

(ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR) FOR THE PROPOSED LITTLETON WIND FARM, CO. TIPPERARY

Volume 2 - Main EIAR

Chapter 14 - Archaeological, Architectural and Cultural Heritage

Prepared for:
Littleton Wind Farm DAC



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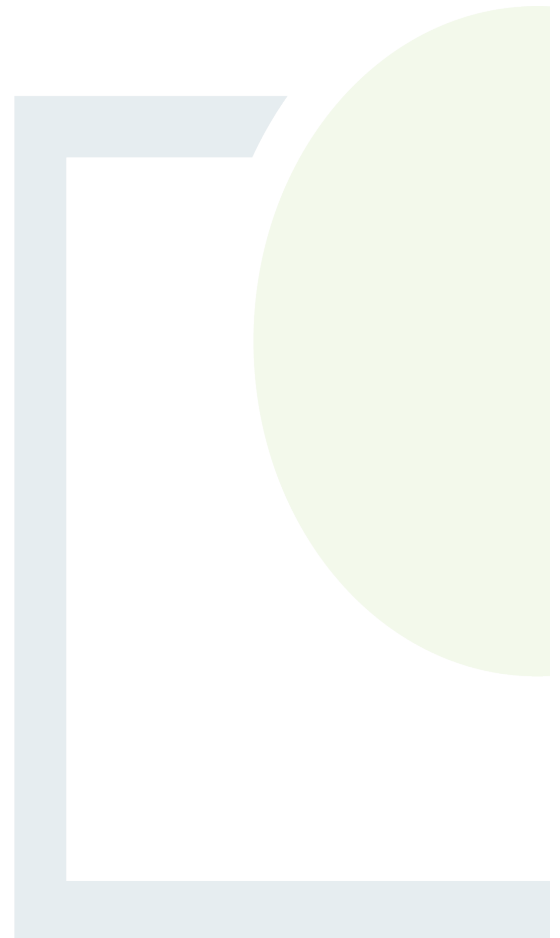


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14. ARCHAEOLOGICAL, ARCHITECTURAL AND CULTURAL HERITAGE

14.1 Introduction

14.1.1 Introduction

This chapter assesses the potential significant effects of the Proposed Development, as described in Chapter 4, on the cultural heritage resource which encompasses heritage assets relevant to both the tangible elements of this resource (archaeology, architecture heritage); and non-tangible elements (including historical associations, folklore, tradition, place names). The recorded and potential cultural heritage resource in the lands within the Proposed Development and the surrounding landscape was reviewed in order to compile a comprehensive cultural heritage baseline for the assessment and details on the reviewed study areas are presented in Section 14.1.3.

The assessment was informed by a combination of desktop research and field inspections.

A detailed description of the proposed project assessed in this EIAR is provided in Chapter 4. The Proposed Development assessed in this EIAR comprises the following elements:

- The 'Proposed Wind Farm' (also referred to in this EIAR as the '**Site**');
- The 'Proposed Grid Connection' (also referred to in this EIAR as the '**GC**');
- The 'Turbine Delivery Route' (also referred to in this EIAR as the '**TDR**');
- The 'Biodiversity Enhancement and Management Plan Lands' (also referred to in this EIAR as the '**BEMP Lands**');

The location of the Proposed Development is shown in Figure 4.1, contained within Volume 4 of this EIAR. The general layouts (including location of BEMP lands) of the Proposed Wind Farm are shown in Figure 4.2(a), (b) and (c). The Grid Connection (GC) route and Turbine Delivery Route (TDR) are presented in Figures 4.3 to 4.4, Volume 4.

The potential for direct and indirect effects during construction, operational and decommissioning phases of the Proposed Development, as well as cumulative and residual effects, are assessed in Section 14.4. Where adverse effects on cultural heritage constraints are predicted, appropriate mitigation and monitoring strategies to ameliorate these effects are identified in Sections 14.5 and 14.6. An assessment of residual effects following the application of these mitigation measures is presented Section 14.7.

This chapter should be read in conjunction with the following appendices contained in Volume 3 of this EIAR:

- Appendix 14.1: Archaeological Inventory Descriptions and Database of Irish Excavation Report entries
- Appendix 14.2: National Museum of Ireland Topographical File Entries
- Appendix 14.3: Cultural Heritage Photographic Record



14.1.2 Statement of Authority

This chapter was prepared by Tony Cummins, a Senior Archaeologist with John Cronin and Associates. Mr Cummins holds BA and MA degrees in archaeology (University College Cork 1992/1994) and has been accredited as a licence-eligible archaeologist by the National Monuments Service since 1998. He has accumulated 30 years' continuous experience as a professional archaeologist and during this time he has prepared cultural heritage assessments for a wide range of wind farms, solar farms, road schemes, greenways and residential/commercial developments. His inputs to development projects have included advisory services during option studies and design phases, consultations with relevant national and local authorities, onsite field surveys and licensed archaeological site investigations, including test trenching, monitoring and excavations. He has also provided expert witness services at Oral Hearings and is a competent expert for the purposes of the preparation of this EIAR chapter.

14.2 Assessment Methodology

14.2.1 Relevant Policy and Guidance

The management and protection of the cultural heritage resource in Ireland is achieved through a framework of international conventions, national laws, codes of practice, guidelines and local authority planning policies. This framework was established in accordance with the provisions of the 'European Convention on the Protection of the Archaeological Heritage' (the Valletta Convention) and the 'European Convention on the Protection of Architectural Heritage' (Grenada Convention) which were ratified by Ireland in 1997. In addition, the UNESCO 'Convention for the Safeguarding of the Intangible Cultural Heritage', 2003, was ratified by Ireland in 2015.

The National Monuments Service (NMS) and the National Built Heritage Service (NBHS), which are currently based in the Department of Housing, Local Government and Heritage (DHLGH), are responsible for the protection and promotion of Ireland's archaeological and architectural heritage. The legislation and guidelines that are relevant to this assessment include the following:

- Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023
- National Monuments Act 1930 (as amended);
- Heritage Act 1995 (as amended);
- National Cultural Institutions Act (1997);
- Planning and Development Act 2000 (as amended);
- Turf Development Act 1998;
- Department of Arts, Heritage and Gaeltacht (2011) *Architectural Heritage Protection: Guidelines for Planning Authorities*;
- Department of Arts, Heritage, Gaeltacht and the Islands (1999): *Framework and Principles for the Protection of Archaeological Heritage*;
- National Monuments Service (2012) *Code of Practice between the Department of Arts, Heritage and the Gaeltacht, the National Museum of Ireland and Bord na Móna*;
- Office of the Public Regulator (2022) *A Guide to Architectural Heritage*; and
- Office of the Public Regulator (2022) *Archaeology in the Planning Process*.



14.2.1.1 *Relevant Archaeological Legislation and Planning Policies*

The Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 was signed into law on October 13th, 2023. While the Act is now law most of its provisions will not enter into force until the Minister of Housing, Local Government and Heritage has made one or more “Commencement Orders”. Section 7 of the Act (which provides for the repeal of the National Monuments Acts (as amended) and related legislation) has currently not entered into force. Accordingly, the National Monuments Acts (as amended) and other legislation which section 7 of the Act will, when it comes into force, repeal, currently remain in force as they stood on 13th October 2023. The Act contains transitional provisions which will, if necessary, enable certain aspects of the existing National Monuments Acts (as amended) to continue in operation notwithstanding their repeal post-commencement of the Act while successor provisions are being brought fully into operation. This includes provisions enabling the Record of Monuments and Places to continue to have effect pending the establishment of a new Register of Monuments.

The National Monuments Act 1930 (as amended), the Heritage Council Act 1995 (as amended) and relevant provisions of the National Cultural Institutions Act 1997 therefore currently remain the primary means of ensuring the satisfactory protection of the archaeological resource. There are a number of mechanisms under the National Monuments Act 1930 (as amended) that are applied to secure the protection of archaeological monuments. These include the designation of National Monument status to sites of national importance, the Register of Historic Monuments, the Record of Monuments and Places and the Sites and Monuments Record as well as the placing of Preservation Orders and Temporary Preservation Orders on endangered archaeological sites.

A National Monument is described as ‘a monument or the remains of a monument, the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto’ (National Monument Act 1930, Section 2). The minister of the Department of Housing, Local Government and Heritage (DHLGH) may acquire National Monuments by agreement or by compulsory order. The State or the Local Authority may assume guardianship of any National Monument (other than dwellings). The owners of National Monuments may also appoint the Minister or the Local Authority as guardians of that monument, if the State or Local Authority agrees. Once a site is in ownership or guardianship of the State, or is subject to a Preservation Order, it may not be interfered with without the written consent of the Minister of Housing, Heritage and Local Government. Details on the National Monuments in State Care, as well as sites subject to Preservation Orders, located within the wider environs of the Proposed Development are provided in Section 14.3 of this chapter.

The Record of Monuments and Places (RMP) was established under Section 12(1) of the National Monuments (Amendment) Act, 1994 and was based on the earlier Sites and Monuments Record (SMR) and Register of Historic Monuments (RHM). These records comprise lists and maps of known archaeological monuments and places for each county in the state. The NMS maintains an online Historic Environment Viewer (HEV) which comprises an interactive map/search facility that provide access to current records stored on its national SMR database which includes archaeological sites identified since the publication of the RMP. The HEV and RMP maps include designated areas around recorded monuments known as ‘zones of notification’ which do not comprise buffer zones but are intended to indicate areas of archaeological potential within their environs. All archaeological sites listed in the RMP receive statutory protection under the National Monuments Act 1930 (as amended) and no works can be undertaken at their locations without providing two months advance notice to the DHLGH.



Bord na Móna (BnM) has a long history of co-operation with the NMS, the National Museum of Ireland (NMI) and the relevant governmental departments overseeing heritage at the time, in relation to the cultural and archaeological importance of wetlands as well as the potential for, and handling of, archaeology discovered in bogs. After the discovery and subsequent preservation of trackways at Corlea Bog, Co. Longford by BnM employees in the 1980s, a new programme for peatland archaeology was established. Since 1991 an annual programme of archaeological survey, initially funded by the NMS, has been conducted in BnM bogs. The Turf Development Act 1998 (Section 56) includes provisions to ensure that: *“The Company and each subsidiary shall ensure that its activities are so conducted as to afford appropriate protection for the environment and the archaeological heritage.”* This Act was in accord with the development of *Agreed Principles for the Protection of Wetlands Archaeology in Bord na Móna Bogs* (1998) between the Minister for Arts, Heritage and the Gaeltacht, the NMI and BnM. These principles set out 10 standards relating to the management of archaeological sites within BnM peatlands. This included the appointment of Archaeological Liaison Officers who received training on the treatment/reporting of archaeological discoveries and the funding of archaeological surveys by BnM. The surveys have been accompanied by an annual programme of selective archaeological excavation and paleo-environmental analysis. By 2013, 64,000 of the c. 80,000-hectare land holdings of BnM had been subject to archaeological survey.¹ Details on programmes of archaeological investigations, which were funded by BnM, within the Site are provided in Section 14.3 of this chapter.

The *Agreed Principles for the Protection of Wetlands Archaeology in Bord na Móna Bogs* were updated and codified by the 2012 *Code of Practice agreed between the Department of Arts, Heritage and the Gaeltacht, the National Museum of Ireland and Bord na Móna*². This Code is guided by the following agreed principles:

- The Minister for Arts, Heritage and the Gaeltacht has a responsibility to protect the archaeological heritage and to exercise powers of preservation, including all known monuments uncovered in BNM bogs.
- The Director of the National Museum of Ireland has a responsibility to enforce state ownership of all archaeological objects and to safeguard the treatment of all archaeological objects before their accession into the State’s repository, under National Monuments Acts 1930-2004 and the National Cultural Institutions Act 1997
- The development of peatlands has considerable archaeological implications which must be addressed given that the archaeological heritage is a non-renewable resource.
- BNM has a statutory duty under the Turf Development Act 1998 (section 56) to afford appropriate protection for the environment and the archaeological heritage.
- BNM will finance a balanced and cost-effective approach to archaeological investigation, excavation, post-excavation and mitigation on the basis of the developer pays principle and in keeping with the Minister’s stated policy in this regard.
- BNM will engage a Project Archaeologist to develop archaeological strategy and to oversee the smooth running of the archaeological response to peat extraction in BNM bogs.
- An Archaeology Management Liaison Committee has been set up consisting of representatives of the Department of Arts, Heritage and the Gaeltacht, the National Museum of Ireland and BNM, including the Project Archaeologist and Consultant Archaeologists working on BNM peatlands. The Committee will meet regularly to agree overall strategies in relation to the mitigation of peat extraction.

¹ Department of the Arts, Heritage and the Gaeltacht 2013 Review of Archaeological Survey and Mitigation Policy relating to Bord na Móna Peatlands since 1990. <https://www.archaeology.ie/sites/default/files/media/pdf/bnm-peatland-review-final-report-20-06-2013.pdf>

² <https://www.archaeology.ie/sites/default/files/media/publications/cop-bord-na-mona-en.pdf>



- Appropriate strategies will be developed by the Archaeology Management Liaison Committee to minimise direct impacts on archaeology taking account of BNM contractual obligations, annual production plans, design and safety implications, environmental and other impacts and costs.
- All parties agree that mitigatory planning at the earliest opportunity minimises the impact on the archaeological heritage. BNM will strive, as far as is reasonably possible, within its statutory remit, to avoid negative impacts on archaeological monuments. In cases where it is not possible to avoid impacting on monuments BNM, the Minister and the Director will cooperate to ensure, as far as possible, that appropriate archaeological mitigation is carried out in advance of peat extraction.
- Prospecting for archaeological monuments, archaeological objects and other such remains, other than in circumstances approved by the Minister, in consultation with the Director, is limited to the confines of the area under peat extraction.
- All parties are committed to dealing with the archaeological implications of peat extraction in a balanced and cost-effective manner consistent with (a) Observing BNM requirement to extract peat on an extensive scale, (b) annual production targets in relevant bogs and (c) A level of excavation, post-excavation and recording of archaeological monuments and archaeological objects, impacted upon by peat extraction, that is acceptable to the Minister, having consulted with the Director, and preservation in-situ of monuments in those particular circumstances where required by the Minister and which would be reasonable in practice.

The Site is located within County Tipperary, and the *Tipperary County Development Plan 2022-2028* contains the following policies in relation to the protection of the archaeological resource within the county:

- Policy 13-4: Safeguard sites, features and objects of archaeological interest, including Recorded Monuments, National Monuments and Monuments on the Register of Historic Monuments, and archaeological remains found within Zones of Archaeological Potential located in historic towns and other urban and rural areas. In safeguarding such features of archaeological interest, the Council will seek to secure their preservation (i.e. in situ or in exceptional circumstances preservation by record) and will have regard to the advice and recommendation of the Department of Arts, Heritage and the Gaeltacht. Where developments, due to their location, size or nature, may have implications for archaeological heritage, the Council may require an archaeological assessment to be carried out. This may include for a requirement for a detailed Visual Impact Assessment of the proposal and how it will impact on the character or setting of adjoining archaeological features. Such developments include those that are located at, or close to an archaeological monument or site, those that are extensive in terms of area (1/2 ha or more) or length (1 km or more), those that may impact on the underwater environment and developments requiring EIA.
- Policy 13-5 Respect and preserve the remains (both sub-surface and upstanding) of the medieval towns in line with the Conservation, Management and Interoperation Plans in place for each town, in line with the guidance of the Heritage Council and the National Policy on Town Defences (DEHLG, 2008).
- Policy 13-6: Consider landscapes of archaeological significance and, if considered necessary, require an impact assessment for proposed development which could have a significant impact on the identified landscape.
- Policy 13-7 Consider underwater archaeology and ensure that development to riverbanks or coastal edges within the vicinity of a site of archaeological interest shall not be detrimental to the character of the archaeological site or its setting.



The GC extends into County Kilkenny, and the *Kilkenny City and County Development Plan 2021-2027* includes the following objective and development management requirements in relation to the protection of the archaeological resource within the county:

- Objective 9C: To protect archaeological sites and monuments (including their setting), underwater archaeology, and archaeological objects, including those that are listed in the Record of Monuments and Places, and in the Urban Archaeological Survey of County Kilkenny or newly discovered sub-surface and underwater archaeological remains.
- To endeavour to preserve in situ all archaeological monuments, whether on land or underwater, listed in the Record of Monuments and Places (RMP), and any newly discovered archaeological sites, features, or objects by requiring that archaeological remains are identified and fully considered at the very earliest stages of the development process and that schemes are designed to avoid impacting on archaeological heritage.
- To require archaeological assessment, surveys, test excavation and/or monitoring for planning applications in areas of archaeological importance if a development proposal is likely to impact upon in-situ archaeological monuments, their setting and archaeological remains.
- To ensure that development within the vicinity of a Recorded Monument is sited and designed appropriately so that it does not seriously detract from the setting of the feature or its zone of archaeological potential. Where upstanding remains of a Recorded Monument exist a visual impact assessment may be required to fully determine the effect of any proposed development.
- To require the retention of surviving medieval plots and street patterns and to facilitate the recording of evidence of ancient boundaries, layouts etc. in the course of development
- To safeguard the importance of significant archaeological landscapes from developments that would unduly sever or disrupt the relationship, connectivity and/or inter-visibility between sites.

14.2.1.2 *Relevant Architectural Heritage Legislation and Planning Policies*

The protection of architectural heritage is provided for through the Heritage Act 1995 (as amended) and the Planning and Development Act 2000 (as amended). The Planning and Development Act 2000 (as amended) requires Planning Authorities to keep a 'Record of Protected Structures' (RPS) of buildings and other structures that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. The RPS is published in development plans and planning permission is required for any works to such structures that would affect their character. The Planning and Development Act 2000 (as amended) also provides for the inclusion of objectives for preserving the character of places, areas, groups of structures or townscapes of special interest designated as Architectural Conservation Areas (ACAs). The National Inventory of Architectural Heritage (NIAH), including the NIAH Historic Gardens and Designed Landscapes Survey, was established to create a nationwide record of built heritage structures and associated lands. While inclusion in the NIAH inventory does not provide statutory protection to a structure or lands, the inventory is intended to advise local authorities on the compilation of their RPS. The term 'designated architectural heritage' is hereafter used to describe structures listed in the NIAH and the County Tipperary RPS. The designated architectural heritage constraints located within the environs of the Proposed Development are identified in Section 14.3 of this chapter.



The *Tipperary County Development Plan 2022-2028* contains the following planning policies in relation to the protection of the architectural resource within the county:

- Policy 13-1: Encourage and support the sympathetic restoration, re-use and maintenance of protected structures thereby ensuring their conservation and protection. In considering proposals for development, the Council will have regard to the Architectural Heritage Protection Guidelines for Planning Authorities, (DAHG 2011) or any amendment thereof, and proposals that will have an unacceptable impact on the character and integrity of a protected structure or adjoining protected structure will not be permitted.
- Policy 13-2: Encourage and support new development that contributes to the enhancement of ACAs with regard to; a) Impact on the character, appearance and integrity of the ACA in terms of compatibility in design, colour, finishes and massing of form; b) Impact on the existing amenities, character and heritage of the ACA; c) The importance of retaining important architectural and townscape elements such as shop fronts, sash windows, gutters and down pipes, plasterwork etc as appropriate.
- Policy 13-3: Seek the sympathetic restoration, appropriate re-use and maintenance of buildings/features which are considered to be of local and vernacular architectural importance.

The GC extends into County Kilkenny and the *Kilkenny City and County Development Plan 2021-2027* includes the following relevant objectives and development management requirements in relation to the protection of the architectural heritage resource within the county:

- Objective 9F: To provide assistance to owners of protected structures in undertaking essential repairs and maintenance by the provision of relevant information.
- Objective 9G: To respond to the Ministerial recommendation to include in the RPS, structures which have been identified as being of regional, national or international significance in the National Inventory of Architectural Heritage survey and to consider for inclusion those rated as being of local significance.
- Objective 9H: To continue to review the Record of Protected Structures and add or delete structures as appropriate.
- Objective 9I: To ensure all digital mapping for the Record of Protected Structures is up to date and current, and readily accessible to the public.
- To have regard to the Architectural Heritage Protection Guidelines when assessing proposals for development affecting a protected structure and buildings listed in the NIAH.
- To encourage the sympathetic retention, reuse and rehabilitation of protected structures and their setting, while ensuring the involvement of suitably qualified professionals
- To ensure proposed development within the curtilage or attendant grounds of a protected structure respects the protected structure and its setting,
- To require an architectural impact assessment where appropriate for developments within the grounds of country house estates which are Protected Structures.
- To seek the protection and sustainable management of historic gardens, parklands and designed landscapes in the Kilkenny County and City, their setting and their visual amenity.
- To request visual impact and /or an architectural heritage impact assessment where development is considered to, have a potential impact on a historic landscape or protected structure.
- To protect elements of designed landscapes within the attendant grounds of Protected Structures, including boundary features



- To ensure that new development does not detract either directly or indirectly from the character or setting of historical bridges.
- To ensure appropriate materials and methodologies are used for the repair works for Kilkenny's historic bridges.
- To protect and sustainably manage historic items of street furniture and roadside features, as appropriate.

14.2.2 Consultation

A scoping report for the Proposed Development was issued on 10th December 2025 to the NMS, Department of Housing, Local Government and Heritage (DHLGH) via the Development Applications Unit. A response from the Department was received on January 23rd 2026, and this included the following recommendations in relation to content to be included in an archaeological impact assessment of the Proposed Development:

- A baseline archaeological and historical study comprising site inspection/s by a suitably qualified Archaeologist and documentary research including reviews of historical, cartographic and aerial photography sources.
- Walkover surveys and field inspections
- An Archaeological/Historic Landscape study
- Visual Impact Assessment
- The desk-study and field inspection regime should inform:
- Targeted non-intrusive advance geophysical survey or prospection (such as Resistivity, Magnetometer or Ground Penetrating Radar Surveys)
- Targeted peatland surveys
- Targeted advance archaeological test excavation
- Any and all intrusive advance investigations (such as, but not limited to, ground investigations for soils/geology/hydrogeology) carried out as part of the EIA or design process should be subject to a programme of archaeological monitoring by a suitably qualified archaeologist.

In summary this chapter presents the following:

- Details on the results of baseline archaeological and historical studies, including reviews of archaeological, historical, architectural heritage, cartographic and aerial photography sources, as well as LiDAR imagery of the Site
- Details on the walkover surveys and field inspections which were conducted by a suitably qualified archaeologist
- An archaeological/historic landscape study which has been informed by desktop research and site inspections
- Details on visual impact assessments which has been informed by consultations with the LVIA specialists as well as reviews of relevant photomontages and Zone of Theoretical Visibility mapping (Chapter 13)
- These studies have informed the formulation of advance mitigation measures detailed in Section 14.5, which include advance geophysical surveys in suitable lands, targeted test trench excavations and construction phase archaeological monitoring



- Ground investigation works conducted during the design phase were subject to archaeological supervision.

Further details of project scoping and consultation can be found in Chapter 2 of this EIAR.

14.2.3 Study Areas

There are no professional guidelines which define the extent of study areas required to assess the effects of wind farm developments on the cultural heritage resource. The extent of the study areas used for this assessment are, therefore, informed by the years of experience and professional judgment of the specialist and are considered suitable for the assessment of potential effects. The study area reviewed for the assessment of the Site comprised the lands within its boundary and the surrounding landscape extending for 2km in all directions beyond its boundary. The extent of this 2km study area is suitable as it facilitated the compilation of a baseline context for the known cultural heritage resource within the Site and its surrounds which informed the assessment of the archaeological potential of the area as well as potential direct and indirect effects of potential medium to high magnitude on the locations and settings of known cultural heritage assets within its surrounds. In addition, a 100m wide study area centred on the GC and TDR work areas required to facilitate the delivery of turbines to the Site was reviewed in order to appraise if there are any known cultural heritage constraints within their localised footprints or close environs, including potential sub-surface remains which may be susceptible to direct or indirect effects. The cultural heritage constraints located within inaccessible private lands within these study areas were appraised based on a combination of reviews of their designations, classifications, states of preservation as described in published Archaeological Survey of Ireland (ASI) inventory descriptions, their depictions on historic mapping and reviews of modern aerial/satellite images of their locations.

The Landscape and Visual Impact Assessment (Chapter 13) presents the results of an assessment of potential visual impacts on a range of publicly accessible heritage receptors within the wider landscape extending for 20km from the Site. A desktop review of other known cultural heritage assets with visual attributes that extend beyond their immediate settings located in private lands within an area extending for 10km in all directions from the Site, such as National Monuments and archaeological monuments with ritual alignments across the wider landscape (e.g., stone circles, stone rows and megalithic tombs) was carried out as part of the cultural heritage assessment. This desktop review is not intended to comprise a visual impact assessment, as such monuments are located in private lands not accessible to the public and views from their locations could not be appraised, but it was carried out to assess the potential for any likely significant intrusions on monument settings and attributes such as recorded alignments across the wider landscape. The extent of this 10km area was chosen in order to appraise if the wider landscape contains individual or groupings of such visually sensitive cultural heritage constraints that may be susceptible to potential medium-to-high magnitudes of indirect effects on their wider settings or visual alignments. Monuments with potential visual alignments within the 10km area located within private lands were assessed based on available Archaeological Survey of Ireland (ASI) descriptions of their existing morphology and recorded alignments combined with their locations in relation to the Site, including considerations of local topographical factors



14.2.4 Desktop Study

The assessment presents the results of a desktop study of relevant published sources and datasets undertaken in order to identify all recorded and potential archaeological, architectural and other cultural heritage sites/features/areas within the study areas. The principal source reviewed for the assessment of the recorded archaeological resource was the current Sites and Monuments Record (SMR) datasets published on the National Monuments Service's Historic Environment Viewer (HEV) at the time of writing in March 2026. The Record of Protected Structures (RPS) and the National Inventory of Architectural Heritage (NIAH) building and gardens surveys were consulted for assessing the designated architectural heritage resource. Details on the legal and planning frameworks designed to protect these elements of the cultural heritage resource are provided in Section 14.2.1.

Other sources consulted as part of the desktop study included the following:

- Reports on Previous Archaeological Surveys and Excavations: A number of programmes of systematic archaeological surveys were conducted across the Site during the 1990s and 2000s on behalf of Bord na Móna and these were carried out under licences issued by the National Monuments Service. These surveys were then followed by targeted licensed archaeological excavations of a range of identified sites which were conducted as an archaeological mitigation measure within the active peat extraction bog. The reports on these archaeological site investigations were reviewed as part of the assessment and details on their results are presented within this chapter.
- Development Plans: The County Development Plans for Tipperary and Kilkenny outline these Councils' policies and objectives for the conservation of the archaeological and architectural heritage resource and include lists of Record of Protected Structures (RPS) as well as designated Architectural Conservation Areas (ACA).
- Archaeological Inventories: The Archaeological Inventory of County Tipperary Vol. 1 (North Tipperary), which provides inventory entries for recorded archaeological sites within North Tipperary, was reviewed as part of the assessment. This inventory was published in 2002 and the National Monuments Service's Historic Environment Viewer (HEV)³ was also reviewed in order to ascertain if any additional archaeological sites were identified within the study area since that time. In addition, there is no published inventory for Co. Kilkenny and the HEV was also reviewed for the section of the GC study area within that county.
- Heritage Council of Ireland's Heritage Map Viewer⁴: This online mapping source collates various cultural heritage datasets provided by, among others, the National Monuments Service, the National Museum of Ireland, local authorities and the Office of Public Works. This online resource was reviewed in March 2026.
- Database of Irish Excavation Reports⁵: The Database of Irish Excavation Reports contains summary accounts of all archaeological excavations carried out in Ireland (North and South) from 1969 to present. The database was reviewed in March 2026.
- Excavation Reports: Available reports on archaeological investigations conducted within the Site were reviewed.

³ <https://www.archaeology.ie/archaeological-survey-ireland>

⁴ www.heritagemaps.ie

⁵ <https://excavations.ie/>



- National Museum of Ireland (NMI) Topographical Files: An inspection of the NMI topographical file archive held in the Museum premises in Kildare Street, Dublin was carried out as part of the assessment. These files contain information on known Irish archaeological objects and can include information on the locations and circumstances of their discovery.
- Literary Sources: Various published sources were consulted in order to assess relevant archaeological, historical, architectural heritage and folklore records and these are listed in Section 14.10 of this chapter.
- Historic Maps: A review of available historic cartographic sources was carried out, and these included the 17th-century Down Survey and various map editions published by the Ordnance Survey (OS) from the mid-19th century onward. Extracts from the reviewed maps are presented in Appendix 14.1.
- Aerial/Satellite/LiDAR imagery: A review of available imagery of the Site was carried out in order to appraise the extent of modern interventions and to ascertain if any traces of undesignated cultural heritage features, including sub-surface archaeological sites, were visible. This included aerial/satellite imagery published online by Tailte Éireann, Google Earth, and Bing Maps. LiDAR mapping datasets of the Site commissioned by the developer were also made available for review.
- Irish National Folklore Collection: Transcribed material from the National Folklore Collection archive, which has been digitised and published online⁶, was reviewed in February 2026.
- UNESCO designated World Heritage Sites and Tentative List: There are two designated World Heritage sites in Ireland (Brú na Bóinne, Co. Meath and Sceilg Mhichíl, Co. Kerry) and a number of other significant examples have been included in a Tentative List (2023) that has been put forward by Ireland for inclusion. There is one tentative list site located within 20km of the Site, and this comprises the Rock of Cashel which is located c.16.3km to the southwest. The potential visual effects on this heritage receptor are assessed in the Landscape and Visual chapter (Chapter 13).

14.2.5 Site Inspections

The Proposed Development, including the TDR and GC, was inspected in July 2022, September 2023, October 2023, September 2025 and December 2025. The inspected lands were assessed in terms of historic landscape, existing land use and the potential for the presence and survival of unrecorded archaeological and undesignated architectural heritage sites/features. The results of the field surveys are described in Section 14.3 and annotated extracts from the photographic record are provided in Appendix 14.3. In addition, the scheduling of site inspections was co-ordinated to overlap with geotechnical investigations within the Site, including the borrow pit area, and all trial pit ground excavations were subject to constant archaeological supervision. Nothing of archaeological significance was identified during this work.

⁶ <https://duchas.ie/en>



14.2.6 Assessment of Impacts

The methodology used for this assessment is in accordance with Environmental Protection Agency (EPA 2022) *Guidelines on the Information to be Contained in EIAR* and the European Commission (2017) *Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report*. The chapter complies with all applicable legislative requirements, including but not limited to Directive 2011/92/EU as amended by Directive 2014/52/EU, the Planning and Development Act, 2000 (as amended) and the Planning and Development Regulations, 2001 (as amended). The assessment has also been carried out in accordance with guidelines for the assessment of impacts on the cultural heritage resource as published by the International Council on Monuments and Sites *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties* (ICOMOS 2011).

Duration of Effects

- Momentary (seconds to minutes)
- Brief < 1 day
- Temporary <1 year
- Short-term 1-7 years
- Medium Term 7-15 years
- Long Term 15-60 years
- Permanent > 60 years
- Reversible: Effects that can be undone, for example through remediation or restoration

Quality of Effect

The quality of an effect on the cultural heritage resource can be positive, neutral or negative:

- Positive Effect – a change which improves the quality of the cultural heritage environment (e.g., increasing amenity value of a site in terms of managed access, signage, presentation etc. or high-quality conservation/restoration and re-use of an otherwise vulnerable derelict structure).
- Neutral Effect – no change or effects that are imperceptible, within the normal bounds of variation for the cultural heritage environment.
- Negative Effect – a change which reduces the quality of the cultural heritage resource (e.g., visual intrusion on the setting of an asset, physical intrusion on features/setting of a site etc.).

Type of Effect

- Direct Impact – where a cultural heritage site is physically located within the footprint of the proposed development, which will result in its complete or partial removal.
- Indirect Impact – effects on the cultural heritage environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
- No predicted impact – the addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.
- ‘Do-nothing Effects’ - The cultural heritage environment as it would be in the future should the Project not be carried out.



- Indeterminable Effects - When the full consequences of a change in the environment cannot be described.
- Irreversible Effects - When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
- Residual Effects - The degree of environmental change that will occur after the proposed mitigation measures have taken effect.

Magnitude of Effect

This is based on the degree of change, incorporating any mitigation measures, on a cultural heritage asset and can be negative or positive. The magnitude is ranked without regard to the value of the asset according to the following scale: High; Medium; Low and Negligible and has been informed by criteria published in the ICOMOS *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties* (ICOMOS 2011) (Table 14-1).

Table 14-1: Magnitudes of Effect on Cultural Heritage Assets (after ICOMOS Guidelines 2011)

Magnitude	Description
High	Most or all key archaeological or architectural materials affected such that the resource is totally altered Comprehensive changes to setting Changes to most or all key historic landscape elements, parcels or components; extreme visual effects; fundamental changes to use or access; resulting in total change to historic landscape character unit Major changes to area that affect Intangible Cultural Heritage activities or associations or visual links and cultural appreciation
Medium	Changes to many key archaeological or historic building materials/elements such that the resource is clearly/significantly modified. Considerable changes to setting that affect the character of the archaeological asset. Changes to the setting of a historic building, such that it is significantly modified. Change to many key historic landscape elements, parcels or components, visual change to many key aspects of the historic landscape, considerable changes to use or access, resulting in moderate changes to historic landscape character. Considerable changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.
Low	Changes to key archaeological materials/historic building elements, such that the resource is slightly altered/slightly different. Slight changes to setting of an archaeological monument. Change to setting of a historic building, such that it is noticeably changed. Change to few key historic landscape elements, parcels or components; slight visual changes to few key aspects of historic landscape; slight changes to use or access; resulting in limited change to historic landscape character. Changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.



Magnitude	Description
Negligible	Very minor changes to key archaeological materials or setting. Slight changes to historic building elements or setting that hardly affect it. Very minor changes to key historic landscape elements, parcels or components; virtually unchanged visual effects; very slight changes to use or access; resulting in very small change to historic landscape character. Very minor changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.

Value assessment criteria

While various national and local authority legal designations exist for elements of the Irish cultural heritage resource (see Section 14.2.1), there is no formal or statutory criteria for grading the value of individual heritage constraints. The non-statutory NIAH does apply a ranking system (Local, Regional, National and International) to structures included in that inventory and, while these rankings do not confer a graduated level of protection they have been utilised as a value indicator for NIAH-listed structures for the purpose of this assessment.

The criteria for assessing the value of archaeological and other cultural heritage constraints as part of this assessment has, therefore, been informed by the *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties* (ICOMOS 2011, 14-16). This guidance on the evaluation of the values of cultural heritage assets is not intended as definitive but rather provides indicators which contribute to a wider judgment based the individual circumstances of each asset. The Value of known or potential cultural heritage assets are ranked according to the following scale: Very High, High; Medium; Low, Negligible and Unknown (Table 14-2). Criteria considered include condition / preservation; documentary / historical significance; group value; rarity; visibility in the landscape; fragility / vulnerability and amenity value. Generally, the more criteria that are evident for a given constraint, the higher in scale its respective value is deemed to be. The values assigned to identified assets within the study area were determined following the completion of the desktop study combined with site inspections of accessible assets and are identified in Section 14.3 of this chapter.

Table 14-2: Indicative factors for assessing the Value of Cultural Heritage Assets (per ICOMOS 2011)

Indicative Value	Example of Asset Types
Very High (International Significance)	World Heritage Sites (including Tentative List properties) Sites, buildings or landscapes of acknowledged international importance Intangible associations with individuals or innovations of global significance
High (National Significance)	Nationally designated sites, buildings and landscapes of significant quality, rarity, preservation and importance Undesignated assets of the quality and importance to be designated Assets that can contribute significantly to acknowledged national research objectives Archaeological Landscapes with significant group value Intangible associations with individuals or innovations of national significance
Medium (Regional Significance)	Designated or undesignated assets that can contribute significantly to regional research objectives, including buildings that can be shown to have exceptional qualities in their fabric or historical associations. Conservation Areas and historic townscapes containing buildings that contribute significantly to its historic character.



Indicative Value	Example of Asset Types
	Intangible associations with individuals or innovations of regional significance
Low (Local Significance)	Assets compromised by poor preservation and/or poor survival of contextual associations Assets of limited value, but with potential to contribute to local research objectives Historic Townscape or built-up areas of limited historic integrity in their buildings and settings Intangible associations with individuals or innovations of local significance
Negligible	Assets with very little or no surviving archaeological interest Landscapes little or no significant historical interest Buildings or urban areas of no architectural or historical note; buildings of an intrusive character
Unknown Potential	Assets whose importance has not been ascertained Buildings with some hidden (i.e. inaccessible) potential for historic significance

Significance of Effects

The significance of effect can be described as Profound, Very Significant, Significant, Moderate, Slight, Not Significant or Imperceptible (Table 14.3) and is assigned based on the combined evaluation of the magnitude of effect and the value of the cultural heritage constraint (Table 14.4).

Table 14-3: Significance of Effects (per EPA EIAR Guidelines 2022)

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



Table 14-4: Significance of Effects Matrix (after EPA EIAR Guidelines 2022)

Magnitude of Effect	High	Not Significant/ Slight	Moderate/ Significant	Significant/ Very Significant	Very Significant/ Profound
	Medium	Not Significant	Slight	Moderate/ Significant	Significant/ Very significant
	Low	Not Significant/ Imperceptible	Slight/ Not Significant	Slight	Moderate
	Negligible	Imperceptible	Not Significant/ Imperceptible	Not Significant/ Slight	Slight
		Negligible	Low	Medium	High/Very High
Value/Sensitivity of the Asset					

14.2.7 Limitations

Phase 1 rehabilitation works were completed in Littleton bog between 2018-2021 and this included the blocking of drains which has resulted in the presence of areas of standing water within the Site. The Site has also been subject to extensive natural revegetation and re-colonisation, including the development of areas of birch woodland and wetland habitats within Littleton and Lanespark bogs, while a portion of the Littleton bog has also been developed as a conifer plantation by Coillte. Areas of the bare surface peat within the cutaway parts of the Site have reduced as this vegetation developed and consolidated. The site inspections of the turbine locations, as well associated hardstands and site access tracks, confirmed the presence of areas of overgrowth within Proposed Development areas. The inspections of drains within the environs of Proposed Development areas also revealed that many of these have been blocked and now contain standing water. The presence of overgrowth has obscured the bare peat ground surface within areas of the Site. However, it is noted that all areas within the Site, including Proposed Development locations, that currently contain overgrowth were subject to detailed inspections during the programmes of archaeological surveys conducted within the Site during the 1990s and 2000s. The Site was in active use for peat extraction at the time of these surveys and did not contain the areas of overgrowth which have developed following the cessation of extraction works. These surveys did not identify any archaeological sites at the locations of the proposed turbines or associated hardstands, and the site access tracks to their locations. It is concluded that, based on the completion of the programmes of detailed archaeological surveys of the Site prior to the development of overgrowth, this limitation has not notably affected the assessment presented in this chapter.



14.3 Receiving Environment

14.3.1 Introduction

The following sections present summary details of the main periods within the Irish archaeological record with references to known archaeological sites, designated architectural heritage structures (RPS and NIAH) and located within the reviewed study areas for the Site (Section 14.3.2), GC (Section 14.3.3) and TDR work areas (Section 14.3.4). The details on designated cultural heritage constraints have been retrieved from current State and Local Authority sources and are considered accurate at the time of writing in March 2026. Tables listing the recorded cultural heritage constraints within the study areas for each of these elements of the Proposed Development are presented at the start of each of these sections and mapping of their locations are also provided. The dating framework used for each period of the archaeological record is based on the *Guidelines for Authors of Reports on Archaeological Excavations*⁷ (National Monuments Service 2006). Summary details on each of these periods are provided in Section 14.3.2 in order to present brief contextual information to the general reader. The published inventory entries of recorded archaeological sites and NIAH-listed structures referenced in the following sections are presented in Appendix 14.2, which includes grid references for each example.

14.3.2 Wind Farm Site

14.3.2.1 Recorded Archaeological Sites within the Site boundary

The HEV lists a total of 31 recorded archaeological sites located within the Site boundary (Table 14.5 and Figures 14.2 a-c). These comprise a range of toghers (trackways) and platforms, some of which were initially identified during peat extraction works in the 1960s with additional examples identified during archaeological surveys and excavations carried out within the Site which were commissioned by Bord na Móna during the 1990s and 2000s. The majority of these sites (24 no.) were concentrated around a narrow (c.250m wide) section of the bog between the townlands of Longfordpass North and Longfordpass South in the northern half of the Site and appear to have been constructed at this location in order to take advantage of the shortest route across this area of the bog (Figure 14.2a). None of the recorded archaeological sites within the Site have been assigned Preservation Orders or have been designated as National Monuments in State Care.

The archaeological inventory descriptions of the archaeological sites located within the Site (see Appendix 14.1), which are sourced from current entries on the HEV website, are based on descriptions of their condition and extent as recorded during archaeological surveys and excavations carried out as targeted archaeological mitigation works within the active peat extraction bog during the 1990s and 2000s. These archaeological site investigations were conducted under licences issued by the National Monuments Service (see Section 14.3.2.8). These inventory descriptions note that various of the platforms and trackways within the Site had been disturbed or removed by ongoing peat extraction works with others described as well-preserved at that time (see Appendix 14.1 for details). Summaries of the targeted archaeological excavations carried out at a range of archaeological sites located within a narrow section of the bog in the northern half of the Site are provided in Section 14.3.2.8 and descriptions of the results of these investigations published in the Database of Irish Excavation Reports are provided in Appendix 14.1.

⁷ <https://www.archaeology.ie/sites/default/files/media/publications/excavation-reports-guidelines-for-authors.pdf>



It is noted that peat extraction continued within the Site for approximately a decade following the completion of the programme of archaeological survey and excavations works in 2008, and also following the compilation of the inventory descriptions published on the HEV which are based on the results of the 1990s and 2000s onsite works. The ongoing extraction works within the Site during the following decade, therefore, likely resulted in further disturbance or removal of the identified archaeological sites. The location of a number of the sites within the main concentration located in the narrow section of the bog in the northern half of the Site are the only examples that currently have surrounding Zones of Notification on the HEV mapping (Figure 14.2a). In 2013 the National Monuments Service published a report entitled *Review of Archaeological survey and mitigation policy relating to Bord na Móna peatlands since 1990*⁸ which identifies a number of bogs that contain areas designated as 'permanent set aside areas' to be removed from production due to the identification of significant archaeological remains. The only permanent set aside area within the Littleton Bog group, as listed in Table 5.2 of that report, is within Killeen 1 Bog which is located outside the south end of the Site. The report also notes that only one archaeological site within Bord na Móna peatlands had been considered for active preservation in situ and this is located is Ballybeg Bog in Co. Offaly.

Table 14-5 provides a summary of the various types and classes of recorded archaeological sites within the Site and these are based on their ASI inventory descriptions which are provided in full in Appendix 14.2.

Class 1 togher (5 no.): These trackways typically have a known orientation with substantial timber planks in good structural definition. They may have several phases of construction indicative of long-term use and reuse.

Class 2 togher (8 no.) These types of trackways are typically over 15m in length with a clear orientation and good structural definition.

Class 3 togher (5 no.) These short trackways typically measure up to 15m in length with a discernible orientation. It may not be possible to trace them beyond a single sighting and they are interpreted as laid down to cross a small area of bog.

Road/trackway (1 no.) A way, or section thereof, which has been deliberately constructed between places.

Unclassified togher (7 no.) A peatland trackway/causeway constructed of wood that cannot be classified as a class 1, class 2 or class 3 togher due to its form or lack of surviving evidence.

Peatland Platforms (5 no.): These comprise non-linear artificially raised areas typically of wood construction.

Table 14-5: Recorded archaeological sites within the Site boundary

Monument No.	Monument Class	Townland	Summary/Condition*
TN042-039001-	Class 1 togher	LEIGH, LONGFORDPASS EAST	Orientated SW-NE. Was being destroyed by peat milling when inspected by the Irish Archaeological Wetland Unit in 1995.
TN042-039002-	Class 2 togher	LEIGH	SW-NE orientation, extensively damaged by machinery (2006)
TN042-039003-	Road/trackway	LONGFORDPASS NORTH	Visible in drain face, orientated east-west (2006)
TN042-039004-	Class 1 togher	LONGFORDPASS SOUTH	Orientated east-west, exposed to machine damage at numerous locations (2006)

⁸ <https://www.archaeology.ie/sites/default/files/media/pdf/bnm-peatland-review-final-report-20-06-2013.pdf>



Monument No.	Monument Class	Townland	Summary/Condition*
TN042-039005-	Class 1 togher	LONGFORDPASS SOUTH	Visible at five sightings orientated east-west (2006)
TN042-039006-	Platform	LONGFORDPASS SOUTH	Visible on the field surface and in the drain face, moderate preservation
TN042-039007-	Class 2 togher	LONGFORDPASS SOUTH	Visible on the field surface and in the drain face, orientated NE-SW (2006)
TN042-039008-	Class 2 togher	LONGFORDPASS SOUTH	Visible at three sightings in drain faces, orientated NW-SE. For the most part, this togher is located below the field surface and is therefore moderately to well preserved, but some of the wood is exposed on the field surface (2006)
TN042-039009-	Class 3 togher	LONGFORDPASS SOUTH	Visible in drain face, 0.08m below the field surface, moderately preserved (2006).
TN042-039010-	Class 2 togher	LONGFORDPASS SOUTH	Short possible togher visible at two sightings, orientated NW-SE, good state of preservation (2006)
TN042-039011-	Class 2 togher	LONGFORDPASS SOUTH	Visible at two sightings, orientated NW-SE, poorly preserved due to peat milling (2006).
TN042-039012-	Class 3 togher	LONGFORDPASS SOUTH	Possible togher visible at two sightings, orientated NW-SE, moderate state of preservation (2006)
TN042-039013-	Class 2 togher	LONGFORDPASS SOUTH	Possible togher visible at two sightings, orientated NW-SE, surface extent in poor state of preservation (2006)
TN042-039014-	Platform	LONGFORDPASS SOUTH	Possible platform noted in drain face, partly disturbed by machinery (2006)
TN042-039015-	Unclassified togher	LONGFORDPASS SOUTH	Visible at three sightings on the field surface and drain face, orientated NW-SE, partly disturbed by machinery (2006)
TN042-039016-	Platform	LONGFORDPASS SOUTH	Visible on the field surface, well-preserved (2006)
TN042-039017-	Platform	LONGFORDPASS SOUTH	Visible in drain face, well-preserved (2006)
TN042-039018-	Class 2 togher	LONGFORDPASS SOUTH	Visible at three sightings in drain faces, orientated east-west, in moderate state of preservation (2006)
TN042-039019-	Class 1 togher	LONGFORDPASS SOUTH	Visible at four sightings, orientated NW-SE, moderately preserved, but the upper surfaces had been machine damaged (2006)
TN042-039020-	Unclassified togher	LONGFORDPASS SOUTH	Possible togher visible at two sightings, orientated NE-SW, disturbed by peat milling (2006)



Monument No.	Monument Class	Townland	Summary/Condition*
TN042-039021-	Class 2 togher	LONGFORDPASS SOUTH	Possible togher visible at two sightings in drain faces, orientated east-west (2006)
TN042-039022-	Platform	LONGFORDPASS SOUTH	Visible in drain face, composed of two brushwoods in moderate state of preservation (2006)
TN042-039023-	Class 3 togher	LONGFORDPASS SOUTH	Visible at two sightings, orientated east-west, partly disturbed by machinery (2006)
TN042-039024-	Unclassified togher	LONGFORDPASS SOUTH	Visible at two sightings, orientated east-west, wood was in a good state of preservation but had been damaged by machinery at the drain face (2006)
TN042-039025-	Class 3 togher	LONGFORDPASS SOUTH	Visible in drain face, 0.25m below the field surface, wood was well preserved but had been damaged by machinery where it was exposed in the drain face
TN042-039026-	Class 3 togher	LONGFORDPASS SOUTH	Visible on the field surface, had been milled where exposed (2006)
TN042-056001-	Unclassified togher	LEIGH, LONGFORDPASS SOUTH	Discovered and partly excavated in the 1960s. Orientated WSW-ENE, 1m below the surface of the bog (1960s). Was being destroyed by peat milling when inspected by the Irish Archaeological Wetland Unit in 1995.
TN042-056002-	Unclassified togher	LEIGH, LONGFORDPASS SOUTH	Recorded as in poor condition, orientated east-west by Irish Archaeological Wetland Unit (1995).
TN042-056003-	Class 1 togher	LEIGH, LONGFORDPASS SOUTH	Was being destroyed by peat milling when inspected by the Irish Archaeological Wetland Unit in 1995.
TN042-057---- TS042-057----	Unclassified togher	LEIGH, BAWNREAGH	Discovered in 1960, trackway orientated NW-SE, located 3.5m below the surface.
TS048-019----	Unclassified togher	CLONOURA	Discovered 1960 and recorded as a possible togher or structure located c. 4m below the surface of the bog.

* Sourced from ASI inventory descriptions which are based on site investigations carried out in 1960s, 1990s and 2000s

14.3.2.2 Recorded Archaeological Sites within 2km of the Site boundary

The HEV records a total of 92 recorded archaeological sites located within lands extending for 2km in all directions from the Site boundary (Table 14.7 and Figures 14.3 a-b). Of these, 36 examples comprise peatland sites identified during programmes of archaeological surveys of active industrial peatlands in the 1990s and 2000s and the inventory descriptions published on the HEV do not include any details in relation to their existing condition. The descriptions of an additional 6 peatland sites identified during archaeological surveys in the 1990s do specify that these were in the process of being destroyed by peat milling at the time of survey.



The inventory descriptions of the other archaeological sites within the 2km area recorded that 21 examples are levelled with no visible surface traces, a further 18 examples only retain low surface traces, 13 examples remain wholly or partially extant with no description of existing conditions recorded for other sites (Table 14.6). Further details on the recorded archaeological sites within 2km of the Site are presented below in Sections 14.3.2.3 to 14.3.2.7 inclusive.

There are two National Monuments in State Care located within 2km of the Site and these comprise an ecclesiastical enclosure (TS048-035002-) in Derryvella townland (National Monument 533) and two church buildings (TN042-055001- and TN042-055003) in Leigh townland (National Monument 266). Details on these monuments are provided in Section 14.3.2.3. None of the recorded archaeological sites within the area have been assigned Preservation Orders.

Table 14-6: Recorded archaeological sites within 2km of the Site boundary

Monument No.	Classification	Condition*	Townland	Approx. distance from nearest turbine
TN042-017----	Enclosure	no surface remains	LONGFORDPASS NORTH	4.4km north of T1
TN042-024----	Enclosure	no surface remains	LONGFORDPASS NORTH	2.6km north of T1
TN042-025----	Church	low surface remains	LONGFORDPASS NORTH	3.3km north of T1
TN042-027----	Bridge	no surface remains	LONGFORDPASS NORTH	3km north of T1
TN042-040001-	Souterrain	removed by quarrying	LEIGH	1.7km west of T1
TN042-040002-	Mound	removed by quarrying	LEIGH	1.7km west of T1
TN042-041----	Moated site	low surface remains	LONGFORDPASS SOUTH	2.2km north of T1
TN042-043----	Enclosure	no surface remains	TULLAHEDY	1.6km north of T1
TN042-054----	Moated site	no surface remains	NOARD	2.7km west of T1
TN042-055----	Ecclesiastical site	extant	LEIGH	1.6km west of T1
TN042-055001-	Church (National Monument 266)	extant	LEIGH	1.6km west of T1
TN042-055002-	Round tower	Low surface remains	LEIGH	1.6km west of T1
TN042-055003-	Church (National Monument 266)	extant	LEIGH	1.6km west of T1
TN042-055004-	Sheela-na-gig	extant	LEIGH	1.6km west of T1
TN042-055005-	Medieval settlement	low surface remains	LEIGH	1.6km west of T1
TN042-060----	Bastioned fort	low surface remains	LONGFORDPASS NORTH	3.2km north of T1
TN048-013----	Ringfort	low surface remains	BALLYBEG	2.9km northwest of T9



Monument No.	Classification	Condition*	Townland	Approx. distance from nearest turbine
TN048-030----	Enclosure	low surface remains	BALLYBEG	2.6km west of T9
TN048-054001-	Road - unclassified togher	removed by peat milling	BALLYBEG	1.8km northwest of T9
TN048-054002-	Post row - peatland	removed by peat milling	BALLYBEG	1.8km northwest of T9
TN048-054003-	Road - class 1 togher	removed by peat milling	BALLYBEG	1.8km northwest of T9
TN048-055----	Post row - peatland	removed by peat milling	BALLYBEG	1.2km northwest of T9
TN048-057001-	Platform - peatland	existing condition not recorded	BALLYBEG	1.8km northwest of T9
TN048-057002-	Road - class 2 togher	removed by peat milling	BALLYBEG	1.8km northwest of T9
TN048-057003-	Road - class 3 togher	removed by peat milling	BALLYBEG	1.8km northwest of T9
TN048-057004-	Platform - peatland	existing condition not recorded	BALLYBEG	1.8km northwest of T9
TN048-057005-	Platform - peatland	existing condition not recorded	BALLYBEG	1.8km northwest of T9
TN048-057006-	Road - class 2 togher	existing condition not recorded	BALLYBEG	1.8km northwest of T9
TN048-057007-	Platform - peatland	existing condition not recorded	BALLYBEG	1.8km northwest of T9
TN048-057008-	Road - class 2 togher	existing condition not recorded	BALLYBEG	1.8km northwest of T9
TN048-057009-	Road - class 3 togher	existing condition not recorded	BALLYBEG	1.8km northwest of T9
TN048-057010-	Road - class 3 togher	existing condition not recorded	BALLYBEG	1.8km northwest of T9
TN048-058001-	Road - class 3 togher	existing condition not recorded	BALLYBEG	1.9km northwest of T9
TN048-058002-	Road - class 2 togher	existing condition not recorded	BALLYBEG	1.9km northwest of T9
TS036-052----	Road - class 1 togher	existing condition not recorded	INCHIROURKE	5.8km north of T1
TS042-018----	Fortified house	partially extant	GRAIGUEPADEEN	4.5km north of T1
TS042-018001-	Bawn	partially extant	GRAIGUEPADEEN	4.5km north of T1
TS042-026----	Ringfort	no surface remains	GRAIGUEPADEEN	4.6km north of T1
TS042-027----	Bridge	no surface remains	GRAIGUEPADEEN	3km north of T1



Monument No.	Classification	Condition*	Townland	Approx. distance from nearest turbine
TS042-028----	Ringfort	extant	GRAIGUEPADEEN	3.4km northeast of T1
TS042-063----	Road - unclassified together	low surface remains	GRAIGUEPADEEN, INCHIROURKE	5.3km north of T1
TS048-020----	Medieval settlement	low surface remains	BUOLICK	1.9km east of T3
TS048-020001-	Tower house	extant	BUOLICK	1.9km east of T3
TS048-020002-	Church	largely reconstructed	BUOLICK	1.8km east of T3
TS048-020003-	Ringwork and bailey	extant	BUOLICK	2.2km east of T3
TS048-020004-	Graveyard	extant	BUOLICK	1.8km east of T3
TS048-021----	Castle - motte	removed by quarrying	BUOLICK	1.5km southeast of T3
TS048-022----	Moated site	low surface remains	CLONOURA	0.95m east of T6
TS048-023----	Ringfort	extant	CLONOURA	1.8m east of T6
TS048-025----	Enclosure	low surface remains	CLONOURA	1.2km southeast of T8
TS048-032----	Enclosure	low surface remains	POYNTSTOWN	2.1km southeast of T8
TS048-033----	Enclosure	low surface remains	GLENGOOLE NORTH	2.2km southeast of T8
TS048-035001-	Church	low surface remains	DERRYVELLA	1.1km northeast of T11
TS048-035002-	Ecclesiastical enclosure (National Monument 533)	extant	DERRYVELLA	1.1km northeast of T11
TS048-035003-	Graveyard	no surface remains	DERRYVELLA	1.1km northeast of T11
TS048-036----	Ringfort	low surface remains	GLENGOOLE NORTH	2.2km northeast of T11
TS048-038----	Church	no surface remains	GLENGOOLE NORTH	1.5km northeast of T11
TS048-038001-	Graveyard	no surface remains	GLENGOOLE NORTH	1.5km northeast of T11
TS048-044----	Moated site	extant	GLENGOOLE NORTH	1.5km east of T11
TS048-046----	Enclosure	no surface remains	CLONOURA	1.1km southeast of T8
TS048-048----	Enclosure	low surface remains	LANESPARK	0.72km southeast of T11



Monument No.	Classification	Condition*	Townland	Approx. distance from nearest turbine
TS048-052002-	Post row - peatland	existing condition not recorded	KILLEEN	2km southwest of T10
TS048-054----	Structure - peatland	existing condition not recorded	DERRYVELLA	1km northeast of T11
TS048-055----	Structure - peatland	existing condition not recorded	DERRYVELLA	1km northeast of T11
TS048-056----	Structure - peatland	existing condition not recorded	DERRYVELLA	1km northeast of T11
TS048-057----	Structure - peatland	existing condition not recorded	DERRYVELLA	1km northeast of T11
TS048-058----	Structure - peatland	existing condition not recorded	DERRYVELLA	1km northeast of T11
TS048-059----	Road - class 1 togher	existing condition not recorded	DERRYVELLA	1km northeast of T11
TS048-060001-	Enclosure	no surface remains	COOLE	2km east of T3
TS048-060002-	Enclosure	no surface remains	COOLE	2km east of T3
TS048-060003-	Field system	no surface remains	COOLE	2km east of T3
TS048-061----	Road - class 3 togher	existing condition not recorded	DERRYVELLA	1.8km northeast of T11
TS048-062----	Road - class 3 togher	existing condition not recorded	DERRYVELLA	1.3km northeast of T11
TS048-063----	Road - class 3 togher	existing condition not recorded	DERRYVELLA	1.3km northeast of T11
TS048-064----	Road - unclassified togher	existing condition not recorded	DERRYVELLA	1.6km northeast of T11
TS048-065----	Structure - peatland	existing condition not recorded	DERRYVELLA	1.3km south of T8
TS048-066----	Structure - peatland	existing condition not recorded	DERRYVELLA	1.5km northeast of T11
TS048-067----	Structure - peatland	existing condition not recorded	DERRYVELLA	1.3km south of T8
TS048-068----	Platform - peatland	existing condition not recorded	DERRYVELLA	1.3km south of T8
TS048-069----	Road - unclassified togher	existing condition not recorded	DERRYVELLA	1.5km northeast of T11
TS048-070----	Road - unclassified togher	existing condition not recorded	DERRYVELLA	1.5km northeast of T11
TS048-071----	Structure - peatland	existing condition not recorded	DERRYVELLA	1.5km northeast of T11



Monument No.	Classification	Condition*	Townland	Approx. distance from nearest turbine
TS048-072----	Road - class 3 togher	existing condition not recorded	DERRYVELLA	1.6km northeast of T11
TS048-073----	Structure - peatland	existing condition not recorded	DERRYVELLA	1.7km northeast of T11
TS048-074----	Structure - peatland	existing condition not recorded	DERRYVELLA	1.8km northeast of T11
TS048-075----	Structure - peatland	existing condition not recorded	DERRYVELLA	1.7km northeast of T11
TS054-003----	Mound	no surface remains	KILLEEN	2.2km southwest of T11
TS054-004001-	Castle - unclassified	partially extant	KILLEEN	1.8km south of T11
TS054-004002-	Medieval settlement	low surface remains	KILLEEN	1.8km south of T11
TS054-004003-	Enclosure	partially extant	KILLEEN	1.8km south of T11
TS054-004004-	Enclosure	low surface remains	KILLEEN	1.8km south of T11
TS054-013----	Church	partially extant	LANESPARK	1.8km southeast of T11
TS054-013001-	Graveyard	extant	LANESPARK	1.8km southeast of T11
TS054-018----	Ritual site - holy well	no surface remains	KILLEEN	2.2km southeast of T11
TS054-088----	Road - class 1 togher	existing condition not recorded	KILLEEN	1.7km southeast of T11

* Condition as recorded by Archaeological Survey of Ireland

14.3.2.3 National Monuments within 10km of the Site

There are six National Monuments in State Care and one additional site subject to a Preservation Order located within 10km of the proposed turbine locations (Table 14.7 And Figure 14.4). Summary details on each of these monuments, which are sourced from ASI inventory entries, as well as their approximate distances from the nearest turbine locations are provided in Table 14.7. Details on any public access to these monuments are also provided.



Table 14-7: National Monuments within 10km of turbine locations

Name	Nation Monument Ref. No.	Summary Description (based on ASI inventory descriptions)	Approx. distance from nearest turbines
Derrynaflan Church and Early Medieval Ecclesiastical site	335	This National Monument in State Guardianship is in Lurgoe townland and comprises a church building (TS054-002002-) within an ecclesiastical enclosure (TS054-002002-). The foundation of the monastery is assigned to St Ruahan of Lorrhain the 6th century. The church contains a multiperiod nave and chancel built of roughly coursed limestone rubble construction, with a single-storey wing extending north to south from the west end of the church. The chancel appears to have been built in the 13th century when it was added to the E end of an early medieval church built of coursed cyclopean limestone masonry, of which only the lower courses of the south wall survive. The church is mentioned in the 15th-century Papal taxations of the Diocese of Cashel and was described as ruinous in the 17th century. This site is notable as the location of the Derrynaflan hoard of eucharistic objects which was discovered here in 1980. The hoard consists of five liturgical vessels: a silver chalice, a silver paten, a bronze strainer, a silver hoop and a bronze basin which are now on public display in the National Museum of Ireland, Kildare Street, Dublin. The site is recorded to be accessible via a detour on the recently opened Littleton Labyrinth walk.⁹ The church and its enclosure have also been assigned Preservation Orders (refs 41/1935 and 2/1980).	Turbines 9, 10 and 11 are located 3.6km to 3.7km to the northeast
Derryvella Early Medieval Ecclesiastical Site	533	This National Monument in State Guardianship is located in the townland of Derryvella and has been associated with the monastery of Doire Meille founded by St Tigernach. It comprises a heavily overgrown enclosure (TS048-035002-) measuring 150m N-S by 125m E-W defined by an earth and stone bank (internal height 0.2m-0.6m and external height 0.8m-1.7m) and shallow external fosse with a possible entrance feature on the west side. All that remains of the levelled church building (TS048-035001-) within the enclosure are some grass-covered stones barely protruding above the surface of the ground and there are no visible remains of any grave markers or headstones inside enclosure. The site is located within private lands and is not listed as accessible to the public on the OPW Places to Visit website.¹⁰	Turbines 9, 10 and 11 are located 1.1km to-1.45km to the southwest

⁹ <https://tipperary.com/wp-content/uploads/2025/09/Littleton-Labyrinth-Brochure.pdf>

¹⁰ <https://heritageireland.ie/>



Name	Nation Monument Ref. No.	Summary Description (based on ASI inventory descriptions)	Approx. distance from nearest turbines
Liathmore Churches	266	This National Monument in State Ownership comprises two extant churches constructed within a monastery site in Leigh townland and is reputed to have been originally founded by St Mochoemog in the sixth century. The smaller church (TN042-055001-) comprises a small early medieval rectangular structure (ext. dims. 5.09m N-S; 8.26m E-W) built with coursed limestone rubble masonry on a protruding basal plinth with a doorway on the western side. The larger church to the south (TN042-055003-) comprises the well-preserved remains of a large multi-period nave (ext. dims. 9.1m N-S by E-W 15.15m) and chancel (9.1m N-S by 8.1m E-W) church with at least four phases of building. A doorway occupies the west end of the north wall, which has a sheela-na-gig (TN042-055004-) carved on the east side, and a late medieval doorway lies directly opposite in the south wall. Historical records from the 17th century indicate that this church was no longer in use at that time. The ecclesiastical site also contains the foundations of a levelled round tower (TN042-055002-) which were uncovered in the area between the two churches during archaeological excavations carried out in the 1960s. The location is within private farmland and is not listed in the OPW Places to Visit website ¹¹ but appears to be accessible via a farm track extending from a public road to the north.	Turbines 1 and 2 are located 1.7km and 1.65km to the southeast
Grallagh Castle and Bawn	127	This National Monument in State Ownership comprises a four-storey tower house (TS053-012001-) with an adjacent bawn (TS053-012002-) located in Grallagh townland. The tower house (ext. dims. 9.8m NW-SE; 12.75m NE-SW) is constructed of randomly coursed limestone rubble. It was originally built in the 15th/early 16th century and altered in the late 16th/early 17th century with additional OPW repair works carried out in the early 1940s. Part of the original bawn wall (TS053-012002-) extends north to south in the area to the east of the tower house. The tower-house is listed as an unguided site accessible to the public on the OPW Places to Visit website ¹² and appears to be accessible from an unsigned gateway on an adjacent roadway.	Turbines 9, 10 and 11 are located 6km-6.2km to the northeast
Kilcooly Abbey	218	This National Monument in State Ownership comprises a Cistercian abbey (TS043-034001-) in the townland of Kilcoolyabbey. In c. 1184, Kilcooly became a daughter foundation of the Cistercian monastery of Jerpoint, Co. Kilkenny. The abbey was burnt in 1418 and again in 1445 when it was almost completely destroyed.	Turbine 1 is located 5.1km to the east

¹¹ <https://heritageireland.ie/visit/places-to-visit/?q=Liathmore>

¹² <https://heritageireland.ie/unguided-sites/grallagh-castle/>



Name	Nation Monument Ref. No.	Summary Description (based on ASI inventory descriptions)	Approx. distance from nearest turbines
		The abbot at this time, Philip O'Mulwanayn, appears to be responsible for rebuilding the abbey which continued in periodic use until 1650 when the Cistercians were finally dispossessed by Cromwell's forces. In the late 17th/18th century the abbey was converted into a house. The abbey remains consist of a church with two-bay transepts, with a chapel in each of the eastern bays, and a south range running from the S transept with accommodation above. Much of the original 12th/13th-century limestone rubble fabric of the nave and chancel survive, despite the complete remodelling of the church in the 15th century and various repairs have also been carried out by the OPW. The abbey remains are located with the private Kilcooley Estate but is included as an amenity on a Discover Ireland website¹³ and is signposted from a public road to the west. The abbey and adjacent monuments within the estate have also been assigned a Preservation Order (ref. 3/2010).	
Farranrory Warhouse	659	The Warhouse at Ballingarry is a two-storey farmhouse which was the scene of the principal action of the 1848 Rebellion by the Young Irelanders, a mid-19th century nationalist movement led by William Smith O'Brien. The house is open to the public and contains exhibits on the history of the Famine and mass emigration, the 1848 rebellion and the penal exile of the Young Ireland leaders in Australia.¹⁴	Turbine 6 is located 9.4km to the northwest
Rathmooley Ringfort (Preservation Order 1/1992)	n/a	This hilltop ringfort contains a raised circular platform (approx. int. diam. 36m; overall diam. 90m N-S; 85m E-W) enclosed by an internal bank, a water-filled ditch and an external bank. Two silver armlets of Viking date were discovered at the site in 1925. The ringfort is located in private lands not accessible to the public. A local road extends around its west, north and east sides but the extant remains of the ringfort are not visible due to dense overgrowth.	Turbine 11 is located 6.2km to the north

¹³ <https://www.discoverireland.ie/tipperary/kilcooley-abbey>

¹⁴ <https://www.discoverireland.ie/tipperary/famine-warhouse-1848>



14.3.2.4 Prehistoric Periods

Until the recent identification of human butchery marks on animal bones recovered from cave sites in Counties Cork and Clare which have been dated to the Palaeolithic period, the earliest recorded evidence for human activity in Ireland dated to the Mesolithic period (7000–4000 BC) when groups of hunter-gatherers lived on the heavily wooded island. The archaeological record indicates that these mobile groups tended to favour coastal, lake and river shore locations which provided a transport resource and also provided elements of their varied diet. These groups did not construct any monuments that have left any above ground traces although their presence in an area can often be identified by scatters of worked flints in ploughed fields. The Neolithic period (4000–2400 BC) began with the arrival of agriculture and its establishment as the principal form of economic subsistence resulted in more permanent settlement patterns. As a consequence of the more settled nature of agrarian life, new site-types, such as substantial rectangular timber houses, field systems and various types of megalithic tombs, begin to appear in the archaeological record as well as artefact types, including pottery. Metalworking arrived in Ireland with the advent of the Bronze Age period (c. 2400–500 BC). This period was also associated with the construction of monument types such as standing stones, stone rows, stone circles and fulachta fia while the development of new burial practices also saw the construction of funerary monuments such as cairns, barrows, boulder burials, tumuli and cists. The arrival of iron-working technology in Ireland saw the advent of the Iron Age (c.500 BC – 400 AD). Relatively little has been known about settlement patterns during this period until recent decades when the corpus of evidence has been increased by the discovery of sub-surface remains of Iron Age sites during archaeological investigations undertaken as part of development projects.

The programmes of archaeological surveys and subsequent targeted excavations of a number of the peatland sites identified in the narrow section of bog within the north end of the Site were carried out by Archaeological Development Services (ADS) in 2006 and 2008. The descriptions of these investigations, as published in the Database of Irish Excavation Reports, are presented in Appendix 14.1 and a summary of the results that follows hereafter are sourced from the ADS excavation report (Turrell 2009). The targeted excavations of identified sites produced dating evidence indicating that of the eleven sites chosen for investigation, one dated to the Middle Bronze Age, another to the Late Bronze Age, five to the Iron Age and four sites were undated.

The two sites dated to the Bronze Age comprised a substantial stone-timber trackway and a plank trackway. The former site was traced for a length of 300m and was orientated east to west across the narrow section of bog the northern end of Littleton Bog. At the time of excavation, the trackway was partly or wholly milled away along much of its length but survived intact at a few locations. The surviving remains were composed of transverse planks supported by longitudinal planks, which were overlaid or underlain by brushwood and roundwood longitudinal elements. Stones, pebbles and gravel were also recorded, both above and below the planks and pegs were also recorded at some sightings. A radiocarbon date of 1190 to 900BC was obtained from this site and the surviving remains indicated that it formed an important route across the narrow section of bog which had been subject to periods of repair. The plank trackway site also extended in an east to west direction over a distance of 210m and had also been subject to milling disturbance. It was composed of longitudinal single planks supported by transverse planks and roundwoods, visible on both the field surface and in the drain face and produced a date of 1500–1570BC. The five identified Iron Age sites comprised two trackways and three platforms. One of the trackways was visible for a distance of 35m and was orientated northwest to southeast. It was composed of transverse and longitudinal roundwood and brushwood element and sections were poorly preserved or had been disturbed by milling. A radiocarbon date obtained from this site indicated that it dated from 360BC to 50AD. The other trackway was identified over a distance of 100m and was orientated northwest to southeast. It was composed of transversely laid roundwoods and produced a date of AD130 to AD420. The three platforms identified in the area were of roundwood and brushwood construction and while sections had been removed by peat milling, they appeared to measure between 5m to 6.3m in length. They produced a date range between 90BC to AD 220 and a wooden vessel was found adjacent to one example.



In addition, a review of the Topographical Files of the NMI reveals that this archive contains records of the discovery of a wide range of archaeological objects of potential prehistoric date within townlands extending into Littleton Bog which include bronze swords, one of which was found in association with a stone and timber trackway, bronze axe heads and a bronze dagger (see Appendix 14.2). The majority of these objects were discovered during the course of 20th century peat extraction works.

Despite the notable concentration of peatland sites of proven or likely prehistoric date located within the Site and also within the areas of bog in the lands extending for 2km from its boundary, there are no recorded dryland archaeological sites with classifications that can be definitively assigned a prehistoric date located within the study area. It is noted that prehistoric settlement sites typically contained timber buildings that do not leave above ground remains and the likelihood exists that unrecorded, subsurface remains of such settlements exist within the study area. This is attested to by the results of the Lisheen Mine Archaeological Project, which comprised a 1990s programme of archaeological investigations in advance of an extensive mining project within an area of Derryville Bog located 8km north of Littleton Bog. During the course of this project the subsurface remains of a total of thirty-three sites were identified within the dryland area surrounding the bog.

A review of the lands extending for 10km from the Site revealed that this area contains the recorded locations of a number of prehistoric monument types with potential ritual alignments across the wider landscape (Figure 14.5). As detailed in Table 14.8, the ASI record a number of these monuments have been levelled and examples are also of uncertain antiquity. The review of the locations of the extant monuments in relation to the Site revealed that none possess recorded alignments that potentially extend towards the locations of any proposed turbines within the Site.

Table 14-8: Monuments with potential visual alignments within 10km of Site

Monument No.	Classification and recorded condition*	Recorded orientation	Distance from nearest turbine	Direct orientation to turbine?
TS048-041----	Megalithic structure (low cairn and possible capstone)	None recorded	3.3km east of Turbine 11	No
TS054-020002-	Megalithic structure (The ASI record that this site is levelled)	None	3km southeast of Turbine 11	No
TS054-014001-	Megalithic structure (The ASI record that it is unclear if this is a megalithic structure or field clearance debris)	None	3km southeast of Turbine 11	No
TS054-011001-	Stone circle (The ASI record that this site is levelled)	None	2.3km east of Turbine 11	No
KK012-062----	Megalithic tomb - portal tomb (The ASI record that this is potentially a folly feature and not a megalithic tomb)	None	9.5km northeast of Turbine 1	No
KK008-109----	Megalithic tomb - unclassified (The ASI record that this comprises truncated mound)	None	9km north of Turbine 1	No

* Condition as recorded by Archaeological Survey of Ireland



14.3.2.5 *Early Medieval Period*

The Irish early medieval period (c.400–1169 AD) broadly commenced with the arrival of Christianity and continued until the arrival of the Anglo-Normans during the 12th century. While the later stages of this period saw the emergence of the first phases of urbanisation around the Hiberno-Norse ports, the dominant settlement pattern continued to be rural-based. The most common early medieval archaeological sites within the Irish landscape are ringforts which comprise circular enclosures delimited by earthen banks formed of material thrown up from a concentric external ditch while stone-built variants known as cashels are also common within western counties. The ubiquity of these enclosures within the Irish landscape is attested to by the fact that their original Gaelic names (rath, lios and dun) still form some of the most common place-name elements in the country. Archaeological excavations have demonstrated that the majority comprised enclosed farmsteads containing the foundations of domestic and agricultural buildings. Ringforts may also contain underground structures known as souterrains, which may also be found in isolated locations, which contain passageways and chambers and were likely used as refuge and/or storage features. There are five recorded ringforts located within 2km of the Site boundary and of these two are recorded as containing extant banks, two retain low surface remains and one levelled example is not visible at ground level (see Table 14.6). The recorded location of one souterrain (TN042-040001-) is also located within 2km of the Site boundary and the HEV description of this site records that it has been removed by quarrying.

There are also 16 enclosures located within 2km of the Site boundary, and all of these are either completely levelled or only retain only low surface remains (Table 14.7). The classification 'enclosure' is typically assigned to archaeological sites, which often may only be visible on historic maps or aerial images, that may represent the sites of levelled ringforts but do not retain enough extant features to classify them as such. The potential also exists that examples may also comprise prehistoric sites, but this often cannot be ascertained without recourse to archaeological excavation.

There are also two notable early medieval ecclesiastical sites, located in the townlands of Leigh and Derrilla, within 2km of the Site boundary which have been designated as National Monuments and details on these are provided in Section 14.3.2.3. The low remains of another early medieval church (TN042-025----) in Longfordpass North townland and the recorded site of a levelled holy well (TS054-018----) in Killeen townland which are both located within 2km of the Site also attest to early ecclesiastical activity within the study area.



14.3.2.6 High and Late Medieval Periods

The arrival of the Anglo-Normans in the late 12th century broadly marks the advent of the Irish high medieval period which continued to c.1400 and was followed by the late medieval period which extended to c.1550. These periods saw the continuing expansion of Irish urbanisation as many of the port cities developed into international trading centres and numerous villages and towns began to develop throughout the country, often within the environs of Anglo-Norman manorial centres which were defended by masonry castles. By the 15th century the native Irish chieftains and lords began to construct tower-house castles within their own landholdings as centres of territorial control. The Site is located within an area of north Tipperary which following the Anglo-Norman conquest was granted by the crown to Theobald Walter, the first Chief Butler of Ireland and progenitor of the later Earls of Ormond in 1185. While little is recorded of the development of the study area during this century, a deed of September 1199 granted Longfordpass, to Elyas FitzNorman, who is recorded to have built a castle to fortify the area. The HEV inventory entry for a 17th century bridge at Longfordpass North (TS042-027) records that the pre-Norman parish was under the control of the O'Brien's of Thomond and that in the summer of 1174 reinforcements for Strongbow's army at Cashel marched through Longfordpass before being ambushed and defeated near Thurles by Donal Mor O'Brien's forces. The presence of a number of archaeological sites within the study area including a motte, masonry castles, moated sites, churches and deserted medieval settlements, attest to a widespread settlement pattern within the dryland areas surrounding the Site during the late and high medieval periods (see Table 14.6). In addition, the NMI Topographical Files record the discovery of a human body with an associated cloak of 15th/16th date in Leigh townland which attests to human activity within the area during this period (Appendix 14.2).

14.3.2.7 Post-Medieval Period

The centuries following AD 1550 comprise the post-medieval period which continued into the middle of the 19th century with the following period extending into the 20th century often described as early modern. The following section provides a high-level overview of the period and further details on the layout of the area between the mid-19th and mid-20th centuries are provided in the cartographic review section presented below (Section 14.3.2.10). The early part of the post-medieval period was a turbulent time in Ireland history and saw a period of wars between the 1560s and 1603 and further conflict during the Cromwellian Wars (1649–53) which saw the extensive dispossession of forfeited Gaelic lands. A review of the mid-17th-century Down Survey records relating to the named the landowners of a number of townlands that extend within the Site indicate that formed part of the extensive landholdings of the Earl of Ormonde at that time. As the post-medieval period progressed high and low status stone houses began to replace simpler cabins throughout the Irish countryside and many farmsteads at this time typically consisted of single-storey cottages with associated outbuildings while two-storey farmhouses became more common into the 19th century. An agricultural boom in the late 18th and early 19th centuries saw a rise in prices for both Irish tillage and dairy produce which resulted in landlords investing in extensive land improvement works within their holdings to increase productivity. The settlement pattern throughout much of the rural landscape was greatly affected by the Famine period and its aftermath in the middle of the 19th century which saw the depopulation of many areas. The period after the Famine saw an increasing move away from small-scale subsistence farming towards more market-led pasture, assisted by the development of the Co-Op system, which also increased the extent of the reclamation of previously marginal lands.



There are no recorded post medieval archaeological sites located within the Site while a number of examples are located within the surrounding 2km study area and these comprise two partially extant fortified houses, the low remains of a largely levelled 17th century bastion fort (TN042-060----) and the recorded location of a now removed 17th century bridge (TN042-027----). The latter two sites are located within the townland of Longfordpass North and it has been noted that the Longfordpass area formed one of the two main routes between Munster and Leinster, was of great strategic importance throughout the historical period (Turrell 2009, 15). The bridge was named 'Bridge of Durragh' on the Civil Survey of 1654-6, which also described a bastion fort (TN042-060----) to the west as 'being lately erected...a strong fort by name Fort Ireton'.

14.3.2.8 Database of Irish Excavation Reports

The Database contains a range of entries for archaeological surveys and excavations of archaeological sites located within the main concentration of peatland sites within the northern end of the Site. These are summarised in Table 14.9 and the full Database entries are provided in Appendix 14.1. The Database entries do not provide SMR references for the excavated sites, but these have been included in Table 14.9 where it is possible correlate the descriptions with inventory entries for SMRs published on the HEV. The first two numbers in the licence references in the table identify the years in which the site investigations were conducted (e.g. 06E = 2006).

Table 14-9: Summary of Database of Irish Excavation entries

Licence	Director	Summary Description
n/a	Stella Cherry, Siobhán Geraghty Michael Ryan (National Museum)	Trackway (SMR TN042-039----) Following the discovery by a Bord na Móna worker of a Late Bronze Age leaf-shaped sword between the timbers of an exposed togher at Littleton Bog, Co. Tipperary, a team from the National Museum of Ireland investigated the site. Part of the same togher had previously been examined by Prof Etienne Rynne in the early 1960s (see North Munster Antiq. Jour. 1962-65, Vol IX, 138-144). At least three toghers run through this section of Littleton Bog. That investigated is the most northerly (Rynne's Togher A). It runs in a south-west-north-east direction and can be traced on the ground for a length of 400m. It is cut through in several places by Bord na Móna drainage ditches. The surface of the trackway has been damaged by the passage of machinery and by having been exposed to the elements for a long period of time. At the find spot of the sword an area 6m x 8m was investigated. here the trackway was approx. 4.5m wide. It was delimited on the south by a large oak beam 4.9m long. The rest of the trackway consisted of birch logs and some smaller redeposited planks – some with square perforations for pegs
06E0698	Jane Whitaker	This bog was surveyed as part of the 2006 Peatland Survey on Bord na Móna's Littleton group of bogs. Thirty-three sites were recorded in this bog and they were located mainly in the northern extent. The sites were mainly roundwood and brushwood structures, with the exception of two plank trackways and a gravel, stone and plank trackway. The remaining sites were eight archaeological wood sites, four platforms and eighteen trackways of varying lengths and widths. Nine of the sites were dated and the dates ranged from 1740-1420 bc to ad 130-420.



Licence	Director	Summary Description
08E0399	Sinclair Turrell	Stone and timber trackway (SMR TN042-039---- Following the peatland survey carried out by ADS in 2006, a total of thirteen sites were excavated in Littleton Bog, Co. Tipperary, during May and July 2008. This site was first investigated in 1960 by Etienne Rynne (Rynne 1962-5) and subsequently entered on the SMR. In 1990, a Bord na Móna worker found a Late Bronze Age leaf-shaped sword protruding from the exposed timbers of the site. This was entered in the NMI Topographical Files as IA/192/1990. A team from the NMI carried out an investigation of the site and found that the trackway appeared to have had two phases of construction (Excavations 1990, No. 105). During the 2006 Peatland Survey a radiocarbon date of 1190 bc- 900 bc was obtained for the site. Four cuttings measuring 5m by 4m were excavated and a metal-detection survey was also carried out along the length of the trackway. It was variable along its 300m length with no cuttings displaying an identical stratigraphy. Only in Cuttings 2 and 4 did a full stratigraphic sequence still survive. The trackway seems to have been renewed or rebuilt at least once, with the later phase being generally wider than the earlier. In Cutting 2 the trackway had a base of peat, sand and stones above which was a mix of longitudinal and transverse planks, together with several pegs. Above this was a layer of longitudinal planks resting on transverse planks and these were overlain by another deposit of stones. Above the stones was a layer of transverse planks resting on longitudinal planks. There was also a line of pegs running along each edge of the trackway, fixing the upper transverse timbers in place. Many of the planks found throughout the sequence had mortise holes at their ends. In Cutting 4, the base of the trackway was composed of transverse plank fragments and stone. Above this was a layer of mortised transverse planks, with a line of pegs running along each edge of the trackway. This was overlain by a longitudinal roundwood above which was a dense layer of transverse roundwoods.
08E0400	Sinclair Turrell	Single-plank trackway Four cuttings, each measuring 6m by 3m, were excavated along the length of this site, a single plank trackway which ran across the northern end of the bog for 168m in an east-north-east to west-south-west orientation. It was constructed of longitudinal split oak timbers supported by transverse planks. Some of the longitudinal planks had mortise holes within situ pegs, while some of the transverse timbers had mortise holes that did not contain pegs. At two locations, supplementary layers of roundwood and brushwood were located below the transverse timbers, to provide extra support in localised wet patches within the bog.
08E0401	Sinclair Turrell	Roundwood and brushwood trackway The site was investigated by means of three cuttings, each measuring 6m by 4m, with a further six small slot-trenches situated between the main cuttings. It was found to be a brushwood and roundwood trackway, running north-west to south-east for 38m. The trackway was up to 4m wide and constructed from roughly trimmed wood, laid transversely and fixed into place with occasional pegs. A radiocarbon date of 360 bc to 50 ad was also returned.



Licence	Director	Summary Description
08E0402	Sinclair Turrell	Archaeological wood This site was investigated by a cutting measuring 2.3m by 1m and two small slot-trenches. It was composed of a loosely laid brushwood spread covering an area of around 5m by 2m. No particular function could be ascribed to it, but, since the site was located in an area where several platforms occurred, it may also represent the remnants of a platform.
08E0404	Sinclair Turrell	Wooden Trackway Excavation of two cuttings, each measuring 5m by 4m, revealed the remains of a substantial corduroy-type wooden trackway running across the northern end of Littleton Bog for 91m in a north-west to south-east direction. It ranged from 3.6m to 4m in width and was constructed from transversely laid roundwoods, split timbers, planks and brushwood, pegged into place along each side of the site and underlain by two parallel longitudinal runners.
08E0406	Sinclair Turrell	Archaeological wood A single cutting, measuring 3m by 1.5m, was excavated in order to investigate this site. It was composed of four poorly preserved roundwood and brushwood elements, one of which had a wedge-point worked end. Little remained of this site but there were a number of roundwood and brushwood platforms close by and it may be that this was originally also a platform. Wood samples taken in 2006 were identified as alnus (alder) and betula (birch).
08E0407	Sinclair Turrell	Platform (TN042-039013-) This site was investigated within a 4m by 3m cutting and a small slot-trench. These revealed the remains of a brushwood and roundwood platform, which was constructed from two layers of wood laid at right angles to each other, with some larger elements placed around the perimeter. The platform measured around 5m from north-west to south-east but was truncated by a drain on the western side. A large and well-preserved wooden vessel was found at the north-eastern edge of the site. The vessel, probably a type of trough, had been finely crafted from a single piece of wood and displayed numerous small facets. It was exposed, recorded and then removed as a block, together with the surrounding peat and the peat fill.
08E0408	Sinclair Turrell	Platforms (TN042-039015-) Two cuttings, each measuring 4m by 2m, were excavated, together with eight small slot-trenches. The site consisted of two adjacent platforms. The wood in and around Cutting 1 represented the remains of a brushwood and roundwood platform measuring around 7m by 7m. The basal layer was composed of brushwood and was overlain by two layers of rough brushwood laid at right angles to each other. There were also occasional pegs fixing the elements in place. The second platform, in Cutting 2, had a brushwood base overlain by two roundwood layers, also laid at right angles to each other. It was rectangular in plan and measured 5m by 3.5m.
08E0409	Sinclair Turrell	No archaeological significance (SMR TN042-039016-) This site was recorded during the 2006 survey as three well-preserved brushwoods, orientated north-west/south-east and exposed on the field surface. At the time of excavation these brushwoods could not be located.



Licence	Director	Summary Description
08E0410	Sinclair Turrell	Roundwood and brushwood trackway (SMR TN042-039019-) Three cuttings, each measuring 5m by 4m, were laid out along the length of this roundwood and brushwood trackway, together with eight small slot-trenches. This trackway measured 100m in length and was orientated north-west to south-east. In Cutting 1, at the north-eastern end of the site, the site consisted of widely dispersed roundwood and brushwood and was up to 2.4m wide. In Cutting 2 the site was 4.6m wide and composed of roughly trimmed transverse roundwood and brushwood above a layer of longitudinal wood. Cutting 3 contained only a few broken and degraded scraps of wood. A radiocarbon date of ad 130 to ad 420 was obtained.
08E0411	Sinclair Turrell	Platform (SMR TN042-039020-) One cutting measuring 4m by 2m, together with seven slot-trenches, were excavated here and revealed the remains of a brushwood and roundwood platform. The base of the platform was composed of two layers of brushwood and roundwood, overlain by a perpendicular layer of roundwoods. The structure was held together by a small number of pegs. The platform was probably sub-square in shape with sides up to 6.3m in length.
08E0412	Sinclair Turrell	Platform (TN042-039025-) A single cutting measuring 5m by 2.2m, together with two small slot-trenches, were excavated and revealed the remains of a platform. It was sub-rectangular in plan and measured around 5m north to south by 6m. The platform was constructed of three layers of brushwood with some roundwood and split timbers laid along the edges of the platform and secured in place with short pegs. The uppermost layer of brushwood was separated from the underlying brushwood by a thin deposit of peat and may therefore have been a later addition.
06E0697	Jane Whitaker	This bog was surveyed as part of the 2006 Peatland Survey, which concentrated in Bord na Móna's Littleton group of bogs. Three bogs were surveyed under one licence, Lanespark, Ballybeg and Derryvella bog. All three bogs are located in close proximity to the Bord na Móna peat briquette factory at Ballybeg. Lanespark is immediately north of the briquette factory and is 324ha in size. No archaeological features were recorded in this bog.

14.3.2.9 Designated Architectural Heritage Structures

There are no protected structures or NIAH-listed structures or landscapes located within the Site, and it does not extend within, or in the close environs of, an Architectural Conservation Area (ACA). There are two protected structures located within 2km of the Site (Figure 14.3 a-b). One of these comprises a presbytery house (ref. TRPS1855) which is located in Gortnahoo townland at a distance of c. 1.7km outside the east of the Site boundary and this is c. 2.4km from the nearest turbine (Turbine 1). This 20th century building is also listed in the NIAH (ref. 22204201) which assigns it a regional rating. The other protected structure within the 2km study area comprises a two-storey 19th century house (ref. TRPS1389) in Ballynonty townland which is named Hillview House. This building is located c. 1.83km outside the southeast end of the Site boundary and is c. 2.4km from the nearest turbine (Turbine 11). The house is also listed in the NIAH (ref. 22205402) which assigns it a regional rating.



14.3.2.10 Review of Cartographic Sources

A review of the 1st edition 6-inch Ordnance Survey (OS) map (published 1843), the 25-inch OS map (published 1904) and the 2nd edition 6-inch OS map (published 1905) revealed that all of these depict the Site as an area of vacant bogland with no vernacular structures, demesne lands or potential archaeological features indicated on any edition. The latter two editions both include the label 'mound' along a number of linear townland boundaries extending through the Site and these typically refer to boundary features within bogland locations dating to recent centuries. The locations of all these labels are within sections of the bog that have been subject to extensive peat extraction works which likely removed any surface traces of these townland boundary features. In addition, the OS maps do not depict any earthen banks or cut ditches extending along the townland boundaries which are indicated as linear cartographic features. The review of the OS maps also revealed that none depict historical peat-cutting or extensive drainage works within the Site and indicate that the location was likely undisturbed bogland until the commencement of the extensive peat extraction works in the second half of the 20th century. The OS maps all show the location of the proposed borrow pit area in the east end of the Site within an area of vacant pasture fields and no potential archaeological sites or structures of potential architecture heritage, such as vernacular buildings, are depicted in this area on any editions. The maps show a quarry area located outside the east end of the proposed borrow pit area which attests to historical extraction works at the location.

14.3.2.11 Review of aerial, satellite and LiDAR imagery

A review of online aerial and satellite images published by Tailte Éireann, Bing and Google, as well as LiDAR images of the Site, which was commissioned by the Developer, revealed that the Site has been subject to extensive ground disturbance during peat extraction works in recent decades and no potential unrecorded archaeological sites or other cultural heritage features were noted within its boundary on any of the reviewed images. The imagery shows also shows the development of existing overgrowth within areas of the Site that were removed from peat extraction works during the past decade, including at the locations of turbines and associated onsite infrastructure. The review of the aerial/satellite and LiDAR images did not reveal any potential unrecorded archaeological sites within the proposed borrow pit area in a green field location in the east end of the Site.

14.3.2.12 Undesignated Cultural Heritage Assets

While encompassing the protected archaeological and architectural heritage resources, cultural heritage also includes various undesignated assets such as demesne landscapes and vernacular structures as well as intangible assets such as folklore, placenames and historical events and associations. As noted in Section 14.3.2.9, the review of historical mapping of the Site did not reveal the presence of any undesignated cultural heritage structures or demesne lands within the Site boundary. The Site extends into a number of townlands and the Irish origins of these placenames presented in Table 14.10 have been sourced from the Placenames Database of Ireland¹⁵.

¹⁵ <https://www.logainm.ie/en/7051>



Table 14-10: Translation of townland names

Townland	Irish	Translation
Longfordpass North/South	Áth Fhada	Long ford
Leigh	Liath	grey place
Newhill	n/a	n/a
Noard	Núrd	meaning uncertain
Clonoura	Cluain Orrtha	'the greyish lawn or boggy pasturage'
Derryhogan	Doire Uí Ógáin	oak-wood of Ó hÓgáin
Lanespark	Buaile Ghréine	Lanespark formerly called Baile Ghroithne (Groithne's pasture)
Killeen	Na Cillíní	a little church

14.3.2.13 Site Inspection

The existing ground conditions within the Site are the result of large-scale industrial peat extraction works during the second half of the 20th century which continued in areas until the final cessation of works in 2017 as well as the revegetation of extensive areas where extraction works ceased in recent decades. Parallel drainage ditches to drain the upper surface of the bogs by lowering the local water table were mechanically excavated across the Site at different stages throughout the second half of the 20th century with strips of bog between these drains were retained to form peat extraction fields. The peat extraction works within the Site initially comprised the extraction of sod peat until 1984 and entailed the excavation of large open drainage ditches known as "trenches" were opened at widths of approximately every 240m across the entire width of the extraction area. These trenches formed the beginning of the face bank from which sod peat was extracted by machine. Milled peat extracted at the Site between 1984 and 2017 and was transported to Littleton Briquette Factory via the bog railway. During the milling process, the top 10-15mm of the surface of each field was broken into peat crumbs by powered milling drums towed behind agricultural tractors. The milled peat crop was then dried by harrowing, gathered into ridges and was then harvested by machine.



Between July 1988 and July 2017, an average of 170,593 tonnes of peat were extracted each year, with a total of approximately 5,117,798 tonnes extracted between July 1988 and the cessation of peat extraction in 2017. There was an average depth of milled peat extraction of 0.1m per year and the location of the main concentration of identified archaeological sites in Littleton Bog (Figure 14.2a) was subject to extraction works until 2017. This likely resulted in approximately an average of 1.1m reduction of ground levels at their location in the period following their identification during surveys in 2006. Phase 1 rehabilitation works were completed in Littleton bog between 2018-2021 and this included the blocking of drains. Some rehabilitation works have also commenced within areas of the Site in the form of extensive natural revegetation and re-colonisation, including areas of birch woodland and a portion of the Littleton bog has been developed as a conifer plantation by Coillte. Areas of the bare surface peat within the cutaway parts of the Site have reduced as the vegetation developed and consolidated. The turbines are located within areas of cutaway bog that have become overgrown with vegetation and the site inspections of the turbine locations, as well associated hardstands and site access tracks, confirmed that there is little exposed bare bog within the overgrown ground surfaces at their locations. No surface traces of any potential archaeological sites were noted during field-walking inspections of the areas of bare peat at Proposed Development locations. The inspections of the locations of remaining drainage ditches within the environs of Proposed Development areas revealed that many of these were obscured by standing water and where visible the drain faces were typically obscured by vegetation and silting. These onsite conditions did not allow for a detailed inspection of the ground surface at the locations of the proposed turbines as well as associated hardstands and sections of site access tracks due to the presence of extensive vegetation and standing water in drains. As noted in Section 14.2.7, all areas within the Site, including the locations of the turbine and hardstands as well as the site access tracks to their locations, were subject to detailed inspections during the programmes of archaeological surveys conducted in the 1990s and 2000s and no archaeological sites were identified at their locations.

The Proposed Development within the Site will entail the creation of floating and founded site access tracks (6m wide) and will also include the upgrading of existing bog operation trackways. The site access track will extend into the Site from the R639 road to the north through a level area of bog that is now surfaced with grass growth. The site access track then follows the line of the former bog railway towards Turbine 1 and, thereafter, runs parallel to the east side of the railway as it extends to the southwest end of the Site. The railway comprised a network of permanent and temporary narrow-gauge rail tracks, the majority of which were constructed in the 1950s and 1960s. The track sleepers were approx. 1.8m in length and 0.76m apart and the total length of permanent track at the Site is c.9.5km long. As areas of the Site fell out of permanent production, some railway lines were taken up completely although sections remained in place at the time of site inspections with other areas containing removed tracks that have been stacked within the Site. The railway line includes sections that are set below adjacent bog surfaces, and the construction of these sections appears to have required the excavation of cut sections in order to create a level railway surface. The location of the proposed onsite substation and adjacent construction compound is located adjacent to the east side of the railway within an area partially overgrown by recolonised vegetation.



The location of the main concentration of recorded archaeological sites within a narrow section of the Littleton bog area was submerged by groundwater during an inspection carried out in July 2022 but was exposed during other inspections in 2023 and 2025. The ground surface in this area contains exposed peat but this was heavily silted over, likely due to the presence of standing water at the location. The remnant ground drains in this area were filled with water at the time of all inspections and, therefore, it was not possible to carry out detailed visual appraisals of drain faces in order to ascertain if traces of potential archaeological features survive in this area. The location of the substation area is in proximity to the recorded location of a togher site (TN042-039004-) (Figure 14.2a). This was described in 2006 as a trackway visible on the field surface and in the drain faces which was composed of single planks supported by interspersed transverse planks and roundwoods. The trackway recorded to have been in a poor to moderate state of preservation in 2006, as it had been exposed to machine damage at numerous locations along its length (see Appendix 14.1 for full inventory description). This area was likely subject to continuing peat extraction in the years following the identification of this site which may have disturbed or removed further archaeological remains. The inspection of this location did not reveal any surface traces of this site within the substation area, but the presence of surface vegetation may mask any surviving surface remains and there is also the potential for surviving subsurface remains. A surface scatter of small timber fragments was noted in an exposed section of surface peat in an area c.10m to the south of the substation area and the potential that this may form the remnants of a removed section of the trackway was noted. The recorded locations of two togher sites (TN042-039008- and TN042-039009-) are situated c.20m to the north of a proposed peat deposition area located to the east of the substation area (Figure 14.2a). No surface traces of these sites were observed during the site inspection, but the potential exists that subsurface traces may survive.

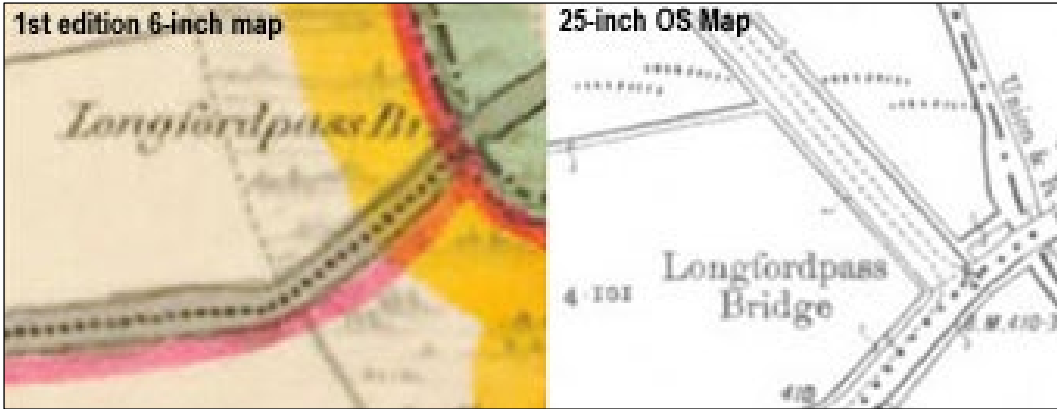
The proposed borrow pit area is located within improved pasture fields in an area of pasture farmland situated on higher ground to the east of the bogland. The ground surface within the fields slopes gradually down towards the bog to the west and was covered by low grass growth at the time of inspection. As detailed in Section 14.3.2.10, this area is depicted as vacant fields on the historic OS maps and no surface traces of any potential unrecorded archaeological sites or structures of architectural heritage interest were noted during the field-walking survey of this area.

14.3.3 Grid Connection

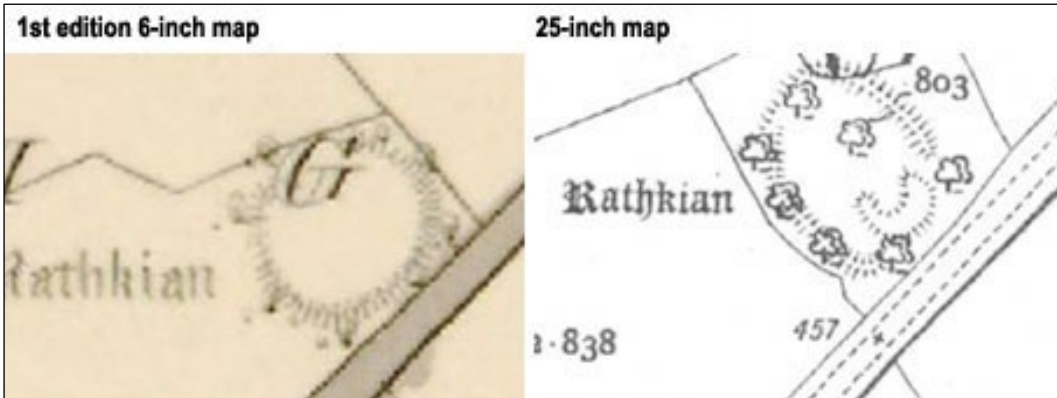
There are ten recorded archaeological sites located within the 100m wide study area centred on the roadways that the GC follows, and these are detailed in Table 14.11.



Table 14-11: Archaeological Sites within GC Study Area

Monument	Class	Townland	Summary Description
TS042-027---- TN042-027----	Bridge	GRAIGUEPADEEN	A modern bridge traverses the Black River on the old Cork-Dublin road located within the GC is indicated as the location of a historic bridge. The ASI record that the 'Bridge of Durragh' described in the Civil Survey of 1654-6 (Simington 1931, vol. 1, 101) was possibly at this location but note that no visible remains of a historic bridge are present. No structural remains of an earlier bridge were noted during the inspection of the grid connection route. 



Monument	Class	Townland	Summary Description
TS042-026----	Ringfort	GRAIGUEPADEEN	Levelled ringfort depicted on historic OS maps as an oval enclosure adjacent to the north side of public road that the GC follows. The maps indicate that the road was constructed to avoid the site but the potential for the presence of sub-surface archaeological features located beneath road fill material in this area cannot be discounted. No surface remains of this site were noted from the roadway to south during the inspection of the grid connection route. 



Monument	Class	Townland	Summary Description
TS042-020----	Moated site	FENNOR	The ASI record that this comprises a partially extant rectangular enclosure delimited by sections of an earth-stone bank and ditch, the north end of which has been levelled. The historic OS maps show the north end of the site at a distance of c.30m to the south of the public road that the GC follows. The location of this site is screened by roadside vegetation and is not visible from the road to north. 1st edition 6-inch map 25-inch OS map

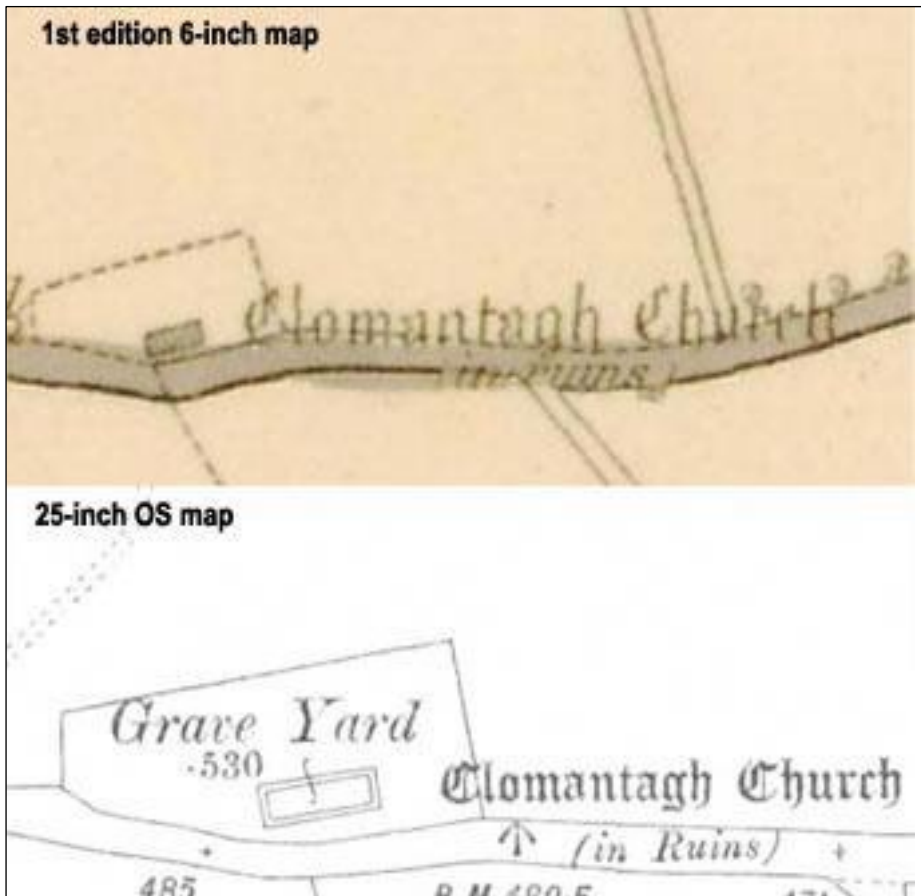


Monument	Class	Townland	Summary Description
KK012-007----	Holy Well	BORRISMORE	The ASI record that this comprises spring well known as Tobar Patraig (Patrick's Well) which is no longer venerated and survives as a silted-up pond located c.10m to the north of the public road that the GC follows. A modern manhole in a concrete structure is located between the recorded location of the well and the road to south. 1st edition 6-inch map  25-inch OS map 



Monument	Class	Townland	Summary Description
KK012-009----	Church	BORRISMORE	The ASI note that 19th century OS records refer to the presence of a gable wall at this location which was known locally as the remains of a church. The wall has now been levelled but the historic OS maps indicate its location c.15m south of the road that the GC follows. The OS maps also show a levelled routeway known as 'Boherkieran' (KK012-008----) extending to the north of the church. No surface traces of the route are present survive but the ASI record that its line can be traced as a cropmark in the lands to the north. No surface remains of these sites were noted from the roadway during the inspection of the grid connection route. 1st edition 6-inch map 25-inch map



Monument	Class	Townland	Summary Description
KK013-003001- KK013-003002- KK013-003003-	Church Graveyard Architectural fragment	CLOMANTAGH LOWER	Extant church, which the ASI record as being of potential 13th century date, located within graveyard (KK013-003002-) on north side of road. The ASI also record that cut stones were uncovered during a clean-up of the graveyard in the 1990s (KK013-003003-). The graveyard contains headstones date from the late 18th century onwards. The existing boundary of the graveyard is shown on the historic OS maps which also depict the existing public road to the south which the GC follows. The surface of the existing roadway to the south is set c.0.5m-1m below ground levels in the church and graveyard indicating that its construction may have reduced ground levels to natural subsoil level. 

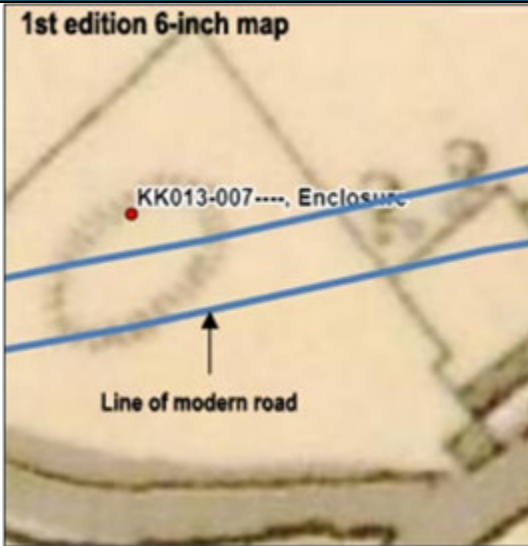


Monument	Class	Townland	Summary Description
KK013-005----	Ringfort	CLOMANTAGH LOWER	The ASI record that this site comprises a roughly circular raised platform (max. dims. 30m N-S; 29m E-W) enclosed by low flat-topped earthen bank (overall Wth 4.5m; Wth at crest 1.25m; int. H 1m; ext. H 1.5m). The public road that the GC follows was constructed within the north half of the ringfort. This road is shown on the historic OS maps and was, therefore, constructed at some point before the 1840s and has been upgraded since that time. The ground excavations required to construct the original road as well as any later works to create the existing modern tarmac-surfaced road have the potential to have truncated/removed internal features within the ringfort but the potential for the presence of internal archaeological features beneath road fill material cannot be discounted. Ringforts were enclosed by deep external ditches which often measured 2m+ in depth and the potential, therefore, also exists for the presence of sub-surface remains of the east and west sections of the enclosing ditch beneath road fill material. The location of this site is screened by roadside vegetation on both sides and there are no views of extant remains of the ringfort from the roadway. 1st edition 6-inch map 25-inch OS map



Monument	Class	Townland	Summary Description
			 Aerial image of ringfort with approx. extent of GC within site shown in red
KK013-007----	Enclosure	CLOMANTAGH LOWER	Indicated on the historic OS maps as an oval enclosure (dims. c. 28m x 15m) within a greenfield area. The existing road that the GC follows in this area was built in the 20th century as a local road diversion and it was constructed through the south half of the enclosure. The ASI record that the north half of the enclosure indicated on the historic OS maps was removed by quarrying in the 20th century. The inspection revealed that the area to the north of the road at this location has clearly been disturbed by quarrying and the construction of the modern roadway appears to have also reduced ground levels within its footprint. The potential does exist for the presence of sub-surface archaeological remains within the roadway.



Monument	Class	Townland	Summary Description
			   Aerial image showing modern disturbance of the enclosure



Monument	Class	Townland	Summary Description
KK009-064----	Holy Well	TOBERNAPEASTIA	The ASI record that this holy well was located c.16m to the south of the road that the GC follows and was recorded in OS letters dating to 1839 as 'Tobernapeastia' (well of the worms). The well is no longer venerated and is sealed by a concrete covering. The site is screened by roadside vegetation and was not visible from the roadway during the inspection. 1st edition 6-inch map 25-inch map



Monument	Class	Townland	Summary Description
KK013-089----	Water mill	FRESHFORD LOTS	Watermill depicted on the Down Survey map (1655-6). The ASI record that the location roughly corresponds with flour mills depicted on the 1st ed. OS 6-inch map which has since been demolished. The indicated location of the mill site is c.40m to the south of the road that the GC follows and is not visible from the roadway. 1st edition 6-inch OS map 25-inch OS map



Monument	Class	Townland	Summary Description
KK009-027----	Ringfort	GRANGE	This circular (int. diam. c. 43m) ringfort is now levelled but is shown on the 25-inch OS map as enclosed by a bank, fosse, outer bank and a probable outer ditch. The detail on the 25-inch OS map shows a section of hachures on the west side of the ringfort which appear to depict the extent of the outer ditch in this area. The public road that the GC follows is shown adjacent to the outer edge of these hachures and the potential exists that the road was constructed to avoid the ringfort. No surface traces of the levelled ringfort were noted during the visual appraisal from the roadway. 1st edition 6-inch map 25-inch OS map



The GC extends through Urlingford village, and the study area contains a number of protected structures within this settlement that are listed in the Kilkenny City and County Development Plan 2021-2027. These comprise a range of 19th and early 20th century buildings located adjacent to the main street (Table 14.12 and Figure 14.15). All of these buildings are also listed in the NIAH, which assigns them a regional rating, and this inventory also includes a number of other buildings in the village that are set back from the main street. The Record of Protected Structures and NIAH do not list any street furniture features within the section of road extending through the village. In addition, the village does not contain an Architectural Conservation Area. The NIAH also lists a number of structures within properties adjacent to the roadways that the GC follows in rural areas and one of these comprises a bridge structure located within the roadway.

Table 14-12: Architectural Heritage Constraints in GC Study Area

Protected Structure	NIAH	Description
C255	12304009	Public Library (former courthouse)
C254	12304011	Catholic Church of the Assumption
C542	12304012	Bank of Ireland
C984	12304024	House
C978	12304007	House
C985	12304025	House
C976	12304004	House
C977	12304006	House
C543	12304003	Allied Irish Bank
C982	12304020	House
C975	12304002	House
C256	12304001	House
-	12303001	Ballyragget Corn Mill
-	12303002	Ballyragget National School
-	12305014	house
	12400902	Grange Bridge
-	12400919	Grange House
-	12400920	Grange House
-	12400922	Clone House
-	12401205	Woodsgift Rectory
-	12401304	Kilrush Corn Mill (Crannagh Flour Mill)
-	12401309	Kilrush House gate lodge
-	12401310	Kilrush House gateway



14.3.4 Turbine Delivery Route

The delivery route to the Site will be along existing roads from Foynes Port, Co. Limerick. A review of the Route Study Report prepared by Pell Frischmann in January 2026 revealed that three areas of third party lands will be required along the route to facilitate minor road widening works, which will entail load bearing surfaces on existing verges and removal of modern signage and localised sections of boundary features. A review of these areas revealed that there are no recorded cultural heritage constraints at their locations or within lands extending for 100m in all directions. The Route Study Report does not identify any required works to masonry bridges along the route or other cultural heritage constraints within properties adjacent to the roadways that the route follows.

14.4 Potential Effects

14.4.1 Do-Nothing Scenario

Please note that irrespective of the consenting of the Proposed Wind Farm the remaining measures outlined in the Rehabilitation Plans, i.e. monitoring of the Littleton, Longfordpass and Lanespark Phase 1 measures and enhanced Phase 2 measures at nearby Ballybeg and Derryvella bogs, will continue to be implemented by BnM in agreement with the EPA. Please see Appendix 2.1 (Volume 3 of the EIAR) and Section 2.2.1 of Chapter 2 of the EIAR for further detail.

14.4.2 Construction Phase

14.4.2.1 *Wind Farm Site*

14.4.2.1.1 Direct Impacts

Direct impacts refer to a 'physical impact' on cultural heritage constraints typically arising during ground excavations, or other earth-moving works, but may also arise from de-watering effects on organic archaeological sites and objects within peatland environments

The construction phase of the Proposed Development within the Site will require ground excavation works for elements of the Proposed Development including geotechnical site investigations, turbine foundations, hardstands, site access tracks (floating and founded) and adjacent drains, cable trenches, substation, met mast, compounds and borrow pit area.

The Proposed Development will also include peat deposition areas (PDA) where surplus topsoil/peat and spoil will be deposited in berms on existing ground surfaces and Biodiversity Enhancement and Management Plan (BEMP) lands where no notable ground excavations will be required. The measures set out in the BEMP include those designed to protect and enhance existing habitats and includes planting of appropriate vegetation. It is expected that measures associated with the implementation of the proposed BEMP will be equivalent to standard agricultural activities and will be maintained by Bord na Móna. There are no recorded extant archaeological sites located within these areas.



The review of the recorded archaeological sites located within the Site boundary revealed that all comprised peatland sites, primarily trackways and platforms, which were recorded during surveys and targeted archaeological excavations carried out in the 1990s and 2000s as programmes of archaeological mitigation relating to ongoing peat extraction works which were carried out within areas of the Site without further archaeological mitigation until 2017. The main concentration of identified archaeological sites identified during these archaeological investigations was located in a narrow section of bog in the northern half of the Site, and no construction phase works are proposed in this area (Figure 14.2a). The location of the nearest proposed turbine (T1) is c.2km to the south of this concentration of sites, while the substation area is c.225m to the southwest. The review of the inventory descriptions of these sites (see Appendix 14.1) revealed that exposed surface remains were in the process of being removed by peat extraction works at the time of these archaeological investigations and peat extraction works continued in this area until 2017. A visual appraisal of existing ground surfaces at the locations of the recorded sites within areas not covered by water or vegetation overgrowth during the compilation of this assessment did not reveal the presence of surface remains, although it is noted that the potential exists for the survival of sub-surface remains. The Proposed Development has been designed to avoid the recorded location of this concentration of archaeological sites and no direct effects on any surviving elements of the recorded extent of their location will occur.

As detailed in Section 14.3.2.13, the proposed location of the substation area is within the environs of the recorded location of a togher site (TN042-039004-) (Figure 14.2a). This was described in 2006 as a trackway visible on the field surface and in the drain faces which was composed of single planks supported by interspersed transverse planks and roundwoods. The trackway was recorded to have been in a poor to moderate state of preservation in 2006, as it had been exposed to machine damage at numerous locations along its length (see Appendix 14.1 for full inventory description). This area was likely subject to continuing peat extraction in the years following the identification of this site which may have disturbed or removed further remains. The inspection of this location did not reveal any surface traces of this site within the substation area, but the presence of surface vegetation may mask any surviving surface remains and there is also the potential for surviving subsurface remains that would be subject to direct, slight-moderate negative effects during construction phase ground works. The recorded locations of two togher sites (TN042-039008- and TN042-039009-) are situated c.20m to the north of a proposed peat deposition area located to the east of the substation area (Figure 14.2a). No surface traces of these sites were observed during an inspection of their recorded location, but the potential exists that subsurface traces may survive and would be subject to direct slight-moderate negative effects from site traffic to the peat deposition area. A section of a floating site access road extends within c.80m of a recorded sighting of an unclassified togher (TN042-057----/TS042-057----) in the 1960s. The recorded location of this site has been subject to extensive peat extraction works since the 1960s and was overgrown at the time of inspection but there is also the potential for surviving subsurface remains that could be subject to direct, slight-moderate negative effects during construction phase ground works.

The potential also exists for the presence of previously unrecorded, sub-surface archaeological sites and objects within the Site boundary. While the existence as well as location, nature and extent of such potential unrecorded, sub-surface archaeological remains are indeterminable, the potential does exist for direct, negative effects on any examples that may exist within proposed development areas, and this will require mitigation (see Section 14.5).

There are no designated architectural heritage structures located within the Site and the construction phase will, therefore, not result in any direct effects on this element of the cultural heritage resource.

There are no National Monuments in State Care or archaeological sites subject to Preservation Orders located within the Site and, therefore, no direct impacts to these elements of the archaeological resource are identified. Potential indirect operational effects on such monuments within the wider landscape are assessed in Section 14.4.3 below.



A review of the recorded archaeological sites and designated architectural heritage structures located within 2km of the Site (see Section 14.3.2) revealed that there are no examples within c.400m of the locations of any turbines or associated infrastructure and, therefore no potential direct effects on these external elements of the cultural heritage resource are predicted during the construction phase.

14.4.2.1.2 Indirect Impacts

As noted above, the review of the inventory descriptions of the recorded archaeological sites (see Appendix 14.2) revealed that remains exposed on the bog surface during 1990s and 2000s archaeological surveys were in the process of being removed by peat extraction works, but it is noted that the potential still exists for the presence of surviving sub-surface archaeological sites and objects within the Site. Given the buried nature of any potential remains of these archaeological sites, no likely indirect visual effects on their wider settings are predicted during the construction phase.

14.4.2.2 Grid Connection

The construction of the grid connection will entail the excavation of a cable trench within existing roads that have truncated original ground surfaces. As detailed in Section 14.3.3, there are ten recorded archaeological sites located within the 100m study area centred on the GC (Figure 14.15). The public road that the route follows extends through the recorded extent of two of these archaeological sites and these comprise a ringfort (KK013-005---) and an enclosure (KK013-007---). While the construction of the existing roadways has likely disturbed archaeological features within these sites the potential that associated subsurface archaeological remains, such as enclosing ditch features, may exist beneath road fill material cannot be discounted. The excavation of the cable trench within the environs of these two sites, therefore, has the potential to result in slight-moderate direct effects on any such surviving archaeological remains and this will require mitigation. No likely direct effects on other archaeological sites located within the 100m study area are predicted. While the existence as well as location, nature and extent of any potential unrecorded, sub-surface archaeological remains associated with these sites are indeterminable, the potential does exist for direct, negative effects on any associated remains that may extend under the roadway that the grid connect follows and this will require mitigation.

The majority of the architectural heritage constraints within the GC study area are located within private properties adjacent to the public road and no mitigation measures for these structures will be required. The proposed crossing methodology at Graiguepadeen Bridge (TS042-027---) and Grange Bridge (NIAH 12400902) (see Table 14.11 and Figure 14.15) will entail horizontal directional drilling (HDD) and this will not require mitigation. In addition, the proposed crossing methodology for other watercourse crossings along the route will also entail HDD which will not result in any likely direct effects on any potential unrecorded underwater archaeological sites that may exist within these watercourses.

14.4.2.3 Turbine Delivery Route

A review of three localised areas along the route that require minor works to facilitate the delivery of turbines to the Site revealed that there are no recorded cultural heritage constraints at their locations or within lands extending for 100m in all directions. No construction phase effects on the cultural heritage resource are, therefore, predicted.



14.4.3 Operation

14.4.3.1 *Wind Farm Site*

14.4.3.1.1 Direct Impacts

The implementation of construction phase mitigation measures detailed in Section 14.5 will result in the preservation in situ (by avoidance) or the preservation in record (by archaeological excavation) of any sub-surface archaeological sites or features that may exist within proposed construction areas. The operation phase of the Proposed Development will not require any ground works within the Site and will, therefore, not result in any likely direct effects on any recorded or potential unrecorded archaeological sites. There are no designated architectural heritage structures located within the Site and the operation phase will, therefore, not result in any direct effects on this element of the cultural heritage resource.

14.4.3.1.2 Indirect Impacts

As noted in Section 14.4.2.1, the surface remains of the archaeological sites identified within the Site during surveys and excavations carried out during the 1990s and 2000s were typically recorded as being disturbed and/or removed by peat extraction works at that time. It is noted that the potential exists for the presence of the remains of sub-surface archaeological sites and objects within the Site, but the operation phase will not result in any likely indirect effects on the setting of buried elements of the potential archaeological resource.

As detailed in Section 14.3.2.3, there are 6 extant National Monuments in State Care, and one Preservation Order site, located within 10km of the Site (Figure 14.14). The Landscape and Visual chapter (Chapter 13) presents an assessment of visual effects on three of these National Monuments in State Care, which are in locations accessible to the public, and these comprise Killcooley Abbey (Chapter 13 ref. VP 10), Derrynaflan Church (Chapter 13 ref. VP 30) and Farranrory Warhouse (Chapter 13 ref. VP 25). The chapter also presents an assessment of visual effects of two National Monuments located within the wider landscape and these comprise Holy Cross Abbey (Chapter 13 ref. VP 22) located c. 12km to the west of the Site and the Rock of Cashel (Chapter 13 ref. VP 33) located c.17.2km to the southwest. The assessment of visual effects on these National Monuments presented in the Landscape and Visual chapter comprise the following:

- Killcooley Abbey: Imperceptible / Neutral / Long Term
- Derrynaflan Church: Moderate / Negative / Long Term
- Farranrory Warhouse: Imperceptible / Neutral / Long Term
- Holycross Abbey: Imperceptible / Neutral / Long Term
- Rock of Cashel: Imperceptible / Neutral / Long Term

As detailed in Table 14.7 (Section 14.3.2.3), there are three additional National Monuments in State Care, and one Preservation Order site, located within 10km of the Site and these include two examples located within the 2km study area (Liathmore Churches (National Monument no 266) and Derryvella early ecclesiastical site (National Monument ref. 533). The other National Monument within 10km of the Site comprises Grallagh Castle and Bawn (National Monument no. 127) located 6km to the southwest of the nearest turbine. A ringfort in Rathmooley townland located 6.2km to the south is not a National Monument in State Care but is subject to a Preservation Order (ref. 1/1992).



Table 14.13 presents an assessment of potential long-term (reversible), indirect effects on the setting of these monuments which has been informed by a review of Zone of Theoretical Visibility (ZTV) mapping, including cumulative maps, prepared by the Landscape and Visual specialists. This is revealed that these monuments are in areas where the potential exists that 9-11 turbines will be visible from their locations. It is noted that the ZTV mapping is based solely on terrain data (bare ground visibility), and ignores features such as trees, hedges or buildings, which may screen views from the location of these monuments. The potential indirect effects on Liathmore Churches and Derryvella early ecclesiastical site are deemed to be significant due to their proximity to the Site. Grallagh Castle and Bawn and Rathmooley Ringfort are located c.6km from the Site and the potential indirect effects on their setting are deemed to be moderate due to their distances from the Site.

Table 14-13: Assessment of potential visual effects on National Monuments and Presevation Order site not assessed in Landscape and Visual Chapter

Name	Nation Monument Ref. No.	Distance from nearest turbines	Sensitivity	Magnitude	Significance
Derryvella Early Medieval Ecclesiastical Site	533	Turbines 9, 10 and 11 are located 1.1km to-1.45km to the southwest	High	High	Significant
Liathmore Churches	266	Turbines 1 and 2 are located 1.7km and 1.65km to the southeast	High	High	Significant
Grallagh Castle and Bawn	127	Turbines 9, 10 and 11 are located 6km-6.2km to the northeast	High	Medium-low	Moderate
Rathmooley Ringfort (Preservation Order 1/1992)	n/a	Turbine 11 is located 6.2km to the north	High	Medium-low	Moderate

The recorded archaeological resource within an area extending for 10km from the Site was also assessed to determine the presence of other monuments within the wider landscape that may have potential visual sensitivities beyond their close settings, i.e., monuments with ritual alignments across the landscape. As detailed in Section 14.3.2.4, this review revealed that of the recorded examples that remain extant, all are located within private lands not accessible to the public, none are located within 3.3km of the Site, and none have alignments set directly towards proposed turbine locations (Table 14.8). Given the distances of these monuments from the Site in combination with the absence of recorded direct visual alignments towards its location, the Proposed Development will result in low magnitude, imperceptible effects on any potential alignment attributes.



The inventory descriptions of the recorded archaeological sites within the 2km study area surrounding the Site, which are located in private third-party lands, note that 21 examples are levelled with no visible surface traces and a further 18 examples retain low surface traces (Table 14.7). Other sites within the area comprise peatland sites identified during programmes of archaeological surveys within surrounding active industrial peatlands in the 1990s and 2000s and the inventory descriptions published on the HEV do not include any details in relation to their existing conditions. The descriptions of an additional 6 peatland sites identified during archaeological surveys in the 1990s do specify that these were in the process of being destroyed by peat milling at the time of survey. No potential indirect effects on the setting of the levelled or partially levelled archaeological sites within the 2km study area are predicted during the operation phase. There are 13 recorded archaeological sites and 2 protected structures located within 2km of the Site that remain either wholly or partially extant (Table 14.7) and based on a review of ZTV mapping they are located in areas where 9-11 turbines will be theoretically visible. As detailed in Section 14.3.2.2 (Table 14.6), none of these extant constraints are located within 1km of any turbines and the indirect negative effect on their wider settings will be of low-medium magnitude and slight to moderate in significance.

14.4.3.2 *Grid Connection*

As the grid connection will comprise a buried cable within public roads during the operation phase it will, therefore, result in no predicted direct or indirect effects on the cultural heritage resource.

14.4.3.3 *Turbine Delivery Route*

In the event that any turbines are required to be replaced during the operational phase using the same route as utilised during the construction phase, no likely effects on the cultural heritage resource are predicted.

14.4.4 Decommissioning

No effects on known elements of the cultural heritage resource are predicted during the decommissioning phase as there are no recorded cultural heritage constraint located within the footprint of the various elements of the Proposed Development that will be subject to decommissioning. The decommissioning phase will reverse the indirect, visual effects on cultural heritage constraints detailed in Section 14.4.3.

14.5 Mitigation Measures

14.5.1 Construction

14.5.1.1 *Wind Farm Site*

The layout of the Proposed Development within the Site was informed by the archaeological desktop research and fieldwork undertaken during the design and assessment phases. The mitigation measures presented in this section have been formulated based on the results of the assessment and are also informed by the nature of existing conditions within the Site. They have also been formulated in accordance with guidelines for archaeological planning conditions published in Section 7.4 of the 2006 *Wind Energy Development Guidelines* and in Section 7.6 of the 2019 *Draft Revised Wind Energy Development Guidelines*.



The proposed location of the substation area is within the proximity of the recorded location of a togther site (TN042-039004-). As noted in Section 14.3.2.13, no surface traces of this site were noted within the substation area during the site inspection. The vegetation growth at this area is low and a programme of pre-construction archaeological test trenching will be carried out at the location of the proposed substation to ascertain if any subsurface remains of this site are present.

The recorded locations of two togther sites (TN042-039008- and TN042-039009-) are situated c.20m to the north of a proposed peat deposition area (Figure 14.2a). Their recorded locations will be cordoned off during the construction phase and traffic to the peat deposit area to the south will be excluded from their recorded location.

There were no surface traces of any potential archaeological sites noted within the proposed borrow pit area which is located within green field lands, but the potential exists for the presence of subsurface archaeological sites in this area. The ground conditions within this area do not form a constraint for advance archaeological investigations and, therefore, a programme of advance geophysical survey followed by targeted test trenching investigations of any identified features of archaeological potential will be carried out in advance of the construction phase. In the event that any archaeological sites, features or objects are identified during these advance site investigations, they will be securely cordoned off and recorded. The NMS will then be notified and consulted to determine further appropriate mitigation measures, which may include preservation in situ by avoidance or preservation by record through systematic, licensed archaeological excavations.

A suitably qualified archaeologist will be employed to monitor construction phase ground works, including advance geotechnical investigations, turbine foundations, site access tracks (including profiling for floating roads), cable trenches, compounds, under licence by the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage within overgrown areas of the Site. This will include archaeological supervision of vegetation clearance works and inspection of cleared areas in advance of ground excavation works within the Site. In the event that any archaeological sites, features or objects are identified during monitoring of ground works will halt at the relevant location, and the archaeological remains will be securely cordoned off and recorded. The NMS will then be notified and consulted to determine further appropriate mitigation measures, which may include preservation in situ by avoidance or preservation by record through a systematic, licensed archaeological excavation.

No potential construction phase effects on the architectural heritage resource are predicted and, therefore, no mitigation measures for this element of the cultural heritage resource are required during this phase.

14.5.1.2 *Grid Connection*

A programme of licensed archaeological monitoring of ground works during the construction phase will be carried out within sections of road within the environs of the recorded archaeological sites detailed in Section 14.3.3. The majority of the architectural heritage constraints within the GC study area are located within private properties adjacent to the public road and no mitigation measures for these structures will be required. The proposed crossing methodology at Grange Bridge (see Table 14.11 and Figure 14.15), and other watercourse crossings, will entail horizontal directional drilling and this will not require any mitigation.

14.5.1.3 *Turbine Delivery Route*

There are no cultural heritage constraints located within the environs of the localised areas of minor works required to facilitate delivery of turbines to the site and, therefore, no mitigation measures are required.



14.5.2 Operation

14.5.2.1 *Wind Farm Site*

Following the implementation of the mitigation measures presented in Section 14.5.1, the operation phase of the Proposed Development will not result in any predicted direct impacts on the known archaeological, architectural and cultural heritage resources and, therefore, no mitigation measures for direct operational phase impacts will be required during this phase.

As detailed in Section 14.4.3, the turbines within the Site will result in a range of long term, indirect negative impacts of a visual nature on the wider setting of cultural heritage constraints located within the environs of the Site which will range from imperceptible to significant in significance. Given the nature of the wind farm turbines there are no mitigation measures that can address these indirect setting effects, but it is noted that they will be reversed following the decommissioning phase.

14.5.2.2 *Grid Connection*

The grid connection will comprise a buried cable during the operation phase and will not result in any predicted effects on the cultural heritage resource which require mitigation.

14.5.2.3 *Turbine Delivery Route*

The turbine delivery route will not result in any predicted effects on the cultural heritage resource during the operation phase which will require mitigation.

14.5.3 Decommissioning

14.5.3.1 *Wind Farm Site*

No likely significant direct or indirect effects on known elements of the cultural heritage resource are predicted during the decommissioning phase and, therefore, no cultural heritage mitigation measures are required for this phase.

14.5.3.2 *Grid Connection*

Grid connection infrastructure including the on-site substation and ancillary electrical will be left in situ as part of the decommissioning phase and, therefore, no mitigation is required.

14.5.3.3 *Turbine Delivery Route*

The temporary accommodation works along the TDR will not be required for the decommissioning phase as turbine components can be dismantled on site and removed using standard HGVs and, therefore no mitigation is required.



14.6 Monitoring

Construction:

There are a number of obligatory processes to be undertaken as part of archaeological licence applications which will allow for monitoring of the successful implementation of the archaeological mitigation measures. These include the submission of method statements providing details on the proposed strategy for all site investigations for the approval of the National Monuments Service as part of the licence application. These documents will clearly outline the proposed extent of works and outline the onsite and consultation processes to be enacted in the event that any unrecorded archaeological sites, features or objects are identified. A report will be compiled following the completion of all onsite investigations to comply with the licensing requirements which will clearly present the results in written, drawn and photographic formats and copies will be submitted to the National Monuments Service and the National Museum of Ireland.

14.6.1 Operation

14.6.1.1 *Wind Farm Site*

All required mitigation measures will be completed during the construction phase and no monitoring of operation phase mitigation measures will be required.

14.6.1.2 *Grid Connection*

All required mitigation measures will be completed during the construction phase and no monitoring of operation phase mitigation measures will be required.

14.6.1.3 *Turbine Delivery Route*

All required mitigation measures will be completed during the construction phase and no monitoring of operation phase mitigation measures will be required.

14.6.2 Decommissioning

14.6.2.1 *Wind Farm Site*

All required mitigation measures will be completed during the construction phase and no monitoring of decommissioning mitigation measures will be required.

14.6.2.2 *Grid Connection*

Grid connection infrastructure including the on-site substation and ancillary electrical will be left in situ as part of the decommissioning phase and, therefore, no monitoring of mitigation will be required.

14.6.2.3 *Turbine Delivery Route*

There will be no decommissioning mitigation measures requiring monitoring.



14.7 Residual Effects

14.7.1 Construction

The mitigation measures presented in Section 14.5.1 will provide for either the avoidance of the potential unrecorded, sub-surface archaeological resource within the footprint of proposed development locations or the proper and adequate recording of this resource by full archaeological excavation. Preservation in situ shall allow for a negligible magnitude of impact resulting in a potential not significant/imperceptible significance of effect in the context of residual impact on the unrecorded archaeological resource. Preservation by record shall allow for a high magnitude of impact, albeit ameliorated by the creation of a full and detailed archaeological record, the results of which shall be publicly disseminated. This shall result in a potential slight to moderate range of significance of effect in the context of residual impacts on the unrecorded archaeological resource.

14.7.2 Operation

As detailed in Section 14.4.3, the operational phase will result in a range of long term, indirect, negative residual effects of a visual nature on the wider setting of cultural heritage constraints within the surrounding landscape which will range from imperceptible to significant in significance. While there are no mitigation measures that can address these residual indirect effects, it is noted that they will be reversed following the decommissioning phase.

14.7.3 Decommissioning

14.7.3.1 *Wind Farm Site*

The decommissioning phase will entail the removal of the above ground turbine components from the Site. The foundation pedestals and hardstands left in place and will be covered over with topsoil that was previously stripped and used for landscaping purposes during the construction stage and will then be allowed to re-vegetate naturally. The internal site access tracks will be left in place and will continue to be used for forestry agricultural purposes. No direct effects on known elements of the cultural heritage resource are predicted during the Decommissioning phase as there are no recorded cultural heritage sites located within the footprint of the various elements of the Development that will be subject to Decommissioning. Any previously unrecorded archaeological remains identified during archaeological monitoring of the construction phase will either be preserved by avoidance or preserved by record (excavation) and no decommissioning effects on such potential features are predicted.

14.7.3.2 *Grid Connection*

Grid connection infrastructure including the on-site substation and ancillary electrical will be left in situ as part of the decommissioning phase and this will result in no likely effects on known elements of the cultural heritage resource. Any previously unrecorded archaeological remains identified during archaeological monitoring of the construction phase of the grid connection will either be preserved by avoidance or preserved by record (excavation) and no effects on any such potential remains are predicted as part of the decommissioning phase.



14.7.3.3 Turbine Delivery Route

The temporary accommodation works along the TDR will not be required for the decommissioning phase as turbine components can be dismantled on site and removed using standard HGVs. This element of the Proposed Development will, therefore, not result in any likely effects on the cultural heritage resource during the decommissioning phase.

14.8 Cumulative Impacts

The assessment of potential cumulative impacts included review of operational, consented and proposed wind farm developments within the surrounding landscape (Table 14.14). This included a review of information, such as cultural heritage impact assessments, contained in online planning files published on the An Coimisiún Pleanála website and Local Authority online planning enquiry systems.

In addition, a review was conducted of other developments within the 2km study area around the Site in order to assess potential cumulative effects on the setting of cultural heritage constraints in combination with the proposed wind farm. This rationale is based on the very low capacity of other development types, such as agricultural, housing or underground services, within the wider landscape around the Site to act in combination with the wind farm to result in significant effects on the setting of cultural heritage constraints.

The review revealed that a proposed recreational cycle and walkway development is located within 2km of the Site which will tie into the existing Loch Dhoire Bhile Loop. A review of An Coimisiún Pleanála Inspector's Report on this development revealed that the application included an archaeological impact assessment which concluded that the proposed development will have no impact on any known items of archaeological heritage in the application site or its vicinity¹⁶. The report also notes that the Department of Housing, Heritage and Local Government recommended that the development should be monitored by a professional archaeologist under licence and that this should be included as a condition of planning.

¹⁶ <https://www.pleanala.ie/anbordpleanala/media/abp/cases/reports/323/r323662.pdf?r=006813115861>



Table 14-14: Cultural Heritage Review of Wind Farms within 20km of the Site

Application Number	Development Name	Number of Turbines	Status	Approximate Distance & Direction from Nearest Turbine (km)	Cultural Heritage Notes
ACP Ref. 322154	Brisklagh Wind Farm	7	Unconsented	15.49918 E (T1)	The Cultural Heritage chapter ¹⁸ in the EIAR prepared for this proposed wind farm concludes that it will result in a not significant indirect cumulative effect on the cultural heritage resource in combination with other operational or proposed wind farms within 20km.
ACP Ref. 321454	Brittas Wind Farm	12	Consented	12.10984 NW (T4)	The Cultural Heritage chapter ¹⁹ in the EIAR for this proposed wind farm concludes that it will result in a slight indirect cumulative effect on the cultural heritage resource in combination with other operational or proposed wind farms within 20km.
ACP Ref. 318704	Borrisbeg Wind Farm	10	Consented	21.25749 NW (T1)	The Cultural Heritage chapter ²⁰ in the EIAR prepared for this proposed wind farm concludes that no significant cumulative effects on the cultural heritage resource will occur in combination with other operational or proposed wind farms within 20km.

¹⁸ <https://www.pleanala.ie/publicaccess/EIAR-NIS/322154/322154%20-%20eiar%20-%20chapter%2014%20cultural%20heritage.pdf?r=669015160291>

¹⁹ <https://cdn.orsted.com/-/media/www/docs/corp/ireland/brittis-planning/volume-2---eiar/23318-ch-11-cult-heritage-03122024.pdf?rev=26ddb048ff54479b5d57fef6a46512d&hash=DD6A510B0C75B7C7F9AA3901822E82C9>

²⁰ <https://www.pleanala.ie/publicaccess/EIAR-NIS/318704/An%20Bord%20Pleanala/c%20Volume%20I%20NTS%20and%20EIAR/Ch%2013%20Cultural%20Heritage.pdf?r=288000690750>



Application Number	Development Name	Number of Turbines	Status	Approximate Distance & Direction from Nearest Turbine (km)	Cultural Heritage Notes
TCC Ref. 05/9	Glengoole Wind Farm	2	Consented	3.81977 E (T8)	The online TCC planning files do not contain a cultural heritage assessment of this development. Archaeological monitoring of the construction phase was included as a planning condition. A review of the Database of Irish Excavation Reports revealed that it does not contain any entries for the location.
ACP Ref. 315176	Knockroe Wind Farm	7	Consented	14.00603 S (T11)	The Cultural Heritage chapter ²¹ in the EIAR prepared for this proposed wind farm concludes that not significant to slight cumulative effects on the cultural heritage resource will occur in combination with other existing, permitted and proposed wind farms within 20km.
TCC Ref. 20972 which was subsequently amended by TCC Ref. 2360803	Farranrory Wind Farm	9	Consented	10.11609 E (T6)	The Cultural Heritage chapter ²² in the EIAR prepared for this wind farm concludes that no significant cumulative effects on the cultural heritage resource will occur in combination with other existing, permitted and proposed wind farms within the surrounding landscape.

²¹ <https://tipperarycoco.eplanning.ie/idswebDPSS/ViewFiles.aspx?docid=701237&format=djvu>

²² <https://tipperarycoco.eplanning.ie/idswebDPSS/ViewFiles.aspx?docid=638593&format=djvu>



Application Number	Development Name	Number of Turbines	Status	Approximate Distance & Direction from Nearest Turbine (km)	Cultural Heritage Notes
TCC Ref. 06/510773	Lisheen Wind Farm 1	18	In Operation	11.39686 N (T1)	An Archaeological Impact Assessment ²³ of this development did not identify any likely significant effects on archaeological sites located within the wider landscape
TCC Ref. 09/510100	Lisheen Wind Farm 2	12	In Operation	7.593389 N (T1)	The Cultural Heritage chapter ²⁴ in the EIS prepared for this development did not identify any likely significant visual effects on archaeological sites within the wider landscape.
KCC Ref. 14//202, 15/629, 19/787, and 20/459 LCC Ref. 14/139 and 19/597 TCC Ref. 12/510275, 14/510138 and 15/6000924	Lisheen Wind Farm 3	8	In Operation	13.14048 N (T1)	The Cultural Heritage chapter ²⁵ in the EIS prepared for this development did not identify any likely significant visual effects on archaeological sites within the wider landscape.
TCC Ref. 10/510118 and KCC Ref. 10/145	Bruckana Wind Farm	14	In Operation	13.91004 N (T1)	The Cultural Heritage chapter ²⁶ in the EIS prepared for this development did not identify any significant effects on the cultural heritage resource. In addition, the Landscape and Visual chapter in the EIS includes an assessment of visual

²³ <https://tipperarycoco.eplanning.ie/idswebDPSS/ViewFiles.aspx?docid=360334&format=jpeg>

²⁴ <https://tipperarycoco.eplanning.ie/idswebDPSS/ViewFiles.aspx?docid=420144&format=djvu>

²⁵ <https://tipperarycoco.eplanning.ie/idswebDPSS/ViewFiles.aspx?docid=454755&format=jpeg>

²⁶ <https://tipperarycoco.eplanning.ie/idswebDPSS/ViewFiles.aspx?docid=429653&format=jpeg>



Application Number	Development Name	Number of Turbines	Status	Approximate Distance & Direction from Nearest Turbine (km)	Cultural Heritage Notes
					impacts on cultural heritage receptors and no significant effects were identified. Archaeological monitoring of the construction phase was carried out to comply with a planning condition and this revealed nothing of archaeological significance ²⁷ .
KCC ref. 081511 and 12/172	Lisdowney Wind Farm	4	In Operation	19.46397 NE (T1)	The Archaeology chapter ²⁸ in the EIS prepared for this development concluded that it would not result in any direct impacts on cultural heritage sites or significant visual impacts on archaeological sites within 1km.
KCC Ref. 12378 and 1617	Foyle/Foyleature Wind Farm	4	In Operation	12.57826 E (T1)	A review of the Kilkenny County Council online planning files did not reveal any cultural heritage impact assessment reports for this development.
KCC Ref. 13/151 and 20281	Ballybay Wind Farm	5	In Operation	9.315062 E (T1)	A review of the Kilkenny County Council online planning files did not reveal any cultural heritage impact assessment reports for this development.

²⁷ <https://excavations.ie/report/2013/Kilkenny/0025262/>

²⁸ <https://idocsweb.kilkenny.ie/ViewFiles.aspx?docid=150813&format=jpeg>



Application Number	Development Name	Number of Turbines	Status	Approximate Distance & Direction from Nearest Turbine (km)	Cultural Heritage Notes
TCC Ref. 09/781 and ACP Ref. 237713	Knocknamuck/Cnoc Wind Farm	5	In Operation	7.978342 E (T1)	The Archaeology chapter ²⁹ in the EIS prepared for this development concluded that it would not result in any effects on archaeological sites.
TCC Ref. 09801 as extended by 15600723	Gurteen Wind Farm	1	In Operation	4.250567 E (T6)	The online TCC planning files do not contain a cultural heritage impact assessment for this development.
TCC Ref. 13/231 and 15600561 ACP Ref. 243357 and 245874	Ballincurry Wind Farm	2	In Operation	4.935713 SE (T11)	The archaeological impact assessment ³⁰ of this development concluded that it would have a moderate visual impact on known archaeological sites in surrounding lands.
TCC ref. 061695 ACP Ref. 306388	Kill Hills	16	In Operation	9.997494 SW (T11)	The Archaeology and Cultural Heritage chapter ³¹ prepared for the Kill Hills wind farm notes that it would result in a visual impact on the setting of archaeological sites in surrounding lands. The significance of this impact is not identified in the chapter. A range of previously unrecorded archaeological sites were identified during monitoring of the construction phase and were preserved in record by licensed archaeological excavations ³² .

²⁹ <https://tipperarycoco.eplanning.ie/idocswebDPSS/ViewFiles.aspx?docid=156185&format=jpeg>

³⁰ <https://tipperarycoco.eplanning.ie/idocswebDPSS/ViewFiles.aspx?docid=220552&format=jpeg>

³¹ <https://tipperarycoco.eplanning.ie/idocswebDPSS/ViewFiles.aspx?docid=215197&format=jpeg>

³² <https://excavations.ie/reports/?search=Kill+Hill>



Given the absence of any predicted direct effects on the known cultural heritage resource arising from the Proposed Development, in combination with the results of the above review of other wind farms within the wider landscape, it is concluded that it is not predicted to contribute to any significant direct cumulative effects on the cultural heritage resource of the wider area in combination with these developments.

It is noted that the available cultural heritage assessments of the wind farms listed in Table 14.14, do not identify any significant effects on known cultural heritage constraints, including cumulative effects. It is also noted that, the Proposed Development will result in indirect, adverse effects ranging from slight to significant in significance on the settings of cultural heritage constraints within the surrounding 2km Study Area. None of the reviewed wind farm developments are located within the immediate environs of any of the cultural heritage constraints within the 2km study area. Given the distances of the reviewed developments listed in Table 14.14 from the Site, it is concluded that they will not act in combination to result in significant indirect cumulative effects on the settings of recorded cultural heritage constraints.

As detailed in Section 14.4.3, it is also noted that the Landscape and Visual assessment of accessible National Monuments within the wider landscape concludes that the Proposed Development would not result in any likely significant visual effects on their settings and will result in imperceptible effects on the majority. An assessment of the potential cumulative visual effects is presented in that chapter.

14.9 Major Accidents

As detailed in Section 14.3, there are no recorded extant cultural heritage constraints located within 1km of proposed development areas within the Site and, therefore, no likely significant risk of major accidents or unplanned events relevant to the cultural heritage resource will arise.



14.10 References

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Database of Irish Excavation Reports: www.excavations.ie



National Folklore Collection: www.duchas.ie

National Inventory of Architectural Heritage survey: www.buildingsofireland.ie

Open Topographic Data Viewer: <https://dcenr.maps.arcgis.com>

Ordnance Survey of Ireland: www.osi.ie/mapviewer

Placename Index of Ireland: www.logainm.ie



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