

East Meath - North Dublin Grid Upgrade Environmental Impact Assessment Report (EIAR): Volume 2

Chapter 13 – Archaeology, Architectural Heritage and Cultural Heritage

EirGrid

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13. Archaeology, Architectural Heritage and Cultural Heritage

13.1 Introduction

This Chapter presents the assessment of the likely potential impacts of the East Meath - North Dublin Grid Upgrade (hereafter referred to as the Proposed Development) on archaeology, architectural heritage and cultural heritage during the Construction and Operational Phases. A full description of the Proposed Development is provided in Chapter 4 (Proposed Development Description) in Volume 2 of this Environmental Impact Assessment Report (EIAR).

In line with the guidance in Cultural Heritage Guidelines for Electricity Transmission Projects (EirGrid 2015), cultural heritage has been assessed under the following topics:

- Archaeology - defined as *"the study of past societies through the material remains left by those societies and the evidence of their environment. The 'archaeological heritage' consists of such material remains (whether in the form of sites and monuments or artefacts in the sense of moveable objects) and environmental evidence"* (EirGrid 2015, page 5);
- Architectural Heritage - comprising *"all structures and buildings (together with their settings and attendant grounds, fixtures and fittings, groups of such structures and buildings and sites), which are of architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. Architectural heritage is generally visible and has a presence in the landscape which requires assessment"* (EirGrid 2015, page 6); and
- Cultural Heritage - defined as *"a general term used to describe aspects of the environment and intangible heritage which are valued for their age, beauty, history or tradition. It encompasses aspects of archaeology, architecture, history, landscape and garden design, folklore and tradition and topography. Cultural heritage is expressed in the physical landscape in numerous often interrelated ways"* (EirGrid 2015, page 6).

Cultural heritage assets can be designated or non-designated and are defined as:

"...places and objects of aesthetic, cultural, historic, scientific, social or spiritual value. They include recorded archaeological monuments (RMP), national monuments, UNESCO world heritage sites (WHS), tentative WHS known and unknown surface and subsurface archaeological remains, protected structures, designed landscapes, architectural conservation areas (ACAs), NIAH building and garden survey sites, structures of architectural heritage merit (vernacular, urban and rural), cultural heritage features, placenames, language and inherited traditions" (EirGrid 2015).

Section 13.2 provides the methodology used for the assessment. Section 13.3 presents information on the baseline environment, and Section 13.4 presents the assessment of the Proposed Development. Proposed mitigation is presented in Section 13.5, and Section 13.6 presents residual impacts. An inventory of archaeology, architectural heritage and cultural heritage is also provided in Appendix A13.1 in Volume 3 of this EIAR. Figure 13.1 to Figure 13.6 which accompany this Chapter can be found in Volume 4 of this EIAR.

13.2 Methodology

13.2.1 Relevant Guidelines, Policy and Legislation

This assessment was undertaken in accordance with the following legislation, policy and best practice guidance:

- National Monuments Acts 1930 to 2014 (as amended):
 - National Monuments Act 1930;

- National Monuments (Amendment) Act 1954;
 - National Monuments (Amendment) Act 1987;
 - National Monuments (Amendment) Act 1994;
 - National Monuments (Amendment) Act 2004;
 - EIA of Proposed Demolition of National Monuments Regulations 2012;
 - S.I. 229/2005 - National Monuments Act 1930 (Section 14B) Regulations 2005; and
 - S.I. 114/2013 (EIA re Approved Road Developments).
- European Cultural Convention 1954 (European Treaty Series No. 018) (Council of Europe 1954);
 - International Council on Monuments and Sites (ICOMOS) International Charter for the Conservation and Restoration of Monuments and Sites (The Venice Charter 1964) (ICOMOS 1965);
 - United Nations Educational, Scientific and Cultural Organisation (UNESCO) Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO 1972);
 - Convention for the Protection of the Architectural Heritage of Europe (The Granada Convention) (European Treaty Series No. 121) (Council of Europe 1985);
 - Convention for the Protection of the Archaeological Heritage of Europe (revised) (The Valetta Convention) (European Treaty Series No. 143) (Council of Europe 1992);
 - Number 19 of 1999 - Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999;
 - Former Department of Arts, Heritage, Gaeltacht and Islands (DAHGI) Framework and Principles for the Protection of the Archaeological Heritage (DAHGI 1999);
 - Planning and Development Acts 2000 to 2023 (as amended);
 - Convention for the Safeguarding of the Intangible Cultural Heritage (the Paris Convention) UNESCO 2003);
 - Convention on the Value of Cultural Heritage for Society (The Faro Convention) (European Treaty Series No. 199) (Council of Europe 2005);
 - Code of Practice between the Department of the Environment, Heritage and Local Government and EirGrid (Department of the Environment, Heritage and Local Government (DEHLG) and EirGrid 2009);
 - Former Department of Arts Heritage and the Gaeltacht (DAHG) Architectural Heritage Protection Guidelines for Planning Authorities (DAHG 2011);
 - Cultural Heritage Guidelines for Electricity Transmission Projects (EirGrid 2015);
 - National Planning Framework (Government of Ireland 2018);
 - Meath County Council (MCC) Meath County Development Plan 2021 – 2027 (MCC 2021);
 - Fingal County Council (FCC) Fingal Development Plan 2023 – 2029 (FCC 2023); and
 - Environmental Protection Agency (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (hereafter referred to as the EPA Guidelines) (EPA 2022).

Archaeological sites and monuments are protected under the National Monuments Acts 1930-2014 (as amended), primarily through inclusion in the Record of Monuments and Places (RMP), the Register of Historic Monuments (RHM) and / or by being declared a National Monument. Section 2 of the National Monuments Act 1930 (as amended) defines a National Monument as:

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

In addition, Section 8 the National Monuments Act 1930 (as amended) of the Act states that the Minister may also place a Preservation Order on a monument:

"which in his [the minister's] opinion is a national monument in danger of being or is actually being destroyed, injured, or removed, or is falling into decay through neglect".

It is illegal to demolish, or remove wholly or in part, a National Monument or disturb the ground within, around or in proximity to a National Monument, without written consent from the Minister (and / or the local authority if they are the owners or guardians).

Under Section 5 of the National Monuments (Amendment) Act 1987, an RHM is required to be established and maintained. Monuments included on the RHM are afforded statutory protection under this Act, of a similar level to Recorded Monuments (see below).

Section 12 (1) of the National Monuments (Amendment) Act 1994 (as amended) requires the establishment and maintenance of a RMP. Sites included in the RMP are legally protected and are referred to as Recorded Monuments. The RMP is maintained by the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage (DHLGH) who have defined Zones of Notification around each Recorded Monument. Zones of Notification do not define the extent of a site but are defined for the purposes of notification to the Minister under Section 12 (1) of the National Monuments (Amendment) Act 1994.

While the Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 was enacted in October 2023, it has not fully entered into force and therefore the relevant sections of the National Monuments Acts 1930 to 2014 (as amended) identified above remain in force and continue to do so until their repeal (NMS 2023). While the Planning and Development Bill 2023 has completed the second stage of debate in Dáil Éireann, it has not fully entered into force and therefore the Planning and Development Acts 2000 to 2023 (as amended) remains in force. The Sites and Monuments Record (SMR) is the national database of the Archaeological Survey of Ireland (ASI) compiled and maintained by the NMS. The SMR details all sites where a monument is known to the ASI pre-dating AD (Anno Domini) 1700 and includes a selection of monuments from the post-AD 1700 period. Inclusion on the SMR does not, in itself, confer legal protection.

The Planning and Development Act, 2000 (as amended) sets out the conditions relating to the protection of architectural heritage. Structures of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest are protected under this Act, through their inclusion on the Record of Protected Structures (RPS) and are known as Protected Structures.

The Planning and Development Act 2000 (as amended) defines an ACA as *"a place, area, group of structures or townscape, taking account of building lines and heights, that:*

- a) is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or*
- b) contributes to the appreciation of protected structures"* (Planning and Development Act, 2000, Part IV, Chapter II).

Development plans are required to include an objective to preserve the character of an ACA. In considering applications for permission for development within an ACA, the effect of a proposed Works on the character of an ACA is a consideration for the planning authority. The MCC Meath County Development Plan 2021 – 2027 (MCC 2021) and the FCC Fingal Development Plan 2023 – 2029 (FCC 2023) include lists of ACAs protected under the Act. In addition, the Meath County Development Plan 2021 – 2027 and the Fingal Development Plan 2023 – 2029 include objectives for the protection of archaeology, architectural heritage and cultural heritage (see below).

Undertaken under the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999, the National Inventory of Architectural Heritage (NIAH) is a nationwide survey of architectural heritage including buildings, structures, and historic gardens and designed landscapes. Inclusion on the NIAH alone does not in itself confer legal protection. The NIAH includes an assessment of the significance of structures based on an appraisal of their contribution to architectural heritage. Significance ratings are: International, National, Regional, Local and Record Only (NIAH 2022). Structures that are considered of International, National, and Regional significance are recommended by the Minister to the relevant local authority for inclusion in their RPS.

The Survey of Historic Gardens and Designed Landscapes (NIAH 2013), undertaken by the NIAH, includes the sites of demesne lands from First Edition Ordnance Survey maps and assesses the level of survival and change. These gardens and designed landscapes (GDLs) largely date from the post-medieval period when the lands surrounding large houses assumed an increasingly ornamental role providing a landscape setting for the house.

While not ratified by Ireland, the 2005 Framework Convention on the Value of Cultural Heritage for Society (the Faro Convention) provides the following useful definition of cultural heritage:

"a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time".

Ireland ratified the Convention for the Safeguarding of the Intangible Cultural Heritage (the Paris Convention; UNESCO, 2003) in 2015. Ireland's obligations under the Paris Convention include establishing National Inventory of Intangible Cultural Heritage to protect, promote and celebrate Irish living cultural heritage practices, customs, crafts, and traditions. Currently, the Inventory includes entries under the following categories:

- Oral traditions and expressions, including language;
- Social practices, rituals, and festive events;
- Traditional craftsmanship;
- Performing arts; and
- Knowledge and practices concerning nature and the universe.

Successful applicants to the National Inventory may also consider seeking nomination by the State for inscription on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity, to which the State is entitled to make one nomination every year. Ireland has successfully inscribed three elements of Irish Intangible Cultural Heritage on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity: Irish Harping was inscribed in 2019, Hurling was inscribed in 2018 and Uilleann Piping was inscribed in 2017.

13.2.1.1 Meath County Development Plan 2021 – 2027

The Cultural and Natural Heritage Strategy of the Meath County Development Plan 2021 – 2027 (MCC 2021) identifies Meath's wealth of built heritage, making it exceptional in Ireland. The identity of the county is linked to its unique heritage, which forms an intrinsic part of the character and attractiveness of the county. The Meath County Development Plan 2021 – 2027 sets out specific policies for the management of: archaeological heritage (HER POL 1 to HER POL 5), architectural heritage (HER POL 14 to HER POL 23), industrial heritage (HER POL 24 and HER POL 25), and designed landscapes, gardens and demesnes (HER POL 26).

Policies of relevance to the Proposed Development include:

- HER POL 1: which aims to protect sites, monuments, places, areas or objects including sites recorded on the SMR, Recorded Monuments, sites on the RHM, National Monuments, and sites with Preservation Orders placed on them. In addition, HER POL 2 aims to protect sites of archaeological interest discovered after the publication of the RMP, in situ (or at a minimum preservation by record);
- HER POL 14: which aims to protect and conserve the architectural heritage of the county; and
- HER POL 26: which encourages the protection and enhancement of GDLs.

13.2.1.2 Fingal Development Plan 2023 – 2029

The Heritage, Culture and Arts chapter of the Fingal Development Plan 2023 – 2029 (FCC 2023) describes FCC's commitment to ensuring the conservation, management, protection, and enhancement of the archaeological, architectural heritage and cultural heritage of Fingal. Specific policies include those to protect archaeological heritage (HCAP2 to HCAP7), architectural heritage (HCAP8 to HCAP16, HCAP21 to HCAP26) and historic designed landscapes (HCAP18 to HCAP20).

Policies of relevance to the Proposed Development include:

- HCAP3: which safeguards archaeological sites, monuments, objects and their settings listed in the RMP, SMR, underwater cultural heritage including protected wrecks, and any additional newly discovered archaeological remains and HCAP 4 which favours the preservation in-situ (or at a minimum preservation by record) of all sites and features of historical and archaeological interest;
- HCAP8: which ensures the conservation, management, protection and enhancement of the architectural heritage of Fingal through the designation of Protected Structures and ACAs, the safeguarding of designed landscapes and historic gardens, and the recognition of structures and elements with no specific statutory designation that contribute positively to the vernacular, industrial, maritime or 20th century heritage of the county;
- HCAP21: which seeks to protect and enhance the historic environment and built heritage assets, including elements of historic street furniture, paving and historic boundary treatments; and
- HCAP18 and HCAP19: which seek to protect the setting, significant views, and built features of historic designed landscapes and promote the conservation of their essential character, both built and natural, and resist proposals that would lead to the loss, or cause harm to the character, principal components or setting of historic designed landscapes and demesnes of significance.

13.2.2 Study Area

Using professional judgement, the study area for archaeology, architectural heritage and cultural heritage was defined as the Planning Application Boundary for the Proposed Development plus a 50m buffer. This study area is large enough to establish a robust baseline as it allows archaeological, architectural heritage and cultural heritage assets within and immediately adjacent to the Planning Application Boundary (and which could potentially extend into it) to be identified, it provides a wider context for these, and enables an informed assessment of the possible presence of unknown archaeological remains to be made. As works (i.e. excavation for the cable trench, Joint Bays, and launch and reception pits for Horizontal Directional Drilling (HDD), construction of the Passing Bays and off-road construction access routes, and establishment of Temporary Construction Compounds (TCCs) / HDD Compounds could have a direct impact on archaeology, architectural heritage and cultural heritage assets within the Planning Application Boundary. The study area allows direct impacts on sites within the Planning Application Boundary, or that potentially extend into it, to be identified and assessed.

Indirect impacts could result from changes to the setting of archaeology, architectural heritage and cultural heritage assets during the Construction and Operational Phases. During the Construction Phase, the activities that could result in indirect impacts would be restricted to the Planning Application Boundary. In addition, areas disturbed during the Construction Phase will be reinstated and, apart from Joint Bay covers and permanent access tracks (in off-road sections), the Proposed Development will be largely underground during the Operational Phase (excluding the Woodland Substation and Belcamp Substation upgrade works, where new infrastructure will largely be within the footprint of the existing substation (at Woodland) and seen in the context of the existing substations). Therefore, indirect impacts are not anticipated beyond the study area. Indirect impacts have been assessed both during the Construction and Operational Phases.

13.2.3 Data Collection and Collation

The following sources of information were consulted to establish the archaeology, architectural heritage and cultural heritage baseline for the study area:

- The results of the previous project stages of work: Capital Project 1021 CP1021 Environmental Constraints Report (Jacobs 2022) and CP1021 East Meath – North Dublin Grid Upgrade Step 4A Report – Analysis of Route Options (Jacobs 2023);
- The lists of National Monuments in State Care: Ownership and Guardianship for County Meath (former Department of the Environment, Heritage and Local Government and NMS 2009a) and National Monuments in State Care: Ownership and Guardianship - Dublin City and County (DEHLG and NMS 2009b);
- The list of Preservation Orders held by the NMS (Department of Culture, Heritage and the Gaeltacht and NMS 2019);
- The RMP for County Meath (DAHGI 1996) and County Dublin (The Heritage Service National Monuments and Historic Properties 1998);
- The SMR for County Meath and County Dublin (Government of Ireland n.d. a);
- The NIAH survey of County Meath and County Dublin and the Survey of Historic Gardens and Designed Landscapes by the NIAH (NIAH 2013);
- Inventory of Intangible Cultural Heritage (Government of Ireland n.d. b);
- The Meath County Development Plan 2021 – 2027 (MCC 2021) for the RHM, Protected Structures and ACAs and Fingal Development Plan 2023 – 2029 (FCC 2023) for Protected Structures and ACAs (please note that there is no RHM for Fingal);
- Aerial imagery (aerial photographs and satellite imagery (see Section 13.8 (References) for details of the sources consulted). A range of aerial imagery from different dates was used which maximised the potential to identify archaeological, architectural heritage and cultural heritage assets. Overall ground conditions within the study area were considered to be suitable for the identification of previously unknown assets;
- Historic mapping available online (see Section 13.8 (References));
- Placename information and information from the National Folklore Collection, including information from the Schools' Collection (1937 to 1938), via the University College Dublin (UCD) digital library (logainm.ie n.d.; UCD Digital Library n.d.);
- National Museum online finds database and the results of previous archaeological investigations recorded by the Database of Irish Excavations Reports, Transport Infrastructure Ireland's (TII) Digital Heritage Collection and the Dublin County Archaeology Project (The Heritage Council, n.d.);
- Archaeological Inventory of County Meath (Moore 1987) (an Archaeological Inventory of Dublin has not been published);
- Information from public consultation and engagement with prescribed bodies;
- Sources held by the National Library of Ireland (see Section 13.8 (References));

- Site inspection and walkover survey (undertaken 12 June 2023 to 14 June 2023 (see Section 13.2.3.2)); and
- Bibliographic sources (see Section 13.8 (References)).

Some archaeological, architectural heritage and cultural heritage assets are entered separately on one or more datasets. Where assets appear on more than one dataset, duplicates have been removed to avoid double counting. These assets have been included under their designation (or more significant designation) as it affords the asset legal protection. Where an asset does appear on more than one dataset, this has been identified in Section 13.3 and in Appendix A13.1 in Volume 3 of this EIAR.

A unique reference number was assigned to each asset identified from the sources listed in this Section. Archaeological assets are prefixed with 'AY' and architectural heritage assets are prefixed with 'AH'. Demesne lands are prefixed with 'DL' and undesignated cultural heritage sites are prefixed with 'CH'. Assets identified from a review of Light Detection and Ranging (LiDAR) data acquired for the Proposed Development are prefixed with 'LI', and townland boundaries are prefixed with 'TB'. Please note that in order to provide consistency with previous stages of assessment, unique reference numbering has been retained with new assets added following subsequent data gathering to inform this EIAR. As a result, numbering does not start at '01' or run sequentially.

13.2.3.1 LiDAR

To inform the archaeology, architectural heritage and cultural heritage baseline by identifying previously unrecorded potential assets and gathering additional information on known assets, Jacobs was commissioned by EirGrid to undertake a review of LiDAR data captured for the Proposed Development. The LiDAR was captured on 14 February 2023 at 0.25m lateral resolution and accurate to +/- 0.05m vertical resolution.

LiDAR data were processed and Digital Elevation Models (DEMs) were produced which were then used to create a number of complementary visualisations. These visualisations were then reviewed, and potential archaeological features were identified. The locations of known assets were then reviewed to gather additional information about them. In addition, a range of sources were consulted to verify interpretations of the results. A report on the results of the review of the LiDAR data is included in Appendix A13.2 in Volume 3 of this EIAR.

The review of the LiDAR data identified 65 previously unrecorded archaeological assets and provided additional information on six known assets.

13.2.3.2 Site Inspection and Walkover Survey

The baseline for archaeology, architectural heritage and cultural heritage was also informed by a walkover survey and site inspection of the Planning Application Boundary which was undertaken between 12 June 2023 and 14 June 2023.

This involved a drive-through, as well as a visual inspection of off-road sections where land access was granted, to note topography and current land use, the presence and condition of known assets and their setting, and to identify previously unrecorded sites and their setting.

13.2.3.3 Consultation

A meeting was held with the NMS on 13 December 2023 to discuss the Proposed Development, where a presentation of an overview of the Proposed Development was provided, along with results of the Step 5 assessment for archaeology, including an approach to establishing the baseline, and the results of the impact assessment. The NMS advised on the archaeological potential of watercourses and suggested mitigation

measures. Following a discussion with the NMS, the mitigation measures that are outlined in Section 13.5 of this Chapter were agreed.

13.2.3.4 Limitations

Not all areas were accessible during the walkover survey and site inspection. However, baseline data from desk-based sources, including a review of LiDAR data acquired for the Proposed Development (refer to Appendix A13.2 in Volume 3 of this EIAR), was available and sufficient to inform the assessment for assets in these locations.

This limitation did not reduce the efficacy of the assessment.

13.2.4 Appraisal Method for the Assessment of Impacts

13.2.4.1 Assessment of Significance

For archaeology, architectural heritage and cultural heritage, an assessment of significance of each asset was undertaken on a six-point scale of Very High, High, Medium, Low, Very Low / Negligible, and Unknown, as presented in Table 13.1, based on professional judgement and guided by the criteria provided in the draft Cultural Heritage Impact Assessment (CHIA) of TII Projects – Overarching Technical Document (TII forthcoming) . This approach was used because while the TII guidance is in draft it has been widely consulted on and provides a method for the assessment of significance of impacts of linear infrastructure projects on archaeological, architectural heritage and cultural heritage assets aligned with the EPA Guidelines (EPA 2022).

Table 13.1: Criteria to Assess the Significance of Archaeology, Architectural and Cultural Heritage Assets

Significance	Criteria
Very High	World Heritage Properties and properties on the World Heritage Tentative List; Built Heritage assets rated as being of International importance by the NIAH; Historic landscapes of international value (designated or undesignated), including those identified by the NIAH. Such landscapes will be extremely well-preserved with exceptional coherence, time-depth, or other critical factors; Places or features of international intangible heritage value; and Other designated and undesignated assets of demonstrable international Cultural Heritage importance.
High	National Monuments; Undesignated sites and monuments that might reasonably be considered a national monument by the Minister because of their historical, architectural, traditional, artistic, or archaeological interest; Recorded Monuments (or sites and monuments scheduled for inclusion on the RMP) of high quality and importance; Sites and monuments subject to Preservation Order or a Temporary Preservation Order; Protected Structures; Undesignated assets of comparable quality and importance as Recorded Monuments and Protected Structures; Architectural Conservation Areas containing important buildings / groupings of buildings that contribute either individually or collectively to the streetscape and the character and appearance of the ACA; Built Heritage assets rated as being of National importance by the NIAH including historic landscapes (designated or undesignated) of outstanding interest and of demonstrable national value, including those identified by the NIAH. These will be well-preserved historic landscapes exhibiting considerable coherence, time-depth or other critical factors; Places or features of national heritage value; and Other designated or undesignated assets of national Cultural Heritage importance.
Medium	Recorded Monuments (or sites and monuments scheduled for inclusion on the RMP) of good quality / preservation; Built Heritage assets rated as being of Regional importance by the NIAH; Historic townscapes or built-up areas with importance historic integrity in their buildings or built settings (e.g., including street furniture and other structures); Historic landscapes or regional value (designated or undesignated), including those identified by the NIAH; Places or features of regional intangible heritage value; and Other designated or undesignated assets of regional Cultural Heritage importance.
Low	Assets compromised by poor preservation and / or poor survival of contextual associations; Built Heritage assets rated as being of Local importance by the NIAH; Undesignated historic buildings of modest quality in their fabric or historical association; Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings (e.g., including street furniture and other structures); Historic landscapes whose value is limited by poor preservation and / or poor survival of contextual associations, including those identified by the NIAH; Places or features of local intangible heritage value; and Other designated or undesignated assets of local importance.
Very Low / Negligible	Assets / landscapes with very little or no surviving Cultural Heritage interest; and Buildings of no architectural, historical, archaeological, artistic, cultural, scientific, social, traditional, or technical interest; buildings of an intrusive character.
Unknown	The importance of the asset has not yet been ascertained (e.g., a LiDAR feature that may or may not be archaeological). In such cases, the significance of impact will be 'Indeterminable'.

13.2.4.2 Impact Magnitude

Magnitude combines judgements about the size and scale of the impact, the extent of the area over which it occurs, whether it is reversible or irreversible, and whether it is short or long-term in duration. Magnitude of impact has been assessed without reference to the significance of the asset, and may include direct and indirect impacts, and can either be 'Positive' (i.e., beneficial) or 'Negative' (i.e., adverse).

Assessment of magnitude was based on professional judgement informed by the criteria presented in Table 13.2.

Table 13.2: Magnitude of Impact on Archaeology, Architectural Heritage, and Cultural Heritage Assets

Magnitude of Impact	Criteria / Typical Descriptions
Very High	Major alteration to, or complete loss of, archaeological, architectural, and cultural heritage interests. Effects likely to be experienced at a very large scale, considered permanent and irreversible.
High	Notable or long-term change to archaeological, architectural, and cultural heritage interests.
Medium	Moderate or long-term change over a restricted area or a moderate change to archaeological, architectural, and cultural heritage interests.
Low	Minor short- or medium-term change over a restricted area or a minor change to archaeological, architectural, and cultural heritage interests.
Very Low / Negligible	Imperceptible change to archaeological, architectural, and cultural heritage interests.

13.2.4.3 Significance of Impacts

For archaeology, architectural heritage and cultural heritage, the significance of impacts with and without mitigation was assessed as a combination of the significance and the magnitude.

In accordance with the guidance provided in the EPA Guidelines (EPA 2022), significance of impacts was assessed on a seven-point scale of Profound, Very Significant, Significant, Moderate, Slight, Not Significant and Imperceptible. The seven levels of significance apply equally to positive and negative impacts. Unless otherwise stated, impacts assessed are negative.

The significance of impacts was assessed using professional judgement informed by the matrix presented in Image 13.1.

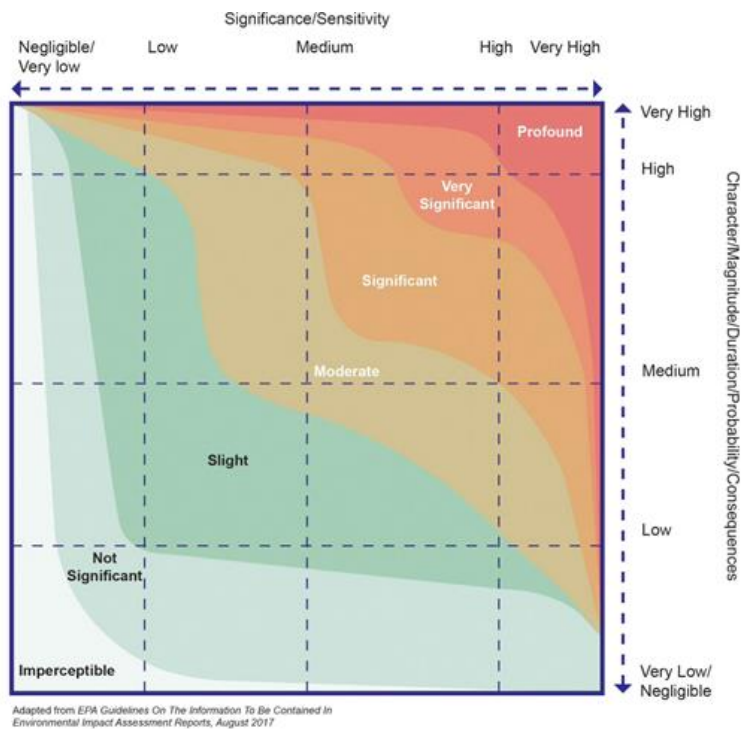


Image 13.1: Matrix for Determination of Significance of Impacts (TII 2020)

13.3 Baseline Environment

This section presents the baseline conditions for the archaeology, architectural heritage and cultural heritage of the study area. Further details on individual archaeology, architectural heritage and cultural heritage assets identified within the study area are provided in Appendix A13.1 in Volume 3 of this EIAR.

13.3.1 Archaeological and Historical Background

No evidence for the Mesolithic period (c. 8000 – 4000 BC) has been identified within the study area. However, a number of watercourses and palaeochannels have been identified, and in the Mesolithic period transient populations often used areas near water sources to exploit natural resources. Evidence of Neolithic (c. 4000 – 2500 BC) activity has been identified within the study area in Barberstown, as part of a multi-phase occupation site (Licence Number: 17E0282), and during archaeological excavations for the M3 Clonee–Kells Motorway (Licence Number: E3034; O’Hara 2009) in the townland of Dunboyne. Concentrations of activity dating to this period have also been identified more widely around Dunboyne and Dunshaughlin (DHLGH 2023).

Within the study area, the Bronze Age (c. 2500 – 600 BC) is characterised by domestic and funerary sites. A burnt mound was excavated in Bennetstown (AY_12) along with a possible rectangular Bronze Age house (Licence Numbers: A017/002, E3024; DHLGH 2023). Burnt mounds comprise circular or irregularly shaped mounds of burnt stones, ash and charcoal around a sunken trough, often located near a water supply. These sites are common in Ireland and were primarily used to heat water, likely for a variety of purposes. A possible Bronze Age structure and a late Bronze Age habitation site, including a possible token cremation, were also excavated in the townlands of Dunboyne (AY_07 and AY_08; Elliott and Ginn 2008) and Ward Upper (AY_21). A number of ring ditches, which are circular ditches usually less than 20m in diameter, identified from aerial imagery were identified in Woodland (CH_61 and CH_62). While these may comprise the remains of round houses, they could represent the remains of clusters of ploughed out barrows (artificial mounds of earth, and / or stone, normally constructed over burials or which have burials inserted into them) which

typically date to the Bronze Age or Iron Age (c. 600 BC – AD 500). Evidence of Iron Age settlement has also been identified in the townland of Dunboyne, including a structure, pit and kiln (O'Hara 2009).

The early medieval period (AD 400 – 1100) saw the introduction of Christianity to Ireland. Ecclesiastical centres were established during this period and often comprised a church, or monastery enclosed by a large oval or circular enclosure defined by a bank and external fosse, or drystone wall. An early monastic site is located in the townland of Dunboyne (ME050-029; outside the study area) comprising a complex of earthwork banks including a rectangular enclosure, overlying a possible earlier circular enclosure, within a larger subcircular enclosure and field system. A medieval church is also located within Ward Lower (AY_23; DU011-039001 and RPS 660; a Recorded Monument and Protected Structure).

Early medieval settlement within the study area is characterised by raths (ringforts), circular enclosures typically between 25m and 35m in diameter, defined by ditches and earthen banks (O'Sullivan and Nicholl 2011). These sites are thought to have been farmsteads, with one or more houses within each enclosure. Within the study area, examples of ringforts have been identified in Common, Forrest Great and Cloghran (AY_29; DU011-023001, AY_41; DU011-043, and AY_43; DU011-046; Recorded Monuments).

The study area is partially located within the barony of Coolock, to the north of Dublin, which was described as having "*soyle of said Barony is Generall good either for Corne or Cattle*" in the 17th century (Simington 1945), and historic mapping depicts the area north of Dublin as largely agrarian with dispersed settlements, scattered farms, and country houses (Down Survey of Ireland 1656 – 1658; Rocque 1760). The barony of Dunboyne is also depicted as in use for arable and pasture farming (Down Survey of Ireland 1656 – 1658). Country houses were established from the 17th Century onwards, during a period of relative political calm, with landowners building country estates to demonstrate wealth and satisfy changing social values (Costello 2014; Reeves-Smyth 2005). These estates often comprised grand rural residencies set within designed grounds including features such as ancillary buildings, avenues and drives, woodland, fishponds and, in the later 18th Century with changing fashions, large areas of open ground and 'naturalised' parkland (Costello 2014; Reeves-Smyth 2005).

The land use of the study area remained largely agricultural, and the field pattern depicted on historic Ordnance Survey mapping (Ordnance Survey 6" 1843) remains perceptible both through extant field boundaries, and the remains of former field boundaries. Recent development within the study area comprises the network of roads, motorways and associated infrastructure (such as the M3 parkway car park in Bennetstown), Dublin Airport, and areas of residential infill, recreational sites (such as Forrest Little Golf Club), and commercial complexes (such as Avoca Dunboyne in Piercetown).

13.3.2 Archaeology

Archaeological assets identified within the study area comprise:

- Eight Recorded Monuments (AY_18, AY_23, AY_24, AY_25, AY_29, AY_41, AY_43 and AY_47); and
- Six sites on the SMR (AY_07, AY_08, AY_09, AY_11, AY_12, and AY_21).

No National Monuments or sites with Preservation Orders placed on them were identified within the study area.

13.3.2.1 Recorded Monuments

A total of eight Recorded Monuments are located within the study area as shown on Figure 13.1 in Volume 4 of this EIAR.

St. Brigid's Church and Graveyard comprises a ruined medieval parish church (AY_23; DU011-039001) and associated graveyard (AY_24; DU011-039002) and is both a Recorded Monument and a Protected Structure

(AH_06; RPS 660). The site is located within the study area adjacent to the R121 Regional Road in Ward Lower. The church comprises the foundations of a rectangular structure, which survives up to 1m in height. The church is located within a raised, oval graveyard bounded by a roughly coursed, limestone wall. The elevated interior of the site suggests that the graveyard has been in use for a long period of time and the oldest headstone recorded dates to 1720 (Egan 1991). The graveyard continues in use, and a modern roadside shrine and a 'grotto' are located to the east of the church. The rural church and graveyard are surrounded on three sides by arable fields with the R121 Regional Road to the east with views across fields to the north, west and south and across the busy road (R121 Regional Road) towards houses to the east. These assets hold historical and archaeological interest because of their potential to contribute to the understanding of Christianity in Ireland through their physical remains, group value as a group of related assets, and social interest as a graveyard still in use today. In consideration of this, and their designation as Recorded Monuments, and a Protected Structure, these assets have been assessed to be of High significance.

An ephemeral cropmark of a possible circular enclosure (AY_18; ME051-002), measuring approximately 50m in diameter, is located in a small pasture field within the study area in Ballintry. Aerial imagery shows a faint circular feature in a field adjacent to the road (CUCAP No.: BDK006). While not depicted on historic mapping, the enclosure is located adjacent to a field named 'Raheens', meaning 'The Little Rath' (Meath Field Names Project n.d.). While construction of a modern house to the south-west may have truncated the enclosure, this asset is of archaeological interest because of its potential to contribute to the understanding of enclosure sites, including their construction, function, date and duration of occupation through its physical remains.

A large circular earthwork (AY_41; DU011-043), measuring approximately 80m in diameter, is located within the study area in Forrest Great. This is interpreted as a platform ringfort, which were typically constructed by scarping a natural knoll or drumlin (O'Sullivan *et al.* 2021). AY_41 is enclosed by an external water-logged fosse (ditch). A large circular earthwork is depicted in this location on First Edition Ordnance Survey mapping (Ordnance Survey 6" 1843) and the ringfort is visible on aerial imagery and LiDAR data (Image 13.2). AY_41 is located in an agricultural field and has been truncated by modern infrastructure, including the roundabout between Naul Road and the R108 and airport lighting. However, this asset remains visible as a very low rise to the south-east of the field with the fosse vaguely perceptible at ground level (Photo 13.1). This asset is of archaeological interest because of its potential to contribute to the understanding of platform ringforts through its physical remains.

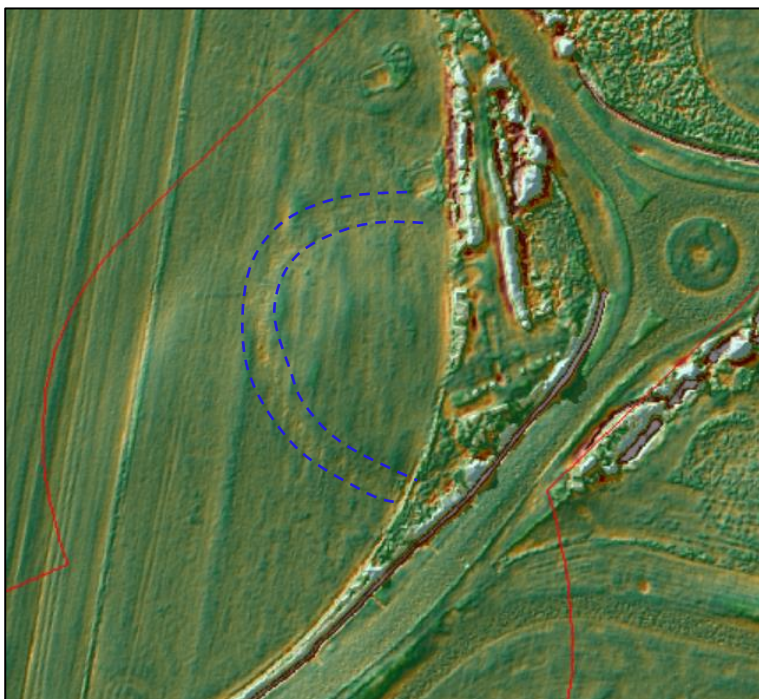


Image 13.2: The Ringfort in Forrest Great (AY_41; Recorded Monument) (Including the Fosse Indicated by Blue Dashed Lines (Simple Local Relief Model Produced from the LiDAR Data Acquired for the Proposed Development)) (Approximate Chainage 30,700)



Photo 13.1: The Ringfort in Forrest Great (AY_41; Recorded Monument) (Including the Fosse Visible in the Grass (Indicated by Blue Dashed Lines))

Two further ringforts (AY_29 and AY_43; DU011-023001 and DU011-046) were also identified within the study area. An oval enclosure (AY_29), interpreted as a ringfort, is located in Common. The enclosure is depicted on First Edition Ordnance Survey mapping (Ordnance Survey 6" 1837). However, it is not depicted on later mapping (Ordnance Survey 25" 1908) and is not visible on aerial imagery or LiDAR data. This location has been developed for a house and archaeological testing (Licence Numbers: 99E0693 and 18E0722) did not identify any features of archaeological significance. AY_43 comprises the site of a 'fort' depicted on First Edition Ordnance Survey mapping (Ordnance Survey 6" 1843). This location has since been redeveloped as part of Dublin Airport. While both these locations have been redeveloped, these assets are recorded on the RMP and therefore have been included as assets. These assets are of archaeological interest

because of their potential to contribute to the understanding of ringforts, through their surviving physical remains.

The site of a castle (AY_25; DU011-068) is located within the study area in Ward Upper. In the late 12th Century, a large fosse called 'Halfpenny Trench' was constructed in the "manor of Ward", and at the end of the 16th Century, a castle was garrisoned at this location (D'Alton 1838). Located within Ward House GDL (DL_07; see Section 13.3.3) this asset is described as "*the walls of an olde castle*" and formed part of a single holding along with the ruins of the medieval church [AY_23] (Simington 1945). No castle is depicted on historic mapping (Rocque 1760; Ordnance Survey 6" to 1 mile, 1853) and no remains are visible on aerial imagery. This asset is of archaeological interest because of its potential to contribute to the understanding of the political and social landscape of the post-medieval period, through its physical remains and documentary evidence.

Located in the townland of Cloghran, AY_47 (DU015-001) comprises the site of an earthen mound recorded on the RMP. Identified from aerial imagery from the 1970s (FSL453/2), the mound is described as a circular feature measuring approximately 15m in diameter located within an arable field approximately 50m to the north-west of the farmhouse and 30m to the west of the eastern field boundary (Duffy 2008). This asset is not depicted on historic mapping, or visible on more recent aerial imagery, and no above ground remains were visible during the walkover survey. This asset is of archaeological interest because of its potential to contribute to the understanding of this site type, through its physical remains.

In consideration of their designations as Recorded Monuments, these assets have been assessed to be of Medium significance.

13.3.2.2 Sites and Monuments Record

A total of six sites recorded on the SMR have been identified within the study area. Of these, five comprising the sites of a structure, kiln, pits and a burnt mound (AY_08; ME050-062001, AY_09; ME050-062002, AY_11; ME050-057, and AY_12; ME050-058) were identified during archaeological investigations for the M3 Motorway while a prehistoric habitation site (AY_21; DU011-091) was excavated in advance of the construction of the N2 National Road (Finglas to Ashbourne). While these five sites provide an indication of archaeological activity within the study area, they have not been included as assets, as they have been removed and their locations developed.

The one surviving site recorded on the SMR and located within the study area (Figure 13.1 in Volume 4 of this EIAR) comprises a field system (AY_07), bisected by the R157 Regional Road, in the townland of Dunboyne. This asset was identified from aerial imagery with a ditch that corresponds with a boundary on the Down Survey (1656-8). The fields comprise large regular parcels, with boundaries that run parallel to the current boundaries. This area was subject to geophysical survey which confirmed the presence of the ditches and subsequent archaeological investigations in advance of the Dunboyne Bypass identified single fill ditches and drainage containing post-medieval and modern ceramics, as well as a prehistoric structure (AY_08) with a possible associated kiln (AY_09) (Elliott and Ginn 2008). Linear cropmarks are visible on aerial imagery in fields adjacent to the R157 Regional Road (Image 13.3), including a possible trackway and field boundaries, and a large circular enclosure (ME050-029) (located outside the study area). This asset is of limited archaeological interest because of its limited potential to contribute to the understanding of the historic landscape, through its surviving physical remains. In consideration of this, this asset has been assessed to be of Low significance.



Image 13.3: The Field System in Dunboyne (AY_07) (MapGenie, 1996 – 2000 © Ordnance Survey Ireland Licence No. EN 0061519-24) (Approximate Chainage 10,800 to 11,400)

13.3.3 Architectural Heritage

Architectural heritage assets within the study area comprise:

- Two Protected Structures (AH_06 and AH_10) (shown on Figure 13.2 in Volume 4 of this EIAR);
- One structure included on the NIAH (AH_13; assessed to be of Regional importance by the NIAH) (shown on Figure 13.2 in Volume 4 of this EIAR); and
- Ten GDLs (DL_04, DL_05, DL_07, DL_08, DL_09, DL_11, DL_13, DL_15, DL_16 and DL_17) (shown on Figure 13.3 in Volume 4 of this EIAR).

No ACAs have been identified within the study area.

13.3.3.1 Protected Structures

Two Protected Structures (AH_06 and AH_10) are located within the study area (Figure 13.2 in Volume 4 of this EIAR). Of these, St. Brigid's Church and Graveyard (AH_06) is also a Recorded Monument and is described under AY_23 and AY_24 in Section 13.3.2.

AH_10 is a post-medieval stone lined well located within the Limepark GDL (DL_13 (see Table 13.3)). It comprises an enclosed stone well located at the base of a set of steps beneath a tree (FCC 2023). The well is not labelled on First Edition Ordnance Survey mapping (Ordnance Survey 6" 1843). However, it is identified as a 'well' on later editions (Ordnance Survey 25" 1909) at the end of a trackway at the corner of a pair of field boundaries to the north-east of 'Lime Park' (DL_13). The well has been identified as a 'Lady's Well' (a holy well) (FCC 2023; Skyvova 2005; Branigan 2012). Often dedicated to saints, holy wells can be located in proximity to the sites of medieval churches with the spring, a venerated tree and venerated stones key structural features (O'Sullivan and Downey 2006). The site of an early medieval church (DU014-009001) is located approximately 200m to the west of AH_10, along with another holy well (DU014-010), approximately 200m to the south. While the area is overgrown with dense vegetation, a curved course of stones was visible below a mature tree and identified as forming part of the wall to the well (Photo 13.2). This asset is of limited architectural, historical and social interest, given its poor condition and limited contribution

to the architectural heritage of the locality and tradition of holy wells. While this asset is designated as a Protected Structure, given its poor condition and limited interest, it has been assessed to be of Medium significance.



Photo 13.2: Row of Stones in Dense Vegetation Indicating the Top of the Enclosed Stone Well in Cloghran (AH_10; a Protected Structure) (Approximate Chainage 33,600).

13.3.3.2 National Inventory of Architectural Heritage

Belcamp House (AH_13; assessed by the NIAH to be of Regional importance, shown on Figure 13.2 in Volume 4 of this EIAR) was a country house built in approximately 1820. The house comprised a detached three-bay, two-storey house including bows framing a prostyle distyle Ionic portico with central door. The house is depicted on First Edition Ordnance Survey mapping (Ordnance Survey 6" 1843) within its associated demesne (DL_17). The house was demolished in 2001. This asset is of very limited artistic and architectural interest, given its poor condition and very limited contribution to the understanding of country houses and architectural heritage of the locality. It has therefore been assessed to be of Low significance.

13.3.3.3 Gardens and Designed Landscapes

Ten GDLs have been identified within the study area. Information on these GDLs and an assessment of their significance is provided in Table 13.3. All GDLs are shown on Figure 13.3 in Volume 4 of this EIAR.

Table 13.3: GDLs Identified within the Study Area

Reference Number	Name	Description and Assessment of Significance	Townland	NIAH Reference
DL_04	Priest Town House	The GDL to Priest Town House, including principal house and ancillary buildings depicted on historic mapping (Ordnance Survey 6" 1837). Retains elements of parkland and woodland, as well as original driveways and entrances, as well as interior and exterior boundaries. Boundary along Belgree Lane formed of hedgerows and 'Crockanee' woodland. This asset is of architectural interest given its historic fabric, continued legibility and extant demesne features. In consideration of this, DL_04 has been assessed to be of Medium significance.	Priest Town	NIAH 5156
DL_05	Hollywoodrath	The GDL to Hollywoodrath, including principal building (RPS 0665) as well as garden and ancillary buildings, including the lodge (NIAH 11347003) on Kilbride Road, depicted on historic mapping (Ordnance Survey 6" 1837; Ordnance Survey 25" 1909). While there has been development within the footprint of the site, including the golf course to the west and housing to the north, the external boundary remains partially extant, as well as internal boundary features including the roadside boundary wall and entrance to the south of the site along the road that bisects the demesne. This asset is of architectural interest given its historic fabric, continued legibility and extant demesne features. In consideration of this, DL_05 has been assessed to be of Medium significance.	Hollystown; Hollywood; Hollywoodrath; Spricklestown	NIAH 2267
DL_07	Ward House	Demesne identified from historic mapping as 'Ward House' (Ordnance Survey 6", 1837) located on the junction between the R135 and R121 Regional Roads. The majority of the demesne features, including the exterior boundary demarcating its footprint, appear to have been removed and modern agricultural buildings and a bungalow, as well as the R121 / R135 Roundabout, have encroached on the demesne. This asset is of very limited architectural interest given its very limited legibility and very few remaining demesne features. Given its condition and lack of legibility, this asset has been assessed to be of Very Low / Negligible significance.	Ward Lower	-
DL_08	Newpark House	Demesne identified from historic mapping as 'Newpark House' (Ordnance Survey 6" 1837) located to the south of the R121 Regional Road. The area appears to have been redeveloped as a commercial complex, including a concrete block roadside boundary wall. However, some external boundaries and the pond remain extant. This asset is of very limited architectural interest given its very limited legibility and very few remaining demesne features. Given its condition and lack of legibility, this asset has been assessed to be of Very Low / Negligible significance.	Newpark	-
DL_09	Kingstown House	Demesne identified from historic mapping as 'Kingstown House' (Ordnance Survey 6" 1843). The exterior boundaries of the demesne reflect those depicted on historic mapping (Ordnance Survey 6" 1843). However, the buildings appear to have been removed. The alignment of the driveway remains perceptible, albeit overgrown, leading from Kilreesk Road to the site of the house. Boundary features include a ditch and established boundary (trees and hedgerow), as well as a modern post and rail fence. This asset is of very limited architectural interest given its very limited legibility and very few remaining demesne features. Given its condition and lack of legibility, this asset has been assessed to be of Very Low / Negligible significance.	Kingstown	-
DL_11	Castle Mount	The GDL to Castle Mount. The principal building remains extant (RPS 611); however, the area has been developed. The boundary depicted on historic mapping (Ordnance Survey 6", 1837 – 1842) is vaguely perceptible in places as hedgerows.	Cloghran	NIAH 5726

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Reference Number	Name	Description and Assessment of Significance	Townland	NIAH Reference
		The boundary on the R132 appears to have been replaced with a new wall. This asset is of limited architectural interest given the poor preservation of demesne features and its limited legibility. In consideration of this, this asset has been assessed to be of Low significance.		
DL_13	Limepark	Demesne identified from historic mapping as 'Limepark' (Ordnance Survey 6" 1843). While the principal building has been demolished and the demesne has been bisected by Stockhole Lane and a local access road from Stockhole lane to Old Stockhole Lane, portions of the northern and eastern boundaries, driveway, and Glebe House (to the south-east) remain extant. This asset is of very limited architectural interest given its very limited legibility and very few remaining demesne features. Given its condition and lack of legibility, this asset has been assessed to be of Very Low / Negligible significance.	Cloghran	-
DL_15	Upper Middletown	Demesne identified from historic mapping as 'Upper Middletown' (Ordnance Survey 6" 1843). One internal boundary remains extant along with some of the external boundary. However, the principal building, driveway and 'Turret' depicted on historic mapping (Ordnance Survey 6" 1843), have been removed and the location of the gate lodge to the east of Stockhole Lane has been redeveloped as modern dwellings. Where extant, boundaries comprise established hedgerows and ditches, with sub-divisions visible as cropmarks on aerial imagery. The footings of a roadside range, or boundary wall, were identified during the site inspection and walkover survey (refer to Photo 13.3) and are visible as an area of disturbance on aerial imagery and LiDAR data (CH_34 (see Section 13.3.4)). This asset is of very limited architectural interest given its very limited legibility and very few remaining demesne features. Given its condition and lack of legibility, this asset has been assessed to be of Very Low / Negligible significance.	Middletown	-
DL_16	Glebe House	Demesne identified from historic mapping as 'Glebe House' (Ordnance Survey 6" 1843), located to the east of Stockhole Lane. While the principal building has been replaced with modern dwellings and the driveway removed, the external boundary and sub-divisions of the demesne reflect those depicted on historic mapping (Ordnance Survey 6 1843). Boundaries comprise established hedgerows, including trees, some of which have modern fences running parallel. This asset is of limited architectural interest given the poor preservation of demesne features and its limited legibility. In consideration of this, this asset has been assessed to be of Low significance.	Glebe	-
DL_17	Belcamp	The GDL to Belcamp (AH_13; see Section 13.3.3.2). The principal building and ancillary buildings have been demolished. The footprint is vaguely perceptible on aerial imagery and features depicted on historic mapping (Ordnance Survey 6", 1837 – 1842), such as the bridge, weir and gardens are perceptible. This asset is of very limited architectural interest given its very limited legibility and very few remaining demesne features. Given its condition and lack of legibility, this asset has been assessed to be of Very Low / Negligible significance.	Belcamp	NIAH 2455



Photo 13.3: Rubblestone Wall Associated with 'Upper Middletown' GDL (DL_15) (Approximate Chainage 36,550)

13.3.4 Cultural Heritage

A total of 194 cultural heritage assets were identified within the study area (detailed in Appendix A13.1 in Volume 3 of this EIAR and shown on Figure 13.4 to Figure 13.6 in Volume 4 of this EIAR), comprising:

- 38 cultural heritage sites (12 Medium, 16 Low and 10 Very Low/Negligible significance) identified from historic mapping, aerial imagery and during the site inspection and walkover survey;
- 61 assets (13 Medium, 14 Low and 34 Very Low / Negligible significance) identified from LiDAR data acquired for the Proposed Development (detailed in Appendix A13.2 in Volume 3 of this EIAR); and
- 98 townland boundaries (49 Medium, 41 Low and eight Very Low / Negligible significance).

These cultural heritage assets are characterised by evidence of settlement, funerary activity, agriculture, and industrial activity, dating from the prehistoric to post-medieval periods. Further information on these 194 cultural heritage assets is provided below.

Five groups of ring-diches (circular or near circular ditched features comprising the possible remains of barrows or round houses) were identified in Woodland (CH_61, CH_62 and CH_65), Cullendragh (CH_67) and Stockhole (CH_78). In addition, seven palaeochannels were identified within the study area from aerial imagery (CH_72) and LiDAR data (LI_18, LI_24, LI_27, LI_36, LI_58 and LI_69) in the townlands of Harlockstown, Dunboyne, Pace, Nuttstown and Cloghran. A possible group of pits was also identified in Baytownpark (LI_20). While these could also evidence prehistoric activity in the area, LI_20 has been interpreted as being of unknown date and function and could equally be non-archaeological in nature. These assets hold archaeological interest due to their physical remains having the potential to contribute to the understanding of the prehistoric period, including funerary practices (CH_61, CH_62 and CH_65). These cultural heritage assets have been assessed to be of Medium significance.

11 previously unrecorded enclosures were identified within the study area from aerial imagery and from LiDAR data acquired for the Proposed Development in Spicklestown, Cullendragh, Shallon, Forrest Great, Cloghran, Stockhole (CH_58, CH_66, CH_75, CH_76, CH_77 and CH_79), Kinoristown, Stokestown, Irishtown and Cloghran (LI_31, LI_34, LI_40, LI_54 and LI_65). These assets comprise circular or sub-circular areas demarcated by a single enclosing element (e.g. a bank and / or ditch). These cultural heritage assets hold archaeological interest due to their physical remains having the potential to contribute to the understanding

of enclosure sites, including their construction, function, date and duration of occupation. Therefore, these assets have been assessed to be of Medium significance.

A total of 25 post-medieval structures, sites of structures, and associated features were identified within the study area comprising:

- Two extant farms (CH_12 and CH_33) and an agricultural range (CH_25) identified from historic mapping (Ordnance Survey 6", 1837–1842; Ordnance Survey 25", 1888–1913). The farms remain operational and include more recent agricultural buildings;
- Six houses (CH_01, CH_04, CH_13, CH_24, CH_29 and CH_71) and the site of two houses (CH_34 and CH_80) depicted on historic mapping (Ordnance Survey 6", 1837–1842; Ordnance Survey 25", 1888–1913);
- The site of a police station depicted on historic mapping and identified from LiDAR data acquired for the Proposed Development (LI_14);
- A roadside building (CH_60) possibly associated with Forrest House depicted on historic mapping (Rocque 1760; Taylor and Skinner 1778) (identified as 'in ruins' on Taylor's Environs of Dublin 1816), the site of a small roofless building (CH_64) identified from historic mapping, and the sites of a cluster of buildings and a possible roadside structure identified from LiDAR data acquired for the Proposed Development (LI_08 and LI_44) of unknown function;
- A roadside pump (CH_63) identified during the site inspection and walkover survey comprising a cast-iron pump in a concrete roadside recess. A pump is not depicted in this location on historic Ordnance Survey mapping (1837; 1911; 1940). However, a pump is depicted further to the east outside a nearby farm (CH_12) and therefore the pump may not be in its original location;
- Dublin and Navan Branch of the Midland Great Western Railway (CH_73) identified on historic Ordnance Survey mapping (Ordnance Survey 25", 1888–1913). A section of which remains operational; and
- Five boundary features (LI_01, LI_13, LI_15, LI_62 and LI_67), a driveway (LI_17) and the site of a pond (LI_41) associated with Hollywooddrath GDL (DL_05).

These cultural heritage assets are of architectural, archaeological, technical, or historical interest due to their physical remains and / or remaining historic fabric, which have the potential to contribute to the understanding of post-medieval settlement and architectural heritage of the study area. However, in cases they are not rare types and/or in poor condition. Therefore, they have been assessed to be of Low significance (CH_01, CH_12, CH_13, CH_24, CH_25, CH_29, CH_33, CH_63, CH_71, CH_73, LI_08, LI_14 and LI_44) and Very Low / Negligible significance (CH_04, CH_34, CH_60, CH_64, CH_80, LI_01, LI_13, LI_15, LI_17, LI_41, LI_62 and LI_67).

A total of 32 field boundaries and field systems were identified from aerial imagery (CH_32, CH_59, CH_68, CH_69 and CH_70) and LiDAR data acquired for the Proposed Development (LI_02, LI_03, LI_05, LI_06, LI_07, LI_09, LI_10, LI_11, LI_16, LI_19, LI_21, LI_23, LI_26, LI_28, LI_29, LI_32, LI_35, LI_38, LI_45, LI_46, LI_48, LI_50, LI_51, LI_56, LI_57, LI_60 and LI_61). While some of these field systems correspond with the field pattern depicted on historic mapping (Ordnance Survey 6", 1837–1842; Ordnance Survey 25", 1888–1913) and are likely post-medieval in date, some (such as LI_21 in Baytownpark) may be earlier examples given they do not match the pattern depicted on historic Ordnance Survey mapping. An additional seven linear features were interpreted as ditches (CH_81, CH_82, CH_83, LI_25, LI_42, LI_49 and LI_70) and a rectangular enclosure (LI_63). There are no corresponding features depicted on historic mapping. Therefore, these ditches are of unknown date. These cultural heritage assets hold limited archaeological interest due to limited potential to contribute to the understanding of the historic landscape through their physical remains. Given these assets are not rare, and in some cases comprise isolated examples of former post-medieval field boundaries, they have been assessed to be of Low (CH_32, CH_59, CH_69, CH_70, LI_07, LI_09, LI_10, LI_11, LI_16, LI_21, LI_25, LI_42, LI_49, LI_63 and LI_70) and Very Low / Negligible (CH_68, CH_81, CH_82, CH_83,

LI_02, LI_03, LI_05, LI_06, LI_19, LI_23, LI_26, LI_28, LI_29, LI_32, LI_35, LI_38, LI_45, LI_46, LI_48, LI_50, LI_51, LI_56, LI_57, LI_60, and LI_61) significance.

Two stone road bridges (CH_15 and CH_74) and the alignments of a former road (LI_55) and track (LI_66) were also identified within the study area. CH_15 and CH_74 are depicted on historic mapping (Ordnance Survey 6", 1837–1842) and continue to form part of the road network carrying roads across the River Ward. LI_55 and LI_66 were identified from LiDAR data acquired for the Proposed Development. The former corresponds with the alignment of the road depicted on historic Ordnance Survey mapping (1843) associated with Glebe House and farm. The latter is not depicted on historic mapping and is of unknown date. Given that CH_15 is of limited architectural, technical and historical interest due to its surviving historic fabric and continued use, this asset has been assessed to be of Low significance. Given that LI_55 and LI_66 are not rare types and are of limited interest, these assets have been assessed to be of Very Low / Negligible significance.

Six former gravel pits and quarries (CH_53, LI_30, LI_33, LI_37, LI_47 and LI_68) were identified within the study area. These comprise irregular areas of disturbance that correspond with sites depicted on historic mapping (Ordnance Survey 6", 1837–1842; Ordnance Survey 25", 1888–1913). These cultural heritage assets hold limited archaeological interest due to their limited potential to contribute to the understanding of local industrial activities and mineral extraction through their surviving physical remains. Given these assets are not rare types and have limited potential to contribute to the understanding of these site types at a local level, they have been assessed to be of Very Low / Negligible significance.

13.3.4.1 Previous Excavation

A review of the Excavations Bulletin, TII's Archaeological Excavation Reports and Dublin Archaeology's archaeological, dive survey and geophysical survey data (The Heritage Council n.d.) identified the following archaeological excavations within the study area, as outlined in Table 13.4.

Table 13.4: Previous Excavations Identified within the Study Area

Licence Number	Townland	Findings
A017/004., E3026, A017/005, and E3027	Bennetstown	Archaeological testing for the M3 Motorway (Clonee to North of Kells) identified three sites including a spread of heat-fractured stone and charcoal, another burnt spread, and a group of pits and postholes, some of which formed a possible semi-circular structure.
16E0335	Barberstown	Archaeological testing carried out in relation to the North Runway development at Dublin Airport identified a rectangular ditched enclosure and a number of linear ditches.
E3024	Bennetstown	Archaeological excavation for the M3 Motorway (Clonee to North of Kells) also identified postholes, some of which were interpreted as the remains of possible structures, a clay-lined, keyhole-shaped kiln and several pits, and burnt mound. Sherds of Middle or Late Bronze Age pottery were recovered from one of the postholes.
00E0950 and 00E0951	Stockhole	Archaeological monitoring of topsoil-stripping prior to the construction of the Airport-Balbriggan Bypass identified a small, oval area of charcoal enriched soil and a small area of burnt topsoil.
03E1358	Ward Upper	Archaeological excavations in advance of the N2 National Road (Finglas to Ashbourne) realignment identified a small pit or token cremation, as well as a pit containing a large amount of prehistoric pottery.
13R020	Killamonan	Archaeological geophysical survey in Killamonan identified a series of possible enclosures, pits and possible areas of burning, and an extensive network of relict field boundaries (Earthsound 2013).
13E0464, 10R0010	Stockhole	Archaeological geophysical survey in advance of development for a cemetery identified features of potential archaeological interest including possible banked and ditched features and a possible former trackway; however, these could equally be natural or agricultural. Probable former field boundaries and field drains were also identified (Crumlish 2015).
17E0282	Barberstown	Archaeological investigations in advance of construction of the North Runway Project at Dublin Airport identified a number of early medieval and medieval features including two enclosures, a kiln and pits and ditches (Murphy 2018).

A further six archaeological excavations also took place within the study area (under Licence numbers: 99E0693, 18E0722, 04E0381, 04E0557 08E0333 and 09E0467). However, these did not identify any archaeological remains or deposits of archaeological significance.

13.3.4.2 Topographical Files

A review of the National Museum Topographical Finds available online (The Heritage Council n.d.) did not identify any casual finds within the study area.

13.3.4.3 Townland Boundaries

Along with baronies and parishes, townlands comprise a geopolitical unit of land still in use today (Smith 2003). They form the oldest and smallest territorial division in Ireland, and in rural areas are often characterised by historic hedgerows which follow more organic pre-18th Century improvement boundaries (Aalen, Whelan and Stout 2011). Many townland names are particularly old and provide invaluable information about the past at a local level, including information on natural features and past land use, local traditions and landmarks, and in some cases, historic landownership.

Townland boundaries have been identified within the study area, which are detailed in Appendix A13.1 in Volume 3 of this EIAR and shown on Figure 13.6 in Volume 4 of this EIAR. The townlands within the study area and information derived from their names from online sources and Irish Place Names (Flanagan and Flanagan 2002) are presented in Table 13.5.

Table 13.5: Townlands Within the Study Area

English Name	Irish Name	Possible Meaning
Ballintry	Béal Átha an Tré	áth ford béal opening, approach, mouth 'opening', 'approach', or 'access', very frequently coupled with 'ford' – 'mouth of the ford' 'the town of the three (persons)' (logainm.ie n.d.; Flanagan and Flanagan 2002; Joyce 1913)
Ballymacarney	Baile Mac Cearnaí	-
Ballymagillin	-	-
Ballystrahan	Baile an tSrutháin	baile townland, town, homestead sruth stream 'town of the streamlet' (logainm.ie n.d.; Flanagan and Flanagan 2002)
Barberstown	Baile an Bhearbóraigh	baile townland, town, homestead
Barstown	-	-
Baskin	Baiscín	'trees or land of trees' The place-name Baskin / Baiscín in Dublin is well attested in English sources, but the underlying meaning remains unclear. It could possibly be a diminutive form of baisc 'heap', in reference to the small hill in this townland (cf. Baskin Hill [House] as depicted on the OS 6" map). In this regard, it is quite interesting to note that a hill is also situated in the likewise-named Baskin in County Westmeath. However, research has not been completed on the townlands of that county and the underlying Irish form of Baskin in Westmeath therefore remains uncertain at this juncture. Moreover, the word baisc 'heap' is not clearly attested in other toponyms which further renders the suggested explanation of Baiscín problematic. Given this situation, it is worth comparing the word baiscín with baiscneach 'thorny, tree-like' (see Irish-English Dictionary, P. Dinneen), but there is no clear relationship between the two.
Baytownpark	-	-
Belcamp	Belcamp	-
Belgree	Baile Graí	baile townland, town, homestead
Bennettstown	-	-
Blackhall Big	An Halla Dubh Mór	dubh, dú-, duí- black mór great, big
Cherryhound	Cherryhound	-
Cloghran	Clochrán	stepping-stones' 'stony place' (logainm.ie n.d.; Flanagan and Flanagan 2002; Joyce 1913)
Clonshaugh	-	-
Colliersland North	-	-
Common	An Coimín	coimín commonage, common land; little hollow, glen
Corrstown	Baile an Chorraigh	baile townland, town, homestead
Court	An Chúirt	'Moore of the court of Belgree' (logainm.ie n.d.)
Creemore	-	-
Culcommon	Cúil Chomáin	'Common's corner or angle' (logainm.ie n.d.)
Cullendragh	An Chuileantrach; Cuileantrach	'denotes land producing holly' (logainm.ie n.d.)
Cushinstown	-	-
Dunboyne	Dún Búinne	dún, dúnaibh fort 'fort of the white cow goddess' (logainm.ie n.d.; Flanagan and Flanagan 2002)
Forrest Great	An Fhoroais Mhór	mór great, big
Forrest Little	An Fhoroais Bheag	beag, big small
Gallanstown	Baile an Ghalóntaigh	baile townland, town, homestead

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English Name	Irish Name	Possible Meaning
Gaulstown	-	Possibly from Ballynagall townland of the English (Joyce 1913)
Glebe (E.D. Kinsaley)	An Ghléib	gléib glebe
Harlockstown	-	-
Hollystown	Baile an Alabhóidigh	baile townland, town, homestead
Hollywood	Cnocán an Alabhóidigh	cnocán hillock
Irishtown	An Baile Gaelach	baile townland, town, homestead
Killamonan (E.D. Blanchardstown)	Coill na Mónann	coill, coillidh, coillte, coille wood "Mac Monan's wood"
Kilreesk	Cill Réisc	cill church 'church of the M-?'
Kingstown	-	-
Kinoristown	-	-
Lynaghstown	Baile na Laighneach	There is a fort in it; 'town of the Leinstermen' (logainm.ie n.d.)
Middleton	-	-
Nevinstown East	Baile Naoimhín Thoir	baile townland, town, homestead
Newpark	An Pháirc Nua	nua new páirc field
Normansgrove	Garrán an Normannaigh	garrán grove
Nuttstown	-	-
Pace	An Bealach	bealach way, pass
Pickardstown	Baile an Phiocóidigh	baile townland, town, homestead
Piercetown	-	-
Portan	-	-
Portmanna	Port manaig	'the monk's fort or bank' (logainm.ie n.d.)
Priest Town	-	-
Rowan	-	'Reddish land' (logainm.ie n.d.)
Sarney	Searnaí	-
Shallon	Sealúin	Sealan [shallan] signifies the rope used by an executioner; and it is sometimes used to designate the place where people were hanged' (logainm.ie n.d.; Joyce 1913)
Skephubble	Sceich an Phubail	sceach, sceich hawthorn, thorn-bush (logainm.ie n.d.; Flanagan and Flanagan 2002)
Spricklestown	Baile Spreiceal	baile townland, town, homestead
Staffordstown Little	-	-
Stockhole	Steach Comhaill	teach, steach, stigh, tigh house 'Conichghaill's house?'
Stokestown	-	-
Vesingstown	-	-
Ward Lower	An Barda Íochtarach	-
Ward Upper	An Barda Uachtarach	-
Waynestown	-	-
Whitesland	-	-
Woodland	Fearann na Coille	coill, coillidh, coillte, coille wood, fearann land
Woodpark	-	-
Yellow Walls	Na Ballaí Búí	búí yellow (logainm.ie n.d.; Flanagan and Flanagan 2002)

The key characteristics of these assets comprise their physical remains and documentary (cartographic) evidence. Given their historical, cultural, traditional, and social interest, 11 townland boundaries have been assessed to be of Medium significance (TB_01, TB_04, TB_38, TB_39, TB_44, TB_67, TB_68, TB_88, TB_89, TB_91 and TB_99).

While the remaining townland boundaries retain some historical, cultural, traditional, and social interest given their poor condition, or having been removed by development, they have been assessed to be of Low (TB_02, TB_03, TB_05, TB_06, TB_07, TB_08, TB_13, TB_14, TB_15, TB_17, TB_18, TB_19, TB_23, TB_30, TB_31, TB_32, TB_33, TB_35, TB_37, TB_43, TB_45, TB_46, TB_47, TB_48, TB_49, TB_50, TB_51, TB_52, TB_53, TB_56, TB_57, TB_76, TB_77, TB_78, TB_79, TB_81, TB_82, TB_83, TB_85, TB_86, TB_87, TB_90, TB_94, TB_95, TB_96 and TB_97), and Very Low / Negligible (TB_09, TB_10, TB_11, TB_12, TB_16, TB_20, TB_21, TB_22, TB_24, TB_25, TB_26, TB_27, TB_28, TB_29, TB_34, TB_36, TB_40, TB_41, TB_42, TB_54, TB_55, TB_58, TB_59, TB_60, TB_61, TB_62, TB_63, TB_64, TB_65, TB_66, TB_69, TB_70, TB_71, TB_72, TB_73, TB_74, TB_75, TB_80, TB_92, TB_93 and TB_98) significance.

13.3.4.4 Potential for the Presence of Unknown Archaeological Remains

The sources identified in Section 13.2.2 and in Section 13.8 provide a thorough understanding of the potential for the presence of unknown archaeological remains within the study area.

Off-road sections assessed to be of very high potential for the presence of unknown archaeological remains comprise:

- The off-road section south of the Woodland Substation (approximate Chainage 0 to 3,600) due to the presence of assets identified from aerial imagery (e.g. the remains of ring-ditches; CH_61 and CH_62) and LiDAR data acquired for the Proposed Development (e.g. a cluster of buildings of unknown date; LI_08) that may date from the prehistoric period onwards; and
- The off-road section to the east of the M1 Motorway due to the presence of known assets and assets identified from aerial imagery within the study area (AY_47; a Recorded Monument and LI_58; a palaeochannel) and adjacent to the study area (such as enclosures; DU015-120 and DU015-008, in Baskin and Middletown respectively) that may evidence activity dating to the prehistoric period onwards.

The potential for the presence of unknown archaeological remains has been reduced in the off-road sections that have been subject to disturbance such as in Kingstown between approximate Chainage 28,650 to 29,100, and the existing Woodland and Belcamp Substations. However, given the number of known archaeological assets within the study area, the results of previous archaeological investigations (see Section 13.3.4.1), as well as cropmarks identified from aerial photographs and sites identified from LiDAR (Appendix A13.2 in Volume 3 of this EIAR), the potential for the presence of unknown archaeological remains within the remaining off-road sections of the Proposed Development has been assessed to be high.

Ireland's extensive river network is known to have been the foci for human activity from the Mesolithic period onwards (Mossop and Mossop 2009; Aalen, Whelan and Stout 2011; Woodman 2015). In addition, votive offerings, objects deposited for religious reasons, were deposited in rivers, loughs and bogs, with a floruit in the Iron Age. Rivers were later used in the medieval and post-medieval period as a source of power, such as for mills, breweries and industrial facilities. In addition, the palaeochannels identified within the study area (LI_18, LI_24, LI_27, LI_36, LI_58 and LI_69 (see Section 13.3.4)) have the potential to contain evidence of the palaeoenvironment as well as containing archaeological remains, including votive offerings. There is therefore potential for archaeological remains in and around watercourses.

The Proposed Development will cross 47 watercourses (some of which will be crossed multiple times) and details of these are provided in Table 13.6. As can be seen from Table 13.6, 35 are drainage ditches, eight are streams (up to 3m in width) and four are rivers (over 3m in width).

Table 13.6: Watercourses to be Crossed by the Proposed Development

Reference Number	Type	Notes	Approximate Chainage
UNWC 1	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913).	Chainage 1,050
UNWC 2	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping (Ordnance Survey 25", 1888-1913).	Chainage 1,600
WCP01	Stream	Dunboyne Stream. A stream depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913) following the same course.	Chainage 2,175
UNWC 3	Drainage ditch	A ditch depicted on later historic Ordnance Survey mapping (Ordnance Survey 25", 1888-1913). Located within an area of Lacustrine sediments (Geological Survey of Ireland (GSI) n.d.).	Chainage 2,750
UNWC 4	Stream	A stream depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913). Crossed by the road (R156), northern section no longer perceptible.	Chainage 4,000
UNWC 5	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913).	Chainage 5,900
UNWC 6	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913).	Chainage 6,050
UNWC 9	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 8,225
UNWC 10	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913).	Chainage 8,350
UNWC 11	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 8,450
UNWC 13	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 8,900
UNWC 15 (1)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 9,150
UNWC 14	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 9,200
UNWC 15 (2)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 9,300
UNWC 15A	Drainage ditch	A drainage ditch not depicted historic Ordnance Survey mapping (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913).	Chainage 9,750
UNWC 16	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913).	Chainage 10,450
WCP02	Stream	A stream depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913). Located in an area of alluvium (GSI n.d.).	Chainage 10,800
UNWC 18	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913).	Chainage 11,400
WCP03	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913).	Chainage 11,650
UNWC 19	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 11,950

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Reference Number	Type	Notes	Approximate Chainage
UNWC 20 (1)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 12,050
UNWC 20 (2)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 12,150
WCP04	River	River Tolka. Depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837-1842) and appears to have been straightened on later editions (Ordnance Survey 25", 1888-1913). The meanders of the former channel are still depicted on later mapping and in LiDAR data acquired for the Proposed Development (LI_69). On modern mapping the course of the river appears to have been straightened further. Located in an area of alluvium (GSI n.d.).	Chainage 12,550
UNWC 21 (1)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 13,200
UNWC 21 (2)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 14,200
UNWC 21 (3)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary on a slightly different alignment (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 14,300
UNWC 22	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 14,450
UNWC 23	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913), to the north and south of the road.	Chainage 14,800
UNWC 24	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913).	Chainage 15,450
WCP05	River	Pinkeen River. Depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913). Located in an area of alluvium with gravels surrounding (GSI n.d.). A palaeochannel (LI_36) was identified adjacent to the current channel from LiDAR acquired for the Proposed Development that may comprise river terraces and levees associated with the river.	Chainage 16,350
UNWC 24A	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as the edge of the road (Ordnance Survey 6", 1837-1842) then a ditch on later edition (Ordnance Survey 25", 1888-1913).	Chainage 16,800
UNWC 25 (1)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837-1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888-1913), to the north and south of the road.	Chainage 17,050
UNWC 25 (2)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping (Ordnance Survey 25", 1888-1913).	Chainage 17,100
WCP07	River	Ward River. Depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913). Located in an area of alluvium (GSI n.d.). This river forms part of an Arterial Drainage Scheme of the Office of Public Works (Broadmeadow and Ward (C2)) which strongly suggests this river may have been subject to modification (Drainage Map n.d.).	Chainage 18,200
WCP08	River	Ward River. Depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837-1842; Ordnance Survey 25", 1888-1913). Located in an area of alluvium (GSI n.d.). This river forms part of an Arterial Drainage Scheme of the Office of Public Works (Broadmeadow and Ward (C2)) which strongly suggests this river may have been subject to modification (Drainage Map n.d.).	Chainage 19,225

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Reference Number	Type	Notes	Approximate Chainage
UNWC 26 (1)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837–1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888–1913).	Chainage 19,700
UNWC 26 (2)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837–1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888–1913).	Chainage 19,825
UNWC 27	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837–1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888–1913).	Chainage 20,375
WCP10	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837–1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888–1913). This watercourse forms part of an Arterial Drainage Scheme of the Office of Public Works (Broadmeadow and Ward (C2/4)) and the Ward Drainage District which strongly suggests this river may have been subject to modification, including deepening and widening (Drainage Map n.d.).	Chainage 20,700
UNWC 28	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837–1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888–1913).	Chainage 21,350
UNWC 29	Drainage ditch	A drainage ditch not depicted historic Ordnance Survey mapping (Ordnance Survey 6", 1837–1842; Ordnance Survey 25", 1888–1913).	Chainage 21,550
UNWC 30	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837–1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888–1913).	Chainage 25,325
WCP12	Stream	A stream depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837–1842; Ordnance Survey 25", 1888–1913). This watercourse forms part of an Arterial Drainage Scheme of the Office of Public Works (Broadmeadow and Ward (C2/2)) which strongly suggests this river may have been subject to modification (Drainage Map n.d.). Located in an area of bedrock outcrop or subcrop (GSI n.d.).	Chainage 26,200
UNWC 30A	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837–1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888–1913).	Chainage 28,150
UNWC 30B	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837–1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888–1913).	Chainage 28,200
WCP13	Stream	A stream depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837–1842; Ordnance Survey 25", 1888–1913). This watercourse forms part of an Arterial Drainage Scheme of the Office of Public Works (Broadmeadow and Ward (C2/1)) which strongly suggests this river may have been subject to modification (Drainage Map n.d.).	Chainage 28,350
UNWC 31 (1)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837–1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888–1913).	Chainage 30,150
UNWC 31 (2)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837–1842; Ordnance Survey 25", 1888–1913).	Chainage 30,425
UNWC 33 (1)	Stream	A stream depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837–1842; Ordnance Survey 25", 1888–1913). Located in an area of alluvium (GSI n.d.).	Chainage 31,400
UNWC 33 (2)	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837–1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888–1913). Located in an area of alluvium (GSI n.d.).	Chainage 31,625
UNWC 33A	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837–1842) then as a drainage ditch on later editions (Ordnance Survey 25", 1888–1913).	Chainage 34,650

Reference Number	Type	Notes	Approximate Chainage
UNWC 34	Stream	A drainage ditch depicted on historic Ordnance Survey mapping as a field boundary (Ordnance Survey 6", 1837–1842; Ordnance Survey 25", 1888–1913).	Chainage 35,200
UNWC 35	Drainage ditch	A drainage ditch depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837–1842; Ordnance Survey 25", 1888–1913).	Chainage 35,600
WCP16	Stream	A drainage ditch depicted on historic Ordnance Survey mapping (Ordnance Survey 6", 1837–1842; Ordnance Survey 25", 1888–1913).	Chainage 36,875

The potential for in-situ archaeological remains within smaller watercourses and field drains, likely established in the 18th and 19th Century as part of agricultural improvement (O'Sullivan and Downey 2010), is considered to be lower than within unaltered streams and rivers. In addition, this potential is reduced where watercourses have been modified such as through canalisation or dredging, or part of the drainage works by the Office of Public Works. Where the evidence indicates that watercourses within the study area have been modified, this is identified in Table 13.6.

While not confirmed by ground investigation (Causeway Geotech Ltd. 2023), alluvium and lacustrine deposits were identified from the Geological Survey of Ireland (GSI) online mapper (GSI 2023) along watercourses (see Table 13.6) and these are considered to have a higher potential for the presence of palaeoenvironmental remains and preserved organic materials.

13.4 Potential Impacts

13.4.1 'Do Nothing' Scenario

Should the Proposed Development not be implemented (i.e., the Do Nothing scenario), there would be no negative impacts to any of the archaeology, architectural heritage and cultural heritage assets as a result of the Proposed Development. The impact would therefore be Neutral.

13.4.2 Construction Phase

13.4.2.1 Direct

13.4.2.1.1 Archaeology

A summary of the assessment of direct impacts on archaeology during the Construction Phase is presented below while the complete assessment is presented in Appendix A13.3 in Volume 3 of this EIAR. Unless otherwise stated, impacts described are negative.

Construction of the Proposed Development will remove a mound (AY_47; Recorded Monument; Medium significance) in Cloghran (Chainage 34,850 and Chainage 34,950). As this archaeological asset will be wholly removed, the magnitude of this permanent impact has been assessed to be Very High and the significance of impact has been assessed to be Very Significant.

The Proposed Development will be located approximately 4m to the east of the enclosing wall of a graveyard (AY_24) in Ward Lower (a Recorded Monument; High significance). While the enclosing wall to the graveyard will be retained, there is the potential for accidental damage to this structure given its location adjacent to the R121 Regional Road (Chainage 23,975 to Chainage 24,025). The magnitude of this permanent impact has been assessed as High and the potential impact is assessed as Very Significant.

In addition, the Proposed Development will also be located within the Zones of Notification of the following seven Recorded Monuments:

- An enclosure (AY_18; Medium significance) in Ballintry, approximately 35m to the south of the Proposed Development (Chainage 17,200);
- A church and graveyard (AY_23 and AY_24; both High significance) in Ward Lower, approximately 26m and 4m to the east of the Proposed Development, respectively (Chainage 23,975 to Chainage 24,025);
- A castle (AY_25; Medium significance) in Ward Upper, approximately 44m to the north-west of the Proposed Development (Chainage 24,350); and
- Three ringforts (AY_29, AY_41 and AY_43; Medium significance) in Common, Forrest Great and Cloghran, approximately 57m to the north (Chainage 26,950 to Chainage 27,000), immediately to the north (Chainage 30,600 to 30,725), and 27m to the south, respectively (Chainage 32,650 to Chainage 32,775).

While the Proposed Development will not directly impact the Recorded Monuments themselves, excavation of the proposed cable trench will have a direct impact on any archaeological remains that may survive within these zones. However, the Proposed Development will be in-road in these locations, and as road construction is likely to have already removed or truncated any archaeological remains that may have been present, the magnitude of these permanent impacts has been assessed to be Low and the significance of impact has been assessed to be Slight.

Construction of the Proposed Development, including the excavation of the proposed cable trench and Joint Bays, temporary Passing Bays, the excavation of temporary launch and reception pits for HDD and Belcamp Substation upgrade works, may also result in a direct impact on any previously unknown archaeological remains that may be present within the land required for the Proposed Development.

There is the potential for impacts on archaeological remains and artefacts that may survive in watercourses and in the land adjacent to them. A total of 37 watercourses will be crossed in-road using existing road structures (UNWC 4, UNWC 5, UNWC 6, UNWC 9, UNWC 10, UNWC 11, UNWC 13, UNWC 15 (1), UNWC 14, UNWC 15 (2), UNWC 15A, UNWC 16, WCP02, UNWC17, UNWC 18, WCP03, UNWC 19, UNWC 20 (1), UNWC 20 (2), UNWC 21 (1), UNWC 21 (2), UNWC 21 (3), UNWC 22, UNWC 23, UNWC 24, UNWC 24A, UNWC 25 (1), UNWC 25 (2), UNWC 26 (1), UNWC 26 (2), UNWC 27, WCP10, UNWC 30, UNWC 30A, UNWC 30B, UNWC 31 (2) and UNWC 33 (1)), therefore avoiding watercourses themselves and the land immediately adjacent to them. No potential impacts on archaeological remains and artefacts that may survive have been identified.

Instream trenching will be required at 18 watercourses. Of these:

- 10 are drainage ditches (UNWC 1, UNWC 2, UNWC 3, UNWC 28, UNWC 29, UNWC 31 (1), UNWC 33 (2), UNWC 33A and UNWC 35);
- Five are streams (WCP01, WCP12, WCP13, UNWC 34 and WCP16); and
- Four are rivers (WCP04, WCP05, WCP07 and WCP08).

As identified in Section 13.3.4.4, the potential for the presence of unknown archaeological remains is considered lower in drainage ditches than within unmodified streams and rivers.

Of these streams and rivers, five appear to have been dredged (WCP04, WCP07, WCP08, WCP12 and WCP13) based on drainage scheme information from the Commissioners of Public Works in Ireland flood maps (Drainage Map n.d.) and the potential for the presence of archaeological remains within these watercourses is also considered to be lower than those that have not. In addition, one of these rivers (WCP04) has been subject to modification, based on historic mapping, and therefore, the potential for the presence of archaeological remains within this watercourse is also considered to be lower.

13.4.2.1.2 Architectural Heritage

A summary of direct impacts on architectural heritage assets assessed to be Significant (i.e. of Moderate significance or above) before mitigation is presented below. The assessment of all impacts (both significant and non-significant) on architectural heritage assets is presented in Appendix A13.3 in Volume 3 of this EIAR. Unless otherwise stated, impacts described are negative.

Construction of the watercourse crossing at Chainage 18,200 will remove an area of 'Crockanee' wood and approximately 120m of boundary associated with the Priest Town GDL (DL_04; Medium significance). The magnitude of this permanent impact has been assessed to be Medium and the significance of impact has been assessed to be Moderate.

In addition, two direct impacts of Slight significance (DL_05 and DL_15) and one direct impact of Not Significant significance (DL_16) have been assessed. These impacts are presented in Appendix A13.3 in Volume 3 of this EIAR.

13.4.2.1.3 Cultural Heritage

A summary of direct impacts on cultural heritage assets assessed to be Significant (i.e., of Moderate significance or above) before mitigation is presented below. The assessment of all impacts (significant and non-significant impacts) on cultural heritage assets is presented in Appendix A13.3 Volume 3 of this EIAR. Unless otherwise stated, impacts described are negative.

Construction of the Proposed Development will:

- Remove the majority of an enclosure (LI_40; Medium significance) in Irishtown, identified from LiDAR data acquired for the Proposed Development in the off-road section between Chainage 22,100 and Chainage 22,200;
- Wholly remove three ring-ditches (CH_78; assessed to be of Medium significance), identified from aerial imagery in the townland of Stockhole in the off-road section between Chainage 35,750 and Chainage 35,950;
- Wholly remove three ring-ditches and partially remove two ring-ditches forming part of CH_62, assessed to be of Medium significance, identified from aerial imagery, in Woodland in the off-road section between Chainage 325 and Chainage 725; and
- Wholly remove the footings of a small group of buildings (LI_08; Low significance) in Cullendragh identified from LiDAR data acquired for the Proposed Development in the off-road section at Chainage 2,650.

The magnitude of these permanent impacts has been assessed to be Very High and the significance of impact has been assessed to be Very Significant.

Construction of the Proposed Development will also:

- Remove curvi-linear features forming part of CH_67 (assessed to be of Medium significance), identified from aerial imagery in Cullendragh in the off-road section between Chainage 3,100 and Chainage 3,300; and
- Remove half of an enclosure (CH_75; assessed to be of Medium significance) identified from aerial imagery in Shallon for TCC4 between Chainage 26,800 and Chainage 26,925.

The magnitude of these permanent impacts has been assessed to be High and the significance of impact has been assessed to be Significant.

Construction of the Proposed Development will also remove deposits associated with three palaeochannels (LI_24, LI_36 and LI_58; Medium significance) in Dunboyne between Chainage 10,450 and Chainage 10,650,

Nuttstown between Chainage 16,350 and Chainage 16,425, and Cloghran between Chainage 34,950 and Chainage 35,150, respectively. These assets have the potential to contain information about the palaeoenvironment as well as archaeological remains. The magnitude of these permanent impacts has been assessed to be Medium and the significance of impact has been assessed to be Moderate.

Construction of the Proposed Development will remove:

- Approximately 37m of an approximately 300m townland boundary (the Woodland - Gaulstown townland boundary; TB_01) at Chainage 1,050;
- Approximately 30m of an approximately 1,500m townland boundary (the Gaulstown - Cullendraugh townland boundary; TB_04) at Chainage 2,150;
- Approximately 35m of an approximately 580m townland boundary (the Rowan – Nuttstown townland boundary; TB_39) at Chainage 16,350;
- Approximately 52m of an approximately 2,000m townland boundary (the Priest Town – Belgree townland boundary; TB_44) at Chainage 19,225;
- Approximately 50m of an approximately 980m townland boundary (the Shallon – Shallon townland boundary; TB_67) between Chainage 26,150 and Chainage 26,200; and
- Approximately 230m of an approximately 1.9km townland boundary (the Clonshaugh – Belcamp townland boundary; TB_87) at Chainage 36,825.

The magnitude of these permanent impacts has been assessed to be Medium and the significance of impact has been assessed to be Moderate.

An additional 14 direct Slight impacts (CH_15, CH_32, CH_59, CH_63, LI_05, LI_09, LI_11, TB_38, TB_52, TB_82, TB_85, TB_86, TB_96 and TB_97), 13 direct Not Significant impacts (CH_34, CH_53, CH_68, CH_80, CH_81, CH_82, CH_83, LI_57, LI_60, TB_51, TB_57, TB_76 and TB_78) and two direct Imperceptible impacts (LI_37 and TB_54) are assessed for cultural heritage. These impacts are presented in Appendix A13.3 in Volume 3 of this EIAR.

13.4.2.2 Indirect

13.4.2.2.1 Archaeology

No significant indirect impacts (i.e., of Moderate significance or above) have been identified on archaeology as a result of the Construction Phase of the Proposed Development. An indirect impact of Slight significance on the setting of two Recorded Monuments (AY_23 and AY_24) resulting from noise and visual intrusion from construction plant has been identified, and these are presented in Appendix A13.3 in Volume 3 of this EIAR.

13.4.2.2.2 Architectural Heritage

Four indirect impacts of Slight significance have been assessed for four GDLs (DL_04, DL_05, DL_15 and DL_16), as a result of the Construction Phase of the Proposed Development, and these are presented in Appendix A13.3 in Volume 3 of this EIAR.

13.4.2.2.3 Cultural Heritage

A total of six indirect impacts of Slight significance (CH_01, CH_13, CH_24, CH_29, CH_75 and LI_40) and five indirect impacts of Not Significant significance (CH_04, CH_12, CH_25, CH_33 and CH_71) have been assessed, as a result of the Construction Phase of the Proposed Development, and these are presented in Appendix A13.3 in Volume 3 of this EIAR.

13.4.3 Operational Phase

13.4.3.1 Direct

No direct impacts were identified on archaeology, architectural heritage and cultural heritage assets as a result of the Operational Phase of the Proposed Development.

13.4.3.2 Indirect

Indirect impacts on the setting of archaeological, architectural heritage and cultural heritage assets resulting from noise and visual intrusion from construction plant during the Construction Phase would not continue into the Operational Phase. In addition, as in-road sections will be reinstated post-installation, the Proposed Development will not be visible in in-road sections during the Operational Phase, and therefore, no indirect impacts on the setting of archaeological, architectural heritage and cultural heritage assets in these locations have been identified. Similarly, while the temporary Passing Bays will require the removal of hedgerows during the Construction Phase, these will be reinstated (see Chapter 4 (Proposed Development Description) in Volume 2 of this EIAR), and the off-road sections will be largely reinstated to agricultural land, and therefore, no indirect impacts on the setting of archaeological, architectural heritage and cultural heritage assets in these locations have been identified. Some permanent private access tracks, off-road Joint Bays and permanent watercourse crossings may be visible within off-road sections, and therefore, have the potential to result in indirect impacts to the setting of archaeological, architectural heritage and cultural heritage assets. These are identified below and an impact assessment presented in Appendix A13.3 in Volume 3 of this EIAR.

No significant indirect impacts (i.e., of Moderate significance or above) are identified on architectural heritage assets as a result of operation of the Proposed Development. Two indirect impacts of Slight significance have been assessed (DL_04 and DL_05) and are presented in Appendix A13.3 in Volume 3 of this EIAR.

13.5 Mitigation and Monitoring Measures

This Section identifies measures required to mitigate or monitor the potential impacts that have the potential to result from the Proposed Development on archaeological, architectural heritage and cultural heritage assets.

Mitigation will be undertaken within the framework provided by the Code of Practice between the Department of the Environment, Heritage and Local Government and EirGrid (Department of the Environment, Heritage and Local Government and EirGrid 2009).

Where preservation in-situ is feasible, a methodology for this will be agreed with the NMS.

All mitigation will be carried out under the supervision of a suitably qualified archaeologist under Licence (where required) granted by the Minister for Housing, Local Government and Heritage, and in accordance with the provisions of the National Monuments Acts 1930–2004 (as amended). Written reports on the results of all mitigation undertaken will be prepared in accordance with the requirements of the Licence(s) granted by the NMS.

The appointed contractor will allow sufficient time in their programme to allow the mitigation to be completed in the areas in which such mitigation is required.

13.5.1 Pre-Construction Phase

Mitigation measures for known archaeological, architectural heritage and cultural heritage assets, that will be undertaken post-consent, but in advance of the Construction Phase, will comprise the following:

- Topographical survey of the upstanding remains of LI_08;
- A photographic and written record of the elements of GDLs DL_04, DL_05, DL_15 and DL_16 impacted by the Proposed Development;
- Townland boundary surveys comprising a detailed written and photographic survey, and test trenching of TB_01, TB_04, TB_38, TB_39, TB_44, TB_51, TB_52, TB_54, TB_57, TB_67, TB_76, TB_78, TB_82, TB_85, TB_86, TB_87, TB_96 and TB_97;
- Palaeoenvironmental assessment and analysis of LI_24, LI_36 and LI_58;
- Archaeological excavation of AY_47, CH_32, CH_59, CH_62, CH_67, CH_75, CH_78, LI_05, LI_08, LI_09, LI_11, LI_24, LI_36, LI_40 and LI_58, informed by archaeological geophysical survey and archaeological test excavation, where preservation in-situ is not feasible;
- Underwater assessment comprising wade and metal detecting survey of:
 - Dunboyne Stream (WCP01);
 - Pinkeen River (WCP05); and
 - Two unnamed streams (UNWC 34 and WCP16).
- An archaeological metal detecting survey will be undertaken of the banks of UNWC 1, UNWC 2, UNWC 3, WCP04, WCP07, WCP08, UNWC 28, UNWC 29, WCP12, WCP13, UNWC 31 (1), UNWC 33 (2), UNWC 33A and UNWC 35).

In addition, archaeological geophysical survey and archaeological test excavation will be undertaken post consent but pre-construction in all off-road sections required for construction, including land required for the proposed access tracks, Passing Bays and Joint Bays, and HDD Compounds and TCCs. Where preservation in situ is not feasible, the results of the archaeological geophysical survey and archaeological test excavation will inform the design of archaeological excavation required to mitigate the impact on any unknown archaeological remains identified.

13.5.2 Construction Phase

During construction, the following mitigation measures will be implemented:

- Archaeological monitoring of on-road construction works within the Zones of Notification of Recorded Monuments (AY_18, AY_23, AY_24, AY_25, AY_29, AY_41 and AY_43) and for assets CH_34, CH_53, CH_68, CH_80, CH_81, CH_82, CH_83, LI_37, LI_57 and LI_60 will be undertaken; and
- AY_24, CH_15 and CH_63 will be clearly demarcated with temporary fencing within the Planning Application Boundary to avoid accidental damage.

If archaeological remains are identified during the archaeological monitoring, and preservation in-situ is not feasible, archaeological excavation will be undertaken under an excavation licence granted by the Minister for Housing, Local Government and Heritage and in accordance with the provisions of the National Monuments Acts 1930–2004 (as amended).

13.5.3 Operational Phase

No mitigation for archaeological, architectural heritage and cultural heritage is required during the Operational Phase.

13.6 Residual Impacts

13.6.1 Construction Phase

Residual impacts on archaeological, architectural heritage and cultural heritage assets during construction and operation are summarised in Section 13.6.1.1, 13.6.1.2 and 13.6.1.3. A full assessment is presented Appendix A13.3 in Volume 3 of this EIAR. In addition, where a significant impact (i.e., an impact of Moderate significance or above) had previously been identified prior to mitigation (see Section 13.4), an assessment of the residual significance of impact is also presented in Table 13.7. All impacts are negative unless otherwise stated.

13.6.1.1 Archaeology

Construction of the Proposed Development will remove AY_47 (a Recorded Monument assessed to be of Medium significance). Following the application of the mitigation measures identified in Section 13.5, the residual magnitude of impact has been assessed to be Medium and the residual significance of impact has been assessed to be Moderate.

A Slight residual significance of impact has been assessed for two archaeological assets (AY_23 and AY_24) and a Not Significant residual significance of impact has been assessed for seven archaeological assets (AY_18, AY_23, AY_24, AY_25, AY_29, AY_41 and AY_43) during construction. These are presented in Appendix A13.3 in Volume 3 of this EIAR.

13.6.1.2 Architectural Heritage

No significant residual impacts are predicted on architectural heritage assets as a result of the construction of the Proposed Development.

During the Construction Phase, a Slight residual significance of impact has been assessed for four GDLs (DL_04, DL_05, DL_15 and DL_16), a Not Significant residual significance of impact has been assessed for one GDL (DL_05) and an Imperceptible residual impact has been assessed for two GDLs (DL_15 and DL_16). These are presented in Appendix A13.3 in Volume 3 of this EIAR.

13.6.1.3 Cultural Heritage

The residual significance of impact has been assessed to be Slight for 19 cultural heritage assets (CH_01, CH_13, CH_24, CH_29, CH_62, CH_67, CH_75, CH_78, LI_08, LI_24, LI_36, LI_40, LI_58, TB_01, TB_04, TB_39, TB_44, TB_67 and TB_87). A Not Significant residual significance of impact has been assessed for six cultural heritage assets (CH_04, CH_12, CH_25, CH_33, CH_71 and TB_38) and an Imperceptible residual significance of impact has been assessed for 28 cultural heritage assets (CH_15, CH_32, CH_34, CH_53, CH_59, CH_63, CH_68, CH_80, CH_81, CH_82, CH_83, LI_05, LI_09, LI_11, LI_37, LI_57, LI_60, TB_51, TB_52, TB_54, TB_57, TB_76, TB_78, TB_82, TB_85, TB_86, TB_96 and TB_97) during construction. These are presented in Appendix A13.3 in Volume 3 of this EIAR.

Table 13.7: Assessment of Residual Impacts for Archaeological, Architectural and Cultural Heritage Assets Where a Significant Impact Has Been Assessed Prior to Mitigation

Asset Reference	Designation	Significance	Impact Magnitude (Pre-Mitigation)	Impact Significance (Pre-Mitigation)	Mitigation Measures	Residual Magnitude of Impact	Residual Significance of Impact
Construction Phase							
Archaeology							
AY_47	Recorded Monument	Medium	Very High	Very Significant	Archaeological excavation informed by archaeological geophysical survey and archaeological test excavation	Medium	Moderate
Architectural Heritage							
DL_04	None	Medium	Medium	Moderate	Photographic and written record of the elements of GDL impacted by the Proposed Development	Low	Slight
Cultural Heritage							
CH_62	None	Medium	Very High	Very Significant	Archaeological excavation informed by archaeological geophysical survey and archaeological test excavation	Medium	Slight
CH_67	None	Medium	High	Significant	Archaeological excavation informed by archaeological geophysical survey and archaeological test excavation	Medium	Slight
CH_75	None	Medium	High	Significant	Archaeological excavation informed by archaeological geophysical survey and archaeological test excavation	Medium	Slight
CH_78	None	Medium	Very High	Very Significant	Archaeological excavation informed by archaeological geophysical survey and archaeological test excavation	Medium	Slight
LI_08	None	Low	Very High	Very Significant	Topographical survey (written, photographic and drawn survey). Archaeological excavation informed by archaeological geophysical survey and archaeological test excavation.	Medium	Slight
LI_24	None	Medium	Medium	Moderate	Palaeoenvironmental assessment and analysis Archaeological excavation informed by archaeological geophysical survey and archaeological test excavation	Low	Slight

East Meath - North Dublin Grid Upgrade
 Environmental Impact Assessment Report (EIAR): Volume 2

Asset Reference	Designation	Significance	Impact Magnitude (Pre-Mitigation)	Impact Significance (Pre-Mitigation)	Mitigation Measures	Residual Magnitude of Impact	Residual Significance of Impact
LI_36	None	Medium	Medium	Moderate	Palaeoenvironmental assessment and analysis Archaeological excavation informed by archaeological geophysical survey and archaeological test excavation	Low	Slight
LI_40	None	Medium	Very High	Very Significant	Archaeological excavation informed by archaeological geophysical survey and archaeological test excavation.	Medium	Slight
LI_58	None	Medium	Medium	Moderate	Palaeoenvironmental assessment and analysis Archaeological excavation informed by archaeological geophysical survey and archaeological test excavation	Low	Slight
TB_01	None	Medium	Medium	Moderate	Townland boundary survey	Low	Slight
TB_04	None	Medium	Medium	Moderate	Townland boundary survey	Low	Slight
TB_39	None	Medium	Medium	Moderate	Townland boundary survey	Low	Slight
TB_44	None	Medium	Medium	Moderate	Townland boundary survey	Low	Slight
TB_67	None	Medium	Medium	Moderate	Townland boundary survey	Low	Slight
TB_87	None	Medium	Medium	Significant	Townland boundary survey	Low	Slight

13.6.2 Operational Phase

No direct impacts have been identified for archaeology and cultural heritage during the Operational Phase.

Two indirect impacts have been identified for architectural heritage during the Operational Phase (DL_04 and DL_05). The residual magnitude of these impacts has been assessed to be Low and the residual significance of impact has been assessed to be Slight.

13.7 Conclusion

This Chapter presents the results of the assessment for archaeology, architectural heritage and cultural heritage arising from the Proposed Development.

During the Construction Phase, there is the potential for significant impacts. After the application of the mitigation measures identified in Section 13.5, the majority of these are not anticipated to be significant. One direct impact identified on a Recorded Monument (AY_47) has been assessed to be a Moderate residual impact.

No significant impacts are anticipated for archaeology, architectural heritage and cultural heritage during the Operational Phase.

13.8 References

Aerial Imagery

Cambridge University Collection of Aerial Photography (CUCAP)

CUCAP Number	Date	Type	Subject
BDK006	14/07/1970	Oblique	Crop marks. Dunboyne, Meath, Ireland

Fairey Survey of Ireland (FSL453/2), 1971, National Monuments Service Archive

Ortho imagery (1995, 2000, 2005): <https://heritagemaps.ie/WebApps/HeritageMaps/index.html>

OSi Ortho

DigitalGlobe aerial imagery

GoogleEarth, various dates

Historic Maps

The Down Survey of Ireland, 1656-1658

Rocque, 1760, Dublin County

Taylor and Skinner Dublin to Swords, 1778

Taylor's Environs of Dublin, 1816

Ordnance Survey, 6" to 1 mile, 1837 – 1842,

Ordnance Survey, 25" to 1 mile, 1888-1913,

Sources

- Aalen, F. H. A, K. Whelan and M. Stout (2011). Atlas of the Irish Rural Landscape (2nd Edition). Cork University Press.
- Branigan, G. (2012). Ancient & Holy Wells of Dublin. The History Press.
- Causeway Geotech Ltd. (2023). East Meath North Dublin Grid Upgrade – Ground Investigation.
- Costello, V. (2014). Irish Demesne Landscapes, 1660 – 1740. Dublin. Four Courts Press.
- Crumlish, R. (2015). Report on Pre-Development Testing at Stockhole Townland, Co. Dublin.
- D'Alton, J. (1838). The History of the County of Dublin. Hodges and Smith, College-Green. Dublin.
- Department of Arts Heritage and the Gaeltacht (2011). Architectural Heritage Protection Guidelines for Planning Authorities.
- Department of Arts, Heritage, Gaeltacht and Islands (now Department of Culture, Heritage and Gaeltacht) (1999). Framework and Principles for the Protection of the Archaeological Heritage.
- Department of Culture, Heritage and the Gaeltacht and National Monuments Service (2019). Preservation Orders. [Online] Available from: <https://www.archaeology.ie/sites/default/files/media/publications/po19v1-all-counties.pdf> [Accessed April 2023].
- Department of the Environment, Heritage and Local Government and EirGrid (2009). Code of Practice between the Department of the Environment, Heritage and Local Government and EirGrid.
- Drainage Maps (n.d.). [Online] Available from: https://www.floodinfo.ie/map/drainage_map/ [Accessed April 2023].
- Duffy, C., (2008). Archaeological Assessment including Test Trenching of a Site at Stockhole Lane, Cloghran, Co. Dublin. [Online] Available from: https://heritagemaps.ie/documents/Therefore_ArchaeologyReports/08E0333.pdf [Accessed October 2023].
- Earthsound (2013). Proposed Development, Killamonan, Fingal, Dublin. Archaeological Geophysical Survey.
- Egan, M. J. S. (1991). Dublin City and County Graveyards. Ireland Branch of the Irish Genealogical Research Society. Dublin.
- EirGrid (2015). Cultural Heritage Guidelines for Electricity Transmission Projects.
- Elliott, R. and V. Ginn (2008). M3 Clonee-North of Kells Contract 1 Clonee – Dunshaughlin Report on the Archaeological Excavation of Dunboyne 4, Co. Meath. Ministerial Directions No. A017/002 E3024.
- Environment, Heritage and Local Government and National Monuments Service (2009a). National Monuments in State Care: Ownership and Guardianship: Meath. [Online] Available from: <https://www.archaeology.ie/sites/default/files/media/pdf/monuments-in-state-care-meath.pdf> [Accessed April 2023].
- Environment, Heritage and Local Government and National Monuments Service (2009b). National Monuments in State Care: Ownership and Guardianship: Dublin. [Online] Available from: <https://www.archaeology.ie/sites/default/files/media/pdf/monuments-in-state-care-dublin.pdf> [Accessed April 2023].
- Environmental Protection Agency (EPA) (2022). Guidelines on the information to be contained in environmental Impact Assessment Reports.
- Fingal County Council (2023). Fingal Development Plan 2023 – 2029.

Flanagan, D. and L. Flanagan (2002). *Irish Place Names*. Gill and Macmillan. Dublin.

Geological Survey of Ireland (GSI) (n.d.). Geological Survey Ireland Spatial Resources. [Online] Available from: <https://dceur.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aac3c228> [Accessed June 2023].

Government of Ireland (2018). *National Planning Framework*.

Government of Ireland (n.d. a) *Historic Environment Viewer*. [Online] Available from: <https://maps.archaeology.ie/HistoricEnvironment/> [Accessed June 2023].

Government of Ireland (n.d. b) *National Inventory of Intangible Cultural Heritage*. [Online] Available from: <https://nationalinventoryich.tcagsm.gov.ie/national-inventory/> [Accessed February 2024].

The Heritage Council (n.d.). *Heritage Maps*. [Online] Available from: <https://heritagemaps.ie/WebApps/HeritageMaps/index.html> [Accessed April 2023].

Jacobs (on behalf of EirGrid) (2022). *Capital Project 1021 CP1021 Environmental Constraints Report*.

Jacobs (on behalf of EirGrid) (2023). *CP1021 East Meath – North Dublin Grid Upgrade Step 4A Report – Analysis of Route Options*.

Joyce, P.W. (1913). *Irish Names of Places*. [Online] Available from: <https://archive.org/details/irishnamesofplac01joycuoft/page/98/mode/2up?q=Gaulstown> [Accessed April 2023].

Logainm.ie (n.d.). *Placenames Database of Ireland*. [Online] Available from: <https://www.logainm.ie/en/> [Accessed April 2023].

Meath County Council (2021). *Meath County Development Plan 2021 – 2027*.

Meath Field Names Project (n.d.). *Meath Field Names Project*. [Online] Available from: <https://meathfieldnames.com/> [Accessed April 2023].

Moore, M. J. (1987). *Archaeological Inventory of County Meath*. Archaeological Survey of Ireland Office of Public Works.

Mossop, M and E. Mossop (2009). *M3 Clonee – North of Kells Contract 2 Dunshaughlin – Navan Report on the Archaeological Excavation of Cliwanstown 1, Co. Meath*. [Online] Available from: <https://repository.dri.ie/catalog/3485bx67k> [Accessed April 2023].

Murphy, D. (2018). *Dublin Airport North Runway Project Archaeological Excavation of Sites 1 – 2*.

NIAH (2013). *Survey of Historic Gardens and Designed Landscapes Data*. [Online] Available from: <https://www.buildingsofireland.ie/resources/> [Accessed June 2023].

NIAH (2022). *National Inventory of Architectural Heritage Handbook*. [Online] Available from: <https://www.buildingsofireland.ie/app/uploads/2022/12/NIAH-Handbook-Edition-June-2022.pdf> [Accessed June 2023].

NMS (2023). *Enactment of Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 and the position pending its entry into force*. [Online] Available from: <https://www.archaeology.ie/news/enactment-of-historic-and-archaeological-heritage-and-miscellaneous-provisions-act-2023-and> [Accessed January 2024].

O'Hara, R. (2009). *M3 Clonee – North of Kells Contract 1 Clonee – Dunshaughlin Report on the Archaeological Excavation of Dunboyne 2, Co. Meath*. Ministerial Directions No. A017/012 E3034.

O'Sullivan, M. and L. Downey (2006). 'Holy Wells', in *Archaeology Ireland*, Volume 20, Number 1, pp. 35 – 37.

- O'Sullivan, M. and L. Downey (2010). 'The Archaeological Imprint of Agricultural Drainage Systems: Part I – Traditional Drains and Ditches', in *Archaeology Ireland*, Volume 24, Number 1, pp. 31 – 34.
- O'Sullivan, A., and T. Nicholl, (2011), 'Early medieval settlement enclosures in Ireland: dwellings, daily life and social identity', in *Proceedings of the Royal Irish Academy: Archaeology, Culture, History, Literature*, Volume 111C (special issue: Domestic life in Ireland), pp. 59 – 90.
- O'Sullivan, F. McCormick, T. R. Kerr and L. Harney (2021). *Early Medieval Ireland AD 400 – 1100 The Evidence from Archaeological Excavations*, 2nd Edition. Royal Irish Academy. Dublin.
- Reeves-Smyth, T. (2005). 'The Country Houses and Designed Landscapes of Fingal' in S. Flanagan and K. Coghlan (eds), *The Built Heritage of Fingal Preserving the Past – Exploring the Present*, pp. 11 – 23.
- Simington, R. C. (1945). *The Civil Survey A.D. 1654 – 1656 Vol. VII County of Dublin*. Irish Manuscripts Commission.
- Skyvova, P. (2005). *Fingallian Holy Wells*. Fingal County Libraries.
- Smith, A. (2003). 'Landscape Representation: Place and Identity in Nineteenth-century Ordnance Survey Maps of Ireland', in P. J. Stewart and A. Strathern (eds), *Landscape, Memory and History: Anthropological Perspectives*. Pluto Press. London. pp. 71 – 88.
- TII (2020). *Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) of Proposed National Roads – Standard*.
- TII (forthcoming). *Cultural Heritage Impact Assessment (CHIA) of TII Projects – Overarching Technical Document (draft)*.
- UCD Digital Library (n.d.). *National Folklore Collection UCD*. [Online] Available from: [https://digital.ucd.ie/?q=dc.type:Collection&fq\[\]=repository_facet:National%20Folklore%20Collection%20UCD](https://digital.ucd.ie/?q=dc.type:Collection&fq[]=repository_facet:National%20Folklore%20Collection%20UCD) [Accessed June 2023].
- UNESCO, 2003. *Convention for the Safeguarding of the Intangible Cultural Heritage*. [Online] Available from: <https://ich.unesco.org/en/convention> [Accessed February 2024].
- Woodman, P. (2015). *Ireland's First Settlers: Time and the Mesolithic*. Oxbow Books. Oxford.