

14 CULTURAL HERITAGE

14.1 INTRODUCTION

- 1 This chapter evaluates impacts on the cultural heritage arising from the proposed development and associated development works within the Cavan Monaghan Study Area (CMSA) as defined in Chapter 5, **Volume 3B** of the EIS. The chapter evaluates both the direct and indirect impacts of the proposed development on the cultural heritage of the CMSA as well as recommending mitigation measures and summarising the residual impacts that will persist once the mitigation has been completed. Impacts are evaluated for the construction, operation and decommissioning phases of the proposed development.
- 2 The term ‘cultural heritage’ is a wide ranging concept, covering a vast breadth of knowledge and it is beyond the scope of this document to discuss it in detail. However, in summary, for the purposes of this appraisal, it includes archaeological heritage, architectural heritage, underwater cultural heritage, cultural landscapes and intangible cultural heritage such as folklore. In subsequent sections of this chapter, and in line with the recommendations of the National Monuments Service and the Built Heritage and Architectural Policy Section of the Department of the Arts, Heritage and the Gaeltacht (DAHG), these have been broadly divided under the headings of ‘archaeological heritage’, ‘architectural heritage’ and ‘other cultural heritage’.
- 3 Efforts have been made from the earliest stages of the project, during both constraints mapping and route selection, to minimise any direct physical impacts and impacts on the setting of cultural heritage sites in the study area.

14.1.1 Legal Framework

14.1.1.1 Conventions and Legislation

- 4 This appraisal is cognisant that Ireland has ratified several European and international conventions in relation to the protection of its cultural heritage, including:
 - The UNESCO World Heritage Convention, 1972;
 - ICOMOS Xi’an Declaration on the *Conservation of the Setting of Heritage Structures, Sites and Areas*, 2005;
 - Codified EIA Directive 2011/92/EU;
 - The European Landscape Convention 2000;

- The European Convention on the Protection of the Archaeological Heritage (Valletta Convention), ratified by Ireland in 1997; and
- The European Convention on the Protection of the Architectural Heritage (Granada Convention), ratified by Ireland in 1997.

5 Relevant legislation includes:

- *Planning and Development Act 2000* as amended;
- *National Monuments Act, 1930*, as amended; and
- *The Architectural Heritage and Historic Properties Act, 1999*.

14.1.1.2 County Development Plans

6 The provisions of the Cavan County Development Plan 2014-2020 (the Cavan CDP) and the Monaghan County Development Plan 2013-2019 (the Monaghan CDP) are a material consideration for An Bord Pleanála (the Board) in its determination of the application for planning approval of the proposed development. The CDPs contain lists of cultural heritage sites including national monuments, recorded monuments, architectural conservation areas, protected structures and protected views as well as baseline assessments of the landscape character of the county. The plans also outline the counties' heritage policies and objectives that aim to protect and promote the archaeological, architectural and cultural heritage of the region. This evaluation was carried out with due regard to these policies and other relevant information contained within the plans.

7 The following is a synopsis of how the cultural heritage consultants have addressed the archaeological and architectural policies and objectives outlined in each of the relevant CDPs.

Cavan County Development Plan 2014-2020 - Archaeological Heritage Policies

8 The Cavan County Development Plans relevant Policies and Objectives pertaining to archaeological heritage are featured in Chapter 7 - Built Heritage and & Archaeology. These policies and objectives (BHP-5-8, BH017-25) generally outline the legal status of monuments, the protections afforded to their settings and zones of archaeological potential and detail the role of the planning authority and the Department of Arts, Heritage and Gaeltacht (DAHG). In terms of electrical infrastructure BHO19 states that "*cognisance will be taken of the 'Code of Practice between ESB National Grid and the Minister of the ECLG in relation to Archaeological Heritage.'*"

Cavan County Development Plan 2014 - 2020 - Architectural Heritage Policies

- 9 The Cavan County Development Plans relevant Policies and Objectives pertaining to architectural heritage are featured in Chapter 7 - Built Heritage and & Archaeology. These policies and objectives (BHP-1-4, BH01-16) generally define the legal status of protected structures, NIAH sites and Architectural Conservation Areas.

Monaghan County Development Plan 2013-2019 - Archaeological Heritage Policies

- 10 All known archaeological monuments were downloaded from the www.archaeology.ie website and National Monuments, in the ownership or guardianship of the State, in the ownership of a local authority and monuments subject to preservation orders were highlighted in GIS from the earliest phases of the proposed development (Archaeological Heritage Objective - AHO 1). Cognisant of the increased level of legislative protection for National Monuments, all sites with this classification were highlighted to assist the project team in avoiding them during identification of feasible route corridor options. In addition the cultural heritage consultants liaised extensively with the project team to attempt to reduce impacts on the setting of archaeological sites in close proximity to the proposed development (Archaeological Heritage Policy - AHP 1, AHP 2, and AHP 3).
- 11 The Monaghan County Development Plans relevant Policies and Objectives pertaining to Archaeological heritage are featured in Chapter 4 - Environment and Heritage. These policies and objectives (AOH-1-3, AHP 1-81-16) define the legal status afforded to recorded monuments and define the roles of stakeholders in the planning process. AHP-5 states that in *“considering development in the vicinity of all archaeological monuments, the planning authority will require the preparation and submission of an archaeological assessment, detailing the potential impact of any development on both upstanding and buried structures and deposits. The report shall also include a visual assessment to ensure adequate consideration of any potential visual impact and should define the buffer area or area contiguous with the monument which will preserve the setting and visual amenity of the site.”*

Monaghan County Development Plan 2013-2019 – Architectural Heritage Policies

- 12 All recorded architectural sites, including Protected Structures, sites from the NIAH (both building and garden surveys) and ACAs were mapped in GIS for the constraints mapping phase (Objectives for Architectural and Built Heritage - ABO 1 and ABO 2, Objectives for the Protection of Protected Structures - PSO 1 and PSO 2, Objective for the Protection of Architectural Conservation Areas - CAO 1 and Policy for the Protection of Architectural Conservation Areas - CAP 1). As most protected structures and NIAH sites are upstanding structures, and the character of ACAs are afforded special protection in the *Planning and Development Act 2000* (as amended), the sensitivity of these sites to impacts on setting was highlighted during initial

constraints mapping (PSP 4). Through this early action, it has been possible to avoid physically impacting upon any ACAs or Protected Structures and their immediate curtilages. Ordnance Survey Ireland (OSi) 1st and 2nd edition mapping was consulted during the compilation of this chapter and industrial heritage was highlighted for the evaluation (Objective for the Protection of Built Industrial Heritage - IHO 1). In relation to designed landscapes, historic parks, gardens and demesnes every effort was made to minimise any impacts on the principal components of these features (Objective for Architectural and Built Heritage - ABO 4).

14.1.1.3 County Heritage Plans

13 The *County Monaghan Heritage Plan 2012-2017* and the *County Cavan Heritage Plan 2006-2011*, as well as individual Heritage Project reports, were reviewed in the preparation of this evaluation. This included the *Industrial Heritage Survey of Historic Railways (2007)*.

14.1.1.4 Other Guidelines

- 14 The following guidelines were used in the evaluation of the cultural heritage in the CMSA:
- Cork County Council (2006). *Guidance Notes for the Appraisal of Historic Gardens, Demesnes, Estates and their Settings*;
 - Department of the Environment Community and Local Government (DoECLG) (March 2013). *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment*;
 - Department of Arts, Heritage, Gaeltacht and the Islands (1999). *Framework and Principles for the Protection of the Archaeological Heritage*;
 - Department of Arts, Heritage and the Gaeltacht (DAHG) (2011). *Architectural Heritage Protection Guidelines for Planning Authorities*;
 - DoECLG (April 2009). *Code of Practice between the Department of the Environment, Heritage and Local Government and ESB Networks*;
 - DoECLG (April 2009). *Code of Practice between the Department of the Environment, Heritage and Local Government and EirGrid*;
 - DAHG (July 2014). *A Draft National Landscape Strategy for Ireland (2014-2024)*; and
 - Institute of Field Archaeologists (2008). *Setting Standards: A Review*.

14.2 METHODOLOGY

15 The following methodology was prepared to evaluate the impact of the proposed development upon the cultural heritage of the CMSA. A more detailed methodology is outlined in **Appendix 14.1, Volume 3C Appendices** of the EIS, which includes details regarding the methodology for evaluation of impacts on setting.

14.2.1 Summary of Methodology

16 An OHL has a relatively small footprint and careful placement of towers can keep physical impacts on cultural heritage sites to a minimum. However, due to the upstanding linear form of an OHL, preventing impacts on the setting of cultural heritage sites is more difficult. Mitigating such impacts is best achieved by ensuring that known designated and undesignated archaeological and architectural sites are highlighted during the constraints mapping and route selection stages of the proposed development and that sites of particular importance are brought to the attention of the project team to reduce, where possible, any impacts. Prior to undertaking this evaluation the following stages of work had been completed:

- Mapping of designated and undesignated archaeological sites, including:
 - World Heritage Sites;
 - National Monuments, be they in the ownership or guardianship of the State, in the ownership of a local authority or monuments under preservation orders;
 - Archaeological Survey Database, including the Sites and Monuments Record and the Record of Monuments and Places; and
 - Data obtained from the Northern Ireland Environment Agency (NIEA) relating to archaeological sites, including, Sites and Monuments Record, Scheduled Zones, Scheduled Monuments in State Care and Areas of Significant Archaeological Interest.

- Mapping of designated and undesignated architectural sites, including:
 - ACAs;
 - Protected Structures;
 - National Inventory of Architectural Heritage (NIAH);
 - Demesne Landscapes and Historic Gardens as indicated on the Ordnance Survey Ireland (OSI) 6 inch historic mapping, surveyed circa 1830; and
 - Data obtained from the NIEA relating to architectural sites, including Listed Buildings, Industrial Heritage, Defence Heritage and the Register of Historic Parks and Gardens.

- EirGrid (May 2011). *North-South 400 kV Interconnection Development Preliminary Re-Evaluation Report*;
- EirGrid (April 2013). *North-South 400 kV Interconnection Development Final Re-Evaluation Report*; and
- EirGrid (July 2013). *North-South 400 kV Interconnection Development Preferred Project Solution Report*.

17 In addition to the previous work listed above, this chapter has been prepared in two main phases, desk based evaluation and fieldwork. Desk based evaluation involved:

- Review of mapping in GIS compiled over the course of the proposed development;
- Review of literature, including historical sources, guidelines and policy documents, relevant legislation, development plans and heritage plans, and subsequent updating of GIS mapping where appropriate; and
- Review of other sources including historic mapping, orthophotography and LiDAR (for more detail refer in particular to **Chapter 1, Volume 3B** of this EIS). During this phase previously unrecorded sites of archaeological and / or architectural potential were highlighted for review during the fieldwork phase of the proposed development.

18 The desk based evaluation gave rise to a greater understanding of the archaeological, architectural and cultural heritage environment through which the proposed development passes, along with detailed mapping in GIS highlighting known features, sites, areas and landscapes in the vicinity which may experience impacts from the proposed development. This chapter has considered in detail an area within approximately 2km either side of the alignment, including tower locations, guarding areas, temporary access routes and stringing areas, as well as having regard to all National Monuments in State Care within 5km either side of the alignment and some notable sites further afield.

19 Upon completion of the desk based evaluation, fieldwork was undertaken to 'ground truth' the results of the desk study. Detailed GIS mapping was used in the field to identify known archaeological and architectural sites; these included designated and undesignated archaeological and architectural sites as well as sites of archaeological and architectural potential noted from historic mapping and aerial photography. GIS mapping included base mapping of OSI Discovery Series maps as well as first edition OSI historic maps and detailed aerial photography. Where possible, with the permission of landowners, land was accessed and where this was not possible, evaluation was undertaken from the nearest publicly accessible land, roads or adjacent land where access was granted. Consultants in the field were cognisant that the mapping supplied did not contain all sites of archaeological,

- architectural or cultural heritage importance and any new archaeological, architectural or cultural heritage sites identified during fieldwork were recorded and added to the GIS. The significance of impacts that may be experienced by archaeological sites, architectural sites and other cultural heritage sites located in the vicinity of the proposed development was then evaluated, for the construction, operation and decommissioning phases of the proposed development.
- 20 Mitigation measures have been recommended and residual impacts that may be expected following mitigation have been predicted.
- 21 The scoping opinion received from the Board (refer to Appendix 1.3, **Volume 3B Appendices** of the EIS) identified the following issues as being relevant to this chapter of the EIS:
- Identification and assessment of potential impacts on archaeological heritage, including an appraisal of all recorded monuments potentially impacted on during construction activities and an assessment of the visual impact on listed sites. This should include impacts on the character and setting of features of interest as well as the relationship between sites;
 - Particular areas of social, cultural and historic interest to be considered include Muff Crossroads;
 - Identify any pre-application archaeological excavations or site investigations undertaken. Describe the rationale for the approach adopted with regard to such pre-application investigations, particularly for areas of known archaeological potential;
 - Identification and assessment of the effects on architectural heritage;
 - The indirect effects of construction activity, including construction access / routes, on structures and building should be considered; and
 - The impact on longer views from sites of national importance and significance should be considered and assessed.

14.2.2 Consultation

- 22 The overall consultation strategy by or on behalf of EirGrid in relation to all stages and elements of the proposed development is described in a separate *Public and Landowner Consultation Report* (refer to **Volume 2B** of the application documentation). That report sets out the objectives of the overall consultation strategy, its structure, details of all consultation activities, feedback received and how such feedback was responded to.

- 23 Consultations with the DAHG, Monaghan and Cavan County Councils and public consultations were undertaken during the preparation of this chapter of the EIS. All consultation responses received have been logged and considered by the project team.

14.3 CHARACTERISTICS OF PROPOSED DEVELOPMENT

- 24 The upstanding linear form of the proposed OHL supporting towers has a small physical footprint meaning that in most cases direct physical impacts on archaeological, architectural or cultural heritage sites, structures, monuments or features can be avoided. Such impacts are most likely during the construction phase and can be as a result of:

- Excavations associated with tower construction including site levelling, foundation excavation and any diversion of services or existing drainage that may be required, including all activities associated with modifications to existing 110kV transmission OHLs;
- Excavations associated with the erection of temporary guarding areas;
- Facilitating access for equipment and materials for the construction of the towers and guarding; and
- Facilitating access for and the process of stringing the OHLs.

- 25 Given that its upstanding linear form has an influence over a wide area, the greatest potential for impacts from this type of development are impacts on the setting of archaeological, architectural and cultural heritage sites, structures, monuments or features located in the surrounding region throughout the operational phase of the development.

- 26 This chapter also evaluates a proposed construction materials storage yard area which is located in a long rectangular field along the edge of the N2 primary road to the south-east of Carrickmacross, County Monaghan. The site straddles the townlands of Monaltyduff and Monaltybane.

14.4 EXISTING ENVIRONMENT

14.4.1 Landscape (Monaghan to Cavan)

- 27 The following section is based on extracts from the *County Monaghan Landscape Character Assessment* (2008) and the Character Area section from the Cavan CDP (Chapter 8).

14.4.1.1 Mulliyash Uplands (Landscape Character Area (LCA) 6)

- 28 **Towers 103 to 128 – Lemgare to Clarderry.** A variable topography comprising a flat plateau area in the western part of this LCA which extends eastward towards the drumlin foothills leading to the summit of Mulliyash Mountain. Landscape pattern is strongly defined as small to medium scale pastoral fields bounded by cut hedgerows with occasional mature trees. A network of local roads permeates this landscape. Settlements are very small and often occupy intersecting roads or crossroads. Many of the dwellings are very traditional and feature white render or stone and many are well sited on the lower slopes of rolling hills or drumlins.
- 29 Whilst not heavily populated today, this landscape character area contains a number of significant historical sites. The earliest is that of Mulliyash cairn itself (National Monument 564), located on the summit of Mulliyash approximately 6.5km to the east of the proposed development and built around 4000 years ago. This site would have been chosen as it commands extensive views over Monaghan, Armagh and Tyrone. Folklore associated with the cairn (and possible passage tomb) relate to a princess who was buried there. Another megalithic tomb is located at Croaghan, and contains seven separate chambers.
- 30 Another important site is located at Clontibret, the scene of one of the earliest Battles of the Nine Years' War, led by the Earl of Tyrone, Hugh O'Neill in 1595. At this battle the English, led by Sir Henry Bagenal, were defeated and this battle was significant in that it was one of the first that Hugh O'Neill himself was directly involved.

14.4.1.2 Monaghan Drumlin Uplands (LCA 5)

- 31 **Towers 129 to 136 – Derryhallagh (Monaghan By) to Cornanure (Monaghan By).** Elevated landscape featuring drumlin hills and small to medium sized loughs. This is a farmed upland landscape which is relatively remote, being distant and elevated topographically from major and minor towns or settlements. The landscape pattern is relatively strong and takes the form of cut or managed hedgerows mostly with some hedge trees abounding pastoral fields. Occasional clumps of deciduous woodland are located in this landscape. Occasional patches of marshland and areas of localised flooding are located in low lying areas.
- 32 Dwellings are frequently well located in secluded locations on the lower slopes of the drumlin hills. Many are composed of single storey traditional style dwellings, accessed via narrow lanes off tertiary roads.

14.4.1.3 Ballybay Castleblayney Lakelands Uplands (LCA 7)

- 33 **Towers 137 to 142 - Cornanure (Monaghan By) to Terrygreeghan.** This is a low lying pastoral landscape which is present as an east west channel located or enclosed between two upland landscapes located to the north and the south. This character area contains numerous loughs, the majority of which present as highly scenic landscapes. The largest of these is Lough Muckno which is linked to the town of Castleblayney on the east side. Crannogs are a feature of many of these loughs and in the more low lying areas these are fringed with large areas of marsh supporting reeds. Rivers and smaller watercourses extend through this landscape in an east west orientation. Traditional stone bridge crossings feature occasionally on these rivers.
- 34 A regional road (R183) links the principal towns of Ballybay and Castleblayney and a dismantled railway line, which is not especially visible in this landscape, also follows the same orientation. Between both towns are also a number of megalithic tombs. The area generally would have been attractive for early settlers owing to the availability of water and gently accessible topography. Whilst their ritual sites were constructed on elevated locations, in all probability, their everyday dwellings constructed of wood, were located in the lower lying areas of land. The pastoral landscape pattern comprises, small to medium sized fields bounded by hedgerows which vary in form, some presenting as cut managed hedgerows and some presenting as uncut hedges comprising many maturing trees.

14.4.1.4 Drumlin and Upland Farmland of South Monaghan (LCA 8)

- 35 **Towers 143 to 211 - Cornamucklagh South to Scalkill.** An elevated landscape containing drumlin hills that are given over to pastoral uses. Hedgerows are, for the most part, uncut and contain many mature deciduous trees. The loughs range in size and the largest of these is Lough Egish. Large areas of marshland feature in the inter drumlin hollows. Occasional traditional farmhouses are located in this landscape, some rendered in white and some built of stone. The most elevated parts of this landscape are highly remote and feature rock outcrops. Although grazed in part by sheep, the farmland is impoverished and there is no strong field pattern. Boundaries to fields are somewhat fragmented and in many places, hedgerows are replaced by stone walls in variable condition. Occasional plantations of coniferous forestry are located in this landscape.
- 36 There are no major settlements within this LCA, although the area supports an extensive network of tertiary roads and is bisected by two regional roads. Historically this LCA lies within the baronies of Cremone and Farney to the south. Cromwellian soldiers and adventurers were given possession of a number of former Colla MacMahon lands, and a number of significant estates emerged including the Shantonagh Estate.

14.4.1.5 Highlands of East Cavan (Area 5)

37 **Towers 212 to 236 - Scalkill to Clonturkan.** This region consists of drumlins and highlands, with Bailieborough and Kingscourt as the main towns. Much of the area is made up of shale and sandstone, an indication of a landscape forged by the movement of glaciers in the last Ice Age. This area is dotted with lakes, there are both dry and wet grasslands, some limited forest and scrub. The area around Kingscourt and Bailieborough town is described as 'areas under urban influence' as they have seen a greater demand for development in recent years.

14.4.2 Archaeological and Historical Background

38 The cultural landscape of counties Cavan and Monaghan are rich and varied and many of the sites scattered across the landscape indicate widespread settlement in the area since the Mesolithic period and continuing throughout the prehistoric and historic periods into the present day. Various published sources, including local and national journals, were consulted to establish a historical background for the alignment of the proposed development. In addition, archaeological and architectural information gathered as part of this chapter was incorporated into the background thus providing a broader understanding of the nature of settlement in the area.

14.4.2.1 Mesolithic Period (8000–4000 BC)

39 In the absence of any evidence of Palaeolithic communities in Ireland our archaeological record begins in the Mesolithic period, when hunter-gatherers navigated the coast and waterways of the country foraging for food and living in temporary camps. Mesolithic sites were usually set on elevated ground overlooking rivers. However, cultural remains from this period have left no lasting legible trace and have no visible dominance in the modern day landscape. Flint tools known as microliths (from Latin 'small stone') are often the best evidence for these early encampments. These tools are extraordinary in their sophistication and range of use and include scalene triangles, rods, needlepoints, scrapers and micro-awls.

40 Evidence for a Mesolithic presence in this area is relatively scant, but a few sites are known of, such as the lakeside platforms at Moynagh Lough (Bradley (2001), *Excavations at Moynagh Lough*) and the habitation site at Kilcorby, County Cavan (MacManus (2005), *Preliminary Report of Excavations at Kilcorby Townland, County Cavan*). Only one artefact dating to the Mesolithic period was found in the CMSA and this was a Bann flake (NMI Find No. - 1965:138) from Corduff, County Monaghan. Flint implements of this type generally date to the later Mesolithic period (5500-4000BC).

14.4.2.2 Neolithic Period (4000BC-2500BC)

- 41 The practice of farming spread from the Middle East, through eastern and southern Europe to reach Ireland via Britain around 4000BC. Ireland's Mesolithic hunters were, over a period of time, displaced or assimilated by the new Neolithic settlers. This transition fundamentally changed the local economy from one based on hunting and foraging to one of cereal cultivation and livestock rearing. The arrival of the first farmers resulted in land clearance by burning or chopping down trees with stone axes. There were no indigenous cereal crops but the settlers brought with them wheat and barley as well as domesticated sheep, goats and cattle. Tending of crops and animals required a more sedentary lifestyle and larger permanent settlements. Farming as a practice required new skills and, more importantly, new tools. This demand resulted in the development of specific crafts. Polished stone axes, ards (ploughs), flint tools for harvesting crops, and stone saddle querns for grinding the grain required the exploitation of specific stone sources. Porcellanite found throughout Ireland and Europe, was quarried at Tievebulliagh Mountain near Cushendall and at Brockley on Rathlin Island, County Antrim. Flint remained an important stone for the production of tools and weapons, objects such as javelin heads, mace heads, polished axes and fine leaf and lozenge shaped arrowheads were used for both hunting and warfare. During this period the first long distance trade networks were established. Stone axes from Britain, a flint axe from Scandinavia, pitchstone from Scotland, and jadeite axes from the Alpine area of northern Europe have all been found throughout the country. Pottery also makes its first appearance in the archaeological record. The pots were handmade, coil built, and fired in bonfires or pits. The earliest pots were mainly undecorated round bottomed bowls, although decoration became more common in the later part of the period. Towards the end of the Neolithic a great diversity in pottery styles existed and flat based pottery was introduced.
- 42 Other significant changes included the development of a ritual landscape dotted by large megalithic (from the Greek mega – large and lith – stone) monuments built as communal tombs or for ceremonial purposes. These monuments indicate status, knowledge of engineering, and the ability to organise resources, including labour. These tombs are divided into four classes; court tombs, portal tombs, passage tombs and wedge tombs. Five court tombs, two portal tombs, two wedge tombs and three unclassified megalithic tombs have been recorded in this area. Court tombs generally consist of a long cairn with a court at one end providing access into a gallery beneath the cairn (Waddell (2000). *Prehistoric Archaeology of Ireland*). Two examples along the proposed line route include tombs in Lemgare townland (SMR No. - MO014-022) and Cornmucklagh South (SMR No. - MO019-037).
- 43 Portal tombs are single chambered monuments where the entrance is flanked by two large portal stones supporting a roof stone. There is an *in situ* example recorded in Lennan townland, County Monaghan (SMR No. - MO019-016).

- 44 Wedge tombs are so named by the distinctive manner in which the roof slopes down towards the back of the tomb and are taller and wider at the entrance. A number of examples are found along the length of the proposed line route including one at Rausker (SMR No. - MO019-025).
- 45 The lack of major infrastructural development within the CMSA accounts in part for the dearth of known Neolithic settlement sites. However stray finds like the discovery of a stone axehead (NMI Find No. - 1933:236) from Annaglogh, indicates that there was activity during this period. Other finds that could fall into this broad date range include a flint thumb scraper (NMI Find No. - 1956:274) from Cargaghoge, a flint scraper (NMI Find No. - 1965:130) from Cargaghoge, a flint blade (NMI Find No. - 1965:133) from Corduff, a worked flint (NMI Find No. - 1942:68) from Corraneary and a flint slug knife (NMI Find No. - 1956:270) from Sreenty.

14.4.2.3 The Bronze Age (2500BC-500BC)

- 46 As stone tools were replaced by the use of copper, which was later combined with tin to make bronze, the structure of society also changed. The copper for these tools was probably derived from Ross's Island in Killarney, County Kerry, where excavations have uncovered the earliest copper mines in Ireland and Britain. These somewhat crude copper objects were soon replaced by more durable bronze tools including axes, swords, spears, knives, halberds and cauldrons. Gold jewellery from this period in the form of lunulae, torcs and bracelets are amongst the finest in Europe and hint at the presence of new social elites.
- 47 In a domestic context, dwellings changed from a general rectangular plan, typical of the Neolithic, to circular arrangements evidenced on excavation by postholes and slot trenches. Middle Bronze Age and Late Bronze Age settlements are usually located on well drained soils suitable for agriculture and near rivers or fording points for ease of transport and communication. Lacustrine areas were also favoured as evidenced by excavations at Moynagh Lough near Nobber (Bradley (1999). *Excavations at Moynagh Lough*).
- 48 As with the Neolithic houses, Bronze Age houses are not easily identifiable on the ground and none have been found in the vicinity of the proposed development to date. Only one possible domestic site has been recorded in the area and this is a hillfort (SMR No. - MO030-018001) located in Raferagh townland, County Monaghan.
- 49 Bronze Age ritual and ceremonial activity is represented by a range of monuments including stone circles, standing stone, stone alignments, henges, tumuli, cairns, barrows and flat cemeteries. Several of these site types are represented in the CMSA. There are two standing stones at Boherlea (SMR No. - ME002-040) and Doohat / Crossreagh (SMR No. - ARM019:013) which probably date to the Bronze Age. Excavated standing stones occasionally provided evidence of an associated burial. However, as this is not always the case it is thought that standing stones may have marked a place of significance, or have formed part of an

alignment which has since been removed, or perhaps that they marked routeways through the landscape (Waddell (2000), *Prehistoric Archaeology of Ireland*). Several burial sites have also been identified in the CMSA. Barrow sites are located in Beagh (ED Drumcarrow) (SMR No. - MO030-045), Reduff (SMR No. - MO027-009) and Doohamlat (SMR No. MO19-051). There are several different classes of barrows but in general they consist of a circular enclosing element of ditches and sometimes banks. The interior, where burials are usually found, may be flat or have a mound of varying height. Burials may also be found in cairns or mounds built of stone, as in the two cairns at Lattonfasky (SMR No. - MO024-025) and Drumnahavil (SMR No. - ARM023:002). Although these sites are difficult to date, most excavated examples have been assigned to the Bronze Age. Bronze Age burials may also be found in flat cemeteries in stone cists or earth cut pits. These cemeteries are generally not evident above ground, but are occasionally discovered during farming and quarrying activities. Three cist burials occurred in a group in Lattonfasky (SMR No. - MO024-025001-3) and a fourth cist burial was found by a farmer ploughing a field in Doon (SMR No. - ME001-009). The topographical files record two food vessels which were found in cists. The first is from Doon (NMI Find No. - 1947:231) and may relate to the site SMR No. ME001:009. The second is from Cabragh (NMI Find No. - 1958:141).

14.4.2.4 Iron Age (c. 500BC-500AD)

50 The end of the Irish Bronze Age merges into the Early Iron Age almost imperceptibly. Not much is known about this period in time and it has been dubbed 'The Irish Dark Age'. It would seem from the evidence so far uncovered that iron use was gradually introduced into Ireland, however bronze implements were still very much in use for everyday objects and for ornamentation. Many of the finds dating to the Iron Age include objects decorated in the 'La Tène' style such as the torc found at Broughter, County Derry. Life in Iron Age Ireland seems to have been much as it was in earlier times, with mixed farmers living in or around small defended settlements with late Bronze Age hillforts and hilltop enclosures continuing in use throughout this period. In Meath the primary focus of Iron Age activity is associated with the Royal site of Tara. This complex was both the seat of the kings of Meath and the High King. The site is strongly linked to myth and legend and is associated with the transformation of Ireland from paganism to Christianity. In the literary tradition, recorded by medieval monks this period corresponds with the epic tales of the Táin as told in the Ulster Cycle. One significant Iron Age site is the linear earthwork known as the Black Pig's Dyke. This site was believed to have been a single defensive earthwork running from Sligo to Louth and presently is untraceable for most of its length. Parts of the earthwork have been identified in County Cavan just east of Bellanagh (Waddell (2000), *Prehistoric Archaeology of Ireland*) and in County Monaghan. It is possible that the proposed line route may pass over the subsurface remains of this earthwork.

14.4.2.5 Early Medieval Period (c. 500AD-1200AD)

- 51 With an expansion in population, the Early Medieval Period witnessed the introduction of a new settlement type generally known as the ringfort. Other names for this site type include rath, lios, cashel and dun. These circular enclosures, numbering between 30,000 and 40,000 across the country, represent the homesteads of the upper echelons of Irish Early Medieval society. Ringforts are generally circular areas surrounded by a bank(s), walls and an external ditch. In some cases there can be up to three sets of defences. The larger more impressive multivallate, raised and platform raths are generally regarded as higher status settlements and are the foci around which the smaller satellite univallate enclosures would be arranged. This relationship is the physical evidence for the Tuath system characterised by petty kingdoms, sovereign in their own right that paid fealty to a larger regional / provincial state. One hundred and eighteen ringforts have been identified in the CMSA indicating that this region was intensively settled during the early medieval period. Hut sites and souterrains are associated with some of these sites. Pre-development testing (Licence No. 05E0375) in the vicinity of a ringfort (SMR No. - MN019-006) in Lismagunshin revealed the possible remains of a cashel. The ringfort was subsequently excavated (Licence No. 05E0785) and a number of pits were found in the vicinity of the site. In addition there is one recorded cashel, which are the stone counterparts of ringforts, located in Cornalara (SMR No. - CV029-001).
- 52 Sites classified as enclosures and earthworks also occur throughout the CMSA. These monuments were originally identified from 19th Century OS maps and as cropmarks with no visible above ground presence. In the absence of excavation, many of these sites are thought to be early medieval ringforts and the sheer number of them suggests that this area was settled extensively during this period.
- 53 In addition there are ten crannóg sites in the CMSA. Crannógs were defended settlements constructed on natural or artificial islands in lakes or marshy areas. They were generally located in shallow water close to the shore and there is often evidence for underwater causeways linking them to the dry land. Crannógs are well represented in counties Meath, Cavan and Monaghan due to the natural topography of drumlins and inter-drumlin lakes and rivers. Crannógs may date to both the prehistoric and early medieval period but the excavation of some of these sites and the discovery of early medieval finds from them indicate that the majority of these sites in the CMSA date to this period. A number of finds from the vicinity of the crannóg in Ervey Lough are typical finds from the early medieval period.
- 54 In the fifth century Christianity was introduced to Ireland and monastic sites began to be founded throughout Ireland. Between the 6th and 8th centuries the influence of the church continued to grow and through the secular and ecclesiastical legislation it is possible to trace the gradual assimilation of the Church into early Irish society (Edwards (1996). *The Archaeology of Early Medieval Ireland*). Despite the abundance of evidence for settlement in

- the CMSA during the early medieval period, there are no ecclesiastical sites from this period known within the vicinity of the proposed development. In fact there is very little evidence for ecclesiastical activity in this area apart from a few holy wells, cross slabs and bullaun stones. The possible Church at Croaghan (SMR No. - MO014-036) could date from the early medieval period, however the Archaeological Inventory records a tradition of mass been said here, which indicates that it may be later in date (Brindley (1986). *Archaeological Inventory of County Monaghan*).
- 55 Historically the 8th century saw the arrival of the Vikings. At this stage the country consisted of a patchwork of petty kingdoms vying with each other to establish local power bases all under the nominally rule of a High King. As with monasteries throughout the country, annals record Viking attacks at Lough Ramor and Tullean in Cavan and at Mucnam near Castleblayney and Clones and Donaghmoye County Monaghan.
- 56 The end of the Viking Age in Ireland came with the reign of Brian Ború as leader of the Dalcassians and Malachy, the Uí Neill King of Tara. Following a number of battles including Tara in 980 and Clontarf in 1014 the Norsemen's military power was broken. They however continued as traders and intermarried amongst the native Irish. Boru's descendants squandered his victory and regional squabbling over territory led indirectly to an invasion by the Anglo-Normans under Strongbow in 1169.

14.4.2.6 Medieval Period Onwards (c. 1200AD-1600AD)

- 57 The start of the medieval period is generally defined by the arrival of the Anglo-Normans in 1169. Originally invited by Diarmuid Mac Murchada as mercenaries to assist in the recovery of his Leinster Kingdom, the Anglo-Normans quickly set about making territorial claims for themselves. By 1171 King Henry II mounted a second invasion resulting in his Lordship of Ireland. As the Anglo-Normans began to acquire lands they built earth and timber fortifications known as motte and baileys. By the 12th century these were replaced by more permanent stone castles.
- 58 During this period the lands of Midhe (meaning 'middle'), which consisted of the present Meath and Westmeath, with parts of Cavan and Longford, were granted to Hugh de Lacy by Henry II. The lands of eastern Breifne (meaning 'hilly'), now much of County Cavan, remained in the control of the Uí Raghallaigh rulers until the 16th century. However the Uí Raghallaigh's remained on good terms with the Anglo-Normans and thus several motte and bailey and stone castles are located along the southern part of County Cavan. In Monaghan or Muine Cheain, meaning land of the little hills, the MacMahons dominated the political arena through most of the early medieval and medieval period. They ruled the Kingdom of Airghialla, later known as Oriel, for several centuries and allied themselves with the Anglo-Normans throughout most of the

- medieval period. However there was limited Anglo-Norman settlement in this area and thus only three motte and baileys are known of in the county.
- 59 There are some recorded archaeological monuments and finds from this period which are located within the constraints of the CMSA. A castle and bawn site (SMR No. - CV035-016) was situated in the townland of Cordoagh (ED Enniskeen) but is no longer standing. The castle was erected by Conor O'Reilly in the 15th century but was apparently abandoned during the 17th century, after the Plantation. Local tradition associates this site with the 'Fair Green' located at Muff (SMR No. - CV035-058 – redundant record). The 'Fair Green' is marked on all editions of the 19th century OS maps and is marked as a sub-rectangular level area.
- 60 Ecclesiastical centres representing the various orders were also prolific during medieval times. The medieval Franciscan friary and associated graveyard at Lattonfasky (SMR No. - MO024-034001-2) dates to this period.
- 61 In the late 16th and early 17th centuries an attempt was made to bring the rebellious Irish aristocracy under control, as the English hold in Ireland had begun to deteriorate in the preceding centuries. One of the results of this was the Nine Years' War (1594–1603), fought between the forces of Gaelic Irish chieftains Hugh O'Neill of Tír Eoghain, Hugh Roe O'Donnell of Tír Chonaill and their allies, against English rule in Ireland. The war was fought in all parts of the country, but mainly in the northern province of Ulster. The ultimate outcome resulted in the end of the old Gaelic order, leading to their exile in the Flight of the Earls and to the Plantation of Ulster. One of the earliest battles of the Nine Years' War was fought just outside the CMSA near Clontibret in 1595. The battle took place over two days and was predicated on English efforts to lift O'Neill's siege of Monaghan Castle. Sir Henry Bagenal, commander of English forces, marched from Dundalk with an army of 1,750 troops to relieve the garrison. En route, in the drumlin hills of Clontribet, O'Neill's men supported by the MacMahon and Maguire clans ambushed and harried Bengals men. Despite heavy losses the English relieved the castle, only to be attacked again on the return journey. Bagenal admitted only 31 men were killed and 109 men wounded on the second day of fighting, but his losses were almost certainly higher. The Irish annals claimed up to 700 English killed. Estimates of the confederate losses vary between 100 to 400 men killed.
- 62 Following the Nine Years' War and the Flight of the Earls, the re-conquest of the country was completed by James I. After this point, the English authorities in Dublin established real control over Ireland for the first time, bringing a centralised government to the entire island, and successfully disarmed the native lordships. From the mid-16th and into the early 17th Century, crown governments carried out a policy of colonisation known as Plantations that led to the introduction of English laws and institutions, such as the establishment of counties and local officials and common law courts. The plantation of Ulster by James VI of Scotland led to the

- plantation of Cavan. However, Monaghan was not planted and the lands were left in the control of the local chiefs.
- 63 These new settlers, who had a British and Protestant identity, would form the ruling class of future British administrations in Ireland. However, the English were not successful in converting the Catholic Irish to the Protestant religion and the brutal methods used by crown authority to pacify the country heightened resentment of English rule.
- 64 This seething resentment was unleashed with a rebellion of the Irish of Ulster in October 1641, during which thousands of Scots and English Protestant settlers were killed. The rebellion spread throughout the country and at Kilkenny in 1642 the association of 'The Confederate Catholics of Ireland' was formed to organise the Irish Catholic war effort. The Irish Confederates professed to side with the English Royalists during the ensuing civil wars, but mostly fought their own war in defence of their own landed interests.
- 65 From 1641 to 1649, the Confederates fought against Scottish Covenanter and English Parliamentary armies in Ireland. Politically they allied themselves with the Royalists cause but were divided over whether to send military help to them in the English Civil War. Following the death of Charles I at the hands of the victorious parliamentarians the Confederate revolt was brutally suppressed during the Cromwellian conquest of Ireland. The New Model Army was paid for its campaign in Irish land that effectively ended the old Catholic landed class.
- 66 Despite the devastation wreaked on the country by the Cromwellian conquest there was still another bloody chapter to be written. The War of the Two Kings, also known as the Williamite War, followed the deposition of catholic King James II in 1688 when he was replaced by his daughter Mary II with her more acceptable protestant husband William of Orange. In order to regain his throne James landed in Ireland in March 1689, with 6,000 French soldiers. After initial successes such as Dromore the Jacobites were able to advance northwards and occupy Belfast. At Crom Castle on 28 July 1689, near Enniskillen, the Jacobites received their first major setback. This was compounded later when William decided to take personal charge of the campaign culminating in his victory on the banks of the Boyne near the village of Oldbridge on 11 July 1690 (Simms (1986), *War and Politics In Ireland 1649-1730*).
- 67 The Williamite victory in Ireland ensured British and Protestant dominance over Ireland. Until the 19th Century, Ireland would be ruled by what became known as the 'Protestant Ascendancy', the mostly English Protestant ruling class. The majority Irish Catholic community and the Ulster-Scots Presbyterian community were systematically excluded from power, which was based on land ownership. This legacy is evident in the many large country homes of the Anglo-Irish landed gentry in County Meath and, to a lesser extent, Cavan.

68 During the 18th to the early 20th century small scale farming continued to dominate the area. Small farmsteads were dotted over the landscape, which was been increasingly modified with the enclosure of the land into smaller fields. The growth of the linen trade also played a significant role in the local economy. Several flax mills in the CMSA are recorded on early maps. In addition a number of these mills were used as corn mills and in some case small settlements developed around them.

14.4.3 Desk Based Evaluation Archaeological

69 Unless stated otherwise, in the tables herein, distance refers to the distance from the data point indicated in the Archaeological Survey Database, downloaded from www.archaeology.ie or digital data made available by the NIEA, to the nearest point on the centreline of the proposed line route. The archaeological, architectural and cultural heritage sites in the CMSA are displayed in Figures 14.1 – 14.13, **Volume 3C Figures** of the EIS.

14.4.3.1 World Heritage Sites

70 The closest United Nations Educational Scientific and Cultural Organisation (UNESCO) World Heritage site is the archaeological ensemble of the Bend in the Boyne or Brú na Bóinne (Ref: 659) which is located approximately 30km to the south-east of the CMSA section of the proposed development.

71 Candidate World Heritage Sites, which were submitted to UNESCO in 2010 by the then Minister for Environment, Heritage & Local Government as part of a tentative list of sites that Ireland would be nominating for World Heritage listing were also considered in relation to the proposed development.

72 In addition consideration was given to significant sites within Northern Ireland, these include the royal site of Navan Fort (Eamain Macha) and the Dorsey Rampart and Iron Age linear earthwork. Both sites are approximately 17km to the north north-east and east respectively from where the CMSA meets the border.

14.4.3.2 Landscape Conservation Areas

73 There are no Landscape Conservation Areas designated within either County Monaghan or County Cavan, however each county does have designated landscape areas. The Monaghan CDP designates two areas of Primary Amenity Value the closest of which is associated with Lough Muckno to the east of Castleblayney, approximately 6km to the east of the proposed development.

- 74 The Cavan CDP designates a number of County Heritage Sites, the closest of which are Dun a Rí Forest Park, located just to the north of Kingscourt and approximately 2.6km to the east of the proposed development, and Moybologue Church located to the south of Bailieborough, approximately 5.5km to the west of the proposed development.

14.4.3.3 National Monuments in the Ownership or Guardianship of the State

- 75 There are no National Monuments recorded in the National Monuments listing within 5km either side of the proposed development.

14.4.3.4 National Monuments in the Ownership of a Local Authority

- 76 In accordance with the National Monuments Act archaeological monuments in the ownership of a local authority can be afforded the same level of protection as those in State care. The most common monuments in the ownership of local authorities consist of historic graveyards that were vested to the Burial Boards by the Church Temporalities Commission. Vesting of these sites took place during the disestablishment of the Church of Ireland towards the end of the 19th Century. The modern day successors to the Burial Boards are the local authorities.

- 77 There are four religious sites listed in the Archaeological Survey Database (ASD) which are located within 2km of the proposed development, they include:

- SMR No. - MO014-036 a church located approximately 1km to the south of Tower 115. The site is not indicated on OSI historic mapping. The Archaeological Inventory for County Monaghan (1986) describes the site as follows, "*Foundations of plain rectangular structure (6.3m x 5m) orientated E-W, with entrance at W. Masses were said here formerly*".
- SMR No. - MO014-033 a burial ground located approximately 340m north of Tower 124. The site is not indicated on OSI historic mapping. The Archaeological Inventory for County Monaghan (1986) describes the site as follows, '*Rectangular area (23m x 13m), orientated ESE-WNW, covered with stones. According to local information, a cemetery*'.
- SMR No. – MO024-004 a burial ground approximately 740m to the east of tower 150 which appears as a graveyard on the OSI 1st edition map and
- SMR Nos. MO024-034001 and MO024-034002 - the ruins of Templemoyle and its associated Graveyard, a small Franciscan Friary on the banks of Lough Egish, located approximately 1.1km to the south east of Tower 161.

14.4.3.5 Monuments Subject to Preservation Orders

- 78 The list of Monuments covered by preservation orders contains a single entry within 2km of the proposed development which refers to a ringfort (SMR No. – MO027-006 / PO – 7/1984) in the townland of Dooraa (spelled Dooroa in the list of preservation orders). The ringfort is located approximately 1.25km west south-west of Tower 169.

14.4.3.6 Archaeological Monuments

- 79 There are in total 233 archaeological monuments recorded within 2km of the centreline of proposed development, including 223 archaeological monuments listed in the ASD (**Table 14.1**) and a further 10 sites listed in the NISMR (**Table 14.2**). These sites date from the late Mesolithic period to the post-medieval period.
- 80 The earliest datable monuments recorded within the CMSA are 11 megalithic tombs consisting of four court tombs, two portal tombs, two wedge tombs, two unclassified megalithic sites and one possible megalithic tomb. All the above typically date to the Neolithic period however wedge tombs can chronologically extend into the Early Bronze Age. Bronze Age monuments are represented by barrow sites at Beagh (ED Drumcarrow) (SMR No. MO030-045), Reduff (SMR No. MO027-009) and Doohamlat (SMR No. MO19-051), cairns at Lattonfasky (SMR No. MO024-025) and Drumnahavil (SMR No. ARM023:002), standing stones at Boherlea (SMR No. ME002-040) and Doohat (NISMR ARM019:013), a hillfort at Raferagh (SMR No. MO030-018001) and three cist burials found in a group in Lattonfasky (SMR No. MO024-025001-3).
- 81 There are several site classifications for which dates could not be determined in the absence of archaeological excavation, these sites could potentially span the prehistoric to early medieval periods. They include 11 crannógs, 24 enclosures and 2 earthworks.
- 82 The most numerous sites are the ubiquitous ringforts of which 140 examples are recorded. These along with 11 associated hut sites and nine souterrains can all be considered to be early medieval in date. The holy well in Lattonfasky (SMR No. MO024-039) may have been in use during the early medieval period but in many cases holy wells can have their origin in the prehistoric period. The possible Church at Croaghan (SMR No. MO014-036) could date from as early as the early medieval period, however the Archaeological Inventory records a tradition of mass being said here, which indicates that it may be later in date (Brindley (1986), *Archaeological Inventory of County Monaghan*).
- 83 Medieval activity in the CMSA is represented by the castle and bawn at Cordoagh (ED Enniskeen) (SMR No. CV035-016001–2) which was built in the early 15th century by Conchobair O'Reilly and the possible medieval Franciscan Friary and associated graveyard at Lattonfasky (SMR No. MO024-034001–2). There are also two possible burial grounds at Shane (SMR No.

MO024-004) and Carrickanure (SMR No. MO014-033). The dates of these are uncertain but both probably date to the post-medieval period and there is local lore that the graveyard in Shane may have been used in Penal and Famine times (Brindley (1986). *Archaeological Inventory of County Monaghan*). Other post medieval sites include the spa well at Collops (SMR No. CV035-015) and the designed landscape feature or tree-ring at Leiter (SMR No. CV035-046).

Table 14.1: Summary of Archaeological Monuments from the ASD Located within 2km of the Proposed Development

Classification	Count	Classification	Count
Anomalous stone group	1	Graveyard	1
Barrow - ring-barrow	1	Hillfort	1
Barrow - unclassified	2	Hut site	11
Bawn	1	Megalithic tomb - court tomb	4
Building	1	Megalithic tomb - portal tomb	2
Burial ground	2	Megalithic tomb - unclassified	2
Cairn - unclassified	1	Megalithic tomb - wedge tomb	2
Castle - unclassified	1	Redundant record	2
Church	2	Ringfort - rath	137
Cist	3	Ringfort - unclassified	1
Crannog	11	Ritual site - holy well	1
Designed landscape feature	1	Souterrain	5
Earthwork	2	Standing stone	1
Enclosure	23	Well	1
Total	52	Total	171
Overall Total 223			

Table 14.2: Summary of Archaeological Monuments from the NISMR Located within 2km of the Proposed Development

Classification	Count
Cairn	1
Enclosure	1
Megalithic Tomb possible	1
Rath	2
Souterrain	3
Souterrain possible	1
Standing Stone	1
Total	10

14.4.3.7 Topographical Files

- 84 The finds listed in the topographical files of the National Museum pertaining to the CMSA comprise a typical cross section of artefacts and tools spanning from the Mesolithic to the early modern period. The files were inspected with regard to all the townlands in the vicinity of the proposed development.
- 85 The earliest datable find was a Mesolithic Bann flake (NMI Find No. - 1965:138) from Corduff. Only one stray find possibly dates to the Neolithic and this is a stone axehead (NMI Find No. - 1933:236) from Annaglogh. Bronze Age activity in the area is better attested and finds from this period include food vessel pottery from Cabragh (NMI Find No. - 1958:141) and Doon (NMI Find No. - 1947:231), bronze swords from Cargaghoge (NMI Find No. - 1956:287) and Lisduff (NMI Find No. - 1959:173), socketed axeheads from Doohat (ARMCM.163.1935) and Lisdrumturk (NMI Find No. - 1956:289), a palstave axehead (NMI Find No. - 1942:412) from Muff, two spearheads from Cornasassonagh (unregistered) and Mohercrom (NMI Find No. - 1963:33), a javelin head (IA/128/62) from Corvally and a bronze cauldron (NMI Find No. - 1965:181) from Lisdrumturk. The Iron Age is represented by an iron spearhead (IA/53/1974) from Cordoagh, a La Tène toilet box (unregistered) from Cornalaragh and a probable Roman key (NMI Find No. - 1956:349) which was found in a crannóg in Greaghlonge Lough. There are also several prehistoric flint lithics from the area which cannot be assigned a more precise date. These included two scrapers (NMI Find Nos. - 1956:274, 1965:130) from Cargaghoge, a blade (NMI Find No. - 1965:133) from Corduff, a worked flint (NMI Find No. - 1942:68) from Corraneary and a flint slug knife (NMI Find No. - 1956:270) from Sreenty.
- 86 Finds from the early medieval period are well represented. Four quern stones typical of this period have been found in Corlea (NMI Find No. - 1978:160), Tullynahinnera (NMI Find No. - 1968:429), Edengora (NMI Find No. - IA/73/72) and Cornalaragh (NMI Find No. - 1965:315). The stone disc (NMI Find No. - 1955:47) found on a crannóg in Breakey Lough probably dates to the early medieval period. Several finds from the crannóg in Ervey Lough may also date to this period. These include a bronze omega pin (NMI Find No. - 1958:69), a silver pennanular brooch (NMI Find No. - 1958:70), a bronze ring-pin (NMI Find No. - 1958:77), a bronze pin (NMI Find No. - 1958:44), a wooden yoke-like object (NMI Find No. - 1957:80), two vessels (NMI Find No. - 1957:81, 1957:88), several staves (NMI Find No. - 1957:82–5), two cattle goads (NMI Find No. - 1957:86–7) a dish (NMI Find No. - 1957:89), an axehead (NMI Find No. - 1957:90) and a bronze tubular object (NMI Find No. - 1957:91). The clay pipe (NMI Find No. - 1956:320) from Bocks Middle, the iron snaffle ring (NMI Find No. - 1943:361) from Kilcrossduff and the metal Box, coin of George III and protractor (unregistered) from Annaglogh are all post-medieval in date.
- 87 There are also several finds which are difficult to assign a precise date to, from the CMSA. These finds include a hone stone (NMI Find No. - 1943:365) from Laragh, a wooden keg of bog butter (NMI Find No. - 1965:275) from Corlea, a ball of worsted (NMI Find No. - 1935:435) from Ardragh,

unglazed pottery sherds (NMI Find No. - 1965:183–4) and a stone mortar (NMI Find No. - 1965:185) from the floor of a wooden house in Cargaghoge Bog, a loom weight (unregistered) from Beagh, an oak boat / trough (unregistered) from Ardragh, a bronze bell-shaped object (NMI Find No. - 1965:253) from a bog in Cornalaragh, a bronze strap-buckle (NMI Find No. - 1960:618) from Ervey, a polished black stone object (NMI Find No. - 1935:388) from Greagh lane, a hammerstone (NMI Find No. - 1965:115) from Raferagh and a glass marble and a lump of vitreous substance (NMI Find No. - 1943:77a–b) from a crannóg in the bog at Kilcrossduff.

- 88 Note: the finds from the topographical index in many instances do not record artefacts recovered from recent excavation work, which may be with conservators or individual archaeological consultancies.

14.4.3.8 Previous Archaeological Fieldwork

- 89 The Excavation Bulletin is both a published annual directory and an on-line database that provides summary accounts of all the excavations carried out in Ireland and Northern Ireland, from 1970 to 2010. The Excavations Bulletin is compiled by Isabel Bennett and published by Wordwell, with support from the OPW and the DAHG. For the years from 1977 to 1984 the Excavation Bulletin was incorporated in the Irish Journal of Archaeology. The database gives access to almost 15,000 reports and can be browsed or searched using multiple fields, including Year, County, Site Name, Site Type, Grid Reference, Licence No., Sites and Monuments Record No. and Author.
- 90 Similarly the National Road's Authority (NRA) archaeological database (<http://archaeology.nra.ie>) contains a description of the results of excavations carried out in advance of various road schemes. In general, the database contains information on sites for which final excavation reports have been received. In a small number of cases, owing to the significance of particular sites, information from preliminary excavation reports has been included in lieu of the final report. The database can be searched using menus in one or more categories including county, townland, site type and dating period.
- 91 A search through the databases for the relevant townlands along or in the general vicinity of the proposed line route in counties Monaghan and Cavan produced seven results. Of these five were described as having no archaeological significance. These sites include townlands between Belturbet and Aghalane as part of the N2 realignment and the proposed sites of dwelling houses at Laragh and Tassan County Monaghan and Dunaree, County Cavan.

- 92 Sites where archaeological material was encountered include a post-medieval farm at Avalreagh and a possible cashel site at Lismagunshin. Both these sites were uncovered as part of the N2 works between Clontibret and Castleblayney. Avalreagh townland (Licence No. - 05E0787) is located approximately 1km north of the proposed line route between Towers 122 and 125. Test-trenching in advance of road construction uncovered the remains of a post-medieval farm structure thought to be a shed for animals and the remains of a possible bawn wall. A water trough for animals was also discovered.
- 93 At Lismagunshin, located approximately 850m from the proposed line route, a site marked 'Fort' on 1835 OS 6-inch map was excavated in advance of road construction. The site was approximately 30m in diameter. No trace of a ditch was present. The only internal features noted were a number of shallow burnt pits, one of which contained a blue glass bead (Sutton B. (2008). *Excavations Bulletin*). A small portion of the intact bank may survive incorporated into the field boundary on the west side of the site. There was quite a lot of stone incorporated into the field boundaries dividing the site at the top of the hill, and it is possible that the enclosing element of this site was constructed out of stone. It would appear that this site may in fact be the remains of a cashel, the stone equivalent of the earthen ringfort.

14.4.3.9 Cartographic and Aerial Anomalies

- 94 Detailed analysis of first edition and second edition OSI mapping was undertaken as well as a review of several sources of aerial photography, including LiDAR and satellite photography. Any sites of archaeological, architectural or cultural heritage potential were noted and mapped in GIS. In all, 171 sites were recorded in the vicinity of the proposed development, these are summarised in **Table 14.3**.

Table 14.3: Potential Archaeological, Architectural and Cultural Heritage Sites noted from Cartographic and Aerial Sources

Feature Type	Count
Beetling Mill	1
Bridge	2
Corn Mill	1
Cultivation Ridges	1
Farmstead	56
Gravel Pit	1
House	72
Level Crossing building (GNR)	1
Lime kiln	25
Mill race	1
Pond	1

Quarry	1
Railway line (GNR)	1
Thorn	1
Well	5
Well / Spring	1
Grand Total	171

14.4.3.10 Toponym Analysis

- 95 Townland names are useful in terms of understanding the geology, archaeology, land use, ownership and folklore of an area. The names can provide information on families, topographical features, and historical incidents. In terms of the built environment many names reference churches, fords, castles, raths, graveyards, roads and passes etc. Townlands are the smallest administrative land divisions used in Ireland and are in fact the only surviving administrative structure with a continuous history of development going back to medieval times if not earlier. Irish townlands generally relate not to settlements, but land units and as such they acquired legal title at an early date. They are the basic divisions of the countryside and were carefully recorded in the maps and books that accompanied the great land transfers of the 17th century. The names feature on the Ordnance Survey maps, the first edition of which was completed for the whole country circa 1842. In the compilation of the Ordnance Survey scholars, such as Eugene O'Curry and John O'Donovan, were commissioned to provide the Survey with the anglicised forms of the Irish placenames, and it is these anglicised forms that have been in general use ever since. In compiling the following data a number of resources were consulted including the Placenames Database of Ireland www.logainm.ie and *Irish Names of Places* by P.W. Joyce (1913).
- 96 The spellings of townland names, which were recorded by the Ordnance Survey from the 1830s onwards, are phonetically-rendered versions of the original Irish. Examples of some of the commonest names contain prefixes such as Drum, Corr, Knock, Mullagh / Mully and Tullagh / Tully which refer to the hills of the region; or Killy, Der / Derry, Cool / Cul, which refer to woodlands. Some common names refer to the human / settlement landscape, as in Lis, or Ra / Rath, Cashel, Gort, Terry, Bally, and Cross.
- 97 Names relating to aspects of the local topography include Tassan translated as the little cataract, Annagh (Cremorne By) - the marsh, Clogher - stony place, Drumguillew – ridge of the wood and Tullyglass – the hillock of the stream.
- 98 Flora and fauna feature in many names like Drumhillard - the ridge of the eagle, Clonturkan - the meadow of the hog / pig, Carrickanure - the rock of the yew tree or Corrinenty – the round hill of nettles.

- 99 Human settlement is indicated in references to forts, houses and landownership as follows: Latnakelly - Monument or grave mound of the McNally's, Terrygreeghan - O'Greaghan's land, Aghmakerr - McKerr's ford or Raferagh - Fiachcra's fort.
- 100 One of the more unusual townland names is Cornasassonagh, meaning the round hill of the Englishmen, or hired soldiers. This name may be linked to a historical event and could reference a local action or the passing of soldiers in many of the campaign's fought throughout the wider vicinity.
- 101 Refer to **Appendix 14.2, Volume 3C Appendices** of the EIS, for a list of townland names and analysis.

14.4.3.11 Townland Boundaries

- 102 Ranging from less than a hectare up to several thousand hectares, townland boundaries are the smallest officially recognised land division in Ireland. During the early to mid-19th century, Ordnance Survey Ireland produce the first edition of the Ordnance Survey maps, which documented in detail, for the first time, all the townlands of Ireland; numbering in excess of 60,000. Undertaken for taxation purposes, the process involved defining new townland boundaries where previously there had been none, such as in bog and mountain areas and in some instances amalgamating existing townlands. The earliest references to townland boundaries are found in pre-Norman legal documents, referring to grants of land to monasteries.
- 103 Monaghan County was not officially formed into a county until 1585. The modern county is divided into five baronies; Truagh, Dartree, Monaghan, Cremorne and Farney. The baronies are further sub divided into parishes and townlands. The modern landholding system in County Monaghan reflects elements of the later medieval Gaelic territorial organisation as recorded in a number of early modern land-settlements from the turn of the 17th century.
- 104 There are eight historic baronies in Cavan. Throughout the Medieval Period the area of the county was part of the Kingdom of East Breffni, named after its ruling Gaelic family. Originally Cavan marked the western province of Connaught, but was transferred to Ulster by Lord Deputy Sussex in 1562 for strategic reasons because it '*bordereth upon the English Pale*' (Report of the Earl of Sussex 1562). For this reason Cavan was part of the Ulster plantation, was shired and became a county.
- 105 More recent townland boundaries may relate to demesne boundaries. Taking a variety of forms from rivers and streams to fences, banks, field walls and demesne walls they can provide an interesting insight into the past.

- 106 In a number of instances towers are located adjacent to townland boundaries but there are none located on townland boundaries.

14.4.4 Desk Based Evaluation Architectural

- 107 There are no listed buildings, registered historic parks or gardens, industrial heritage sites or defence heritage sites located in Northern Ireland within 2km of the proposed development.

14.4.4.1 Architectural Conservation Areas

- 108 There are currently no ACAs designated within 5km of the proposed development. The closest, located within Carrickmacross, is approximately 6.5km to the east of the proposed development. It is noted however that County Monaghan has indicated its intent to designate a number of new ACAs during the life of its current County Development Plan, Ballybay is one such town and is located approximately 3.4km to the west of the proposed development.

14.4.4.2 Records of Protected Structures and the National Inventory of Architectural Heritage

- 109 The Records of Protected Structures for counties Cavan and Monaghan are currently under review in light of surveys having been undertaken relating to the NIAH. All Protected Structures and NIAH sites within the two counties were included in this evaluation.
- 110 There are three structures noted in the NIAH that are rated as being of National importance located within 5km of the proposed development. Saint Peter's Church (RPS No. - 41402801) in Laragh, County Monaghan, and Gartlan's Public House (RPS No. - 293) and the Church of the Immaculate Conception (RPS No. - 294), both in Kingscourt, County Cavan. All are in excess of 3km from the proposed development.
- 111 In total there are 14 protected structures located within 2km of the proposed development as it traverses counties Monaghan and Cavan. There are a further 21 sites that have been highlighted by the NIAH surveys of County Monaghan and County Cavan, that are in the process of being reviewed for possible inclusion within their RPSs in the future. The closest such structure, Manse House, recently added to the NIAH survey for County Monaghan (NIAH No. 41403014), is located approximately 200m to the east of the proposed development in the vicinity of Tower 194. Details of all structures listed in both the RPS and the NIAH located within 2km of the proposed development are provided in **Appendix 14.3, Volume 3C Appendices** of the EIS.

14.4.4.3 Demesne Landscapes and Historic Gardens

- 112 OSI first edition mapping was used in conjunction with the NIAH Garden Survey to map all demesne landscapes and historic gardens within 2km of the proposed development. Both Garden surveys for Monaghan and Cavan have been completed to a Phase 2 level which makes an initial assessment of the condition and survival of all identified sites using aerial photography and historic mapping. Individual site survey reports record a general appraisal of the site, the presence and survival of principal buildings, movement within the site eg; drives, walks and avenues and demesne features – walled gardens, orchards, woodland, vistas etc. There are relatively few historic gardens in the vicinity of the proposed development as it passes through counties Cavan and Monaghan and those in the vicinity are relatively small. This is especially apparent when compared with the expansive demesnes of County Meath in the MSA (refer to Chapter 14, **Volume 3D** of the EIS) to the south, some of which cover several hundred hectares.
- 113 Demesne landscapes and historic gardens are generally shaded on the OSI 1st edition maps, however it was discovered during the appraisal that this is not the case for County Monaghan. Contact was made with the Architectural Section of the then DoEHLG and at the time (May 2011), they were unaware of this anomaly. In light of this, the Garden Survey on the Buildings of Ireland website (<http://www.buildingsofireland.ie/Surveys/Gardens/>) was used as a baseline for the point locations of historic gardens and then their boundaries were mapped in GIS using professional judgement and experience.
- 114 Generally the historic gardens listed in **Table 14.4** are located at a distance from the proposed development, however in the vicinity of Towers 170 to 175, the proposed line route passes through an area where three demesne landscapes and historic gardens are found in close proximity. These are associated with Lakeview House, Shantonagh House and Tully House. It appears that the proposed line route passes through the demesne landscape associated with Shantonagh House and Tully House.

Table 14.4: Demesne Landscapes and Historic Gardens within 2km of the Proposed Development

Name	NIAH Garden Survey Description	Townland	County	Area (Ha)
Woodfort	Main features unrecognisable - peripheral features visible	Ervey	Meath	13.5
Rock Field	Main features unrecognisable - peripheral features visible	Avalreagh	Monaghan	4.9
Shantonagh House	Main features substantially present - peripheral features unrecognisable	Tooa	Monaghan	20.1
Lakeview House	Virtually no recognisable features	Shantonagh	Monaghan	17.1
Tully House	Virtually no recognisable features	Tullyglass	Monaghan	21.2

Ballybay House	Main features substantially present - peripheral features unrecognisable	Knocknamaddy	Monaghan	48.2
Lakelands	Main features substantially present - peripheral features unrecognisable	Lismagunshin	Monaghan	12.1
Heath Lodge	Virtually no recognisable features	Leiter	Cavan	26.9
Northlands	Main features unrecognisable - peripheral features visible	Taghart North or Closnabraddan	Cavan	39.9

14.4.5 Route Survey

- 115 The following route survey is a distillation of the desktop evaluation including use of detailed aerial photography, LiDAR, coupled with the vantage point surveys and field survey work undertaken.

14.4.5.1 Towers: 103 - 121

Townlands: Lemgare, Lisdrumgormly, Annaglogh, Latnakelly, Tassan, Cashel

- 116 The CMSA section of the proposed development proceeds north to south from the Armagh border crossing into Lemgare townland, County Monaghan. Between Towers 103 and 109 the proposed line route proceeds to the south-east, skirting the border and passing a number of recorded monuments including a ringfort in Coolartragh (SMR No. - MO014-020) and a souterrain (SMR No. - MO014-039) in Lemgare located approximately 750m and 400m to the south-west of the proposed line respectively. Further south-east in the vicinity of Tower 106 the proposed route passes almost directly over a ringfort with the remains of a building within its interior (SMR Nos. - MO014-021001 and MO014-021002). The site is described in the archaeological inventory as an oval area of rock outcrop (approximately 26m ENE-WSW; 39m NNW-SSE) surrounded by artificial scarp and bank with an entrance to the SSW.
- 117 Between Towers 106 and 107 the proposed line route passes within close proximity to two monuments, an enclosure (SMR No. - ARM023-004) and a court tomb (SMR No. - MO014-022). The enclosure is located in Crossbane townland, County Armagh and is recorded as a polygonal earthwork situated on a slight eminence sloping to a stream. The perimeter of the monument is defined by a stone wall. This site is located approximately 140m from the proposed alignment. On the Monaghan side of the border (110m west of the line route) is (SMR No. - MO14-022), a Court tomb with a cairn. This monument is aligned north-west south-east. The court gives access to the scant remains of chamber. Continuing south-east to Tower 109 the proposed line route passes a number of now derelict structures that feature on the first edition OS maps before diverting to the south-west. Near Tower 110 there is a sub circular copse of gorse that may obscure a site of archaeological potential. This copse is located within approximately 30m of the proposed alignment.

- 118 Between Towers 109 and 112 the proposed line route heads in a southerly direction, passing a complex of monuments to the east including three ringforts and an enclosure. One of the ringforts in Annaglogh contains a souterrain and a possible hut (SMR No. - MO15-003001-03). All of these sites are in excess of 400m from the proposed line route.
- 119 At Tower 112 the proposed line route alters course to the south-west, passing over a ridge in Latnakelly. The line route passes 310m to the north of Tassan lough the site of a crannóg (SMR No. - MO14-034), which is situated on its southern shore. The crannóg is tree-lined and is recorded as a roughly circular cairn of loose stones and charcoal 18m in diameter. Within Tassan townland the proposed line route passes a number of structures that appear on historic maps. Near Tower 121 at the junction of the proposed line route and the N2 roadway the proposed line route oversails a lime kiln featured on the early OS maps.

14.4.5.2 Towers: 121-136

Townlands: Cashel, Annagh (Cremorne By), Carrickanure, Cornamucklagh North, Clarderry, Derryhallagh (Monaghan By), Drumroosk, Cargaghramer, Cornanure (Monaghan By)

- 120 From the N2 the proposed line route continues to the south-west via Annagh (Cremorne By) and Cornamucklagh North bypassing two monuments - a rath (SMR No. - MO14-032) and a possible burial ground (SMR No. - MO014-033) in Carrickanure (340m and 450m from the line route respectively). The cemetery is defined by a rectangular area (23m x 13m), orientated east south-east and west north-west, and covered with stones. Between Towers 124 and 129 there are no recorded monuments within 500m of the proposed alignment however there a number of 1st edition features including wells, structures and a quarry site. Many of these sites are no longer extant.
- 121 North of Ghost Lough between Towers 129 and 130, in Derryhallagh (Monaghan By) townland the proposed line route passes within 80m of an anomalous stone group (SMR No. - MO019-048). This site is on slightly raised ground which slopes gently from the south to the north. It is described as having nine irregularly shaped limestone boulders placed closely together (3.5m N-S × 3.2m E-W), forming no definite pattern. According to local tradition this feature is known as a 'giant's grave' and there are various legends and superstitions associated with the stones.
- 122 Between Corofin Lough and Coogans Lough the proposed line turns south through drumlin country passing in close proximity to a number of derelict farmsteads and two lime kilns. Also noted in this area are two monuments, an earthwork and a portal tomb both occupying elevated sites either side of the proposed line route. The ringfort (SMR No. - MO019-017) is indicated as a 'Fort' on 1835 'OS 6-inch' map, however, site investigations confirm that there is now no visible surface remains. The portal tomb (SMR No. - MO019-016), located approximately 210m west of

the proposed line route between Towers 133 and 134 is visible on a hillside from a nearby access road. The tomb which opens to the north-west has two side stones and a displaced roof stone.

- 123 Continuing south via Drumroosk and Cargaghramer the proposed line route passes a derelict farmstead and structure. There is a ringfort (SMR No. - MO019-023) 750m to the east of Tower 136. The fort is well screened by trees and there is no visible trace of the fosse or an entrance.

14.4.5.3 Towers: 136-152

Townlands: Cornanure (Monaghan By), Rausker, Terrygreeghan, Cornamucklagh South, Crinkill, Clogher, Drumguillew Lower, Drumhawan

- 124 From Cargaghramer the proposed line route continues over drumlins into Cornanure (Monaghan By) townland bypassing a number of first edition features, all of which have no above ground trace. Approximately 270m to the east of the line in Rausker townland on the eastern slope of a ridge is a wedge tomb (SMR No. - MO019-025). The wedge tomb, incorporated into a mound, consists of a gallery flanked by two buttresses and a single outer walling stone on the north-west side. The gallery (L 3m; Wth 0.7m) is preceded at the south-west by short portico. Two displaced roof stones lie across the gallery. The structure measures 11m long by 5m wide (de Valera and Ó Nualláin (1982) *Survey of the Megalithic Tombs of Ireland*). The site is not visible from any public roads, but is clearly visible in aerial photography and its elevated position can be seen from Discovery Series mapping. Also in the general vicinity, in excess of 750m from Tower 140, is a tree ringed rath in Tonyscallan (SMR No. - MO019-026).
- 125 West of the proposed line route between Towers 138 and 142 are five monuments including two ringforts (SMR Nos. - MO019-020 and 022), a megalithic tomb (SMR No. - MO019-021), and two crannógs (SMR Nos. - MO019-043 and 044). Both the megalith and ringfort SMR No. - MO19-022 are in excess of 900m from the line route, the other sites are in excess of 500m. Also of note between Towers 139 and 140 the line route crosses over the old Great Northern Railway, Armagh to Castleblayney line dated 1910.
- 126 Crossing the R183 road, Tower 142 diverts the proposed line route to the south-east where it passes in close proximity to two monuments including a court tomb (SMR No. - MO019-037) and a ringfort (SMR No. - MO019-038), both found in Cornamucklagh South. The court tomb is within 50m of the proposed line route between Towers 143 and 144 and is described as a roughly trapezoidal cairn incorporating at its north-west border a deep U-shaped court. The gallery structure is represented by a single side stone. The site is not visible from the road. The ringfort (SMR No. - MO019-038) is located approximately 40m to the east of the proposed line route on the summit of a hill and is recorded as an oval area approximately 40m in diameter surrounded by a scrub lined, earthen bank with traces of a fosse. From aerial imagery the bank looks degraded to the south-west.

- 127 From this point the line route passes east of Crinkill Lough, containing a crannóg on its eastern shore (approximately 710m from the line route). At Tower 149 the line route deviates to the south and passes to the west of a megalithic court tomb (SMR No. - MO024-003) and a burial ground (SMR No. - MO024-004). The court-tomb is located approximately 410m from the line route and has a slightly curved gallery. A number of the stones around it are shattered. Nearby 740m from the line route is a burial ground (SMR No. - MO024-004) which according to local tradition was used in Penal and Famine times. The site is a rectangular, slightly raised area enclosed by foundations and the remains of wall faced with slabs set on edge. Internally are a few grave markers, chiefly lines of small stones and several thin slabs (Irish Folklore Commission (1938), *IFC Survey of Schools*). The site is currently overgrown with scrub.

14.4.5.4 Towers: 152-169

Townlands: Drumhawan, Greagh (Cremorne By), Brackly (Cremorne By), Tullynahinnera, Cooltrimegish, Boraghy, Aghmakerr, Drumillard (Cremorne By)

- 128 South from Drumhawan through Greagh (Cremorne By) between Towers 155 and 161 the proposed development passes a number of first edition structures and two ringforts, both in excess of 700m from the proposed development. North-west of Lough Egish the line route diverts to the south-west at Tower 161 and crosses the R180 near Boraghy. On the shore of Lough Egish is one of the few religious archaeological sites in the vicinity of the proposed development, the ruins of Templemoyle Church and graveyard (SMR Nos. – MO024-034001 and 002) which is located approximately 1km to the south-east of Tower 161. From this point it proceeds to the east of Lough Morne passing within approximately 80m of a ringfort (SMR No. - MO024-032) at Aghmakerr. This fort is surrounded by scrub and measures 30m in diameter. It is enclosed by an earthen bank with modern stone facing and has traces of external fosse, visible mainly at the north-east and the east. The site is not visible from the road.
- 129 The proposed line route crosses the R181 road at Drumhillard (Cremorne By), along the roadside at this juncture are a number of buildings that appear on historic maps.

14.4.5.5 Towers: 169-176

Townlands: Drumillard (Cremorne By), Tooa, Tullyglass.

- 130 Proceeding south-east through a small valley the proposed line route between Towers 169 and 171 passes three elevated monuments including a ringfort and enclosure in Tooa (SMR No. - MO027-007001 and MO027-008) and a barrow in Reduff (SMR No. – MO027-009). All the sites are in excess of 350m from the proposed development and are not visible from any public vantage points. The ringfort is tree lined and contains the foundations of two conjoined hut sites. The enclosure is marked 'Fort' on 1835 OS 6-inch map. The barrow is described as a circular, slightly raised mound surrounded by fosse with external bank. The entrance at the west north-

west has traces of stone lining through the bank and causeway. To the east as the line route crosses the R181 between Towers 169 and 170 are two three bay houses that have recently been surveyed as part of the NIAH for County Monaghan (NIAH Reg. Nos. - 41402419 and 41402421).

- 131 Between Towers 171 and 175 the proposed line route passes through two demesnes - Shantonagh House and Tully House. Shantonagh House is described in the garden survey as having its main demesne features substantially present. Tully House is described in the garden survey as having virtually no recognisable features. Some small ruined walls are all that remain of a Corn Mill near Tully House; the house itself and associated outbuildings have vanished entirely. There is also no trace of Beetling Mill that was once located to the south. Other significant buildings in the area include Farm Hill (NIAH Reg. No. – 41402707) and the adjoining Farm Hill Flax Mill (RPS No. – 41402706). Archaeological sites in the area include a rath and an enclosure in Tullyglass townland (SMR No. - MO027-031 and 32); both sites are located approximately 110m and 520m to the west of the proposed line route respectively. The enclosure, nearest the proposed line route, is described as possibly being a landscape feature. Approximately 450m to the east of Tower 175 is a crannóg (SMR No. – MO027-034) on the eastern shore of Bocks Lough.

14.4.5.6 Towers: 176-193

Townlands: Tullyglass, Cornasassonagh, Corrinenty, Ummerafree, Sreenty, Ardragh, Corvally (Farney By)

- 132 South of Bocks Lough the line route traverses Cornasassonagh townland passing 170m east of a well screened ringfort (SMR No. - MO027-037). Further south at Tower 181 the proposed line route passes 70m to the west of an enclosure (SMR No. - MO027-077) described as a sub-rectangular area (c. 12.5m x 15.5m) surrounded by a grass-covered low stone wall with an entrance on the west side.
- 133 At Tower 184 the line route diverts to the west passing approximately 120m north of a ringfort (SMR No. - MO027-076001 and MO027-076002) which contains the remains of a hut site. Set back from the road, the site is heavily vegetated and was not visible from roads in the surrounding area due to its elevated position and intervening hedgerows. Further west is a rath at Sreenty (SMR No. - MO027-074) defined as a circular area (diameter 31m) with a bank visible to the west. This site is located on a ridge and the line route angles around it to the west. No visible trace remains as it was bulldozed in 1996.
- 134 To the immediate west of Tower 186 are an earthwork (approximately 80m from the line route) and an enclosure (approximately 200m from the line route) (SMR No. - MO027-072 and 110), both sites are indicated on the historic mapping but now have no above ground trace.

- 135 East of Ouvry Cross roads the line route continues through Ardragh towards Corvally (Farney By). Along this section an examination of historic maps identified a number of old farmsteads and lime kilns. There are two archaeological sites in these townlands (SMR No. - MO027-097) a tree-lined ringfort and an enclosure (SMR No. - MO027-096) that is marked 'fort' on the 1835 map but of which no trace now survives. MO027-097 is located on a hilltop approximately 315m east of the line route, MO027-096 is located approximately 120m to the west near Tower 193.

14.4.5.7 Towers: 193-211

Townlands: Corvally (Farney By), Raferagh, Cornalaragh, Doagh, Corlea (ED Drumcarrow), Ballaghnearn, Scalkill

- 136 To the east of Tower 193, approximately 820m from the proposed development, is the small village of Corvally which contains both a church and a school which are listed in the Monaghan RPS (RPS Nos. – 41403002 and 41403001 respectively).
- 137 South of the R178 road, the proposed line route passes through Corvally (Farney By) and Raferagh and Cornalaragh. This area is characterised by hills and small fields with mature hedgerows scattered with the remains of derelict farmhouses and structures. West of the line route and all in excess of 500m are three ringforts at Corcreeghagh (SMR No's - MO030-003,004 and 005). To the east of the proposed route between Towers 194 and 195 is Manse, a named house on the OSI 2nd edition maps, which was recently added to the NIAH (Reg. No. – 41403014). Approximately 600m to the west of the proposed development between Towers 195 and 196 are St. John the Baptist's Church, Corcreeghagh School and a small corrugated iron cottage all of which have been recently added to the NIAH (Reg. No's – 41403001, 41403002 and 41403003 respectively).
- 138 In Cornalaragh townland the proposed line route passes within 20m of a ringfort (SMR No. - MO030-021). The ringfort is visible on the aerial photographs as a tree-lined circular area. The archaeological inventory records that the monument is approximately 37m in diameter and is surrounded by an earthen bank with external fosse visible from south-west to north north-west. There are gaps at the east, east south-east, south and south-west but the original entrance is not identifiable. The site is well set back from any roads and is not visible from any public vantage point. South of this, the proposed line route continues through Doagh, Corlea (ED Drumcarrow) and Scalkill where it crosses into County Cavan. Between Towers 201 and 211 the proposed line route comes in close proximity of a number of first edition buildings, farmsteads, a lime kiln and two bridges.

14.4.5.8 Towers: 211-224**Townlands: Scalkill, Lisagoan, Drumiller, Corlea (Clankee By), Cornamagh, Corglass (ED Lisagoan), Collops, Dingin**

- 139 The line route passes from Monaghan into Cavan between Towers 211 and 212 crossing the R162 in the vicinity of two ringforts (SMR No. - MO030-037 and CV029-007) in Scalkill and Lisagoan townlands respectively. The ringfort (SMR No. - MO030-037) in Scalkil is located approximately 124m to the north of the proposed line route and is defined by a tree-lined circular area (approximately 39m in diameter) skirting a laneway leading to a farmhouse. From aerial photography the fort is visible from the road as a copse of trees. The Lisagoan site is in excess of 400m from the proposed line route and is covered in scrub, enclosed by a substantial inner bank and deep fosse. The site is not visible from the road.
- 140 Further south between Towers 213 and 214, the line route passes 230m to the west of a roadside ringfort (SMR No. - CV029-008). This ringfort has no vegetative cover and is defined by a raised circular area (diameter approximately 39m) enclosed a substantial earthen bank with external fosse, and is located to the rear of a dwelling house. Proceeding south-west the line route traverses the hills of Drumiller and Corlea (Clankee By) townlands bypassing a number of structures that feature on first edition maps. At Tower 220 there is a ringfort (SMR No. - CV029-005) situated on a hilltop 550m to the east. This site is inaccessible and consists of a well-preserved, scrub lined, earthen bank and a wide, deep, waterlogged fosse. There is a break in the bank to the south-east with partially surviving accompanying causeway presumably represents the original entrance. South of this in Corglass (ED Lisagoan) townland the proposed line route passes approximately 400m to the west of a ringfort (SMR No. - CV035-017). This site appears on the historic mapping as a substantial monument marked as a 'Fort'. The archaeological inventory describes it as having a massive inner bank with an external height of 6m. A review of aerial photographs, dating from 1995 to present however suggests that the site has been cleared away, and only survives as a cropmark.
- 141 Between a local access route and the R165, the line route enters Collops townland and passes near a number of structures, including a lime kiln and a Spa well (CV035-015) that feature on historic mapping. The well (located approximately 146m from the proposed line route) was visited by a surveyor in 1988 but there is no additional information on the site since then.

14.4.5.9 Towers: 224-236**Townlands: Dingin, Corrycholman, Leiter (ED Lisagoan), Cordoagh (ED Enniskeen), Laragh, Corranearny (ED Enniskeen), Carrowreagh, Clonturkan**

- 142 From Tower 224 the line route diverts to the south-west passing approximately 450m from a ringfort (CV035-033) located to the eastern end of a hilltop in Dingin townland. Crossing the

- R165 into Corrycholman near Tower 225 is an unrecorded potential enclosure site visible on the aerial photographs as a bend in a field with a circular platform to the south. This site does not appear on the historic mapping and its significance can only be determined with a field visit.
- 143 Between Towers 225 and 227 the line route passes approximately 250m to the east of Heath Lodge (CV-35-N-744970) demesne and approximately 421m from a nearby landscape feature visible on aerial photography as a scrub lined oval enclosure, orientated north-south (CV035-046). The NIAH garden survey describes the demesne as having virtually no recognisable features. The landscape feature is visible from the road as a copse of scrub.
- 144 From Corrycholman townland, past Muff Lough the line route enters into Cordoagh (ED Enniskeen) the former site of a castle and bawn (CV035-016001). The castle was erected by Conor O'Reilly in the 15th century and apparently abandoned after the Plantation. Although there are now no visible remains at ground level, an earlier account (Davies (1947), *The Castles of County Cavan*) described what may have been the remains of three walls of a bawn enclosing an irregular rectangle 58m by 43.8m. The wall on the north-west side, which is likely to have housed the entrance, may have been removed during road construction. The first edition map dated 1835 indicates a 'Castle' in ruins beside two structures and an enclosed rectangular plot.
- 145 Of note, located approximately 2.2km to the west of Tower 228, there are three unclassified cairns (CV034-041, CV034-058 and CV034-057) located on Lough an Leagh mountain. They will not be directly impacted upon. A photomontage and description of landscape and visual effects on Lough an Leagh are detailed in **Chapter 11** of this volume of the EIS.
- 146 Situated in a rough field in excess of 500m from the line route between Towers 227 and 228 is a site marked on the first edition map as a 'Fair Green' and gravel pit. The archaeological inventory describes the site as not being an archaeological monument within the remit of the Archaeological Survey of Ireland. The 'fair green' is presently located to the rear of a farmyard.
- 147 The present day Fair of Muff is held annually on the 12th August and is centred on a nearby road junction. Historically the fair dates to 1608 when King James I granted a licence to Mr. Gareth Fleming of Cabra, Kingscourt to hold a fair and market over three days. It may be of earlier provenance. More recently at the head of a road junction an information panel, plaque and a seating area have been installed. The 'Fair Green' is marked on all editions of the 19th century OS maps and is marked as a sub-rectangular level area. The site of the modern fair is centred around a crossroads, located approximately 200m to the south east of Tower 227 and a low lying field to the south of the crossroads. At this point, the proposed line approaches from the north-east and then turns to the south at Tower 228. It is not a designated cultural heritage site and will not be directly impacted upon. A photomontage and description of the landscape and visual effects are discussed in **Chapter 11** of this volume of the EIS.

- 148 From Tower 228 the line route continues south through Laragh townland passing approximately 400m west of Our Lady of Mount Carmel RC Church (RPS No. 184). The church is described in the NIAH as a modest-scale church in a prominent location, which retains its original form and much of its historic detailing. Built in 1858, this church replaced an earlier T-plan church dating from 1787. The altar window, c.1970, is from the Harry Clarke Studios. The belfry is also of interest for the quality of the decoration to the ironwork. Within the same townland are two ringforts (CV035-045 & 044) one of which, according to the survey notes, no above ground trace survives. The other fort (CV035-045) is located beside a dwelling house and a farm building and survives from its south-west circuit to the north-west.
- 149 From Tower 231 the line route travels directly south through Laragh, Corranery (ED Enniskeen) and Carrowreagh townlands towards Clonturkan on the Meath border. Between Towers 235 and 236 the line route passes to the west of two ringforts (CV035-014 & 034) one of which is visible as a tree copse along the roadway. Both these forts are located over 300m from the proposed line route.

14.4.5.10 Construction Materials Storage Yard

- 150 The proposed construction materials storage yard is located in a long rectangular field to the south-east of Carrickmacross along the edge of the N2 primary road. The site straddles the townlands of Monaltyduff and Monaltybane. There are no recorded monuments within the site; however there are two areas to the north-west and south-east where previously unknown archaeological sites were discovered during archaeological resolution of the development of the N2 road. The archaeological sites are classified as Excavation-Miscellaneous and relate to sub-surface features discovered prior to road construction (Excavation Licence No. 03E1298). Excavation of RMP MO031-132 to the north-west revealed a circular charcoal filled pit (diam. 2m; D 0.6m) and excavation of RMP MO031-133 revealed an isolated circular pit (diam. 1.5m; D 0.5m). Both sites were removed and are now no longer extant.
- 151 With regard to the local architectural resource there are two Protected Structures located approximately 250m to the east of the construction materials storage yard on the opposite side of the N2. These sites are Monalty House (Ref. No. 41403111) described as a detached five-bay, three-storey, gable-ended double-pile house with basement, c. 1810 and associated two-storey outbuildings (Ref. No 41403185).
- 152 From a review of historical mapping including the first edition 6" map and the later second edition 25" map the proposed compound site was an undeveloped field adjacent to a gravel pit. Aerial photographs available on the OSI website show the site as being partially forested in 1995, a green field site in 2000 and in 2005 the site is shown as being entirely stripped of topsoil and being utilised as a spoil deposition area for the construction of the N2. Given the scale of earlier groundworks on the site no archaeological mitigation is required at this location.

14.5 POTENTIAL IMPACTS

14.5.1 Introduction

153 Potential impacts have been considered for both known and previously unrecorded archaeological, architectural and cultural heritage sites, for the construction, operation and decommissioning phases of the proposed development.

14.5.2 Evaluation of Impacts

154 In line with EPAs *Guidelines on the Information to be contained in Environmental Impact Statements* (March 2002) and DoECLGs *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment*, the impact upon designated and undesignated archaeological, architectural and cultural heritage sites, structures, monuments or features (as detailed in **Appendices 14.2, 14.3 and 14.4, Volume 3C Appendices** of the EIS) have been evaluated using the following criteria.

14.5.2.1 Quality of Impacts

- Positive Impact: A change that improves or enhances an archaeological, architectural or cultural heritage site, structure, monument or feature or its setting;
- Neutral Impact: A change that does not affect an archaeological, architectural or cultural heritage site, structure, monument or feature or its setting; and
- Negative Impact: A change that will remove or negatively alter, whether in its entirety or not, an archaeological, architectural or cultural heritage site, structure, monument or feature, or detract from an observer's enjoyment or appreciation of its setting.

14.5.2.2 Significance of Impacts

- Imperceptible Impact: An impact capable of measurement but without noticeable consequences;
- Slight Impact: An impact, which causes noticeable changes in the character of the environment without affecting its sensitivities;
- Moderate Impact: An impact that alters the character of the environment in a manner that is consistent with existing and emerging trends;
- Significant Impact: An impact, which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment; and

- Profound Impact: An impact, which obliterates sensitive characteristics.

14.5.2.3 Duration of Impacts

- Temporary Impact: Impact lasting for one year or less;
- Short term Impact: Impact lasting one to seven years;
- Medium term Impact: Impact lasting seven to fifteen years;
- Long term Impact: Impact lasting fifteen to sixty years; and
- Permanent Impact: Impact lasting over sixty years.

14.5.2.4 Types of Impacts

- Cumulative Impact: The addition of many small impacts to create one larger, more significant, impact;
- 'Do Nothing Impact': The environment as it would be in the future should no development of any kind be carried out;
- Indeterminable Impact: When the full consequences of a change in the environment cannot be described;
- Irreversible Impact: When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost;
- Residual Impact: The degree of environmental change that will occur after the proposed mitigation measures have taken effect; and
- 'Worst Case' Impact: The impacts arising from a development in the case where mitigation measures substantially fail.

14.5.3 Construction Phase

155 Potential construction impacts may be direct, physical impacts on known and previously unrecorded archaeological, architectural or cultural heritage sites, structures, monuments or features. Care has been taken during the design stage to avoid such impacts, however where there remains a potential for such impacts mitigation measure are recommended. In relation to the proposed development, direct physical impacts on the archaeological, architectural and cultural heritage can manifest themselves in the following ways:

- Where an archaeological, architectural or cultural heritage site, structure, monument or feature is located within an area where works takes place and the works either intentionally or unintentionally entail the alteration or removal of all or part of the site, structure, monument or feature a direct, physical impact will occur;
- Direct, physical impacts can also occur in gaining access to the site. Where archaeological, architectural or cultural heritage sites, structures, monuments or features are intentionally or unintentionally removed or altered when transporting and / or facilitating access for machinery, equipment and / or materials to or from site for tower construction, and / or stringing of OHLs and /or construction of guarding areas, a direct physical impact will occur; and
- There is the potential for direct, physical impacts on previously unrecorded archaeological and architectural sites, structures, monuments or features.

156 If these impacts cannot be remediated, for example if archaeological deposits are destroyed during excavations, then the impacts will be permanent.

14.5.3.1 Archaeological Impacts

157 The following tables contain details of the potential direct, physical impacts that archaeological sites located within the vicinity of the proposed development may experience. To increase the clarity of this evaluation these tables also contain details of site specific mitigation measures. Further details regarding mitigation measures are contained in **Section 14.6**. It should be noted that not all sites of archaeological importance are represented below, only those that have a potential to be directly physically impacted upon by the proposed development. For details of all archaeological sites that are located within the vicinity of the proposed development please refer to **Appendix 14.2, Volume 3C Appendices** of the EIS.

158 Note that:

- The tables are listed in alphanumeric order by Sites and Monuments Record (SMR) number;
- 'Distance to route' for archaeological monuments is the distance from the centre point of the data provided on the www.archaeology.ie website to the centreline of the proposed line route at its nearest point, rounded to the nearest 10m; and
- Similarly the 'Distance to Nearest Tower' is the distance from the centre point of the data provided on the www.archaeology.ie website to the centre point of the tower.

Table 14.5: Potential Construction Phase Impacts on Archaeological Monument SMR No. MO014-021001-, Ringfort - Rath

ROI SMR No. MO014-021001 - Ringfort - Rath					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Lemgare	279806,328706	30	106	100
<p>Potential Direct Physical Impacts: Tower 106 is located 100m from this ringfort and there is the potential that excavations associated with the construction of the tower could impact on associated archaeological deposits. There are also the ruins of a house nearby that appear on the first edition OS map.</p>					
<p>Mitigation: Given the proximity of Tower 106 to the archaeological monument and nearby house that appears on the first edition map it is recommended that pre-construction archaeological testing of Tower 106 site be undertaken under licence granted by the DAHG. Prior to construction a suitably qualified archaeologist will demarcate a buffer not less than 20m from the ringfort to prevent accidental damage.</p>					
<p>Residual impacts: Following demarcation there will be no inadvertent physical impacts on the archaeological monument. In the event that there are archaeological deposits discovered during archaeological testing they will excavated in full consultation with the National Monuments Service of the DAHG.</p>					

Table 14.6: Potential Construction Phase Impacts on Archaeological Monument SMR No. MO014-021002-, Building

ROI SMR No. MO014-021002 - Building					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Lemgare	279806,328706	30	106	100
<p>Potential Direct Physical Impacts: Tower 106 is located 90m from this ringfort and there is the potential that excavations associated with the construction of the tower could impact on associated archaeological deposits. There are also the ruins of a house nearby that appear on the first edition OS map.</p>					
<p>Mitigation: Given the proximity of Tower 106 to the archaeological monument and nearby house that appears on the first edition map it is recommended that pre-construction archaeological testing of Tower 106 site be undertaken under licence granted by the DAHG. Prior to construction a suitably qualified archaeologist will demarcate a buffer not less than 20m from the ringfort to prevent accidental damage.</p>					
<p>Residual impacts: Following demarcation there will be no inadvertent physical impacts on the archaeological monument. In the event that there are archaeological deposits discovered during archaeological testing they will excavated in full consultation with the National Monuments Service of the DAHG.</p>					

Table 14.7: Potential Construction Phase Impacts on Archaeological Monument SMR No. MO019-037----, Megalithic Tomb - Court Tomb

ROI SMR No. MO019-037---- Megalithic Tomb - Court Tomb					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Cornamucklagh South	275550,320000	50	143	200
<p>Potential Direct Physical Impacts: This megalith is located in the south eastern corner of a steeply sloping field where it is proposed to erect a tower 200m to the north-west. There is the potential that the monument could be inadvertently impacted upon during the stringing of OHL.</p>					
<p>Mitigation: A suitably qualified archaeologist will demarcate a buffer of not less than 20m from the archaeological monument to protect it from accidental impact, archaeological monitoring is recommended for groundworks associated with the construction of Tower 143.</p>					

Residual impacts: Following the demarcation of an appropriate buffer there will be no inadvertent physical impacts on the archaeological monument. In the event that there are archaeological deposits discovered during archaeological monitoring or groundworks they will be excavated in full consultation with the National Monument.

Table 14.8: Potential Construction Phase Impacts on Archaeological Monument SMR No. MO019-038----, Ringfort - Rath

ROI SMR No. MO019-038---- Ringfort - Rath					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Cornamucklagh South	275770,319710	30	145	160
<p>Potential Direct Physical Impacts: This ringfort is located 30m to the north-west of the OHL. Access for the construction of Tower 145 passes through a neighbouring field. There is the potential that construction and stringing works could inadvertently impact archaeological deposits associated with the site.</p>					
<p>Mitigation: A suitably qualified archaeologist will demarcate a buffer of not less than 20m from the archaeological monument to protect it from accidental impact. Furthermore it is recommended that archaeological monitoring of all groundworks associated with the construction of Tower 145 take place.</p>					
<p>Residual impacts: Following demarcation there will be no inadvertent physical impacts on the archaeological monument itself. In the event that there are archaeological deposits discovered during archaeological monitoring or groundworks associated with the construction of the tower they will excavated in full consultation with the National Monument.</p>					

Table 14.9: Potential Construction Phase Impacts on Archaeological Monument SMR No. MO019-048----, Anomalous Stone Group

ROI SMR No. MO019-048---- Anomalous stone group					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Derryhallagh (Monaghan By)	275477,323906	80	130	170
<p>Potential Direct Physical Impacts: This stone group (possible) is located 170m to the north-west of the proposed development and 60m from the proposed stringing area. Given this proximity there is the potential that construction and stringing works could inadvertently impact upon the site.</p>					
<p>Mitigation: Given the potential for physical impacts during the construction phase of the proposed development, a suitably qualified archaeologist will demarcate a buffer no less than 20m from the outside limit of the monument.</p>					
<p>Residual impacts: Following demarcation there will be no inadvertent physical impacts on the archaeological monument itself.</p>					

Table 14.10: Potential Construction Phase Impacts on Archaeological Monument SMR No. MO027-032----, Ringfort - Rath

ROI SMR No. MO027-032---- Ringfort-Rath					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Tullyglass	276782,311340	130	173	130
<p>Potential Direct Physical Impacts: The proposed access route for the construction of Tower 173 passes in close proximity to this enclosure. It is noted that there is a gateway immediately adjacent to the monument that is the preferred access and that the topography in the area is quite steep. There is the potential that construction traffic could inadvertently impact on this site.</p>					
<p>Mitigation: A suitably qualified archaeologist will confirm the access and be on site during construction</p>					

work to monitor the access. If necessary, bog mats will be used to ensure the preservation of sub surface deposits.
Residual impacts: Following monitoring of the access and the use of bog mats as required, there will be no impacts on archaeological deposits associated with the adjacent monument.

Table 14.11: Potential Construction Phase Impacts on Archaeological Monument SMR No. MO027-077----, Enclosure

ROI SMR No. MO027-077---- Enclosure					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Corrinenty	277041,309221	90	181	150
<p>Potential Direct Physical Impacts: It is proposed to replace the polesets for an existing 110 kV line and replace them with shorter poles at this location. The nearest poleset is located <20m to the west of the enclosure. There is potential that works here may inadvertently impact on sub surface archaeological remains associated with the enclosure. This enclosure is located 35m to the NE of the stringing area there is therefore the potential that the site may be inadvertently impacted on by construction traffic.</p> <p>Mitigation: A suitably qualified archaeologist will demarcate a buffer not less than 20m from the outer bank of the monument and monitor stringing works in the vicinity of the monument in order to avoid any accidental impacts. It is recommended that a suitably qualified archaeologist monitor all groundworks associated with removing the polesets to facilitate reducing the height of the existing 110kV line. The enclosure will be clearly demarcated and its location highlighted to the construction contractor.</p> <p>Residual impacts: Following demarcation there will be no inadvertent physical impacts on the archaeological monument.</p>					

Table 14.12: Potential Construction Phase Impacts on Archaeological Monument SMR No. MO030-021----, Ringfort - Rath

ROI SMR No. MO030-021---- Ringfort - Rath					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Cornalaragh	276656,303851	40	201	90
<p>Potential Direct Physical Impacts: This ringfort is located within 20m of the centreline of the proposed development and there is the potential that stringing works could inadvertently impact the site. Tower 201 is located approximately 70m from the outer bank of this monument and there is the potential that groundworks could impact on archaeological deposits associated with the monument.</p> <p>Mitigation: A suitably qualified archaeologist will demarcate a buffer of no less than 20m from the outer bank of the ringfort and carry out archaeological testing under licence to the National Monuments Service of the DAHG during the construction phase.</p> <p>Residual impacts: Following demarcation there will be no inadvertent physical impacts on the archaeological monument itself. In the event that there are archaeological deposits discovered during archaeological testing they will be excavated in full consultation with the National Monuments Service of the DAHG.</p>					

159 There are a number of tower locations where there is no potential for impact on a particular archaeological monument but there is considered to be a high potential of encountering archaeological deposits due to archaeological monuments within the surrounding area. **Table 14.13** details these tower locations.

Table 14.13: Other Tower Locations where there are Potential Archaeological Impacts

Tower number	Potential Impacts
107	There is the potential to impact on previously unrecorded archaeological deposits associated with nearby archaeological monuments, a court tomb (SMR No. MO014-022----) and an enclosure (NISMR No. ARM023-004----)
143	There is the potential to impact on previously unrecorded archaeological deposits associated with a nearby archaeological monument, a court tomb (SMR No. MO019-037----)
144	There is the potential to impact on previously unrecorded archaeological deposits associated with nearby archaeological monuments, a court tomb (SMR No. MO019-037----) and a ringfort-rath (SMR No. MO019-038----)
145	There is the potential to impact on previously unrecorded archaeological deposits associated with a nearby archaeological monument, a ringfort-rath (SMR No. MO019-038----)
151	Construction of the tower impacts on the entrance to a farm complex (CMS No. CMSA_CHS068) that predates the first edition OS survey, circa 1830. The tower is also located in close proximity (approx. 25m) to a lime kiln (CHS No. CMSA_CHS068A) which is also indicated on the first edition OS map. There is the potential that there could be associated archaeological deposits that could be negatively impacted on by the construction of the proposed tower.
180	There is the potential to impact on previously unrecorded archaeological deposits associated with a nearby archaeological monument, an enclosure (SMR No. MO027-077----)
181	There is the potential to impact on previously unrecorded archaeological deposits associated with a nearby archaeological monument, an enclosure (SMR No. MO027-077----)
186	There is the potential to impact on previously unrecorded archaeological deposits associated with nearby archaeological monuments, an enclosure (SMR No. MO027-072----) and an earthwork (SMR No. MO027-110----) and a ringfort-rath (NISMR No. MO027-074----)
193	There is the potential to impact on previously unrecorded archaeological deposits associated with a nearby archaeological monument, an enclosure (SMR No. MO027-096----)

14.5.3.1.1 Temporary Access Routes

- 160 There are several tower locations noted in Chapter 7, **Volume 3B** of the EIS where, depending on ground conditions, placing of temporary rubber matting or aluminium road panels may be required to facilitate access to working areas, stringing areas and guarding areas. Excavation of topsoil associated with the placement of Type 3 temporary access tracks could have a permanent, negative impact on previously unrecorded archaeological deposits. However, the requirement for Type 3 temporary access tracks has not been identified. Mitigation in the event that Type 3 temporary access tracks are required is specified in **Sections 14.6.1.1** and **14.6.1.2**.
- 161 A number of previously unrecorded cultural heritage sites (CMSA_CHS) have been noted where features appear in historic mapping and / or aerial photography and / or during fieldwork, and there is the potential that construction traffic could have a permanent, negative impact on historic fabric and / or associated archaeological deposits. Where such impacts have been noted mitigation measures are recommended for associated towers.

14.5.3.1.2 Guarding Areas

- 162 Obstacles such as road and distribution lines may have to be guarded by way of temporary guard poles and structures. There is the potential that excavation works associated with the construction of guarding areas could have a permanent, negative impact on previously unrecorded archaeological deposits. **Tables 14.14 - 14.34** detail locations where there may be an impact.
- 163 Guarding areas are referenced according to the nearest tower, for example, 'at Tower 107', or 'south of Tower 111'.

Table 14.14: Potential Impacts arising from Guarding Areas South-East and adjacent to Tower 107

Location of guarding – South-east and adjacent to Tower 107 (NGR 280120/328320)
Potential Impacts - The guarding area is located approximately 120m from a megalithic tomb (SMR No. MO014-022) that appears as a fort on the first edition OS map. Given the proximity of the archaeological monument there is the potential that groundworks associated with the construction of the guarding could impact on associated archaeological deposits. Also access for the construction of the guarding area is through a farmstead (CMSA_CHS006) that first appears on the first edition OS map and there is the potential that in gaining access associated historic structures or features could be impacted upon.
Mitigation Measures - A suitably qualified archaeologist will confirm the access and monitor groundworks associated with construction of the guarding
Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will be excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.15: Potential Impacts arising from Guarding Areas South of Tower 111

Location of guarding - South of Tower 111 (NGR 280360/327020)
Potential Impacts - There is the potential that facilitating access for and the construction of the guarding could impact on the remains of two houses that appear on the first edition OS map (CMSA_CHS012 & CMSA_CHS011).
Mitigation Measures - A suitably qualified archaeologist will confirm the access and monitor groundworks associated with construction of the guarding.
Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will be excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.16: Potential Impacts arising from Guarding Areas South-West of Tower 121

Location of guarding - South-west of Tower 121 (NGR 277850/325920)
Potential Impacts - The first edition OS map indicates the presence of a lime kiln (CMSA_CHS018) on the north side of the road where the guarding is to be constructed. The kiln is not indicated on the second edition OS map although rough ground is indicated in the area. The area is now densely vegetated.
Mitigation Measures - A suitably qualified archaeologist will monitor groundworks associated with the construction of the guarding on the north-east side of the road.
Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will be excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.17: Potential Impacts arising from Guarding Areas South-West of Tower 124

Location of guarding - South-west of Tower 124 (NGR 276755/325465)
Potential Impacts - The first edition OS map indicates the presence of a house (CMSA_CHS022) on the north-east side of the road where the guarding is to be constructed. By the time of the second edition survey the house is no longer extant. There is the potential that the construction of the guarding in this area could impact on subsurface remains associated with the structure.
Mitigation Measures - A suitably qualified archaeologist will monitor groundworks associated with the construction of the guarding on the north-east side of the road.
Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.18: Potential Impacts arising from Guarding Areas South and adjacent to Tower 129

Location of guarding - South and adjacent to Tower 129 (NGR 275535/324190)
Potential Impacts - The first edition OS map indicates the presence of a house (CMSA_CHS031) on the south side of the road where the guarding is to be constructed. By the time of the second edition survey the house is no longer extant. There is the potential that the construction of the guarding in this area could impact on subsurface remains associated with the structure.
Mitigation Measures - A suitably qualified archaeologist will monitor groundworks associated with the construction of the guarding on the north-east side of the road
Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.19: Potential Impacts arising from Guarding Areas South-West of Tower 131

Location of guarding – South-west of Tower 131 (NGR 274865/323645)
Potential Impacts - The first edition OS map indicates the presence of a house (CMSA_CHS034) on the south-west side of the road where the guarding is to be constructed. A trackway to a lime kiln just to the south-west of the guarding area is also indicated. By the time of the second edition survey the house and lime kiln are no longer extant. There is the potential that the construction of the guarding in this area could impact on subsurface remains associated with these structures.
Mitigation Measures - A suitably qualified archaeologist will monitor groundworks associated with the construction of the guarding on the south side of the road.
Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.20: Potential Impacts arising from Guarding Areas South-East of Tower 143

Location of guarding - South-east of Tower 143 (NGR 275510/319970)
Potential Impacts - The guarding area is located approximately 35m to the south-west of a court tomb (SMR No. MO019-037) that appears as 'The Cashel' on the first and second edition OS map. Given the proximity of the archaeological monument there is the potential that groundworks associated with the construction of the guarding could impact on associated archaeological deposits. Given the proximity of the monument there is the potential that it could be inadvertently impacted upon during the construction of the guarding.
Mitigation Measures - Where the guarding is to be constructed, a regime of archaeological testing will be undertaken, under licence to the National Monuments Service of the DAHG. During the construction phase a suitably qualified archaeologist will demarcate a buffer of not less than 20m from the nearby court tomb (SMR No. MO019-037), to ensure that there is no inadvertent damage.
Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service

of the DAHG and the National Museum of Ireland.

Table 14.21: Potential Impacts arising from Guarding Areas North-West of Tower 144

Location of guarding - North-west of Tower 144 (NGR 275550/319910)
Potential Impacts - The guarding area is located approximately 50m to the south of a court tomb (SMR No. MO019-037) that appears as 'The Cashel' on the first and second edition OS map. Given the proximity of the archaeological monument there is the potential that groundworks associated with the construction of the guarding could impact on associated archaeological deposits. Given the proximity of the monument there is the potential that it could be inadvertently impacted upon during the construction of the guarding. Also the guarding on the south side of the road is located in very close proximity to a house that appears on the first edition OS map (CMSA_CHS058).
Mitigation Measures - Where the guarding is to be constructed, a regime of archaeological testing will be undertaken, under licence to the National Monuments Service of the DAHG. During the construction phase a suitably qualified archaeologist will demarcate a buffer of not less than 20m from the nearby court tomb (SMR No. MO019-037), to ensure that there is no inadvertent damage.
Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.22: Potential Impacts arising from Guarding Areas South-West of Tower 161

Location of guarding - South-west of Tower 161 (NGR 277685/314595)
Potential Impacts - The guarding area is located where a number of structures appear on the first edition OS map, including a framstead (CMSA_CHS085) a house (CMSA_CHS086) and a well (CMSA_CHS087). These features are no longer extant but there is the potential that construction of the guarding area could impact on associated sub-surface remains.
Mitigation Measures - A suitably qualified archaeologist will monitor groundworks associated with the construction of the guarding area.
Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.23: Potential Impacts arising from Guarding Areas North of Tower 167

Location of guarding - North of Tower 167 (NGR 276430/313375)
Potential Impacts - There is the potential that facilitating access for and the construction of the guarding could impact on the remains of house that appears on the first edition OS map (CMSA_CHS094).
Mitigation Measures - A suitably qualified archaeologist will confirm the access and monitor groundworks associated with the construction of the guarding.
Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.24: Potential Impacts arising from Guarding Areas South of Tower 167

Location of guarding - South of Tower 167 (NGR 276400/313275)
Potential Impacts - The guarding area is located approximately 120m to the north-east of a rath (SMR No. MO024-032) that appears as a fort on the first edition OS map. Given the proximity of the archaeological monument there is the potential that groundworks associated with the construction of the guarding could impact on associated archaeological deposits.
Mitigation Measures - A suitably qualified archaeologist will confirm the access and monitor groundworks associated with the construction of the guarding.
Residual Impacts - In the event that there are archaeological deposits discovered during

archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.
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Table 14.25: Potential Impacts arising from Guarding Areas South of Tower 169

Location of guarding - South of Tower 169 (NGR 276240/312515)
Potential Impacts - The guarding on the south side of the road is located in an area where a house was located during the first edition OS survey (CMSA_CHS099). There is the potential that groundworks associated with the construction of the guarding could impact on associated remains.
Mitigation Measures - A suitably qualified archaeologist will monitor groundworks associated with the construction of the guarding.
Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.26: Potential Impacts arising from Guarding Areas South-East of Tower 171

Location of guarding - South-east of Tower 171 (NGR 276635/311845)
Potential Impacts - There is the potential that facilitating access for and the construction of the guarding could impact on a demesne associated with Farm Hill and Tullyglass house.
Mitigation Measures – Confirmation of access by suitably qualified archaeologist subsequent to demarcation of vernacular or demesne features.
Residual Impacts - No predicted residual impacts.

Table 14.27: Potential Impacts arising from Guarding Areas North of Tower 175

Location of guarding - North of Tower 175 (NGR 277105/311030)
Potential Impacts - There is the potential that facilitating access for and the construction of the guarding could impact on the remains of house that appears on the first edition OS map (CMSA_CHS107).
Mitigation Measures - Confirmation of access by suitably qualified archaeologist
Residual Impacts - No predicted residual impacts.

Table 14.28: Potential Impacts arising from Guarding Areas North of Tower 178

Location of guarding - North of Tower 178 (NGR 277165/309945)
Potential Impacts - The guarding is located in an area where a house was situated during the first edition OS survey (CMSA_CHS111). There is the potential that groundworks associated with the construction of the guarding could impact on associated remains.
Mitigation Measures - A suitably qualified archaeologist will monitor groundworks associated with the construction of the guarding.
Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.29: Potential Impacts arising from Guarding Areas East of Tower 185

Location of guarding - East of Tower 185 (NGR 275950/308440)
Potential Impacts - Access for the construction of the guarding is via a lane servicing buildings that predate the first edition OS survey (CMSA_CHS122). There is the potential that in facilitating access, historic features associated with these buildings could inadvertently be impacted upon. The guarding area is also located approximately 150m to the north-west of a rath (SMR No. MO027-076) with an associated hut site (SMR No. MO027-076). Given the proximity of the archaeological monument there is the potential that groundworks associated with the construction of the guarding could impact on associated archaeological deposits.

Mitigation Measures - Confirmation of access by suitably qualified archaeologist subsequent to demarcation of vernacular features. A suitably qualified archaeologist will monitor groundworks associated with the construction of the guarding.

Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.30: Potential Impacts arising from Guarding Areas West of Tower 185

Location of guarding - West of Tower 185 (NGR 275675/308430)

Potential Impacts - The guarding area is located approximately 150m to the north-east of a rath (SMR No. MO027-074) that appears as a fort on the first edition OS map. Given the proximity of the archaeological monument there is the potential that groundworks associated with the construction of the guarding could impact on associated archaeological deposits.

Mitigation Measures - A suitably qualified archaeologist will monitor groundworks associated with the construction of the guarding.

Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.31: Potential Impacts arising from Guarding Areas East of Tower 186

Location of guarding - East of Tower 186 (NGR 275445/308420)

Potential Impacts - The guarding area is located approximately 100m to the north-west of a rath (SMR No. MO027-074) that appears as a fort on the first edition OS map. Given the proximity of the archaeological monument there is the potential that groundworks associated with the construction of the guarding could impact on associated archaeological deposits.

Mitigation Measures - A suitably qualified archaeologist will monitor groundworks associated with the construction of the guarding.

Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.32: Potential Impacts arising from Guarding Areas North and adjacent to Tower 188

Location of guarding - North and adjacent to Tower 188 (NGR 275135/307835)

Potential Impacts - The guarding is located in an area where there are two derelict buildings area in close proximity to the track.

Mitigation Measures - Confirmation of access by suitably qualified archaeologist.

Residual Impacts - No predicted residual impacts.

Table 14.33: Potential Impacts arising from Guarding Areas at Tower 216

Location of guarding - At Tower 216 (NGR 275520/299755)

Potential Impacts - The guarding is located in an area where a house was situated during the first edition OS survey (CMSA_CHS150). There is the potential that groundworks associated with the construction of the guarding could impact on associated remains.

Mitigation Measures - A suitably qualified archaeologist will monitor groundworks associated with the construction of the guarding.

Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

Table 14.34: Potential Impacts arising from Guarding Areas North of Tower 233

Location of guarding - North of Tower 233 (NGR 274450/294255)
Potential Impacts - The guarding on the north side of the trackway is located in an area where a house was situated during the first edition OS survey (CMSA_CHS164). There is the potential that groundworks associated with the construction of the guarding could impact on associated remains.
Mitigation Measures - A suitably qualified archaeologist will monitor groundworks associated with the construction of the guarding.
Residual Impacts - In the event that there are archaeological deposits discovered during archaeological monitoring they will excavated in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

14.5.3.1.3 Changes to existing 110kV Overhead Line Infrastructure

164 Between Towers 180 and 181 the proposed 400kV OHL crosses the Louth-Rathrussan 110kV OHL and, to facilitate this, two existing polesets will have to be replaced. Intermediate Poleset 100 is located to the east of the proposed 400kV OHL and less than 20m from the upstanding remains of an enclosure (SMR No. – MO027-077). There is a high potential that groundworks associated with replacing the existing poleset could have a permanent, negative impact on archaeological deposits associated with the enclosure, refer to **Section 14.6.1.3** in relation to mitigation measures.

14.5.3.2 Architectural Impacts

165 There are no predicted construction phase, direct physical impacts on any designated architectural sites listed in either the RPS or NIAH for counties Monaghan and Cavan.

166 Between Towers 170 and 175 the proposed development passes through a region that is associated with Shantonagh House and Tully House historic landscapes. Both are listed in the Buildings of Ireland Garden Survey of the www.buildingsofireland.ie website. As noted in **Section 14.4.4.3**, the demesne landscapes and historic gardens have not been shaded on the first edition OSI maps but their extents were interpreted from the historic mapping. No demesne landscape or historic garden features, including boundary walls, gates, entrance features etc. were noted that will be directly impacted on by the proposed development. There will be a slight negative, permanent impact on these historic landscapes.

14.5.4 Operational Phase

167 The majority of potential operational effects will be impacts on the setting of archaeological, architectural or cultural heritage sites, structures, monuments or features. As has been noted previously, the greatest threat to the archaeological, architectural and cultural heritage of the region from this type of development consists of potential impacts on setting throughout the operational phase. Given the upstanding linear form of the proposed development, it has the

potential to alter a person's appreciation or enjoyment of a site, structure, monument, feature or cultural heritage landscape even when these are located at a remove from the development. Impacts on setting are best mitigated through sensitive routing of the proposed development during the earliest stages of constraints mapping, preliminary corridor selection and route selection. During the earlier stages of this project, sites where there was a high potential for impacts on their setting were highlighted so that they could be avoided as far as was practicably possible taking into account all the other constraints within the study area.

- 168 In line with the recommendations of the EPAs *Guidelines on the information to be contained in Environmental Impact Statements* (2002), only sites where it was considered that the significance of the impact on their setting would be moderate or greater are included in this section.

14.5.4.1 Archaeological Impacts

- 169 The following tables (Tables 14.35 – 14.49) contain details of the potential impacts that the proposed development could have on the setting of designated archaeological sites during the operational phase of the proposed development. As it is impractical to mitigate these impacts they will persist throughout the operational phase of the development and this is reflected in the residual impacts listed in the tables.

Table 14.35: Potential Operational Phase Impacts on Archaeological Monument SMR No. ARM023:004---, Enclosure

NI SMR No. ARM023:004 Enclosure					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Armagh	Crossbane	280050,328610	140	106	200
Potential Impacts on Setting: The site is well screened with internal trees and adjacent mature hedgerows. There are no vantage points where the site could be seen from local roads. The field report indicates that this earthwork may be an enclosure associated with an abandoned farm. The site is located 135m from the line route. There will be intervisibility with the proposed development, particularly to the south and south-east. The sensitivity of the site impacts on setting was found to be moderate and the magnitude of the impact on the site from the proposed development was considered to be substantial. The overall significance of the impact on the setting of the site will be moderate.					
Mitigation: None					
Residual impacts: There will be a moderate negative, permanent impact on the setting of the site during the operational life of the project.					

Table 14.36: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO014-021001-, Ringfort - Rath

ROI SMR No. MO014-021001- Ringfort - Rath					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Lemgare	279806,328706	30	106	100
Potential Impacts on Setting: This site is visible from a local access road located 400m to the south-west of the monument. The proposed development passes almost overhead, with Tower 105 located approximately 280m to the north-west and Tower 106 approximately 90m to the south-east. Given the					

proximity to the towers and the OHL the magnitude of the impact will be major. The sensitivity of the site to impacts on setting was found to be moderate. The significance of the impacts on the setting of the archaeological monument was found to be significant.
Mitigation: None
Residual impacts: There will be a significant negative, permanent impact on the setting of the site during the operational life of the project.

Table 14.37: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO014-021002-, Building possible

ROI SMR No. MO014-021002- Building possible					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Dist. to Structure (m)
Monaghan	Lemgare	279806,328706	30	106	100
Potential Impacts on Setting: MO014-021001 for details.					
Mitigation: See MO014-021001 for details.					
Residual impacts: See MO014-021001 for details.					

Table 14.38: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO014-022----, Megalithic Tomb - Court Tomb

ROI SMR No. MO014-022---- Megalithic Tomb - Court Tomb					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Lemgare	279970,328310	120	107	130
Potential Impacts on Setting: This court cairn is situated in the SE corner of a field 150m away from the nearest access road. The site is well screened and densely overgrown with both blackthorn and white thorn. The nearest Tower 107 is located 130m to the east. The sensitivity of the site to impacts on setting was found to be moderate. The magnitude of the impact on the site was found to be substantial. The overall significance of the impact on the setting of the site was found to be moderate.					
Mitigation: None					
Residual impacts: There will be a moderate, negative, permanent impact on the setting of the site during the operational life of the project.					

Table 14.39: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO019-016----, Megalithic Tomb - Portal Tomb

ROI SMR No. MO019-016---- Megalithic Tomb - Portal Tomb					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Lennan	274517,323253	210	133	230
Potential Impacts on Setting: This portal tomb is located in the saddle of hill, visible on the skyline from the nearby road to the west. The site is elevated and exposed, with expansive views over the surrounding area, particularly to the south. The sensitivity of the site to impacts on setting was found to be high. The proposed development will run from north to south approximately 210m to the east of the monument. The magnitude of the impact of the proposed development was found to be substantial to major. The overall significance of the impact of the proposed development on the setting is considered to be significant.					
Mitigation: None					
Residual impacts: There will be a significant, negative, permanent impact on the setting of the site during the operational life of the project.					

Table 14.40: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO019-037----, Megalithic Tomb - Court Tomb

ROI SMR No. MO019-037---- Megalithic Tomb - Court Tomb					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Cornamucklagh South	275550,320000	50	143	200
<p>Potential Impacts on Setting: This monument is located in the corner of a field under a copse of trees ringed with field clearance stones. The site is not visible in the wider area and can only be appreciated within its immediate setting. The OHL passes 50m to the west with a tower located on the boundary of the field containing the monument to the north-west. Although the court of the tomb opens to the north-west, views of the tower will be limited by vegetation. The impact will be cumulative to an existing OHL crossing almost directly over the site. The sensitivity of the site to impacts on setting was found to be moderate to high. The magnitude of the impact on the site was found to be substantial. The overall significance on the impact on setting of the site was considered to be moderate.</p>					
<p>Mitigation: None</p>					
<p>Residual impacts: There will be a moderate negative, permanent impact on the setting of the site during the operational life of the project.</p>					

Table 14.41: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO019-038----, Ringfort - Rath

ROI SMR No. MO019-038---- Ringfort - Rath					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Cornamucklagh South	275770,319710	40	145	160
<p>Potential Impacts on Setting: This heavily overgrown fort is located on the summit of a hill (135m) with good views in all directions. The centre line of the proposed development is located approximately 25m from the site passing to the west of the summit from north-west to south-east. From the monument there will be several towers visible to both the north and south. The sensitivity of the site impacts on setting was found to be moderate. The magnitude of the impact on the monument was found to be major. The overall impact on the setting of the monument will be significant.</p>					
<p>Mitigation: None</p>					
<p>Residual impacts: There will be a significant negative, permanent impact on the setting of the site during the operational life of the project.</p>					

Table 14.42: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO019-048, Anomalous Stone Group

ROI SMR No. MO019-048---- Anomalous stone group					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Derryhallagh (Monaghan By)	275477,323906	80	130	170
<p>Potential Impacts on Setting: Known locally as the 'Giant's Grave', this stone group is located on an elevation overlooking Ghost Lough. The site is not publicly accessible and it is not visible from roads in the vicinity. The proposed development passes from north-east to south-west approximately 80m to the north-west of the site. The sensitivity of the site to impacts on setting was deemed to be moderate to high. The magnitude of the impact on the setting of the site was considered to be substantial. The overall impact on the setting of the site by the proposed development was considered moderate.</p>					
<p>Mitigation: None</p>					
<p>Residual impacts: There will be a moderate negative, permanent impact on the setting of the site during the operational life of the project.</p>					

Table 14.43: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO024-032-- , Ringfort - Rath

ROI SMR No. MO024-032---- Ringfort - Rath					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Aghmakerr	276278,313173	90	167	180
<p>Potential Impacts on Setting: From aerial evidence this site is very overgrown with scrub and mature trees, the rath is on the slope of a hill in average pasture with limited views due to high ground both to the north and south. The rath is located 74m to the west of the line route, there is an intervening field boundary with mature trees that will provide some screening, however there will be inter-visibility particularly to the south and the south-east. The magnitude of the impact on this site will be substantial, the sensitivity of this area to impacts was considered moderate. The overall significance of the impact on the setting will be moderate.</p>					
<p>Mitigation: None</p>					
<p>Residual impacts: There will be a moderate negative, permanent impact on the setting of the site during the operational life of the project.</p>					

Table 14.44: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO024-034001-, Church

ROI SMR No. MO024-034001- Church					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Lattonfasky	278700,313990	1160	161	1160
<p>Potential Impacts on Setting: Templemoyle is located on the north eastern shore of Lough Eghis 1159m from the nearest Tower 161. Access to the church and graveyard is via a rough lane. From the site, which is a signposted amenity area there will be distant views across the lake towards the scheme. The view to the west north-west will see the development breaks the horizon of a low hill beyond the R181 road. The sensitivity of the site to impacts on setting was found to be high and the magnitude of the impact on the setting of the site moderate to substantial. The overall significance of the impact of the proposed development on the setting of the site was considered to be moderate.</p>					
<p>Mitigation: None</p>					
<p>Residual impacts: There will be a moderate negative, permanent impact on the setting of the site during the operational life of the project.</p>					

Table 14.45: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO027-076001-, Ringfort - Rath

ROI SMR No. MO027-076001- Ringfort - Rath					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Ummerafree	276080,308290	150	184	180
<p>Potential Impacts on Setting: This heavily vegetated ringfort is located on the summit of a ridge and appears to be in good condition. Generally roads in this area follow steep sided valleys limiting the immediate viewshed. The proposed development runs from east to west approximately 150m to the north of the site. There are a number of other recorded monuments to the west and north of this fort all of which have been completely destroyed. The sensitivity of the site to impacts on setting was found to be moderate. The magnitude of the impact was found to be substantial. The overall significance of the impact on the setting of the monument was found to be moderate.</p>					
<p>Mitigation: None</p>					
<p>Residual impacts: There will be a moderate, negative, permanent impact on the setting of the site during the operational life of the project.</p>					

Table 14.46: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO027-076002-, Hut Site

ROI SMR No. MO027-076002- Hut Site					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Ummerafree	276080,308290	150	184	180
Potential Impacts on Setting: See MO027-076001 for details					
Mitigation: See MO027-076001 for details					
Residual impacts: See MO027-076001 for details					

Table 14.47: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO027-077----, Enclosure

ROI SMR No. MO027-077---- Enclosure					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Dist. to Structure (m)
Monaghan	Corrinenty	277041,309221	90	181	150
Potential Impacts on Setting: This site is defined by a grassed over, sub-rectangular bank in a field of poor pasture with frequent gorse bushes. Within the enclosure there are a number of anomalies that may indicate small scale quarrying and/or the presence of a hut site. The site is oversailed by an existing 110 kV transmission line. The height of a poleset <20m to the west (part of the 110kV powerline) is to be reduced. The proposed OHL passes 80m to the west of the site with an intervening hedgerow. The sensitivity of the site to impacts on setting was found to be moderate and the magnitude of the impact substantial. The overall significance of the impact from the proposed development was found to be moderate and cumulative to the existing impact from the 110 kV OHL.					
Mitigation: None					
Residual impacts: There will be a moderate negative, permanent impact on the setting of the site during the operational life of the project.					

Table 14.48: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO030-021----, Ringfort - Rath

ROI SMR No. MO030-021---- Ringfort - Rath					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Dist. to Structure (m)
Monaghan	Cornalaragh	276656,303851	40	201	90
Potential Impacts on Setting: This ringfort lies approximately 20m to the north-east of the centreline of the proposed development occupying the summit of a ridge with an elevation of 177m. The site is visible as a circular enclosure lined with mature trees with three field boundaries extending from its bank to the north-east, north-west and south south-east. The OHL passes to the west and south-west of the monument within the same field. The sensitivity of the site to impacts on setting was deemed to be moderate to high and the magnitude of the impact on the monument was considered to be substantial to major. The overall significance of the impact on the setting of the monument was found to be significant.					
Mitigation: None					
Residual impacts: There will be a significant negative, permanent impact on the setting of the site during the operational life of the project.					

Table 14.49: Potential Operational Phase Impacts on Archaeological Monument SMR No. MO030-037----, Ringfort - Rath

ROI SMR No. MO030-037---- Ringfort - Rath					
County	Townland	NGR	Distance to Route (m)	Nearest Tower (No.)	Distance to Structure (m)
Monaghan	Scalkill	276150,301320	130	211	200

Potential Impacts on Setting: This treelined ringfort occupies the south eastern edge of a ridge within a field surrounded by mature hedgerows (elevation 160m). A lane runs along its northern circuit providing access to a farmyard. From the nearby road, located 130m to the south-west, the fort is visible as a tree copse. This site has a high sensitivity to impacts based on its elevation. The magnitude of the impact of the OHL located 113m to the south-east was considered substantial. The overall impact on the setting of the monument was found to be significant.
Mitigation: None
Residual impacts: There will be a significant, negative, permanent impact on the setting of the site during the operational life of the project.

14.5.4.2 Architectural Impacts

170 **Table 14.50** contains details of the potential impacts that the proposed development could have on the setting of designated architectural sites during the operational phase of the proposed development. In addition the table contains mitigation measures that could reduce the significance of these impacts and detail the residual impacts to be expected.

Table 14.50: Potential Operational Phase Impacts on St. Patrick's Church, Ardragh, RPS No. 41402713 / NIAH Ref: 41402727

St Patrick's Church, 1865-1875.					
NIAH Rating - Regional					
RPS Ref: 41402713 / NIAH Ref: 41402727					
County	Townland	NGR	Distance to Route (m)	Nearest Structure (No.)	Distance to Structure (m)
Monaghan	Ardragh	276189,306201	750	193	750
Potential Impacts on Setting: This roadside church is located on a low hill surrounded by trees, in a particularly attractive and well maintained site. The church faces west overlooking a small lake and ridge, towards the line route 750m away. The development will be visible crossing the high ground. The sensitivity of the site to impacts on setting was considered to be high and the magnitude of the impact substantial. The overall significance of the impact will be moderate to significant.					
Mitigation: The planting of screening along the western margin would reduce the impact of the proposed development on the setting of the site but it would also remove a significant view.					
Residual Impacts: There will be a moderate to significant permanent negative impact on the setting of this church during the operational phase of the proposed development.					

14.5.5 Operational Phase – Maintenance / Upgrade Works

171 There is the potential that archaeological, architectural or cultural heritage sites, monuments, structures or features in the vicinity of the line route could be impacted on during maintenance or upgrade works that may be required throughout the operational phase of the proposed development.

14.5.6 Decommissioning

172 The proposed development will become a permanent part of the transmission infrastructure. The expected lifespan of the development is in the region of 50 to 80 years. This will be achieved by routine maintenance and replacement of hardware as required. There are no plans for the

decommissioning of the OHL. In the event that part of, or the entire proposed infrastructure is to be decommissioned, all towers, equipment and material to be decommissioned will be removed off site and the land reinstated. Impacts would be expected to be less than during the construction phase and would be of short term duration.

14.5.7 Indirect Impacts

173 No indirect impacts are predicted in the assessment of impacts for the proposed development.

14.6 MITIGATION MEASURES

14.6.1 Construction Phase - Direct Physical Impacts

174 The best form of mitigation, preservation in situ, is achieved by routing to avoid direct physical impacts upon archaeological, architectural and cultural heritage site, structures, monuments and features. All designated archaeological, architectural and cultural heritage sites, structures, monuments or features have been avoided by the design team as far as was practicably possible, taking into account all the environmental constraints within the CMSA.

175 The *National Monuments Act*, as amended requires that, in the event of the discovery of archaeological finds or remains that the relevant authorities, the National Monuments Service of the DAHG and the National Museum of Ireland, should be notified immediately. Allowance will be made for full archaeological excavation, in consultation with the National Monuments Service of the DAHG, in the event that archaeological remains are found during the construction phase.

176 In areas where there is the potential that archaeological, architectural or cultural heritage site, structures, monuments or features could be impacted on during the construction phase, one or more of the following mitigations measures have been recommended in the EIS:

- Archaeological monitoring — in areas of moderate archaeological potential, excavations associated with construction works and / or facilitating access to the construction site and / or stringing areas will be monitored by a suitably qualified archaeologist. In the event that archaeological deposits are discovered, work in the area will cease immediately and the archaeologist will liaise with the National Monuments Service of the DAHG and the National Museum of Ireland.
- Archaeological testing – best practice in areas of high archaeological potential demands caution, to ensure that archaeological deposits are identified as early as possible, thereby ensuring that any loss from the archaeological record is minimised. Under a monitoring remit, an archaeologist will observe normal construction works, usually undertaken with a toothed excavator bucket. During archaeological testing a licensed

eligible archaeologist supervises excavations undertaken with a toothless grading bucket, under licence to the National Monuments Service of the DAHG, thereby ensuring the early identification of archaeological deposits and minimal loss to the archaeological record. Undertaking this confirmatory surveying will ensure that sufficient time can be allowed within the construction schedule for the excavation of any archaeological deposits discovered.

- Demarcation – where it has been identified that there is the potential that an archaeological, architectural or cultural heritage site, structure or monument could be impacted upon in gaining access to construct the proposed development then demarcation has been recommended to prevent any inadvertent damage. A suitably qualified archaeologist will access the site prior to the commencement of construction works in the area and demarcate a buffer around the monument that will remain in place throughout any construction works in the vicinity.
- Confirmation of temporary access routes – at a number of locations confirmation of the proposed temporary access routes will take place, in consultation with the construction team and prior to commencement of construction works, to ensure that the surviving historic fabric of buildings is not impacted on in gaining access for construction activities. To this end the temporary access routes may be revised, sensitive features highlighted and demarcated or different construction machinery or methods (as identified in the EIS) may be used that can access the site without impacting on the historic fabric.
- Monitoring of tree surgery – in a couple of instances there is dense vegetation that will have to be trimmed in the vicinity of upstanding remains of buildings that are indicated on historic mapping. This work will be monitored by a suitably qualified archaeologist to ensure that the historic fabric of the buildings is not impacted upon by the works.

177 It is recommended that a suitably qualified cultural heritage consultancy / consultant be appointed to oversee the effective implementation of the mitigation measures recommended in this chapter for the construction phase of the proposed development. The consultancy / consultant should maintain continuing liaison with the National Monuments Service of the DAHG throughout the construction phase of the development.

178 In line with the *Code of Practice between the National Monuments Service of the DoEHLG (now DAHG) and ESB Networks* (2009), a project archaeologist will be appointed to oversee the effective implementation of the recommended archaeological mitigation during the proposed works. Appendix I of the Code of Practice defines the role of the project archaeologist and

Appendix II sets out the relationship between the project archaeologist and the consultant archaeologist.

14.6.1.1 Tower Locations and Associated Temporary Access Routes

179 For clarity, detailed site specific mitigation measures that relate to designated archaeological and architectural sites are contained in the tables in **Section 14.5**. A summary of the mitigation measures is contained in **Table 14.51**. The mitigation measures are listed by tower number, providing a summary of mitigation measures that apply to the construction of each tower and or works that are associated with facilitating access to the tower. Towers where no mitigation is required are not contained in the table.

Table 14.51: Summary of Mitigation Measures Listed by each Tower Number

Tower number	Mitigation
106	Archaeological testing under licence to the National Monuments Service of the DAHG and a suitably qualified archaeologist will confirm the access and demarcate a buffer around nearby monument SMR No. MO014-021001 during the construction phase.
107	Archaeological monitoring by suitably qualified archaeologist and confirmation of access by a suitably qualified archaeologist.
108	Confirmation of access by a suitably qualified archaeologist.
110	Monitoring of tree surgery by suitably qualified archaeologist in the area of farm complex to the south of tower that appears on historic mapping.
111	Confirmation of access by a suitably qualified archaeologist.
112	Confirmation of access by a suitably qualified archaeologist.
118	Confirmation of access by a suitably qualified archaeologist.
126	Confirmation of access by a suitably qualified archaeologist.
127	Monitoring of tree surgery in the area of farm complex to the north of tower that appears on historic mapping.
130	A suitably qualified archaeologist will demarcate a buffer around nearby monument SMR No. MO019-048---- during the construction phase.
131	Confirmation of access by a suitably qualified archaeologist.
135	Monitoring of tree surgery in the area of farm complex to the south of tower that appears on historic mapping.
137	Monitoring of tree surgery in the area of farm complex to the south of tower that appears on historic mapping.
143	Archaeological monitoring by a suitably qualified archaeologist and demarcation of buffer around nearby monument SMR No. MO019-037 during the construction phase.
144	Archaeological monitoring by a suitably qualified archaeologist and demarcation of buffer around nearby monument SMR No. MO019-038 during the construction phase.
145	Archaeological monitoring by a suitably qualified archaeologist and demarcation of buffer around nearby monument SMR No. MO019-038 during the construction phase.
151	Confirmation of access by suitably qualified archaeologist. Archaeological monitoring by a suitably qualified archaeologist. Monitoring of tree surgery in the area of farm complex to the north of tower that appears on historic mapping. (CHS No. - CMSA_CHS-068).
154	Confirmation of access by a suitably qualified archaeologist.

Tower number	Mitigation
166	Confirmation of access by a suitably qualified archaeologist.
167	Confirmation of access by a suitably qualified archaeologist.
171	Confirmation of access by a suitably qualified archaeologist.
172	Confirmation of access by a suitably qualified archaeologist.
173	Monitoring of access adjacent to SMR No. MO027-032 by suitably qualified archaeologist and use of bog mats if necessary.
175	Confirmation of access by a suitably qualified archaeologist.
177	Confirmation of access by a suitably qualified archaeologist.
179	Confirmation of access by a suitably qualified archaeologist.
180	A suitably qualified archaeologist will be employed to monitor this work.
181	A suitably qualified archaeologist will demarcate a buffer around nearby monument SMR No. MO027-077 during the construction phase and monitor stringing works adjacent to the monument. A suitably qualified archaeologist will monitor all groundworks associated with removing the polesets to facilitate reducing the height of the existing 110kV line. The enclosure will be clearly demarcated and its location highlighted to the construction contractor.
184	Confirmation of access by a suitably qualified archaeologist.
186	Archaeological monitoring by a suitably qualified archaeologist.
188	Confirmation of access by a suitably qualified archaeologist.
193	Archaeological monitoring by a suitably qualified archaeologist.
195	Confirmation of access by a suitably qualified archaeologist.
196	Confirmation of access by a suitably qualified archaeologist.
197	Confirmation of access by a suitably qualified archaeologist.
201	Archaeological testing under licence to the National Monuments Service of the DAHG and demarcation of buffer around nearby monument SMR No. MO030-021 during the construction phase.
211	Confirmation of access by a suitably qualified archaeologist.
218	Confirmation of access by a suitably qualified archaeologist.
219	Confirmation of access by a suitably qualified archaeologist.
233	Confirmation of access by a suitably qualified archaeologist.
234	Confirmation of access by a suitably qualified archaeologist.

14.6.1.2 Guarding Areas and Associated Temporary Access Routes

180 A summary of the mitigation measures is contained in **Table 14.52**. The mitigation measures are listed by guarding area location and national grid reference (NGR) with a summary of mitigation measures that apply to construction works associated with each guarding area. Locations where no mitigation is required are not contained in the table.

Table 14.52: Mitigations for Guarding Areas

Guarding Area Location	NGR	Mitigation Summary
South-east and adjacent to Tower 107	280120/328320	Confirmation of access by suitably qualified archaeologist and archaeological monitoring of groundworks.
South of Tower 111	280360/327020	Confirmation of access by suitably qualified archaeologist and archaeological monitoring of groundworks.
South-west of Tower 121	277850/325920	Archaeological monitoring of groundworks.
South-west of Tower 124	276755/325465	Archaeological monitoring of groundworks.
South and adjacent to Tower 129	275535/324190	Archaeological monitoring of groundworks.
South-west of Tower 131	274865/323645	Archaeological monitoring of groundworks.
South-east of Tower 143	275510/319970	Archaeological testing under licence to the National Monuments Service of the DAHG and demarcation of nearby court tomb (SMR No. MO019-037).
North-west of Tower 144	275550/319910	Archaeological testing under licence to the National Monuments Service of the DAHG and demarcation of nearby court tomb (SMR No. MO019-037).
South-west of Tower 161	277685/314595	Archaeological monitoring of groundworks.
North of Tower 167	276430/313375	Confirmation of access by suitably qualified archaeologist and archaeological monitoring of groundworks.
South of Tower 167	276400/313275	Confirmation of access by suitably qualified archaeologist and archaeological monitoring of groundworks.
South of Tower 169	276240/312515	Archaeological monitoring of groundworks.
South-east of Tower 171	276635/311845	Confirmation of access by suitably qualified archaeologist.
North of Tower 175	277105/311030	Confirmation of access by suitably qualified archaeologist.
North of Tower 178	277165/309945	Archaeological monitoring of groundworks.
East of Tower 185	275950/308440	Confirmation of access by suitably qualified archaeologist.
West of Tower 185	275675/308430	Archaeological monitoring of groundworks.
East of Tower 186	275445/308420	Archaeological monitoring of groundworks.
North and adjacent to Tower 188	275135/307835	Confirmation of access by suitably qualified archaeologist.
At Tower 216	275520/299755	Archaeological monitoring of groundworks.
North of Tower 233	274450/294255	Archaeological monitoring of groundworks.

14.6.1.3 Existing 110kV Overhead Line Infrastructure

- 181 A suitably qualified archaeologist will monitor all groundworks associated with the replacement of Intermediate Poleset 100 associated with the crossing of the Louth - Rathrussan 110kV OHL. The upstanding remains of the nearby enclosure (SMR No. MO027-077) will be clearly demarcated by the archaeologist during on-site works, to ensure that it is not inadvertently impacted upon. In the event that archaeological deposits are discovered then the National Monuments Service will be notified immediately and time allocated within the construction schedule to allow for excavation of any archaeological material in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

14.6.2 Operational Phase

- 182 As has been noted previously in this chapter, impacts on setting are best mitigated through sensitive routing of the proposed development to avoid impacts on particularly sensitive archaeological, architectural and cultural heritage sites, structures, monuments, features or landscapes. From the earliest stages of this project every attempt has been made to minimise the impacts that it will have on the setting on the archaeological, architectural and cultural heritage of the region. Despite this, it has not been possible, given the large influence that an upstanding linear development such as has been proposed and other competing environment and social factors to avoid all impacts on setting. In most instances it is not possible to further mitigate the impacts on setting that have been predicted in the **Section 14.5**.

14.6.3 Operational Phase – Maintenance / Upgrade Works

- 183 Potential impacts on archaeological, architectural or cultural heritage sites, monuments, structures or features during maintenance or upgrade works that may be required during the operational phase of the proposed development are best mitigated through ongoing liaison with the National Monuments Service and the Architectural Heritage Advisory Unit at the DAHG and local heritage and conservation officers within the County Councils.

14.6.4 Indirect Impacts

- 184 No indirect impacts were predicted in the evaluation of impacts for the proposed development.

14.7 RESIDUAL IMPACTS

14.7.1 Archaeological

14.7.1.1 Construction Phase

185 Following mitigation there will be no direct physical impacts on the upstanding remains of any known archaeological monuments during the construction phase of the proposed development. There is the potential that archaeological deposits in the vicinity of known archaeological monuments or in areas of high archaeological potential may be encountered during the excavation associated with the construction of tower foundations, guarding areas or other excavation works associated with the proposed development. Following mitigation these will be dealt with in accordance with best practice and in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

14.7.1.2 Operational Phase

186 There will be ongoing impacts on the setting of archaeological monuments throughout the operational phase of the proposed development. **Table 14.53** lists archaeological monuments that are located in the vicinity of the proposed development and the impact that they will experience on their setting. Only sites where the significance of the impact was considered to be moderate or higher are included in the table.

Table 14.53: Residual Impacts on Archaeological Monuments

SMR No.	Classification	Residual Impact
ARM023:004	Enclosure	There will be a moderate negative, permanent impact on the setting of the site during the operational life of the project.
MO014-021001-	Ringfort - Rath	There will be a significant negative, permanent impact on the setting of the site during the operational life of the project.
MO014-021002-	Building possible	See MO014-021001- for details.
MO014-022----	Megalithic Tomb - Court Tomb	There will be a moderate, negative, permanent impact on the setting of the site during the operational life of the project.
MO019-016----	Megalithic Tomb - Portal Tomb	There will be a significant, negative, permanent impact on the setting of the site during the operational life of the project.
MO019-037----	Megalithic Tomb - Court Tomb	There will be a moderate negative, permanent impact on the setting of the site during the operational life of the project.
MO019-038----	Ringfort - Rath	There will be a significant negative, permanent impact on the setting of the site during the operational life of the project.
MO019-048----	Anomalous stone group	There will be a moderate negative, permanent impact on the setting of the site during the operational life of the project.
MO024-032----	Ringfort - Rath	There will be a moderate negative, permanent impact on the setting of the site during the operational life of the project.

SMR No.	Classification	Residual Impact
MO024-034001-	Church	There will be a moderate negative, permanent impact on the setting of the site during the operational life of the project.
MO027-076001-	Ringfort - Rath	There will be a moderate, negative, permanent impact on the setting of the site during the operational life of the project.
MO027-076002-	Hut Site	See MO027-076001- for details
MO027-077----	Enclosure	There will be a moderate negative, permanent impact on the setting of the site during the operational life of the project.
MO030-021----	Ringfort - Rath	There will be a significant negative, permanent impact on the setting of the site during the operational life of the project.
MO030-037----	Ringfort - Rath	There will be a significant, negative, permanent impact on the setting of the site during the operational life of the project.

- 187 Impacts on any archaeological sites, monuments, structures or features as a result of maintenance or upgrade works during the operational phase will be mitigated through ongoing liaison the National Monuments Service of the DAHG and local heritage officers.

14.7.2 Architectural

14.7.2.1 Construction Phase

- 188 There are no predicted impacts on any designated architectural sites during the construction phase of the proposed development.
- 189 There are a number of sites where there is the potential that construction traffic could inadvertently impact on the surviving fabric of structures that appear in the historic maps and in such instances the temporary access routes will be monitored to ensure that such fabric is not impacted upon.

14.7.2.2 Operational Phase

- 190 There will be ongoing impacts on the setting of architectural sites throughout the operational phase of the proposed development.

191 **Table 14.54** lists architectural sites that are located in the vicinity of the proposed development and the impact that they will experience on their setting. Only sites where the significance of the impact was considered to be moderate or higher are included in the table.

Table 14.54: Residual Impacts on Architectural Sites

No.	RPS	County	Name	Residual Impact
41402713		Monaghan	St Patrick's Church	There will be a moderate to significant permanent negative impact on the setting of this church during the operational phase of the proposed development.

192 Impacts on any architectural sites or structures as a result of maintenance or upgrade works during the operational phase will be mitigated through ongoing liaison with the architectural heritage advisory unit at the DAHG and local authority conservation officers.

14.8 INTERRELATIONSHIPS BETWEEN ENVIRONMENTAL FACTORS

193 There are potential interrelationships with the following environmental topics:

- **Chapter 4** - Human Beings – Tourism and Amenity - some of the more prominent archaeological, architectural or cultural heritage sites, structures, monuments or features may also be tourist attractions. The proposed development may be perceived as reducing the attractiveness of these sites by having an impact on their setting.
- **Chapter 6** - Flora and Fauna - the proposed development can impact on demesne boundaries or planted landscape features within a demesne. The proposed development may be perceived as reducing the attractiveness of these sites by having an impact on their setting.
- **Chapter 9** - Noise and Vibration - noise from high voltage OHLs can impact on the setting of archaeological, architectural or cultural heritage sites, structures, monuments or features. The proposed development may be perceived as reducing the attractiveness of these sites by having an impact on their setting.
- **Chapter 11** - Landscape - the proposed development will form a new feature in the environment and impact visually on sites which are of archaeological, architectural and cultural heritage importance, some of which will be prominent landscape features and may contain important views or prospects.

14.9 CONCLUSION

194 The archaeological, architectural and cultural heritage appraisal for the CMSA evaluates both the direct and indirect impacts on the archaeological, architectural and cultural heritage resource in the vicinity of the proposed development. In accordance with the relevant legislation and DAHG policy, the main mitigation measures involves preservation in situ, thereby avoiding direct,

physical impacts on known archaeological sites. All designated cultural heritage sites have been avoided as far as was practicably possible, with due regard to other disciplines and constraints. Recommendations to prevent or mitigate impacts include demarcating appropriate buffers around sites, supervision of vegetation clearance, and / or archaeological pre-development testing or monitoring of groundworks. These mitigation measures will be implemented at the construction phase to minimise and / or eliminate impacts.

- 195 The appraisal found that there will be no direct, physical impacts on the upstanding remains of previously recorded archaeological monuments. The closest monument to proposed ground works associated with the 400kV OHL, a ringfort-rath (SMR No. MO030-021) is located approximately 70m from Tower 201. It is noted that there is the potential that subsurface archaeological remains associated with this site could be impacted on by the proposed development. It is proposed to remove polesets associated with an existing 110 kV line and replace them with shorter poles in the vicinity of Tower 181. One of the polesets is located less than 20m to the west of an enclosure (SMR No. MO027-077). There is potential that these works may impact on sub surface archaeological remains associated with the enclosure.
- 196 A total of eight monuments are located within 200m of the proposed development where it has been found that there is a potential that associated archaeological deposits could be directly, physically impacted upon during the construction stage. These impacts relate to construction traffic passing in close proximity to archaeological monuments and / or archaeological monuments that are located in close proximity to proposed groundworks (<150m) where there is the potential that associated archaeological remains could be impacted upon. A further 9 tower locations are noted where there is the potential to impact on archaeological deposits due to them being located in areas of high archaeological potential or being associated with cartographic or aerial anomalies. Appropriate mitigation will ensure there are no physical impacts on upstanding archaeological remains, that subsurface archaeological remains associated with previously recorded monuments are protected from construction traffic and inadvertent impacts, and that, in areas of high archaeological potential, archaeological deposits discovered during construction are dealt with in accordance with professional best practice in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.
- 197 A total of 21 guarding areas have been noted where there is a potential for direct physical impacts during the construction phase, mostly relating to features that appear in historic mapping. Following mitigation there will be no impacts on the upstanding remains of any designated archaeological monuments. Mitigation measures proposed will ensure that in sensitive areas should any archaeological deposits be discovered that they will be dealt with in accordance with professional best practice in full consultation with the National Monuments Service of the DAHG and the National Museum of Ireland.

- 198 There are no predicted impacts relating to structures that appear in either the Records of Protected Structures for Counties Monaghan and Cavan or the National Inventory of Architectural Heritage for the two counties. There will be a slight, negative, direct, physical impact on the historic landscapes associated with Shantonagh House and Tully House.
- 199 Given the upstanding linear form of the proposed development it is acknowledged that the greatest potential for impacts constitutes impacts on the setting of cultural heritage sites during the operational phase. In most instances it is not practical to mitigate these impacts, therefore efforts have been made from the earliest phases of the proposed development to ensure that impacts on setting are kept to a minimum, through sensitive routing. Sites where it was considered that the significance of the negative impact on their setting would be moderate or greater include 15 SMR's and one protected structure.