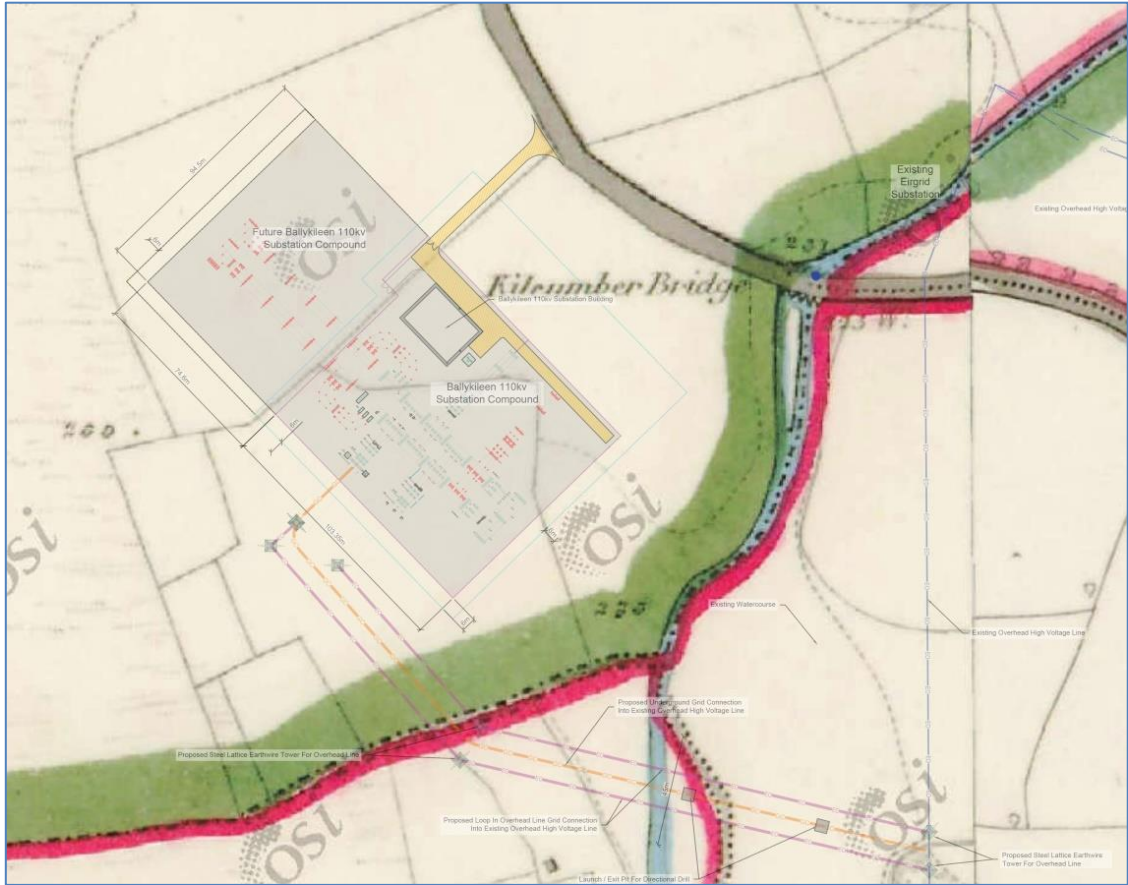


Figure 10-6: Proposed Kilcumber Bridge 110kV substation site overlain on the pre-famine 1st Ed. OSi map, of c.1840.

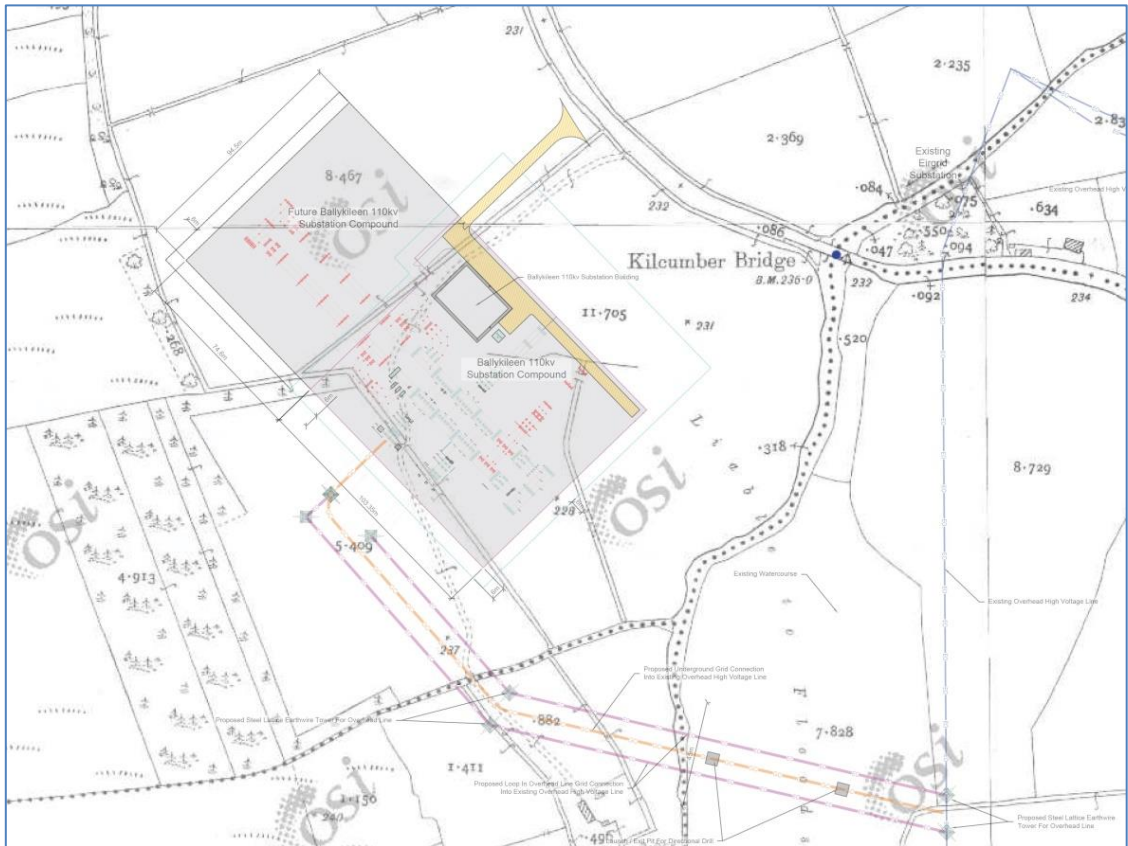


Figure 10-7: Proposed Kilcumber Bridge 110kV substation site overlain on the 2nd Ed. OSi map.



Plate 10-3: View from N of Kilcumber Bridge (LDARCH).

10.11 EXCAVATIONS IRELAND DATABASE

Examination of the online database of licensed excavations undertaken in Ireland recorded no entries within the limits of the proposed development or within the townland of Ballinowlart North, However, there is a series of records in the excavations database for Ballykilleen townland (www.excavations.ie):

- Licence No. 08E0884/ Cushaling. Archaeological monitoring of alterations to the existing 110kV electrical transformer station were undertaken at Ballykilleen, Edenderry Road, Co. Offaly. The development area was located 600m south-east of c.100 archaeological sites identified during the Peatland Survey of 2002. The stripping of the current hardcore surface followed by the excavation of a number of foundation pads for electrical structures within the existing substation was monitored. The area had been heavily disturbed and nothing of archaeological significance was noted.
- Excavations under Licence No. 03E0869 were carried out in Ballykilleen townland to investigate five features previously recorded by the Irish Archaeological Wetland Unit (IAWU) of UCD viz: OF-BKL0027, OF-BKL0028, OF-BKL0029 OF-BKL0032 & OF-BKL0034. The features were identified as a secondary togher orientated east-west (OF-BKL0027), a tertiary togher orientated north-south (OF-BKL0028), a tertiary togher orientated north-north-west/south-south-east (OF-BKL0029), an archaeological complex (OF-BKL0032) and a tertiary togher orientated east-west (OF-BKL0034). Excavations found no trace of OF-BKL0034. Site OF-BKL0032 was found to be a rectangular platform of dual-layered brushwood incorporating one small portion of a split timber in the upper layer. The upper layer of the platform was badly damaged by milling and the platform measured roughly 5m by 7.6m. Site OF-BKL0029 was found to be a togher of brushwood incorporating a small hurdle panel orientated north-north-west/south-south-east and possibly providing a link between the platform and OF-BKL0027. Sites OF-BKL0027 and OF-BKL0028 are likely to be part of the same togher. They were both composed of brushwood laid transversely to form an east-west walking surface. There was some evidence for a brushwood and peg substructure at its western end, where it joined OF-

BKL0029, and further to the east a small hurdle panel was incorporated into the structure over a patch of particularly wet bog.

- Three features identified by the IAWU in 2002 were excavated under Licence No. 03E0906 in Ballykilleen townland. The sites are situated in Cloncreen Bog, a Bord na Móna production bog. These sites were identified as two tertiary toghers and worked wood in situ. A single cutting was excavated for each site. The two toghers appear to be part of the same togher, orientated north-west/south-east. Both cuttings revealed an arrangement of longitudinally laid brushwood. The worked wood in situ was composed of brushwood elements in no discernible pattern, some of which exhibited toolmarks.
- Features identified by the IAWU in 2002 were selected for excavation under Licence No. 03E0983 following a survey by the Irish Archaeological Wetland Unit (IAWU) in 2002. The sites are situated in Cloncreen Bog, a Bord na Móna production bog, and were selected for excavation in the summer of 2003. Two 4m by 5m cuttings were excavated. The first cutting above a sighting in the drain face contained no archaeological material, probably due to the proximity of the main north-south drainage channel. The second cutting contained part of a split timber trackway orientated north-north-west/south-south-east. The timbers were laid longitudinally, with transverse roundwood elements and brushwood beneath them. This site was traced north for a further field. A c. 75m length of this trackway survives.
- Following a survey by the Irish Archaeological Wetland Unit (IAWU) in 2002 of Cloncreen Bog, a Bord na Móna production bog, a number of sites were selected for excavation in the summer of 2003 under Licence No. 03E0984. These sites were identified as a primary togher, dated to 3630-3143 cal. BC, a possible tertiary togher orientated north-east/south-west incorporating a notched timber artefact, a tertiary togher orientated north-east/south-west, unworked wood in situ, a tertiary togher orientated north-south and another tertiary togher orientated north-south. Seven cuttings were excavated in this group of sites.

10.12 ARCHAEOLOGICAL LANDSCAPES

Examination of the Offaly County Council Built Heritage section (Chapter 10) of the Offaly County Development Plan, 2014-2020 revealed that the proposed development is not situated within a designated archaeological landscape.

10.13 NATIONAL MUSEUM OF IRELAND (NMI) TOPOGRAPHIC FILES

Examination of the artefact finds records held by the National Museum of Ireland (NMI) revealed no records within limits of Ballykilleen or Ballinowlart North townlands (www.heritagemaps.ie).

10.14 FIELD INSPECTION

Field inspection of the proposed Kilcumber Bridge 110kV substation was undertaken by two archaeologists in May 2019, following initial baseline research. Additional field inspections took place in June and September 2019. Furthermore, the route of the proposed overhead power line grid connection was inspected in November 2020, due to design revisions.

The proposed substation site comprises of generally level pasture fields immediately opposite and SW of the Edenderry Power Plant (**Figure 10-2** and **Plates 10-3, 10-4, 10-5**). Inspection of the proposed Kilcumber Bridge 110kV substation site revealed nothing of archaeological interest.

The proposed grid connection route and associated new towers for the overhead power lines are situated at the southern limits of the site. This c.330m long grid connection route will extend from the proposed new substation over the Figle River and connect to the existing overhead lines. The proposed grid connection route was inspected with negative archaeological results.



Plate 10-4: Proposed Kilcumber Bridge 110kV substation site (from E)



Plate 10-5: Oblique low flown aerial image from SE of the proposed Kilcumber Bridge 110kV substation site (LDARCH).



Plate 10-6: Oblique low flown aerial image from S of the proposed Kilcumber Bridge 110kV substation site opposite Edenderry Power Plant (LDARCH).

10.15 LIKELY SIGNIFICANT IMPACTS

10.15.1 General

Likely significant impact refers to a ‘physical effect’ on a monument or site. The construction phase of the proposed Kilcumber Bridge 110kV substation will consist of substantial topsoil clearance and possibly substantive quantities of underlying peat / bogland as well. None of these works will impact on any of the four recorded monuments in the 1.5km radius study area as they are situated c.1.3km to the N of the proposed substation. However, given the number of previously recorded monuments discovered in the peatland in Ballykilleen townland, the likely significant impacts on unknown potential archaeological sites, features and artefacts is classified as medium to high.

10.15.2 Likely Impacts on the known recorded archaeology, unknown potential archaeology and wider cultural heritage

10.15.2.1 Construction Phase

- There are no recorded archaeological monuments or artefacts known or recorded within the proposed Kilcumber Bridge 110kV substation site. However, examination of the wider study area and particularly from Ballykilleen townland itself, demonstrates that the area has been occupied from at least the Neolithic period.
- Furthermore, the close proximity of the proposed substation to the Figile/Cushaling River is indicative of an enhanced subsurface archaeological potential associated with better quality land and wider riverine resources (fishing, hunting, travel and access). In that context, the potential of encountering sub-surface archaeology during the construction of the substation is considered to be medium to high.

- There is no anticipated impact on the historic bridge structure during the construction phase as Kilcumber Bridge is situated c.70m from the nearest proposed structure in the site limits and c.180m from the proposed grid connection.

10.15.3 Operational Phase

- There will be no cultural visual impact (CVI) on the four recorded sites in the 1.5km radius study area encompassing the proposed Kilcumber Bridge 110kV substation.

10.15.4 Do-Nothing Scenario

The wider archaeological and cultural heritage landscape will remain intact and uninterrupted if the project goes ahead or not.

10.15.5 Decommissioning Phase

The de-commissioning of the proposed substation will have no impact as any current potential subsurface archaeology will have been mitigated for in advance of construction. Furthermore the development will be come a permanent feature on the Irish electrical grid.

10.15.6 Risk of major accidents and disasters

There is no anticipated risk to the integrity of the known recorded archaeology encompassing Kilcumber Bridge 110kV substation in the event of a major accident or disaster.

10.15.7 Cultural Visual Impacts

There will be no cultural visual impact (CVI) or diminution of or interruption of alignment views by the Kilcumber Bridge 110kV substation on the four known recorded monuments in the wider 1.5km radius study area as they have no coherent above ground register.

The enclosure OF019-003 situated c.1.44km to the north of substation site is barely visible on the surface with little or no physical above ground register. Any residual potential cultural view has already been impacted by the nearby Bord na Móna Edenderry Power Plant.

10.15.8 Cumulative Impacts

Cumulative impacts is the addition of other small impacts to create one larger or more significant impact. In addition to the proposed Kilcumber Bridge 110kV substation development there is the existing Edenderry Power station situated beside it as well as the proposed but as yet unbuilt Cushaling Wind Farm nearby. In that context, it is anticipated that there will be no increased cumulative impacts upon the archaeological, architectural or wider cultural heritage resource / asset of the 1.5km study area.

10.16 RESIDUAL IMPACTS

No cultural heritage residual impacts are anticipated.

10.17 MITIGATION

- Licensed archaeological test excavations should be undertaken in advance of the construction of the Kilcumber Bridge 110kV substation.
- Licensed archaeological test excavations should be undertaken in advance of construction of the proposed towers for the overhead line grid connection.
- Should archaeology be discovered in any of the proposed licensed testing, additional archaeological work, including excavation, may be required. A decision on the extent and nature of the additional archaeology will be determined following submission of an interim report and response from the NMS and National Museum of Ireland (NMI).

10.18 CONCLUSIONS

- There are no recorded monuments within the boundary limits of the proposed Kilcumber Bridge 110kV substation.
- Given, the substantial number of previous archaeological sites discovered in the nearby peatland in Ballykilleen townland, there is a medium to high possibility that the construction phase of the proposed substation will substantially impact on this as yet unknown potential subsurface archaeology as detailed in this report. However, the proposed mitigation strategy of pre-construction licensed archaeological testing should offset these possible impacts to varying degrees.
- There is no impact anticipated on Kilcumber Bridge by the construction phase as the bridge is situated c.70m from the nearest proposed substation structure.

10.19 REFERENCES

Excavations Database, www.excavations.ie

County Offaly Development Plan 2014-2020

Down Survey Maps (c.1655), www.downsurvey.tcd.ie

Dunne, L. (2018). *Cushaling Wind Farm, Chapter 12 Cultural Heritage section of EIAR*. Unpublished report by Laurence Dunne archaeology on behalf of Malachy Walsh & Partners.

Griffiths Valuation Map 1853, www.askaboutireland.ie

Herity, M. (1993). *Mottes and Mounds at Royal Sites in Ireland*. JRSAL, Vol. 123 pp.127-151.

Lewis, S. (1837). *Topographical Dictionary of Ireland*. Stationery Office, London.

MacCotter, P. (2008). *Medieval Ireland*. Four Courts Press, Dublin.

National Monuments Service online sites and monuments records database, www.archaeology.ie

O'Flanagan, Rev. M. (Compiler) 1933 Letters containing information relative to the antiquities of the King's County collected during the progress of the Ordnance Survey in 1839. Bray.

Ordnance Survey online historic mapping, www.osi.ie, 1st Edition 6" maps for County Offaly, coloured series 1840.

Ordnance Survey online historic mapping, www.osi.ie, 2nd Edition 1896.

Record of Monuments and Places Constraints Maps, Co. Offaly & Co. Kildare, based on revised 1914 Ed OS. Archaeological Survey of Ireland, Office of Public Works, Dublin, 1997.

Ryan, M. (1980). *An Early Mesolithic site in the Irish midlands Lough Boora, Co. Offaly*. *Antiquity* 54.

Sites & Monuments Records online monuments database of the National Monuments Service, www.archaeology.ie

Topographical Files of artefacts recovered in Ireland in the National Museum of Ireland by townland (www.heritagemaps.ie).