

5. Archaeology & Cultural Heritage

Executive Summary

- 5.1 This chapter considers the likely significant effects on the historic environment (Archaeology and Cultural Heritage) associated with the construction, operation and decommissioning of the proposed Carnbuck Wind Farm (the Proposed Development).
- 5.2 The Proposed Development comprises 12 three-bladed horizontal axis wind turbines, each up to 180 m maximum height above ground level; associated external electricity transformers; underground cabling; access tracks; turning heads; crane hardstandings; control building and substation compound, energy storage containers, mast, off-site areas of widening to the public road and all ancillary works. The development also comprises upgrades to the existing site entrance and access tracks of Gruig Wind Farm. During construction and commissioning there would be a number of temporary works including a construction compound with car parking; temporary parts of crane hardstandings and welfare facilities.
- 5.3 A heritage asset (or historic asset) is any element of the historic environment which has cultural significance. Both discrete features, and extensive landscapes defined by a specific historic event, process or theme, can be defined as heritage assets; and assets may overlap or be nested within one another. Designated assets include Scheduled Monuments, Listed Buildings, World Heritage Sites, Conservation Areas and Historic Parks, Gardens and Demesnes. Other assets may also be locally designated through policies in the Local Plan.
- 5.4 The majority of heritage assets are not designated. Some non-designated assets are recorded in the Northern Ireland Sites and Monuments Records (NISMR) maintained by the Historic Environment Division (HED). However, many heritage assets are currently unrecorded, and the information contained in the NISMR is not definitive, since they may include features which, for instance, have been entirely removed, or are of uncertain location, dubious identification, or negligible importance. The identification of non-designated heritage assets is therefore to some extent a matter of professional judgement.
- 5.5 Some heritage assets may coincide with visual receptors or landscape character areas, which are assessed in Chapter 04: Landscape and Visual and in such cases, it is important to recognise the difference in approach between these two topics. Cultural heritage assessment addresses effects on the cultural heritage significance of heritage assets, which may result from, but are not equivalent to, visual impacts. Similarly, an effect on a landscape character area does not equate to an effect on the cultural heritage significance of heritage assets within it.
- 5.6 The specific objectives of the chapter are to:

- Describe the location, nature and extent of any known heritage assets or areas of archaeological potential which may be affected by the Proposed Development;
 - Provide an assessment of the importance of these assets;
 - Assess the likely scale of any effects on the historic environment posed by the Proposed Development;
 - Outline suitable mitigation measures to avoid, reduce or offset significant adverse effects; and
 - Provide an assessment of any residual effects remaining after mitigation.
- 5.7 The assessment has been carried out by Fraser McFarlane (M.A. Hons, MLitt, ACIfA), of Headland Archaeology (UK) Ltd. Headland Archaeology is a Registered Organisation with the Chartered Institute for Archaeologists (CIfA), an audited status which confirms that all work is carried out in accordance with the highest standards of the profession.
- 5.8 Headland Archaeology (UK), as part of the RSK Group, is recognised by the Institute of Historic Building Conservation (IHBC) under their 'Historic Environment Service Provider Recognition' scheme. This quality assurance standard acknowledges that RSK works to the conservation standards of the IHBC, the UK's lead body for built and historic environment practitioners and specialists.
- 5.9 Headland Archaeology (UK) operates a quality management system to help ensure all projects are managed in a professional and transparent manner, which enables it to qualify for ISO 9001 (Quality Management), ISO 45001 (health and safety management) and ISO 14001 (environmental management).
- 5.10 The chapter is supported by:
- Technical Appendix 5.1: Cultural Heritage Desk-based Assessment and Stage 1 Setting Assessment (Vol. 4)
 - Figures 5.1-5.15 (Vol. 3) are referenced in the text where relevant.

Legislation & Planning Policy

- 5.11 The assessment has been undertaken with reference to relevant legislation, policy and guidance relating to the historic environment.

Statutory Protection

- 5.12 Scheduled Monuments and Listed Buildings are protected by statute.
- 5.13 Legislation regarding Scheduled Monuments is contained within the Historic Monuments and Archaeological Objects (Northern Ireland) Order 1995. Legislation regarding Listed Buildings is contained in the Planning Act (Northern Ireland) 2011.
- 5.14 The Historic Monuments and Archaeological Objects (Northern Ireland) Order 1995 makes no reference to the settings of Scheduled Monuments. The Planning Act (Northern Ireland) 2011 does, however, place a duty on the planning authority with

respect to Listed Buildings and their settings. Section 91 of the 2011 Act states (in part):

“In considering whether to grant planning permission for development which affects a listed building or its setting, and in considering whether to grant listed building consent for any works, a council or, as the case may be, the Department must have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.”

- 5.15 In May 2016, the Department of the Environment Northern Ireland (DOENI) was restructured, and the Department for Communities (DfC) was created. The Historic Environment Division (HED) of the DfC has responsibility for archaeological and built heritage throughout the region.

National Planning Policy

- 5.16 The Strategic Planning Policy Statement for Northern Ireland (SPPS), published in 2015 has a statutory basis under the Planning Act (Northern Ireland) 2011 and outlines the Department for Infrastructure’s (DFI) policy on important planning matters that should be addressed throughout Northern Ireland. The provisions of the SPPS are material to all planning applications and appeals.
- 5.17 Section 6.3 of SPPS states that the “...aim of the SPPS in relation to Archaeology and Built Heritage is to manage change in positive ways so as to safeguard that which society regards as significant whilst facilitating development that will contribute to the ongoing preservation, conservation and enhancement of these assets.”
- 5.18 The SPPS outlines particular strategic policies to be followed when preparing Local Development Plans (LDPs) and determining planning applications. These policies are outlined in relation to World Heritage Sites; archaeological remains (including Scheduled Monuments, Monuments in State Care and Areas of Significant Archaeological Interest); Listed Buildings; Historic Parks, Gardens and Demesnes; Conservation Areas; Areas of Townscape Character, and non-designated heritage assets. Implementation of the policies outlined in the SPPS are undertaken via the LDPs.
- 5.19 The policies of the DFI regarding protection and management of cultural heritage assets are contained in Planning Policy Statement 6 (PPS 6): Planning, Archaeology and the Built Heritage (DOENI 1999). Revised criteria for the designation of Listed Buildings are contained in an Addendum to PPS6 published in 2011. Additional planning policies relating to areas of Townscape character are provided in an Addendum to PPS 6.
- 5.20 The policies in PPS 6 make the preservation of the archaeological and built heritage a material consideration in the planning process. This applies specifically to archaeological remains (including Scheduled Monuments) (Policies BH 1 and BH 2), World Heritage Sites (Policy BH 5), Parks, Gardens and Demesnes of Special Historic Interest (Policy BH 6), Listed Buildings (Policies BH 7 - BH 11), and Conservation Areas

(Policies BH 12 - BH 14). The setting of an asset covered by any of these designations is also a material consideration.

- 5.21 All policies relevant to this assessment are detailed in full Section 2.2 of Technical Appendix 5.1.
- 5.22 Planning Policy Statement 18 (PPS18) 'Renewable Energy' 2009 covers cultural heritage within Policy RE1 which states "Development that generates energy from renewable resources will be permitted provided the proposal, and any associated buildings and infrastructure, will not result in an unacceptable adverse impact on: built heritage interests ..."

Local Planning Policy

- 5.23 The Mid and East Antrim Local Development Plan 2030 is still in draft form and has not been formally adopted. It does, however, outline how the Council sees the area developing over the next eight years. Contained within the draft plan is key guidance relating to the historic environment. The policies relevant to this assessment include: Policy HE1 Archaeological Remains and their Settings, Policy HE2 Historic Parks, Gardens and Demesnes and Policy HE5 Development affecting the Setting of a Listed Building. These policies are outlined in full in Section 2.3 of Technical Appendix 5.1.
- 5.24 The Causeway Coast and Glens Borough Council Local Development Plan 2035 is currently in draft form. Publication of the Draft Plan strategy has not yet occurred. The plan is currently scheduled to be adopted in winter 2024.
- 5.25 Excerpts from The Northern Area Plan, adopted in 2015, which covers Causeway Coast and Glens Borough Council relevant to this assessment include: text outlined on page 46 regarding development of greenfield sites (including the potential for archaeological remains to exist within them and the requirement for archaeological mitigation where appropriate) and policy which covers Historic Parks, Gardens and Demesnes. These policies are outlined in full in Section 2.3 of Technical Appendix 5.1.

Guidance

- 5.26 In February 2018, HED published Guidance on Setting and the Historic Environment. This document provides guidance on HED's role in developing advice on potential impacts from development and landscape change upon the settings of heritage assets. It also recommends other international charters and conventions that should be considered as guidance during impact assessment (HED 2018, Technical Appendix B). These include, but are not limited to, the International Council on Monuments and Sites (ICOMOS) 2005 Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas (also known as the Xi'an Declaration); the 1992 European Convention on the Protection of the Archaeological Heritage (also known as the Valletta Convention), and the 2011 ICOMOS Guidance on Heritage Impact for Cultural World Heritage Properties.

- 5.27 HED also recognise the relevance of guidance published by the statutory body for CADW, the statutory body historic environment service for Wales, specifically Conservation Principles for the sustainable management of the historic environment in Wales (2011) and Heritage Impact Assessment in Wales (2017).
- 5.28 The Services and Standards Framework, published by HED in May 2016 (updated June 2019), provides additional explanation of the planning process in relation to archaeology and built heritage, with advice on procedures for archaeological evaluation and mitigation.
- 5.29 HED also published Development and Archaeology Guidance on Archaeological Works in the Planning Process in May 2019. This guidance document is aimed at applicants, agents, developers and archaeological consultants who may be responsible for archaeological works associated with development projects. It is intended to guide processes around archaeological works consistently throughout Northern Ireland. The guidance cover: archaeological information required to inform planning decisions and planning conditions for archaeological works after a planning decision is made.
- 5.30 Standards and Guidance published by the Chartered Institute for Archaeologists (CIfA) have been followed in preparing this assessment, in particular the 'Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment' (2014b, revised 2017 and 2020) and the 'Standard and guidance for historic environment desk-based assessment' (2014a, revised 2019).
- 5.31 This assessment has also been prepared with reference to IEMA, IHBC and CIfA's July 2021 publication Principles of Cultural Heritage Impact Assessment in the UK. This document presents the principles of and suggests good practice for assessment of the impact of a development proposal on cultural heritage assets.

Scope of Assessment

- 5.32 The scope of this assessment extends to:
- Establishing the potential for direct or indirect construction, operational and decommissioning effects on heritage assets identified within the Site;
 - Establishing the potential for any construction, operational, decommissioning and cumulative effects on the setting effects on heritage assets within the Site and wider study area.

Identification of Potential Effects

- 5.33 Effects on the historic environment can arise through direct physical impacts, impacts on setting or indirect impacts:
- Direct physical impacts describe those development activities that directly cause damage to the fabric of a heritage asset. Typically, these activities are related to construction works and will only occur within the inner study area (ISA).

- An impact on the setting of a heritage asset occurs when the presence of a development changes the surroundings of a heritage asset in such a way that it affects (beneficially or adversely) the cultural significance of that asset. Visual impacts are most commonly encountered but other environmental factors such as noise, light or air quality can be relevant in some cases. Impacts may be encountered at all stages in the life cycle of a development from construction to decommissioning but they are only likely to lead to significant effects during the prolonged operational stage of the development.
 - Indirect impacts describe secondary processes, triggered by the development, that lead to the degradation or preservation of heritage assets. For example, changes to hydrology may affect archaeological preservation; or changes to the setting of a building may affect the viability of its current use and thus lead to dereliction.
- 5.34 Likely significant direct or indirect effects on known and unknown heritage assets are discussed in terms of the risk that a significant effect could occur. The level of risk depends on the level of archaeological potential combined with the nature and scale of disturbance associated with construction activities and may vary between high and negligible for different elements or activities associated with a development, or for the development as a whole.
- 5.35 Likely significant effects on the settings of heritage assets are identified from an initial desk-based appraisal of data from NISRM, and consideration of current maps and aerial images. Photowire and wireline visualisations have been prepared to illustrate changes to key views, and to aid assessment where potential setting effects have been identified (Figures 5.5-5.15, Volume 3). The visualisations have been produced by the Landscape and Visual team and the methodology for preparing these is described in Chapter 04: Landscape & Visual.
- 5.36 For any identified effect the preferred mitigation option is always to avoid or reduce effects through design, or through precautionary measures such as fencing off heritage assets during construction works to avoid accidental direct effects. Effects which cannot be eliminated in these ways will lead to residual effects.
- 5.37 Adverse direct or indirect physical effects may be mitigated by an appropriate level of survey, excavation, recording, analysis and publication of the results, in accordance with a written scheme of investigation (PPS6 Policy BH4).

Consultation

- 5.38 Responses arising from consultation carried out during the archaeology and cultural heritage assessment are summarised in Table 5.1:

Table 5.1: Consultation Summary

Consultee	Type and Date	Summary of Consultation Response	Response to Consultee

<p>Historic Environment Division (Historic Buildings)</p>	<p>Consultation submitted in January 2022 advising on intention to submit an environmental statement Agreement of Scope of Assessment sent via email on 11th February 2022</p>	<p>No response received in relation to intention to submit and environmental statement HED (Historic Buildings) confirmed that they broadly agreed with the scope of the assessment but requested that the list of viewpoints selected for assessment in relation to Listed Buildings be widened in order to take into account the taller height of the turbines for the Proposed Development compared to the smaller turbines for the operational Gruig Windfarm. Specifically, it was requested that Listed Buildings should be considered beyond the 5 km Outer Study Area (OSA).</p>	<p>To accommodate this request, Grade B1, B2 and B+ Listed Buildings have been considered out to 10 km from the in addition to Grade A Listed Buildings which have been considered out to 20 km (see Paras 5.42 and 5.129-5.133).</p>
<p>Historic Environment Division (Archaeology and Monuments)</p>	<p>Consultation submitted in January 2022 advising on intention to submit and environmental statement Agreement of Scope of Assessment</p>	<p>No response received</p>	

	sent via email on 11 th February 2022		
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Assessment Methodology

- 5.39 Assessment of potential direct (physical) effects and effects upon cultural significance through development within the setting of heritage assets is presented separately for the construction, operation and decommissioning stages of the Proposed Development, and potential cumulative effects are presented separately also.
- 5.40 The assessment has been carried out in the following stages:
- Desk-based study leading to the identification of heritage assets potentially affected by the Proposed Development;
 - Definition of baseline conditions, based on results of the desk-based study and visits to/inspection of heritage assets;
 - Assessment of the importance of heritage assets potentially affected;
 - Identification of potential impacts on heritage assets, informed by baseline information, site visits, ZTV mapping, wireframes and photomontages;
 - Proposal of mitigation measures to eliminate, reduce or offset adverse effects;
 - Assessment of the magnitude of residual effects;
 - Assessment of the significance of residual effects, broadly a product of heritage assets' importance and the magnitude of the impact; and
 - Assessment of cumulative effects.

Baseline Characterisation

Study Area

- 5.41 Overlapping study areas have been used for this assessment. The Inner Study Area (ISA) corresponds with the Preliminary Site Boundary. All heritage assets within the ISA have been assessed for potential construction and operational effects. Note that the final Planning Application Boundary (Figure 1.2) lies entirely within the ISA/ Preliminary Site Boundary.
- 5.42 The Outer Study Area (OSA) is based on a zone of theoretical visibility (ZTV) of the proposed turbines. Within the OSA, heritage assets have been included in the assessment based on the level of importance (see Table 5.3), to ensure that all potential significant effects are recognised:
- Up to 2 km from the ISA: all non-designated heritage assets (including Defence Heritage Records and Industrial Heritage Records).
 - Up to 5 km from the ISA: Conservation Areas, non-designated assets which have a wider landscape setting that contributes substantially to their cultural significance.

- Up to 10 km from the ISA: Grade B+, Grade B1 and Grade B2 Listed Buildings, Scheduled Monuments, State Care Monuments, Register Parks, Gardens and Demesnes of Special Historic Interest.
- Up to 20 km from the ISA: Grade A Listed Buildings, World Heritage Sites and any asset which is considered exceptionally important, and where long-distance views from or towards the asset are thought to be particularly sensitive, in the opinion of the assessor or consultees.

5.43 Criteria for the identification of heritage assets requiring detailed assessment in this chapter is based on the approach set out in page 9 of Guidance on Setting and the Historic Environment that specifies a range of factors which might form part of the setting of a heritage asset as follows:

Physical

5.44 Physical aspects of setting include: man-made structures; historic streetscapes; historic buildings and building groups; designed landscapes; airspace, coastlines and seascapes; topography, natural features and interactions with the natural and historic environment; rivers and route-ways within the surrounding area of the heritage asset or used in association with it.

Visual

5.45 Visual aspects of setting include a variety of views of, across, or including the heritage asset; views of the surrounding area from or through the heritage asset; and views along route-ways, or towards designed vistas such as borrowed landscape, planting, or built features. These may incorporate views towards and the settings of numerous other heritage assets.

5.46 Heritage assets do not need to be visually prominent to have a setting and some heritage assets will have an experienced setting which extends beyond the area of visibility. The experience of related aspects of an asset's setting, for example elements of a designed landscape, need not be visually connected or visible at the same time.

5.47 The experience of an asset's setting is not wholly visual, but may include a site's ambience, sense of remoteness, tranquillity or removal from the modern world.

Functional

5.48 Functional aspects of setting include the aesthetic, architectural, commemorative, historical, social, spiritual, symbolic, technological, traditional knowledge and/or other tangible or intangible values associated with human activity. These may include designed or perceived interactions with the natural environment or with other heritage assets in the surrounding landscape.'

Desk Study / Field Survey

5.49 A Cultural Heritage Desk-based Assessment and Stage 1 Setting Assessment (Volume 4, Technical Appendix 5.1) was carried out to define the existing baseline conditions

within the Site and OSAs. The assessment was based on a study of all readily available documentary sources, following ClfA Standards and Guidance. The following sources of information were referred to:

- Northern Ireland Environment Agency (NIEA): online databases available through the NIEA website, including:
 - Northern Ireland Sites and Monuments Record (NISMR) including Scheduled Monuments;
 - Buildings Database;
 - Areas of Significant Archaeological Interest;
 - Areas of Significant Archaeological Potential;
 - Scheduled Monument data;
 - Register of Historic Parks, Gardens and Demesnes of Special Historic Interest;
 - Battle Sites
 - Industrial Heritage Record; and
 - Defence Heritage Record.
 - Historic maps and records held by Public Records Office Northern Ireland (PRONI);
 - The National Collection of Aerial Photography (NCAP);
 - Northern Ireland Regional Landscape Character Assessment
 - Previous excavations detailed in Excavations Bulletin; and
 - Relevant internet resources, including Google Maps, Google Earth and Bing satellite imagery
 - Geological data available online from the British Geological Survey
 - Readily available published sources and unpublished archaeological reports.
 - Other readily available published sources.

5.50 A site visit was undertaken on Wednesday 2nd of March 2022 in rainy and cloudy conditions during which notes were made regarding site characteristics, any visible archaeology and geographical/geological features which may have a bearing on previous land use and archaeological survival, as well as those which may constrain subsequent archaeological investigation. Records were made regarding extant archaeological features, such as earthworks or structural remains, any negative features, local topography and aspect, exposed geology, soils, watercourses, health and safety considerations, surface finds, and any other relevant information.

5.51 The OSAs were visited on Thursday 3rd of March 2022 in sunny weather conditions to carry out assessment of heritage assets that may be affected by the operation of the Proposed Development i.e. through effects on their settings and the contribution made by setting to their cultural significance.

- 5.52 Heritage assets within the ISA are compiled in a gazetteer (see Technical Appendix 1 of Technical Appendix 5.1 in Volume 4).
- 5.53 Designated and non-designated heritage assets are referenced in this report by the NISRM list entry number. Any newly discovered assets are assigned a number prefixed HA for Heritage Asset. A single asset number can refer to a group of related features, which may be recorded separately in the NISMR and other data sources.
- 5.54 Assets within the ISA are shown in Volume 3, Figure 5.1 and Figure 5.2, with detailed descriptions compiled in a Cultural Heritage Desk-based Assessment and Stage 1 Setting Assessment (Volume 4, Technical Appendix 5.1). All heritage assets within the OSA are shown in Volume 3, Figure 5.3 and Figure 5.4.

Potential for Unknown Heritage Assets in the ISA

- 5.55 The likelihood that undiscovered heritage assets may be present within the ISA is referred to as archaeological potential. Overall levels of potential can be assigned to different landscape zones, following the criteria in Table 5.2, while recognising that the archaeological potential of any zone will relate to particular historical periods and types of evidence. The following factors are considered in assessing archaeological potential:
- The distribution and character of known archaeological remains in the vicinity, based principally on an appraisal of data in the NISMR;
 - The history of archaeological fieldwork and research in the surrounding area, which may give an indication of the reliability and completeness of existing records;
 - Environmental factors such as geology, topography and soil quality, which would have influenced land-use in the past and can therefore be used to predict the distribution of archaeological remains;
 - Land-use factors affecting the survival of archaeological remains, such as ploughing or commercial forestry planting; and
 - Factors affecting the visibility of archaeological remains, which may relate to both environment and land-use, such as soils and geology (which may be more or less conducive to formation of cropmarks), arable cultivation (which has potential to show cropmarks and create surface artefact scatters), vegetation, which can conceal upstanding features, and superficial deposits such as peat and alluvium which can mask archaeological features.

Table 5.2: Archaeological Potential

Potential	Definition
High	Undiscovered heritage assets of high or medium importance are likely to be present.

Medium	Undiscovered heritage assets of low importance are likely to be present; and it is possible, though unlikely, that assets of high or medium importance may also be present.
Low	The study area may contain undiscovered heritage assets, but these are unlikely to be numerous and are highly unlikely to include assets of high or medium importance.
Negligible	The study area is highly unlikely to contain undiscovered heritage assets of any level of importance.
Nil	There is no possibility of undiscovered heritage assets existing within the study area.

Importance Criteria

- 5.56 Cultural heritage impact assessment is concerned with effects on cultural significance, which is a quality that applies to all heritage assets, and as defined by CADW, relates to the ways in which the significance of heritage assets is valued both by specialists and the public. The cultural significance of a heritage asset will derive from factors including the asset's evidential value (i.e. its physical fabric), historical value, aesthetic value and communal value (i.e. its significance to people for commemorative, symbolic or spiritual value). This use of the word 'significance', referring to the range of values attached to an asset, should not be confused with the unrelated usage in EIA where the significance of an effect reflects the weight that should be attached to it in a planning decision.
- 5.57 The importance of a heritage asset is the overall value assigned to it reflecting its statutory designation or, in the case of non-designated assets, the professional judgement of the assessor (Table 5.3).
- 5.58 The heritage significance of Listed Buildings derives from their architectural and historic interest. These terms are defined in the Revised Annex C to PPS6, published in 2011:
- 5.59 'Architectural interest is understood to encompass a broad spectrum which ranges from style, character and ornamentation to internal plan form and functionality. Also important are examples of particular building types and techniques used in their construction. Where buildings have been changed over time (as many have) it is the consideration of its current architectural interest that is important, rather than what it may have been like in the past.
- 5.60 Historic interest is understood to encompass a broad spectrum which ranges from age and rarity, through the amount of historic material left in a building, to its importance as a historic structure, and to the stories, historical events and people associated with the building. It is important that associations are linked in a clear and direct way to the fabric of the building if they are to be regarded as major grounds for listing. Aspects of social, economic and cultural history revealed by the building may also be considered important.'

- 5.61 The criterion for Listing in HED's 2019 guidance is that a building is considered 'special' following Section 8 . Grade A refers to '...buildings of greatest importance to Northern Ireland including both outstanding architectural set-pieces and the least altered examples of each representative style, period and type.' Grade B+ refers to '...high quality buildings that because of exceptional features, interiors or environmental qualities are clearly above the general standard set by Grade B1 buildings.' Grade B1 refers to '...good examples of a particular period or style. A degree of alteration or imperfection of design may be acceptable. Generally B1 is chosen for buildings that qualify for listing by virtue of a relatively wide selection of attributes. Usually these will include interior features or where one or more features are of exceptional quality and/or interest.'. Grade B2 refers to '...special buildings which meet the test of the legislation. A degree of alteration or imperfection of design may be acceptable. B2 is chosen for buildings that qualify for listing by virtue of only a few attributes. An example would be a building sited within a conservation area where the quality of its architectural appearance or interior raises it appreciably above the general standard of buildings within the conservation area' .
- 5.62 Annex C to PPS6 lists the criteria for architectural interest as: 'style; proportion; ornamentation; plan form; spatial organisation; structural system; innovatory qualities; alterations; quality and survival of interiors; setting; and group value'. The criteria for historic interest are listed as: 'age; rarity; authenticity; historic importance; authorship; social, cultural or economic importance; and historic associations' .
- 5.63 Criteria for deciding whether an archaeological monument is of regional importance (and thus a candidate for Scheduling) are given in PPS6 Annex B, paragraph B11, and comprise: period; rarity; documentation; group value; survival/condition; and diversity.
- 5.64 Further criteria is outlined in HED's 2019 guidance for Scheduling Historic Monuments including:
- Period
 - Rarity
 - Documentation
 - Group value
 - Survival / condition
 - Diversity
 - Potential
 - Fragility / vulnerability
- 5.65 Factors to be taken into account in assessing the local significance of archaeological sites and monuments are listed in PPS6 paragraph 3.9:
- 'appearance: distinctive features in the landscape/townscape or local landmarks;
 - quality: well-preserved or extensive buried remains;

- folklore/historical interest: association with a person or event in local tradition or legend;
- group value: one of a number of locally important sites; and
- rarity: a locally rare example.'

5.66 Any feature which does not merit consideration in planning decisions due to its significance may be said to have negligible importance. It is the role of the professional judgements made by the assessor to identify any historic remains within the ISA that are considered to be of negligible importance.

Table 5.3: Importance Criteria

Importance of the asset	Criteria
Very High (International)	World Heritage Sites and other assets of equal international importance, that contribute to international research objectives
High (National)	Scheduled Monuments, Monuments in State Care, Grade A and B+ Listed Buildings, sites included in the Register of Parks, Gardens and Demesnes of Special Historic Interest, Battle Sites and non-designated heritage assets of equivalent importance that contribute to national research objectives
Medium (Regional)	Conservation Areas, Grade B1 and Grade B2 Listed Buildings and non-designated assets of regional importance except where their particular characteristics merit a higher level of importance, heritage assets on local lists and non-designated assets that contribute to regional research objectives
Low (Local)	Non-designated heritage assets or locally listed heritage assets, except where their particular characteristics merit a higher level of importance, non-designated heritage assets of local importance, including assets that may already be partially damaged
Negligible	Identified historic remains of no importance in planning considerations, or heritage assets and findspots that have already been removed or destroyed (i.e. 'site of')
Unknown / Uncertain	Heritage assets for which a level of importance cannot be defined on current information

5.67 The importance of heritage assets that may be affected by the Proposed Development is identified in the impact assessment and summarised in the Gazetteer (Technical Appendix 1).

5.68 The special characteristics which contribute to an asset's cultural significance may include elements of its setting. Setting is defined by HED¹ as '... the physical space

¹ *Guidance on Setting and the Historic Environment, 2018*

that is part of - and contributes to - the significance and distinctive character of a heritage asset, and through which the asset may be seen, experienced, understood and enjoyed.’ The setting of a heritage asset is defined and analysed according to Stage 2 of the three-stage approach promoted in *Guidance on Setting and the Historic Environment*, with reference to factors listed on page 11 (Magnitude of Effect below). The relevance of these factors to the understanding, appreciation and experience of the asset determines how, and to what extent, an asset’s cultural significance derives from its setting. All heritage assets have settings; however, not all assets are equally sensitive to effects on their settings. In some cases, setting may contribute very little to the asset’s significance, or only certain elements of the setting may be relevant.

Magnitude of Effect

- 5.69 The magnitude of an effect is a measure of the degree to which the cultural significance of a heritage asset will potentially change as a result of a development. This definition of magnitude applies to likely effects on the cultural significance through change within setting as well as likely physical effects on the fabric of an asset.
- 5.70 The methodology adopted for the identification and assessment of potential effects on setting follows the approach set out in HED’s *Guidance on Setting and the Historic Environment*² and in CADW’s *Heritage Impact Assessment in Wales*³. HED’s guidance sets out three stages in assessing the effect of development on the setting of a heritage asset or place as follows:
- Stage 1: identify the heritage assets that might be affected.
 - Stage 2: define the setting by establishing how the surroundings contribute to the significance of the heritage assets in the ways they are understood, appreciated and experienced.
 - Stage 3: assess how any change would impact upon that setting
- 5.71 It is important to note that the magnitude of an effect resulting from an effect on setting is not a direct measure of the visual prominence, scale, proximity or other attributes of the Proposed Development itself, or of the extent to which the setting itself is changed. Moreover, it is necessary to consider whether, and to what extent, the characteristics of the setting which would be changed contribute to the asset’s cultural significance.
- 5.72 Magnitude is assessed as high/medium/low/negligible, and adverse or beneficial, or no effect, using the criteria in Table 5.4 as a guide. In assessing the likely effects of a development, it is often necessary to take into account various effects which affect an asset’s cultural significance in different ways, and balance adverse effects against beneficial effects. For instance, there may be adverse effects on an asset’s fabric and beneficial effects on cultural significance resulting from change in setting arising from a development which would not otherwise occur in a ‘do-nothing’ scenario; a

² HED 2018

³ CADW 2017

heritage asset that might otherwise degrade over time could be preserved or consolidated as a consequence of a development. The residual effect is an overall measure of how the asset’s significance is reduced or enhanced.

Table 5.4: Criteria for Assessing the Magnitude of Impacts on Heritage Assets

Magnitude	Description
High Beneficial	Alterations to an asset and/or its setting resulting in considerable enhancement of cultural significance. Or Preservation of an asset and/or its setting where it would otherwise suffer considerable loss of cultural significance in the do-nothing scenario.
Medium Beneficial	Alterations to an asset and/or its setting resulting in moderate enhancement of cultural significance. Or Preservation of an asset and/or its setting where it would otherwise suffer moderate loss of cultural significance in the do-nothing scenario
Low Beneficial	Alterations to an asset and/or its setting resulting in a slight enhancement of cultural significance. Or Preservation of an asset and/or its setting where it would otherwise suffer slight loss of cultural significance in the do-nothing scenario.
Negligible Beneficial	Alterations to an asset and/or its setting resulting in a very slight enhancement of cultural significance. Or Preservation of an asset and/or its setting where it would otherwise suffer very slight loss of cultural significance in the do-nothing scenario.
No Effect	The asset’s cultural significance is not altered.
Negligible Adverse	Alterations to an asset and/or its setting resulting in a very slight loss of cultural significance.
Low Adverse	Alterations to an asset and/or its setting resulting in a slight loss of cultural significance.
Medium Adverse	Alterations to an asset and/or its setting resulting in a moderate loss of cultural significance.
High Adverse	Alterations to an asset and/or its setting resulting in a considerable loss of cultural significance.

Assessment of the Significance of Effects

5.73 The significance of an effect (‘EIA significance’) on the cultural significance of a heritage asset, resulting from a direct or indirect physical effect or an effect on its setting is assessed by combining the magnitude of the impact and the importance of the heritage asset. The matrix in Table 5.5 provides a guide to decision-making but is not a substitute for professional judgement and interpretation, particularly where the asset importance or effect magnitude levels are not clear or are borderline

between categories. EIA significance may be described on a continuous scale from negligible to major.

Table 5.5: Significance of Effects Matrix

		Magnitude of change			
		High	Medium	Low	Negligible
Importance	Very High	Major	Major	Major or Moderate	Moderate or Minor
	High	Major	Major or Moderate	Moderate or Minor	Minor
	Medium	Major or Moderate	Moderate or Minor	Minor	Negligible
	Low	Moderate or Minor	Minor	Negligible	Negligible

5.74 It is common practice to identify EIA effects as significant or not significant, and in this assessment Major and Moderate effects are regarded as ‘significant’ in EIA terms, while Minor and Negligible effects are ‘not significant’.

5.75 Impact assessment conclusions upon Scheduled Monuments are also presented in the terms of PPS6 Policy BH 1 i.e. ‘Development which would adversely affect such sites of regional importance or the integrity of their settings will not be permitted unless there are exceptional circumstances.’ PPS6 does not define ‘integrity’ in the context of Policy BH 1, therefore for the purposes of the assessment, the integrity of a setting is considered to be maintained if the principal characteristics of the setting that contribute to the cultural significance of the asset are retained, and it continues to be possible to appreciate and understand the Scheduled Monument in its setting.

Assessment of Cumulative Effects

5.76 Proposed wind energy developments are included in the cumulative assessment where they also feature prominently within views of or towards assets affected by the Proposed Development, as demonstrated by photomontage visualisations. A cumulative effect is considered to occur where the magnitude of the combined effect of two or more developments is greater than that of the developments considered separately.

5.77 Cumulative effects are considered in cases where an effect of more than negligible significance would occur as a result of the Proposed Development.

Baseline Conditions

Current Baseline

Assumptions and Limitations

5.78 Information held by public data sources is generally considered to be reliable; however, the following general points are noted:

- There is no LiDAR data available for the ISA;
- The following historic maps were not available for consultation: Ordnance Survey 1919-1963, Antrim, Six Inch to the Mile County Series Fifth Edition and Ordnance Survey 1952-1967 Six Inch to One Mile Irish Grid;
- There are no images relating to the ISA available on the NCAP website;
- Documentary sources are rare before the medieval period;
- Whilst it is accepted that historic documents may be biased depending on the author, with content seen through the lens of context, wherever such documentary sources are used in assessing archaeological potential professional judgment is used in their interpretation in that the functionality of the document is considered;
- NISMR records can be limited because opportunities for research, fieldwork and discovery depend on the situation of commercial development and occasional research projects, rather than the result of a more structured research framework. A lack of data within the NISMR records does not necessarily equal an absence of archaeology;
- Where archaeological sites have been identified solely from aerial imagery without confirmation from archaeological excavation or supporting evidence in the form of find-spots for example, it is possible the interpretation may be revised in the light of further investigation.
- The significance of sites can be difficult to identify from NISMR records, depending on the accuracy and reliability of the original source; and
- There can often be a lack of dating evidence for archaeological sites.
- Any archaeological site visit has inherent limitations, primarily because archaeological remains below ground level may have no surface indicators.

Geology and Geomorphology

5.79 The underlying solid geology is recorded by the British Geological Survey as Unnamed Extrusive Rocks, Palaeogene - Mafic Lava and Mafic Tuff - Igneous Bedrock formed approximately 23 to 66 million years ago in the Palaeogene Period. Superficial deposits are recorded as peat⁴ which started to form in Ireland following the end of the Ice Age around 9,000 years ago⁵.

⁴ BGS

⁵ Mitchell and Ryan 2001, 144

Known Heritage Assets in the ISA

- 5.80 The full list of known heritage assets within the ISA and OSA is presented in the gazetteer appended to accompanying Cultural Heritage Desk-based Assessment and Stage 1 Setting Assessment (Volume 4, Technical Appendix 5.1). The significance of these assets is discussed by period in the Statement of Significance and Importance section of Technical Appendix 5.1.
- 5.81 All heritage assets within the ISA are shown in Volume 3 Figure 5.1 and Figure 5.2.
- 5.82 There are no designated heritage assets within the ISA.
- 5.83 There are no non-designated heritage assets recorded on the NISMR within the ISA. A total of 19 features were noted during research for this assessment and during the site walkover survey.
- 5.84 Of these, eight have been discounted from the impact assessment as they are of negligible importance; these have been identified as either modern features, or these are documentary records only from historic mapping data and walkover survey has confirmed they do not survive preserved as landscape features. These include: a structure (HA5), a bank/peat cutting of likely modern date (HA9), peat cuttings (HA10 and HA11), an enclosure of modern date (HA16) and three field boundaries (HA17, HA18 and HA19). Features of negligible importance are detailed in the Cultural Heritage Desk-based Assessment and Stage 1 Setting Assessment (Volume 4, Technical Appendix 5.1).
- 5.85 The remaining 11 heritage assets comprise:
- Four structures (HA2, HA3, HA4, and HA5) and one livestock enclosure with an associated bank (HA6) of possible Medieval date,
 - A sheepfold (HA1), two enclosures (HA7 and HA13) an area of ridge and furrow (HA8) and a structure (HA14) of post-medieval date
 - An area of ridge and furrow (HA12) of either late 19th century or early 20th century date.
- 5.86 The heritage assets of potential Medieval date are considered to be of medium importance as there is no other evidence for this period within the ISA or 2 km OSA.
- 5.87 The heritage assets of post-medieval and late 19th century/ early 20th century date are considered to be of low importance as they represent locally common features.

Heritage Assets in the OSA

- 5.88 All heritage assets within the OSA are shown in Volume 3 Figure 5.3 and Figure 5.4.
- 5.89 Within the OSA (2 km from ISA), there is one Grade B1 Listed Building: HB07/01/016 Beetling Mill and component parts. There are six non-designated NISMR records comprising cairns, enclosures, standing stones and a graveyard. There are 12 non-designated Industrial Heritage Records (IHR) comprising mines, bridges, mills and a reservoir.
- 5.90 With the OSA (2-5 km from the ISA), there are nine Scheduled Monuments comprising a crannog, standing stones, the site of a castle, an iron smelter, the site of a church

and a raised rath. There is one Register Park, Garden and Demesne of Special Historic Interest (abbreviated throughout this chapter as RPGD) AN:049 Lissanoure. There are three Grade B Listed Buildings comprising a gate lodge and two churches. There are three Grade B1 and four Grade B2 Listed Buildings comprising post offices, a rectory, houses and a hall. There are 13 non-designated NISMR heritage assets which were considered as potentially having a wider landscape setting which contributes to their cultural significance. These include standing stones, a cairn and Newtown Crommelin Historic Settlement and Cloughmills Historic Settlement. These non-designated assets have been screened as part of the Stage 1 Setting Assessment, the results of which are shown in the gazetteer (Volume 4, Technical Appendix 5.1).

- 5.91 Within the OSA (5-10 km from the ISA) there are 29 Scheduled Monuments including motte and baileys, tombs, forts, church sites, raths, standing stones and a souterrain associated with a raised rath. There is one Grade B+ Listed Building and nine Grade B Listed Buildings. These include houses, churches, a cottage and a gazebo. There are seven Grade B1 Listed Buildings and six Grade B2 Listed Buildings including houses, pumps, kilns, bridges and halls.
- 5.92 Within the OSA (10-20 km from the ISA) there are eight Grade A Listed Buildings including a viaduct, churches, a castle, a tower and a country house. There are 14 RPGDs.
- 5.93 A Stage 1 Setting Assessment has been carried out in order to consider whether further detailed setting assessment is required, based on whether it is likely that cultural significance could be harmed through development within their setting. Summary results are presented in Part 6.2 of the Cultural Heritage Baseline Desk-based Assessment and Stage 1 Setting Assessment (Volume 4, Technical Appendix 5.1).
- 5.94 The Stage 1 Setting Assessment methodology considers each heritage asset in the OSA in turn to identify those assets in the ZTV which have a wider landscape setting that contributes to their cultural significance and whether it is likely that cultural significance could be harmed by the Proposed Development. Where heritage assets are located outwith the ZTV, third-party viewpoints within the ZTV which may provide a significant view towards the heritage asset and the Proposed Development were considered.
- 5.95 Following consultation the Stage 1 Setting Assessment found that there may be effects through changes within their setting on the significance of nine Scheduled Monuments, one RPGD (including one Grade B1 Listed Building within the RPGD boundary) and two non-designated heritage assets within the OSA as a result of the Proposed Development.

Previous Investigations

- 5.96 A walkover survey of the footprint of the existing Gruig Wind Farm was carried out in 2003 in advance of its construction. No heritage assets were noted during the works⁶. Archaeological monitoring of ground breaking works for the existing Gruig Wind Farm were carried out between November 2007 and October 2008. No archaeological remains were noted during the works⁷.

Archaeological and Historical Narrative

Prehistoric Periods (6,000 BCE - 500 CE)

- 5.97 Remains of Mesolithic date (c.6,000-4,000 BCE) in Ulster are largely characterised by flint scatters with ephemeral evidence for temporary camps and structures. Groups would move through the landscape seasonally, hunting, gathering and fishing, with the coast of Antrim providing a ready source of flint for making tools⁸. There is evidence of Mesolithic occupation within the 10 km OSA of the ISA (ANT027:107, see Para 5.93 below). The first Neolithic farmers arrived in Ulster around 4,000 BCE, marking the transition towards a more sedentary, settled way of life. There is greater evidence for ritual practice and burial at this time, with elaborate tombs, such as Dooley's Cairn (ANT 022:012, see Para 5.93 below) and monuments such as standing stones emerging during the Neolithic. The Bronze Age (c.2,500-500 BCE) marked the introduction of metal objects into society, with a distinctive style of pottery known as 'Beaker' pottery introduced although evidence for this is relatively rare in Ulster⁹. The Iron Age (c.500BCE-500CE) saw further technological change with the introduction of iron whilst people moved towards living in circular roundhouse style structures. Evidence of an Iron Age burial is present within the 10 km OSA (ANT027:107, see Para 5.93 below).
- 5.98 There are no prehistoric heritage assets recorded on the NISMR within the ISA. Within the 2 km OSA, there are two non-designated heritage assets of prehistoric date: a cairn (ANT024:001) and a standing stone (ANT023:009). The standing stone, (ANT023:009), is located approximately 700m west of the ISA on the south-western slopes of Slievenahanaghan. It is likely it was positioned to overlook the more arable land located to the south-west; the ISA and its immediate environs was unlikely to have been suitable for settlement in the prehistoric period due to its upland nature and poorly draining soils. The NISMR record for the cairn (ANT024:001), notes that the feature is shown on the Third and Fourth Edition OS maps although there are no visible remains of the feature remaining. It is noted that it is the site of a possible marker cairn of possible, a conclusion likely to have been reached due to its location on the boundary between the townlands of Carnuck and Altnahinch. The lack of recorded prehistoric assets either within the ISA or 2 km OSA suggests this area was

⁶ B9 Energy Services & RES 2004

⁷ Gahan and Long 2009

⁸ Mallory and McNeill 1991, 17

⁹ Ibid, 91

not extensively settled in this period; the hilly nature of this area, dominated by, Slievenahanaghan, Slieverush and Skerryhill, along with the poorly draining soils which characterise much of these upland areas are likely to have made the area largely unsuitable for settlement at this time. The ISA is therefore considered to be of negligible potential for previously unrecorded prehistoric sites although the areas along Aghanageeragh River may of slightly higher potential (i.e. low potential).

- 5.99 In the wider study area, there are four scheduled standing stones within the 5 km OSA: ANT018:085, ANT018:088, ANT018:015 and ANT018:095. Three of these stones, ANT018:085 ANT018:015 and ANT018:095 are located in close proximity to one another within an area of low lying, arable land. Standing stones began to appear in the Neolithic period along with advent of farming and have been interpreted as places of ceremony or ritual importance or meeting places. It is likely the three standing stones in this area acted as focal points for local farming communities, perhaps acting as places of ritual or perhaps acting as monuments tying the population to the local arable land.
- 5.100 Within the 10 km OSA, there are eight Scheduled Monuments of prehistoric date, including two court tombs (ANT028:019 and ANT022:012), a fort (ANT020:008), a cairn and axe factory (ANT019:009/019:012), barrows or cairns (ANT190:001/190:002), a standing stone (ANT013:023), an enclosure and possible barrows (ANT028:083) and a late Mesolithic site and site of an Iron Age burial (ANT027:107). ANT028:083 is notable as being the earliest recorded evidence of human occupation within the study area; a hut dated to the 6th millennium BC was noted along with numerous flint artefacts. The proximity of the site to Clogh River suggests that Mesolithic people used this watercourse for drinking water and fishing, periodically setting up temporary camps as they moved through the landscape. The court tombs ANT028:019 and ANT022:012 are of Neolithic date and are examples of the burial practices employed for high status people at this time of prehistory. The axe factory (ANT019:012) demonstrates how prominent areas with suitable natural resources were exploited to make tools during the Neolithic. Standing stone ANT013:023 and an enclosure and possible barrows (ANT028:083) are further evidence of prehistoric ritual and burial practices. The fort (ANT020:008) is an example of how settlement patterns changed in the later prehistoric period, with promontory forts such as this becoming more common into the Iron Age. Evidence of burial practices in the Iron Age are also evidenced through the remains found at ANT027:107.

Medieval Period (500 CE- 1600 CE)

- 5.101 The Medieval period is broadly considered to be marked by the introduction of Christianity to Ireland starting around the 5th century. The Medieval period marked an increase in ring-fort settlements known in mountainous or rocky areas as 'caiseals', the walls of which were made of stone with no corresponding ditch associated the feature. Where the ramparts of the ring-forts were made of soil they

were known as 'raths'¹⁰, a number of which are present within the wider study area of the ISA (see Para 5.98 below). Raths primarily functioned as a means of protecting livestock and the increase in features such as this points to an increased need at this time to ensure that animals were protected from potential raids or theft. Domestic stock was the primary economy at this time, with cattle driven to summer pastures known as 'bailte' which were generally located in upland areas such as the ISA¹¹. Temporary dwellings were built in these upland areas to give shelter to 'booleying' parties of women who milked the cows and boys who guarded the herds¹². Whilst no definitive date can be attributed to the structures (HA2-5) and the potential livestock pen (HA6) present in the ISA, their location and form, as well as their absence from any historic maps, suggest they could be evidence of local people using the area for summer pasture during the Medieval period.

- 5.102 Elites during the Medieval period generally lived apart from the wider population, in either a ring-fort built for defence on a carefully chosen site known as a 'dun' or in lake dwellings such as crannogs¹³ (see Para 5.98 below). The years between 800 and 1300 in Ulster were largely characterised by Viking raids and the invasion of the Normans in the 12th century. The invasion of Ulster by John de Courcy, an Anglo-Norman knight, in 1177 is generally thought to have resulted in the creation of a number of defensive 'motte' and bailey' sites in Ireland¹⁴. A 'Motte' was a mound or fortification, sometimes built on top of earlier rath sites¹⁵, which would usually have a house set on top of it guarded by a palisade. Mottes were often attached to a 'bailey', an enclosed courtyard with buildings overlooked by the motte and surrounded by a palisade. A number of mottes are located within the wider study area of the ISA (see Section 5.114) and are evidence of how the landscape was controlled during this period.
- 5.103 The 1300s marked a decline in the Norman occupation of Ireland; the Scots under Edward Bruce, brother of Robert the Bruce, invaded Ulster near Larne in 1315, coinciding with a period of famine throughout Europe, which along with onset of the Black Death in 1348, ultimately led to Ulster returning almost entirely to Gaelic control¹⁶ until the Elizabethan conquest between 1558-1603. The Statistical Account for the Parish of Loughguile written in 1833 by Lieutenant J. Greatorex records that a battle took place between Sorley Boy and Conway McQuillan on Slievenahanaghan, to the north of the ISA in 1569, with a later account, the OS Memoir on Ancient Topography written in 1837-1838 noting that slight traces of entrenchments and a

¹⁰ Bardon 1992, 22

¹¹ Ibid

¹² Ibid

¹³ Ibid, 23

¹⁴ Mitchell and Ryan 2001, 305

¹⁵ Bardon 1992, 37

¹⁶ Ibid, 49, 55

cairn of stones thought to have been thrown over the body of a fallen soldier were still visible at that time¹⁷.

- 5.104 There are no heritage assets of Medieval date recorded on the NISMR within the ISA or within the 2 km OSA. It is possible, however, that the structures (HA2-HA5) and likely livestock pen (HA6) within the ISA could date from this period as noted above. These structures do not appear on the First Edition OS map of 1832-1846 suggesting they were no longer in use by this time and hints at the structures being earlier in date. The vicinity of HA2-HA6 can therefore be considered to be of medium potential for previously unrecorded heritage assets of Medieval date. The rest of the ISA has no evidence for Medieval activity and can generally be considered as of negligible potential for previously unrecorded Medieval remains. The areas along Aghanageeragh River may, however, be of slightly higher potential (i.e. low potential) as this area may have been suitable for grazing animals during the Medieval period.
- 5.105 Within the 5 km OSA there are three Scheduled Monuments of Medieval date: a crannog (ANT023:015), the site of a church and graveyard (ANT024:010) and a raised rath (ANT023:007). While Crannogs can date back to prehistoric periods the crannog ANT023:015 has been interpreted as a probably early medieval date, in the absence of intrusive archaeological works the exact date of this asset cannot be confirmed. Crannogs are typically artificial or partly artificial islands constructed in loughs as platforms for dwellings¹⁸ and show the variety of settlement types employed from the prehistoric period to the medieval period.
- 5.106 A rath is a form of enclosed and defended farmstead, usually circular or sub-circular in plan¹⁹, they are typically enclosed by one or more earthen banks and ditches. Their distribution correlates closely with areas of rich farmland, with most located below the 150m AOD contour. The Canamenagh Rath (ANT023:007) is a raised rath; this type of rath has its interior raised above the level of the surrounding countryside. The attributes of raised raths appear to have posed significant difficulties compared to standard raths, it took greater effort to construct the enclosure, access was more difficult, internal structures were more exposed to weather conditions, sites were more conspicuous and therefore possibly more prone to attack. It is possible that platform raths were built in areas of high-water tables to avoid flooding²⁰ the raised ground level making them less susceptible to flooding and offsetting the other limitation of this site type. Some raths, such as ANT022:009 within the 10 km OSA, were connected to souterrains, underground storage areas probably used to store food²¹.

¹⁷ Day and McWilliams 1992, 68

¹⁸ Mitchel & Ryan 2001, 261

¹⁹ Stout 1997, 15

²⁰ Ibid, 17

²¹ Bardon 1992, 23

5.107 Within the 10 km OSA there are 18 Scheduled Monuments of Medieval date. These include a church site, a fortification, a hillfort, four motte and baileys, and 11 rath sites one of which is associated with a souterrain. The fortification, hillfort and motte and baileys are all examples of how the OSA was controlled and dominated during this time, whilst the rath sites provide insight into the differing ways in which people lived and controlled their livestock. The church site exemplifies the introduction of Christianity and its growing importance during the Medieval period.

Post-medieval Period (1600-1900CE)

5.108 The post-medieval period in Ireland was initially dominated by the Elizabethan conquest which took place between 1558 and 1603, ultimately establishing English rule in Ulster. This paved the way for the Plantation of Ulster, which took place between 1603 and 1685 and entailed the organised colonisation of Ulster by predominantly Protestant people from southern Scotland and northern England. The plantation was intended to '...quieten Ulster and free the province from the risk of further native rebellion and foreign invasion.'²² and was considered to be a civilising exercise designed to, in the words of King James I '...establish the true religion of Christ among men...almost lost in superstition'²³. The continued supplanting of the native Catholic population led to a rebellion of Irish Catholics in 1641 who sought to reverse the plantations. Following initial success and the establishment of a new provisional government known as the Confederacy, the invasion of Oliver Cromwell in 1649 ultimately restored Ulster and the rest of Ireland to British control, with Cromwell imposing a particularly harsh settlement on the Irish Catholic population²⁴. The victory of William of Orange at the Battle of the Boyne in 1690 further cemented Protestant rule in Ulster. The Great Famine between 1845 and 1852 led to a 15% reduction in the population of Ulster and led to widespread emigration²⁵.

5.109 The Statistical Account for the Parish of Loughguile written in 1833 by Lieutenant J. Greatorex notes that the population at this time was a mix of Scottish and English immigrants, who presumably settled in the area during the Plantation of Ulster, with the Gaelic populations largely living in the upland areas of the parish²⁶. The account notes that the upland areas of the parish afforded good pasturage during the summer months but was not extensively cultivated at this time²⁷. The evidence of cultivation seen within the ISA is, therefore, perhaps the exception to the rule in terms of how the upland areas of the parish were used in the post-medieval period. It records that a battle took place between Sorley Boy and Conway McQuillan on Slievenahanaghan in 1569. The account note that potatoes were the primary crop grown, with barley,

²² Ibid, 124

²³ Ibid

²⁴ Ibid 136, 140, 141

²⁵ Ibid 307, 308

²⁶ Day and McWilliams 1992, 58

²⁷ Ibid, 58

oats, and flax also grown²⁸. It records that nearly all the young men in the parish at this time were employed as weavers and in the manufacture of linen although it is noted that the sale of linen was not profitable at this time. The account notes that flax spinning was a common job but was similarly unprofitable and done largely as a way of '...passing away the time and to prevent idleness...' ²⁹. Lissanoure castle (HB04/07/010) is noted as having been improved by the addition of wings and offices at this time, with other antiquities within the parish comprising '...forts and mounds that are to be found all over the parish; none of them...remarkable or deserving particular mention' ³⁰.

- 5.110 The OS Memoir for the Parish of Loughguile written in 1835 by James Boyle largely reflects the 1833 Statistical Account in its description of the parish. The OS Memoir on Ancient Topography written between 1837 and 1838 by J. Stokes refers to a number of sites within the parish, including graveyards, the battle site on Slievenahanaghan, forts, standing stones and various finds such as the remains of a canoe within a bog, coins, flint tools, arrowheads and a clay ring. The sites noted in the account largely reflect the sites recorded on the NISMR within the wider study area of the ISA. As noted above, the account mentions that slight traces of entrenchments and a cairn of stones thought to have been thrown over the body of a fallen soldier were still visible at the battle site on Slievenahanaghan at this time³¹. Of particular note are the standing stones at Corkey (ANT018:085, ANT018:088 and ANT018:015) which are referred to and were illustrated as part of the account³². Also of note within Stokes's account is a reference to a '...prostrate stone at the top of Groog mountain.' ³³. This stone presumably relates to ANT023:009, located approximately 700m WSW of the ISA which is now a standing, instead of prostrate, stone, suggesting it has been restored to a standing position at some point since the production of Stokes's account in 1837. The Fair Sheets account for the parish of Loughguile written by J. Bleakly between 1837 and 1838 largely reflects Stokes's account.
- 5.111 There are no heritage assets of post-medieval date recorded on the NISMR within the ISA. There are eight features of post-medieval date noted during research for this assessment within the ISA including a sheepfold (HA1), two enclosures (HA7 and HA13), an area of ridge and furrow (HA8), two likely agricultural structures (HA14 and HA15) and two field boundaries (HA18 and HA19). The post-medieval features within the ISA are largely concentrated along Aghanageeragh River; this area can, along with areas of improved agricultural land at the south, south-west and north-west of the ISA, therefore be considered as being of medium potential for previously

²⁸ Ibid, 59

²⁹ Ibid

³⁰ Ibid, 60

³¹ Ibid, 68

³² Ibid, 73

³³ Ibid, 69

- unrecorded remains of post-medieval date. The rest of the ISA can be considered to be of low potential for previously unrecorded remains of post-medieval date.
- 5.112 Within the 2 km OSA there is one Grade B1 Listed building of post-medieval date: a mill (HB07/01/016). There are 12 non-designated Industrial Heritage Records (IHR) of post-medieval date within the 2 km OSA. These include bauxite and ironstone mines, bridges, flax mill and mills. The bauxite and ironstone mines show how the land was exploited for raw materials and demonstrates the importance of these types of industries at this time. The mills show how grain was processed whilst the flax mill shows the importance, of this industry to the local area. The bridge demonstrates how transport infrastructure improved in the area during the post-medieval period.
- 5.113 There are two Scheduled Monuments within the 5 km OSA including Clogh Castle (ANT027:016) and an iron smelter (ANT024:500). There is one RPGD within the 5 km OSA: Lissanoure (AN-049). There are three Grade B Listed Buildings within the 5 km OSA including a gate lodge (HB04/07/011), the remains of a church (HB04/07/013) and a church (HB04/16/001). There are three Grade B1 Listed Buildings within the 5 km OSA including a rectory (HB04/07/014) a church (HB04/05/002) and a house (HB04/05/004). There are four Grade B2 Listed Buildings within the 5 km OSA including a post box (HB07/01/015 B), a telephone kiosk (HB07/01/015 C), a checker hall (HB04/07/008) and a post office (HB07/01/015 A).
- 5.114 There are nine Grade B Listed Buildings of post-medieval date within the 10 km OSA comprising houses, churches, a cottage, a gazebo and a conservatory and garden house. There are seven Grade B1 Listed Buildings within the 10 km OSA including halls, houses, cottages, a country house, and a stables and castle. There are six Grade B2 Listed Buildings within the 10 km OSA including houses, pumps, a kiln and a bridge.
- 5.115 Within the wider 20 km OSA there are eight Grade A Listed Buildings of post-medieval date including castles, churches, memorials, a tower and a country house. There are 14 RPGDs of post-medieval date within the 20 km OSA. The number of designed landscapes, castles and country houses within the wider study area show how wealthy families chose to live during the post-medieval period and how living within designed landscapes grew in importance at this time.

Modern (1900CE - Present)

- 5.116 The 20th century marked a period of considerable upheaval in Ulster, with the formation of the Irish Free State in 1922 resulting in six of the predominantly Protestant counties of Ulster remaining part of the United Kingdom with the remaining three counties seceding. The subsequent decades were marked by the Troubles which lasted between the late 1960s and 1998 and comprised an irregular war fought between republican paramilitaries such as the Provisional Irish Republican Army and the Irish National Liberation Army who sought to create a united Ireland, and loyalist paramilitaries such as the Ulster Defence Force, Ulster Defence Association and British state security forces who sought to retain Northern Ireland as part of the United Kingdom.

- 5.117 There are no heritage assets of modern date within the ISA. There are six features of likely modern date noted through research for this assessment present within the ISA. These include areas of peat cuttings (HA9, HA10, and HA11), an area of ridge and furrow enclosed by a bank (HA12), a sub-trapezoidal enclosure possibly associated with a shooting lodge (HA16) and a possible field boundary noted on the Third Edition OS map (HA17). Whilst the peat cuttings cannot be definitely assigned a modern date, these activities continued into the 20th century in rural areas, and it is likely this was the case in the ISA. The vicinity of HA12, HA16 and HA17 are of medium potential for previously unrecorded heritage assets, with the rest of the ISA generally of low potential. There is a higher potential for the remains of peat cuttings to exist, however, these features are considered to be of negligible importance and are therefore not considered in this EIA (see Section 6 of Technical Appendix 5.1 in Volume 4). The heritage assets dating to this period reflect the continued use of small areas of the ISA for cultivation (HA12), the continued division of the land (HA16 and HA17) and reflects the use of peat as a fuel at this time (HA9, HA10 and HA11).
- 5.118 There are no heritage assets of modern date within the 2 km or 5 km OSAs. There is one Grade B+ Listed Building within the 10 km OSA: Kilmore House (HB05/01/012).

Archaeological Potential of the ISA

- 5.119 The ISA is generally of negligible-low archaeological potential, with exceptions as below.
- 5.120 There are no known prehistoric remains within the ISA, the upland nature of which is likely to have made it unsuitable for settlement at this time. The potential for previously unrecorded remains of prehistoric date within the ISA is generally negligible although the area along Aghanageeragh River is of slightly higher (low) potential for prehistoric remains as this area would have been slightly more suitable for exploitation in the prehistoric period.
- 5.121 The ISA was used for summer pasture, possibly during the Medieval period as seen by HA2-HA6; whilst these structures are not definitively Medieval in date, they may, given their absence from historic maps and their form, date from this period. The vicinity of HA2-HA6 is therefore of medium potential for previously unrecorded remains of Medieval date. The rest of the ISA is generally of negligible potential for Medieval remains as there is no evidence for remains of this date outwith HA2-HA6. The area along Aghanageeragh River is of slightly higher (low) potential for Medieval remains as this area would have been slightly more suitable for grazing cattle during the summer months compared to elsewhere in the ISA.
- 5.122 The post-medieval features within the ISA are largely concentrated along Aghanageeragh River; this area can, along with areas of improved agricultural land at the south, south-west and north-west of the ISA, therefore be considered as being of medium potential for previously unrecorded remains of post-medieval date. The rest of the ISA can be considered to be of low potential for previously unrecorded remains of post-medieval date.

- 5.123 The ISA is of medium potential for modern features, with evidence from this period more widely distributed across the ISA. It is likely any such features will relate to areas of peat cuttings and field boundaries.
- 5.124 Below ground and earthwork remains of post-medieval and modern date would be presumed to be of only low or negligible importance for their evidential value which contributes to a sense of place.
- 5.125 Peat, which characterises the superficial deposits of the ISA, survives under waterlogged conditions and therefore has excellent preservation potential for organic remains. Study of the organic remains preserved within stratified peat deposits enables the construction of a narrative of changes to the surrounding environment brought about by human activities and natural events in the prehistoric and historic periods.
- 5.126 The peat was observed to be a maximum of 1.5 m in depth during archaeological monitoring of ground works for the existing Gruig Wind Farm with an average depth of between 0.75 m and 1 m noted (Gahan and Long 2009). Given the relatively shallow nature of the peat and the lack of any archaeological remains noted within the peat during archaeological monitoring of ground works for the existing Gruig Wind Farm, it is considered that the ISA is of low palaeoenvironmental potential.
- 5.127 Modern drainage channels which have been dug in roughly the central north-eastern area and central southern areas of the ISA, along with peat cuttings which are evident throughout the central area of the ISA, are likely to have truncated any above, and potentially below ground, remains which may have existed in these areas.

Heritage Assets Considered for Setting Effects

- 5.128 Each asset in the OSA is presented in the Gazetteer and the Stage 1 Setting Assessment is presented in the Archaeology and Cultural Heritage Desk-based Assessment and Stage 1 Setting Assessment (Volume 4, Technical Appendix 5.1), summarised below. Heritage asset locations are shown on Volume 3, Figure 5.3 and Figure 5.4. The heritage assets retained for detailed assessment are shown in Table 5.6 below.
- 5.129 There are no World Heritage Sites or Conservation Areas within the OSA.

Register of Parks, Gardens and Demesnes of Special Historic Interest

- 5.130 There is one RPGD located 4.2 km north-west of the ISA: AN-049 Lissanoure. This location is shown in Figure 5.3. There are none located between 5 km and 10 km from the ISA. Between 10 km and 20 km from the ISA, there are 14 RPGDs. RPGDs can derive their cultural significance through designed views and vistas, inter-relationships between heritage assets therein, as well as potentially long-range views towards historic or natural features located outwith the defined landscape boundary.
- 5.131 The main focal point of AN-049 Lissanoure is the Grade B1 listed Lissanoure Castle (HB04/07/010), which is set within cleared parkland overlooking a small lough to the south. The remaining listed buildings within the designed landscape are set within

the policy woodland which characterises much of the central and eastern areas of AN-049 Lissanoure's boundary. Given the level of screening from policy woodland, the only structures which are partially intervisible are Lissanoure Castle (HB04/07/010), Lissanoure Cottage (HB04/07/002) and a conservatory and garden (HB04/07/009). Any visual relationship between these features would be retained despite the presence of the Proposed Development located 4.2 km to the south-east. Lissanoure Castle (HB04/07/010) is oriented south-east towards the Proposed Development, implying that views in this direction from the building contribute to how it functions within the designed landscape of AN-049 Lissanoure. The Proposed Development, whilst likely to be at least partially screened by policy woodland at the east of the lough, could potentially cause a visual distraction to how Lissanoure Castle is understood, appreciated and experienced within its setting. AN-049 Lissanoure and Lissanoure Castle (HB04/07/010) have therefore been retained for detailed assessment in the EIA.

- 5.132 Following Stage 1 Setting Assessment, no further RPGDs in the OSA were identified as requiring detailed assessment as no effect is predicted upon their cultural significance as a result of the Proposed Development, with details presented in Parts 6.2.4 in the Archaeology and Cultural Heritage Desk-based Assessment and Stage 1 Setting Assessment (Volume 4, Technical Appendix 5.1).

Scheduled Monuments

- 5.133 It is proposed to retain the following Scheduled Monuments for detailed assessment in the EIA, from which it is considered there is a potential for effects resulting from the Proposed Development and also cumulatively. The locations of these are shown in Figures 5.3 and 5.4:

- ANT018:085 Corkey North, standing stone
- ANT018:088 Ballyveely Upper, standing stone
- ANT018:015 Corkey North, standing stone
- ANT018:095 Corkey North, standing stone
- ANT027:010 Dundermot, motte (and site of bailey)
- ANT027:036 Dungall, motte
- ANT018:019 Knockaholet, motte and bailey
- ANT027:022 Doonbought, fortification
- ANT022:012 Ballymacaldrack, 'Dooey's Cairn', court tomb

- 5.134 It is considered that these heritage assets all may have a wider landscape setting which contributes to their cultural significance and may be subject to visual change as a result of the Proposed Development which may affect how they are understood, appreciated and experienced.

- 5.135 Following Stage 1 Setting Assessment, no further Scheduled Monuments in the OSA were identified as requiring detailed assessment as no effect is predicted upon their cultural significance as a result of the Proposed Development, with details presented

in Parts 6.2.12 in the Archaeology and Cultural Heritage Desk-based Assessment and Stage 1 Setting Assessment (Volume 4, Technical Appendix 5.1).

Listed Buildings

- 5.136 It is proposed one Listed Building is retained for detailed assessment in the EIA: Lissanoure Castle HB04/07/010 which will be considered as part of the overall assessment for AN-049 Lissanoure RPGD. The location of this Listed Building is shown on Figure 5.3. As outlined above, the castle faces south-east towards the ISA; the Proposed Development, whilst likely to be at least partially screened by policy woodland at the east of the loch, could potentially cause a visual distraction to how Lissanoure Castle is understood, appreciated and experienced within its setting. It has therefore been retained for detailed assessment as part of the wider assessment of AN-049 Lissanoure RPGD.
- 5.137 Following Stage 1 Setting Assessment, no further Listed Buildings in the OSA were identified as requiring detailed assessment as no effect is predicted upon their cultural significance as a result of the Proposed Development, with details presented in Parts 6.2.16 in the Cultural Heritage Desk-based Assessment and Stage 1 Setting Assessment (Volume 4, Technical Appendix 5.1).

Non-designated Heritage Assets

- 5.138 It is proposed that two non-designated heritage assets are retained for detailed assessment in the EIA. These comprise two standing stones: ANT023:009 and ANT023:010. The locations of these are shown in Figure 5.3. It is considered that these assets have a wider landscape setting which may contribute to their cultural significance, and which could be affected by the construction of the Proposed Development.
- 5.139 There are no non-designated heritage assets recorded on the NISMR within the ISA. There are 11 non-designated heritage assets of low importance within the ISA which were noted during research for this assessment. These include a sheepfold (HA1), five structures (HA2-HA5 and HA14), a livestock pen (HA6), two enclosures (HA7 and HA13) and two areas of ridge and furrow (HA8 and HA12). The locations of these are shown in Figures 5.1 and 5.2.
- 5.140 Following Stage 1 Setting Assessment, no further non-designated heritage assets in the OSA were identified as requiring detailed assessment as no effect is predicted upon their cultural significance as a result of the Proposed Development, with details presented in Parts 6.2.22 in the Archaeology and Cultural Heritage Desk-based Assessment and Stage 1 Setting Assessment (Volume 4, Technical Appendix 5.1).

Table 5.6: List of Heritage Assets Retained for Detailed Setting Assessment

Ref	Name	Period	Status
ANT023:009	Gruig, standing stone	Prehistoric	Non-designated

			Heritage Asset
ANT023:010	Scotchmerbane, standing stone	Prehistoric	Non-designated Heritage Asset
ANT018:085	Corkey North, standing stone	Prehistoric	Scheduled Monument
ANT018:088	Ballyveely Upper, standing stone	Prehistoric	Scheduled Monument
ANT018:015	Corkey North, standing stone	Prehistoric	Scheduled Monument
ANT018:095	Corkey North, standing stone	Prehistoric	Scheduled Monument
AN-049	Lissanoure	Post-medieval	Register Park, Garden and Demesne of Special Historic Interest
HB04/07/010	Lissanoure Castle	Post-medieval	Grade B1 Listed Building
ANT027:010	Dundermot, motte (and site of bailey)	Medieval	Scheduled Monument
ANT027:036	Dungall, motte	Medieval	Scheduled Monument
ANT022:012	Ballymacaldrack, 'Dooley's Cairn', court tomb	Prehistoric	Scheduled Monument
ANT018:019	Knockaholet, motte and bailey	Medieval	Scheduled Monument
ANT027:022	Doonbought, fortification	Medieval	Scheduled Monument

Future Baseline

5.141 Under the 'do nothing' approach, the known and potential heritage assets present within the ISA would continue to be subject to natural erosion. This could take the

form of flooding, perhaps as a result of increased rainfall due to climate change, or through natural taphonomic processes which may, over a prolonged period to time, erode the extant remains of heritage assets. Identification, investigation and recording of such heritage assets would be unlikely to be undertaken in advance of any damage under the 'do nothing' scenario.

5.142 In terms of change within the setting of heritage assets in the OSA, under the 'do nothing' scenario settings would remain as per the baseline situation, notwithstanding any setting impacts that may occur as a result of consented and future consented developments.

Likely Significant Effects

5.143 Likely significant environmental effects have been considered after taking into account any inherent 'embedded' mitigation designed into the project, set out in Chapter 03: Design Evolution and Alternatives.

Construction Effects

Direct Effects

5.144 There are 11 known heritage assets within the ISA as shown in Table 5.7 below. Of these, five are considered to be of medium importance and six are considered to be of low importance. Nine of the heritage assets within the ISA have been avoided through design and will not be directly affected by the Proposed Development.

Table 5.7: Heritage Assets in the ISA

Ref	Description	Period	Status	Importance
HA1	Sheepfold shown on 3rd Edition OS map. Largely well preserved, measuring in total 25 m east-west and 18 m north-south. The sheepfold walls are up to 1.1m in height and composed of sub-rounded granite blocks. The sheepfold is sub-divided into two chambers, with one narrower chamber at the east measuring 18 m north-south by 6 m east-west and the larger western chamber 18 m north-south and 19 m east-west. It is set within a field of ridge and furrow (HA8) with a bank (HA7) located to the north.	Post-medieval	Non-designated	Low
HA2	Sub-rectangular structure located on a south-east facing slope. The structure measures 14 m in length and 3 m in width	Medieval/Post-medieval	Non-designated	Medium

	and comprises low turf walls measuring up to 1 m in width. Possibly a shieling hut used during seasonal grazing.			
HA3	Sub-rectangular structure located on a south-east facing slope at the base of a localised knoll. The structure measures 11 m in length and 3 m in width and comprises low turf walls measuring up to 0.7 m in width. Possibly a shieling hut used during seasonal grazing.	Medieval/Post-medieval	Non-designated	Medium
HA4	Sub-rectangular structure located on a south-east facing slope at the base of a localised knoll. The structure measures 9 m in length and 3 m in width and comprises low turf walls measuring up to 0.7 m in width. Possibly a shieling hut used during seasonal grazing.	Medieval/Post-medieval	Non-designated	Medium
HA5	Sub-circular structure located on a south-east facing slope at the base of a localised knoll. The structure measures 8 m in length and 3 m in width and comprises low turf walls measuring up to 0.7 m in width. Possibly a shieling hut used during seasonal grazing.	Medieval/Post-medieval	Non-designated	Medium
HA6	Sub-rectangular enclosures cut into the peat located on a local knoll immediately north-west of HA2-HA5. There are two enclosures: the western enclosure measures approximately 11m north-south by 8m east-west and the eastern enclosure measures approximately 11 m north-south by 8m east-west. The enclosures are defined by turf baulks approximately 0.6 m in width. It is likely that the enclosures were used as a pen for livestock and may relate to the structures located to the south-east (HA2-HA5). An east-west running bank is located 8m to the north of	Medieval/Post-medieval	Non-designated	Medium

	the enclosures. It is approximately 22 m in length, 0.6m in width and up to 0.3m in height.			
HA7	Enclosure bank defining the north-eastern extent of an area of ridge and furrow (HA8) located approximately 90 m north of a sheepfold (HA1). The bank runs for approximately 60 m north-east to south-west and measures approximately 0.7 m in width and up to 0.4 m in height.	Post-medieval	Non-designated	Low
HA8	Area of ridge and furrow measuring approximately 29,8500 m ² extending from the vicinity of a sheepfold (HA1) at the east extending along Aghanageeragh River. Partially enclosed by HA7 at the north-east and HA13 at the south-west.	Post-medieval	Non-designated	Low
HA12	Area of ridge and furrow measuring approximately 13,850 m ² enclosed by a bank. This field is shown on the Third Edition OS map of 1900-1907 but is likely to date to the late 19 th century	Post-medieval	Non-designated	Low
HA13	Enclosure shown on Second Edition OS map. Originally shown on the Second Edition map as two enclosures located south of HA7 and immediately north of Aghanageeragh River. The eastern enclosure was removed at some point in the late 19th century, leaving one extant enclosure. The remaining enclosure is defined by three banks approximately 0.5 m wide and up to 0.3 m in height. Partially encloses an area of ridge and furrow (HA8).	Post-medieval	Non-designated	Low
HA14	Structure shown on the First Edition OS map at the west of an area of ridge and furrow (HA8). Structure is rectangular and measures approximately 11 m in length and 5 m in width.	Post-medieval	Non-designated	Low

5.145 Direct physical effects are predicted on three non-designated heritage assets of low importance:

- HA8, an area of ridge and furrow
- HA12, an area of ridge and furrow
- HA13, an enclosure

HA8, area of ridge and furrow

5.146 The asset comprises an area of ridge and furrow measuring approximately 29,8500 m² extending from the vicinity of a sheepfold (HA1) at the east extending along Aghanageeragh River. It is likely that it was originally unenclosed but was subsequently partially enclosed when enclosures HA7 at the north-east and HA13 at the south-west were constructed later in the 19th century. The area was likely to have been used to grow potatoes in in the 19th century.

5.147 A small section of the asset, immediately north-west of Aghanageeragh River lies within the footprint of a site track leading to the proposed location of Turbine 7 and would be directly impacted by excavation works. A **low** impact is predicted on an asset of **low** importance, leading to a significance of effect of **negligible adverse**, which is **not significant** in EIA terms.

HA12, area of ridge and furrow

5.148 The asset comprises an area of ridge and furrow measuring approximately 13,850 m² enclosed by a bank. This field is shown on the Third Edition OS map of 1900-1907 but is likely to date to the late 19th century. Given this area's proximity to the proposed temporary crane pad location for Turbine 5, a direct impact on the north-western extent of HA12 is considered likely. A **low** impact is predicted on an asset of **low** importance, leading to a significance of effect of **negligible adverse**, which is **not significant** in EIA terms.

HA13, enclosure

5.149 The asset comprises an enclosure shown on the Second Edition OS map of 1846-1862 as two enclosures located south of HA7 and immediately north of Aghanageeragh River. The eastern enclosure was removed at some point in the late 19th century, leaving one extant enclosure. The remaining enclosure is defined by three banks approximately 0.5 m wide and up to 0.3 m in height. It partially encloses an area of ridge and furrow (HA8).

5.150 The eastern bank of the enclosure lies within the footprint of a site track leading to the proposed location of Turbine 7 and would be directly affected by excavation works. A **medium** impact is predicted on an asset of **low** importance, leading to a significance of effect of **minor adverse**, which is **not significant** in EIA terms.

Indirect Effects

5.151 Whilst changes to the soil moisture levels in which the assets within the ISA are located may theoretically cause them to physically degrade, this is considered

unlikely, and no indirect effects are predicted in this instance. The nature of the assets are such that temporary changes to the soil structure in the vicinity of them would not cause the assets to erode or collapse.

Potential Accidental Direct Effects

5.152 Accidental direct effects upon heritage assets within the ISA may arise should activities such as, but not limited to, ancillary drainage works and uncontrolled plant movement take place in the vicinity of the heritage assets identified above (HA8, HA12, HA13).

Direct Palaeoenvironmental Effects

5.153 Given the relatively shallow nature of the peat in the wider area and the paucity of any archaeological remains noted during archaeological monitoring for the existing Gruig Wind Farm, it is considered that the palaeoenvironmental potential of the ISA is low. No significant adverse direct impacts are identified.

Direct Effects Upon Areas of Archaeological Potential

5.154 Direct construction impacts on previously unknown heritage assets in the ISA is possible. An assessment of effect significance cannot be meaningfully evaluated for unknown heritage assets, as neither the importance of the asset nor the magnitude of the impact can be known. Consequently, only the likelihood of construction effects is considered.

5.155 Based on the assessment of known heritage assets within the ISA, any effect resulting from an impact upon archaeological remains discovered during the construction-phase is unlikely to be of greater than **minor** significance.

Construction Phase Setting Effects

5.156 The assessment of potential setting effects upon heritage assets within the ISA and OSA as a result of the construction stage of the Proposed Development, through the introduction of increased traffic, construction noise/dust, and the visual intrusion of cranes etc to the landscape, is the same as those assessed under 'operational effects' below, although construction effects would be temporary and therefore **not significant** in EIA terms due to their very short duration.

Operational Effects

5.157 Paragraphs 5.121-5.133 above outline the heritage assets identified in the Stage 1 Setting Assessment which have been retained for detailed assessment in this chapter. An assessment, grouped by asset type, of potential effects on the setting of these assets is presented below.

Standing Stones

5.158 There are two standing stones within 2 km of the ISA and three within 5 km which have been retained for detailed assessment. The locations of these can be seen on Figure 5.3. Standing stones began to appear in the Neolithic period along with the

advent of farming and have been interpreted as places of ceremony or ritual importance or meeting places. It is likely the standing stones within the OSA acted as focal points for local farming communities, perhaps acting as places of ritual or perhaps acting as monuments tying the population to the local arable land. Standing stones generally derive their cultural significance from their physical, archaeological value with the potential through excavation to elucidate their nature and inform on prehistoric ritual sites. Visually and contextually, standing stones derive their cultural significance from their location within the landscape, often acting as focal points within areas of flat arable land (as is the case for ANT018:015, ANT018:095, ANT018:085 and ANT023:010). In the case of these stones, is likely the local community who built them cultivated the local fertile land and positioned the stones to be visible from the area they had settled; as such outward views from the standing stones to areas of possible nearby settlement or contemporary monuments contribute to their visual and contextual cultural significance. Standing stones can also be situated overlooking areas of arable land from an elevated position (as is the case for ANT023:009); in this case it is likely the stone was positioned to overlook the more arable land located to the south-west, tying the stone to the people who had settled in this area instead of to the area in which the stone is located (which is characterised by boggy, poorly draining soil and is largely unsuitable for cultivation).

ANT023:009

- 5.159 ANT023:009 comprises a single basalt standing stone situated upright but which was previously recorded in an OS Memoir of 1838 as being recumbent³⁴. The location can be seen on Figure 5.3. The south face of the stone measures 1.77 m high and 0.58 m in width. The west face is 0.88 m wide at widest point (near its base) and tapers to 0.44 m wide at the top. The north face is 1.85 m high. As a non-designated heritage asset, the standing stone is considered to be of low importance.
- 5.160 The stone is situated in an elevated position on a hill affording long range views of the flat, arable land which characterises the wider landscape to the south-east, south, south-west and west (Image 5.1).

³⁴ Day and McWilliams 1992, 58

Image 5.1: View south from standing stone ANT023:009 showing low-lying land



- 5.161 Short range views in these directions are broadly limited to the slope leading to the stone, with a wind turbine located approximately 100 m south-east featuring in south-facing views from the standing stone. Views to the north-west, north, north-east and east are largely of the local moorland on in which the stone is set, with the existing Gruig Wind Farm featuring in these views.
- 5.162 The stone is only visible from a range of approximately 100 m when approaching it from the south, with the topography largely screening it from view when further downslope. As such, the stone does not appear as a prominent landscape feature, with north facing views to it from the wider landscape informative only insofar as the visitor experiences the upland nature of the landscape in which the stone is situated. The higher ground to north of the stone focusses views to the open, expansive southern views from the stone. It is likely that the community which erected the standing stone would have lived within this local area and as such views towards this

area from the stone serve to tie the monument to the people who erected it, and contributes to how the monument is understood, appreciated and experienced. The lack of intervisibility between low lying ground to the south-west and the stone suggests that the stone may have been built in order mark an area from which the low lying arable ground to the south could be appreciated from. Outward views from the stone can therefore be seen as the key factor in understanding, appreciating and experiencing the stone.

- 5.163 Figure 5.5 indicates that 12 of the proposed turbines would be visible in north-east facing views from the stone. Whilst this would introduce visual change to views from the stone, views in this direction do not contribute significantly to how the stone is understood, appreciated and experienced. Views to the north and north-east are broadly limited to the moorland on which the stone is set; it is unlikely the community who constructed the stone inhabited this area due to the poorly draining soils which characterise it making it largely unsuitable for settlement in the prehistoric period. Views from the stone are focussed on the low lying arable land to the south and south-west, which is likely to have been settled by the community which erected the stone. The connection between the stone and this area is established by the long range south facing views from the stone which remain appreciable in the modern day. Whilst views to the north-west would undergo visual change, the introduction of the Proposed Development would not fundamentally change how the stone is understood, appreciated and experienced in relation to the land at the south.
- 5.164 It is therefore considered that the Proposed Development would have a low impact on the cultural significance of ANT023:009, an asset of low importance leading to a significance of effect of negligible adverse which is not significant in EIA terms.

ANT023:010

- 5.165 ANT023:010 is a large, flat irregularly shaped upright slab of basalt measuring 1.95 m in height, 0.91 m in width and 0.51 m in thickness and which narrows in thickness to the top. The stone is situated within a modern drystone wall in improved undulating grassland (Image 5.2). As a non-designated heritage asset, the stone is considered to be of low importance.

Image 5.2: View north of ANT023:010 towards ISA



- 5.166 Views from the stone to the north and north-east are partially screened from view by a hedgerow and a house located immediately to the north, but medium range views of local hills are possible with the existing Gruig Wind Farm visible to the north. Views in all other directions are largely focussed on the undulating arable land in which the stone is situated, with views north and east
- 5.167 The stone is likely to have served as a focal point for the local communities who had settled in the area, perhaps functioning as a meeting place or place of ritual. It is likely it was visible from nearby contemporary settlement and thus reciprocal views to and from the local arable land are important in understanding and appreciating the stone as a focal point for the community who built it. The stone has lost some of its setting in this capacity as it has been incorporated into a drystone wall which lies immediate adjacent to a public road which combine to diminish the prominence of the stone in the landscape. Hedgerows present at the north and west of the stone also screen it from any inward views to it from these directions. As such, the stone is

largely experienced within a reduced setting, focussed largely on the field in which it is situated and the outward views from the stone.

- 5.168 Within this reduced setting, it is possible to understand how the stone would have related to the local community it served, situated as it is within gently undulating arable land. The relationship with this land, particularly in south and west facing views can still be appreciated and thus the relationship the stone has with this local land is still appreciable.
- 5.169 Figure 5.6 shows that 12 of the proposed turbines would be visible in north facing views from ANT023:010, with nearest, Turbine 5, located 2.13 km to the north. Although the Proposed Development would introduce further change to views in this direction from the stone, it is considered it would not materially change how it is understood, appreciated and experienced within its key setting in relation to local arable land. The longer range views which are possible when facing north and north-east from the stone take in an area which, whilst forming part of the backdrop of the stone, fall outwith the area within which it is understood, appreciated and experienced. The local setting of the stone in relation to the local arable land would remain fully appreciable despite the presence of the Proposed Development.
- 5.170 It is therefore considered that the Proposed Development would have no impact on the cultural significance of standing stone ANT023:010, an asset of low importance, resulting in no effect significance which is not significant in EIA terms.

ANT018:015, ANT018:095 and ANT018:085

- 5.171 These three standing stones are located in close proximity to one another and given the likely relationship between the stones are discussed as a group below.
- 5.172 The stones are situated in low lying arable land, with ANT18:015 and ANT018:095 located 100 m apart, approximately 280 m south of ANT018:085 which is situated slightly upslope. ANT018:015 measures 2.1 m in height and 1.3m wide x 0.42m thick with a pointed top. It forms part of a hedgerow and fence line. ANT18:095 is a large slab of basalt measuring 3.7 m in height, and a maximum of 1.3 m at the base which tapers to the top. ANT018:085 is located on slightly higher ground to the north and is notably smaller than ANT18:015 and ANT018:095; it is an irregularly shaped slab of basalt measuring 1.75 m in height and 1.05 m in width and 0.5 m in thickness. As Scheduled Monuments, these three standing stones are of high importance.
- 5.173 On the approach to ANT018:015 from the east, the stone is clearly visible in relation to ANT018:095 located 100 m to the west. Views in this direction highlight the relationship between the two stones with ANT018:015, despite its presence within a modern hedgerow and fence line, backdropped by the local hills approximately 700 m to the west (Image 5.3). This view highlights how the stones function as focal points in the local landscape; in addition, it allows the viewer to appreciate how the stones may have been visible prior to the establishment of hedgerows and field boundaries erected as part of the enclosure of the land in the historic period. Outward views from both stones are broadly similar, taking in views of the local arable land. There

are longer range views east and south-east towards the existing Gruiig Wind Farm which is partially visible in these views. Views west also take in a low lying hill 700 m to the west which forms the backdrop to both stones on approach from the east. Hedgerows to the north and south partially screen views to and from the stones and to an extent limit the setting in which they are experienced.

Image 5.3: View west of ANT018:015 and ANT018:095



- 5.174 ANT018:085 is less conspicuous in the landscape compared to ANT018:015, ANT018:095, only coming into view within a range of approximately 50 m on approach from the south-west. Views from the stone broadly reflect those from ANT018:015, ANT018:095, with views south partially screened by a hedgerow which obscures any views of ANT018:015, ANT018:095.
- 5.175 The reciprocal views between the three stones are key to understanding how the two monuments relate to their wider setting. It is likely that prior to enclosure of the surrounding landscape in the historic period all three stones were intervisible, creating a clear focal point for the communities who cultivated the local arable land and who probably erected the stones. The visual relationship between ANT018:085 and ANT018:015 and ANT018:095 has been lost, however, it remains possible to understand, appreciate and experience how the stones relate to the local land which they served. The clear relationship between ANT018:015 and ANT018:095 remains

appreciable despite the changes to their setting caused by the incorporation of ANT018:015 into a hedgerow and fence line and the enclosure of the land to the north and south.

- 5.176 Figure 5.7 indicates that three of the proposed turbines and the blades of two turbines would be visible in south-east facing views from ANT018:095 which take in ANT018:015, with Figure 5.8 showing two turbines and the blade tips of two turbines would be visible in south-east facing views from ANT018:085. Whilst the Proposed Development would introduce visual change to long range south-east facing views from the stones, the area in which it is located, (the nearest turbine, Turbine 1, is located 3.68 km away from ANT018:095/ANT018:015 and 3.88 km away from ANT018:085), is considerably outwith the area in which the stones are understood, appreciated and experienced within. The key relationship between the stones and their local setting within arable land would be retained along with an ability to understand their importance as possible meeting places or places of ritual for the local communities who built them. The informative west facing views on the approach to ANT018:015 and ANT018:095 from the east, which encapsulates the relationship the stones have with the local area, will undergo no change and will be fully retained.
- 5.177 It is therefore considered that the Proposed Development would have no impact on the cultural significance of standing stones ANT018:015, ANT018:095 and ANT018:085, assets of high importance. In accordance with Policy BH 1 of PPS6, it is considered the Proposed Development would not adversely affect the integrity of these heritage assets' setting resulting in no effect significance which is not significant in EIA terms.

ANT018:088

- 5.178 ANT018:088 is a small standing stone recorded on the NISMR as a thin, almost pointed slab of basalt measuring 1.45 m in height high by 0.43 m in width at its base and between 0.12 m by 0.18 m thick. It is located immediately north-west of an abandoned structure within a low lying arable land. As a Scheduled Monument, the stone is of high importance. The NISMR entry for the asset suggests the asset may be a standing stone which has been moved from its original location as its close proximity to the structure makes it unlikely it would have remained in situ throughout the construction of the structure.
- 5.179 As such, the stone is of no clear function. In the event it is indeed a standing stone, it is likely to have been removed from its original location and has thus lost its original setting. In its current setting, the stone is set immediately north-west of an abandoned structure which would screen any views of the Proposed Development. Should the structure be demolished, this would open up views towards the Proposed Development, with Figure 5.9 showing that the blades of two turbines and the tips of two turbines would be visible, with the nearest turbine, Turbine 1, located 4.9 km away. The distance at which the Proposed Development is located falls considerably outwith the area which the stone, if it genuinely is a standing stone, was intended to function within. Given this, and the likelihood that the stone is not in its original

location, it is considered that the Proposed Development would have no impact on the cultural significance of standing stone ANT018:088, an asset of high importance. In accordance with Policy BH 1 of PPS6, it is considered the Proposed Development would not adversely affect the integrity of the heritage asset's setting, resulting in no effect significance which is not significant in EIA terms.

Mottes and Fortification

5.180 There are three mottes and one fortification, all of which are located within the 10 km OSA. A 'motte' was a mound or fortification which would usually have a house set on top of it guarded by a palisade. Mottes were often attached to a 'bailey', an enclosed courtyard with buildings overlooked by the motte and surrounded by a palisade. Motte sites begin to appear in Ulster following the Norman invasion in the 12th century and are examples of how land was controlled at this time. The fortification site (Doonbought Fort ANT027:022), differs from the mottes in that it is characterised by stone walls built on top of a small natural, instead of man-made, knoll. Excavation of the site has dated it to the Anglo-Norman period, making it broadly contemporary with the motte sites in the wider area³⁵. The mottes and fortification within the 10 km OSA derive their cultural significance from their physical, archaeological value, with the upstanding remains of the monuments allowing the visitor a clear insight into their function and relationship with the wider landscape. Archaeological excavation of the features would reveal further insight into the form and nature of Medieval defensive structures in County Antrim. Visually and contextually, the monuments derives their cultural significance from their landscape positions with their siting clearly intended to dominate the local area in which they are set through being prominently visible. The monuments would also have acted as a base from which the landscape could be monitored and controlled.

ANT027:010 Dundermot, motte (and site of bailey)

5.181 ANT027:010 Dundermot, motte (and site of bailey) is located in improved grassland on top of a small, low hill. It comprises the well preserved remains of a conspicuous motte lying 150 m north-west of Glaryford Bridge. The motte is very steep sided with a sub-rectangular flat top and is encircled by a substantial ditch. The only surviving trace of the levelled bailey is a poorly defined raised area adjoining the outer edge of the ditch from the south to the south-east. As a Scheduled Monument, the motte is of high importance.

5.182 The motte is notable as a landscape feature from within a range of approximately 400 m on approach to it from the west along Station Road, from the east along Springmount Road and to a lesser extent, from the south along the A26. On approach from the north along the A26, the motte is less discernible and is partially obscured by modern buildings. The motte appears as a prominent feature when approached on foot from the south, sitting above the arable land in which it is located. Given the

³⁵ McNeill, T.E. 1977

generally flat nature of the landscape, the motte would originally have appeared as a landmark in the local area. The motte is covered in trees which obscures the views from it in all directions. Prior to the plantation of the trees, views from the motte would have taken in the largely flat arable land which characterises the wider area with longer range views of hills and the ISA, 8 km to the north-east, also possible.

Image 5.4: View of ANT027:010 looking north-east towards ISA



- 5.183 The motte is prominent in a local context and was clearly intended to dominate the low lying, generally flat local arable land in which it is set by appearing as a landmark. It is still possible to appreciate the motte in this context in the present day, albeit within a 20th century landscape. Whilst not clearly discernible in the present day due to the level of tree coverage, there would have been reciprocal views back to the local arable land, allowing for a level of control and monitoring of the area. Views to distant hills 8 km to the north-east, whilst forming one component of the visual experience from the motte (albeit obscured by tree cover) do not contribute to how it is understood, appreciated and experienced in relation to its key setting within generally flat, low lying arable land.
- 5.184 Figure 5.10 indicates that 12 of the proposed turbines would be visible from the motte. Whilst the Proposed Development would introduce visual change to long range views to the north-east from the motte should trees be felled from it, it would be located considerably outwith the area within which the motte is understood, appreciated and experienced. The presence of the Proposed Development 8 km to the north-east, with the nearest turbine, Turbine 3, located 8.61 km away, would

not challenge the dominance of the motte in relation to the local area in which it was intended to function. It would remain readily appreciable as a centre of local power, intended to control the flat, low lying arable land in which it is set.

- 5.185 It is therefore considered that the Proposed Development would have no impact on the cultural significance of ANT027:010 Dundermot, motte (and site of bailey), an asset of high importance. In accordance with Policy BH 1 of PPS6, it is considered the Proposed Development would not adversely affect the integrity of this heritage asset's setting resulting in no effect significance which is not significant in EIA terms.

ANT027:036 Dungall, motte

- 5.186 ANT027:036 Dungall, motte is located in improved grassland on top of a low, gradual hill. The steep sided motte has been partially hollowed out at the top and is encircled at its base by a wide, deep ditch. It is situated in gently undulating arable land, with the Clogh River located approximately 125 m north. As a Scheduled Monument, the motte is of high importance.
- 5.187 The motte is notable as a prominent landscape feature from within a range of approximately 320 m on approach along Rockstown Road from both the east and west. Hedgerows generally obscure views of the motte from outwith this range. When approaching the motte on foot from the south, it appears as a prominent feature, clearly intended to be visible from and dominate the local area. Views from the top of the motte take in the local gently undulating land, with views of the River Clogh present in north-west, north and north-east views. A clear sense of how the motte controlled the local area can be gained from the top of the motte, with reciprocal views back to this area also important in how the monument functioned as a centre of local power. It is likely the River Clogh to the north of the motte played an important role in its siting as it would have acted as a natural defence, improving the overall security of the motte.

Image 5.5: View of ANT027:036 looking north-east towards ISA



- 5.188 Figure 5.11 indicates that 12 of the proposed turbines would be visible from the motte, with the nearest, Turbine 5, located 9.31 km to the north-east. Whilst the Proposed Development would introduce visual change to long range views to the north and north-east from the motte, it would be located considerably outwith the area within which the motte is understood, appreciated and experienced. The presence of the Proposed Development over 9 km to the north-east would not challenge the dominance of the motte in relation to the local area in which it was intended to function in. It would remain readily appreciable as a centre of local power, intended to control the local undulating arable land in which it is set.
- 5.189 It is therefore considered that the Proposed Development would have no impact on the cultural significance of ANT027:036 Dungall, motte, an asset of high importance. In accordance with Policy BH 1 of PPS6, it is considered the Proposed Development would not adversely affect the integrity of this heritage asset's setting resulting in no effect significance which is not significant in EIA terms.

ANT018:019 Knockaholet, motte and bailey

- 5.190 ANT018:019 is an oval motte measuring 7.8 m north-south by 6.3 m east-west at its top and 22 m north-south by 20 m east-west at the base. The top of the motte is enclosed by a small bank 1.6 m wide, 0.5 m above the interior and 5 m above a filled-in ditch around the motte base. The motte stands in a large oval enclosure, probably a bailey, measuring 53 m north-south by 43 m east-west defined by a steep scarp and

enclosed by traces of an outer ditch. As a Scheduled Monument, the motte is of high importance.

- 5.191 The motte is notable as a landscape feature from within a range of approximately 320 m on approach from the south and 280 m on the approach from the north along Drones Road. It comes into view from within a range of 190 m when approaching from the west and 300 m when approaching from the east along Ballportery Road. Hedgerows and topography generally screen the motte from view outwith this range.
- 5.192 When approaching the motte on foot from the north (Image 5.6), it appears as a prominent feature, clearly intended to be visible from and dominate the local area. Views from the top of the motte take in the local gently undulating land, with views to the south and south-west particularly expansive, taking in long range views of the lower lying surrounding landscape. Views to the north, north-east and north-west are more limited, taking in the more local vicinity of the motte only. A clear sense of how the motte controlled the local area can be gained from the top of the motte, with reciprocal views back to this area also important in how the monument functioned as a centre of local power. The open, vantage views to the south which are possible from the top of the motte suggests this was the key area it was intended to control and dominate.

Image 5.6: View south-east of ANT018:019



- 5.193 Figure 5.12 indicates that 12 of the proposed turbines would be visible from the motte, with the nearest turbine, Turbine 5 located 6.6 km to the ESE. Whilst the Proposed Development would introduce visual change to long range views to the east and south-east from the motte, it would be located outwith the area within which the motte is understood, appreciated and experienced. The presence of the Proposed Development over 6 km to the east would not challenge the dominance of the motte in relation to the local area in which it was intended to function. The wind turbines would appear peripherally in views east and would not affect the informative south and south-west facing views from the top of the motte. The motte would remain readily appreciable as a centre of local power, intended to control the local undulating arable land in which it is set.
- 5.194 It is therefore considered that the Proposed Development would have no impact on the cultural significance of ANT018:019 Knockaholet, motte and bailey, an asset of high importance. In accordance with Policy BH 1 of PPS6, it is considered the Proposed Development would not adversely affect the integrity of this heritage asset's setting, resulting in no effect significance which is not significant in EIA terms.

ANT027:022 Doonbought, fortification

- 5.195 ANT027:022 Doonbought, fortification is located in an area of improved grassland on top of a small, steep, rocky hill. The fortification comprises a large, outer oval enclosure and an inner polygonal enclosure. A sub-rectangular depression is just north of centre of the inner enclosure and extending to the north-west may be traces of a destroyed souterrain. As a Scheduled Monument, the fort is of high importance.
- 5.196 The fortification is only experienced as a heritage asset from within a range of approximately 400 m from Dunbought Road to the south. Outwith this area, the fort is largely screened from view by topography and hedgerows, with the overgrown nature of the fort further limiting its prominence.
- 5.197 When approaching the motte on foot from the south, the fort becomes more readily appreciable as a defensive position which was originally intended to be visible from and dominate the local area. Low stone walls at the top of the fort remain extant and allow the visitor to further understand and appreciate how the fort was constructed and defended. Views from the top of the fort take in the surrounding low lying flat land in the immediate vicinity although views east, north-east and west are obscured by trees. Views to the south are notably more open (Image 5.7), taking in long range views of the landscape, suggesting views to this area were important when the fort was in use. A clear sense of how the fort controlled the local area can therefore be gained from the top of the motte, with reciprocal views back to this area also important in how the monument functioned as a centre of local power.

Image 5.7: View south from ANT027:022



- 5.198 Figure 5.13 indicates that 12 of the proposed turbines would be visible from the fort, with the nearest turbine, Turbine 5 located 6.6 km to the north. Whilst the Proposed Development would introduce visual change to long range views to the north and north-east from the fort, it would be located outwith the area within which the fort is understood, appreciated and experienced. The presence of the Proposed Development over 6 km to the north would not challenge the dominance of the fort in relation to the local area in which it was intended to function in. The informative south facing views from the top of the fort would be retained which, along with the extant walls at the top fort, allow the visitor to understand, appreciate and experience the fort as a centre of local power, intended to control the local low lying arable land in which it is set.
- 5.199 It is therefore considered that the Proposed Development would have no impact on the cultural significance of ANT027:022 Doonbought, fortification, an asset of high importance. In accordance with Policy BH 1 of PPS6, it is considered the Proposed Development would not adversely affect the integrity of this heritage asset's setting resulting in no effect significance which is not significant in EIA terms.

AN-049 RPGD and Lissanoure Castle (HB04/07/010)

- 5.200 Lissanoure RPGD has been the site of a major dwelling since the 14th century, the most notable of which was Lissanoure Castle, built in 1770, rebuilt in 1828 and destroyed by an explosion in 1847. The castle was the centre of a contemporary landscape park laid out in the 18th century within the undulating site and surrounding Lough Guile. The designed landscape as seen in the present day was created under the direction of Lord MaCartney. An artificial lough, named Five Islands Lough, was

created by the excavation of two canals leading north from Lough Guile either side of Lissanoure Castle and draining into an area at the north of the castle. Artificial islands were planted here with bridges built and boats used on the waterways. Shrubberies graced the castle and tree-lined gravel paths provided walks whilst the parkland had clumps and plantations, much of which survive, such as Knowehead Plantations at the north-west of the castle. Structures such as HB04/07/011, a gate lodge, HB04/07/002, Lissanoure Cottage, HB04/07/009 a conservatory and garden house, and HB04/07/012, a Gazebo were built within the landscape in the late 19th century and, along with the re-development, and subsequent partial destruction, of Lissanoure Castle shape the character of the RPGD in the present day. A number of sites such as ANT 018:012, a possible crannog, ANT018:013, a church and graveyard, and two souterrains ANT018:050 and ANT018:80 are recorded within the boundary of AN-049, further adding to its historic interest. As an RPGD, AN-049 Lissanoure is of high importance.

- 5.201 AN-049 Lissanoure RPGD derives its cultural significance from its functional aspect and historic interest as an example of an 18th century designed landscape with later 19th century modifications. Visually and contextually, the landscape derives its cultural significance from its relationship with the buildings and landscape features within, and its relationship with Lough Guile, which forms a key component of the landscape. Its physical, archaeological potential, as seen by the sites recorded on the NISMR within the landscape's designation boundary, along with the architectural interest of the buildings within it, also contribute to its cultural significance.
- 5.202 Lissanoure Castle (HB04/07/010) itself primarily derives its cultural significance from its physical, architectural interest as a castle with 18th century origins which has been re-modelled in the 19th century and restored in the 20th century following the explosion which partially destroyed it in 1847. Visually and contextually, the castle derives its cultural significance from its relationship with Lough Guile located to the south, and from its relationship and situation within policy woodland which forms much of the AN-049 designed landscape. As a Grade B1 Listed Building, Lissanoure Castle (HB04/07/010) is of medium importance.
- 5.203 AN-049 Lissanoure RPGD and Lissanoure Castle (HB04/07/010) are largely screened from view from the wider landscape, with extensive policy woodland preventing any inward views to the castle or landscape. Lough Guile is visible in views from Knockaholet Road to the south, although it is heavily screened by trees. The approach to Lissanoure Castle (HB04/07/010) from within the designed landscape from both the east and west is characterised by tree lined driveways, limiting the views of the castle. Views south-east from the castle itself are largely limited to policy woodland and Lough Guile, with policy woodland at the south-east screening any long range views. Views to the north take in the artificial Five Islands Lough and demonstrate how this artificial lough was created as part of the designed landscape intended to serve the inhabitants of Lissanoure Castle. The position of the castle on what is effectively an artificial island created as a result of the canals which were dug to

create Five Island Lough, along with the policy woodland in the surrounding area create a sense of seclusion, with the castle clearly intended to function within this enclosed setting.

- 5.204 Figure 5.14 shows that four of the proposed turbines would, based on a bare earth ZTV, be visible in south-east views from the south-east of Lissanoure Castle (HB04/07/010) within AN-049 Lissanoure RPGD, with the nearest turbine, Turbine 1, located 4.88 km to the south-east. Whilst this would theoretically introduce visual change to these views, the Proposed Development is located considerably outwith the area in which Lissanoure Castle (HB04/07/010) within AN-049 Lissanoure RPGD are intended to be understood, appreciated and experienced. There are no designed vistas or avenues within the designed landscape which are intended to take in long range views. AN-049 Lissanoure RPGD is a secluded landscape created through the plantation of policy woodland around Lough Guile. Lissanoure Castle (HB04/07/010) was clearly intended to function within this secluded setting and its orientation to the south-east was likely to have been intentionally to allow the visitor to experience the castle in relation to Lough Guile instead of the wider landscape. Although the proposed turbines would in theory be visible, they would be screened from view by the extensive policy woodland which exists to the south of Lough Guile.
- 5.205 It is therefore considered that the Proposed Development would have no impact on the cultural significance of AN-049 Lissanoure RPGD, an asset of high importance, and Lissanoure Castle (HB04/07/010), an asset of medium importance. In accordance with Policy BH 1 of PPS6, it is considered the Proposed Development would not adversely affect the integrity of these heritage assets' setting resulting in no effect significance which is not significant in EIA terms.

ANT022:012 Ballymacaldrack, 'Dooley's Cairn', court tomb

- 5.206 ANT022:012 Ballymacaldrack, 'Dooley's Cairn', is a single ended court tomb with a deep U-shaped forecourt, which leads to a stone chamber beyond a long stone lined 'cremation passage' with three circular pits, one at either end and one in the middle. The edges of the cairn are stone revetted.
- 5.207 Court tombs are thought to date to the Neolithic period and although they vary considerably in form generally contain three basic elements:
- A stone gallery for burials which is divided into chambers;
 - A forecourt at the entrance to the gallery formed by a series of stones in an arc;
 - The area behind the forecourt and gallery is often enclosed in either an earthen mound or with stones³⁶
- 5.208 Court tombs can be aligned roughly north-south although in the west of Ulster and Ireland, where the bulk of court tombs are located, they are predominantly oriented

³⁶ Mallory and McNeill 1992, 56

east-west³⁷. The tombs in west Ulster and Ireland may have been aligned east-west to align with the rising and setting of the sun; it is not clear why the tombs in the east of Ulster are more north-south oriented although it has been suggested that court tombs originated in the west and as they spread to the east and became more dispersed in the landscape, they deviated from their original design³⁸. Court tombs are considered to be communal burial monuments built by early farming communities and are generally situated on or adjacent to arable land, strongly suggesting that contemporary Neolithic settlement existed in the wider vicinity of the tombs³⁹. ANT022:012 Ballymacaldrack, 'Dooley's Cairn' was excavated in the 1930s and again in the 1970s; the excavations revealed two polished stone axes located at each side of the entrance to the tomb and thought to represent 'guardians' of the dead interred inside. One of the pits within the tomb revealed the cremated remains of five or six adults thought to have been cremated inside the passage of the tomb. As a Scheduled Monument in State Care, ANT022:012 Ballymacaldrack, 'Dooley's Cairn' is of high importance.

- 5.209 ANT022:012 Ballymacaldrack, 'Dooley's Cairn' derives its cultural significance from its physical, archaeological potential, with further excavation of the site having the potential to further elucidate the nature of Neolithic funerary practices. Visually and contextually, the monument derives its cultural significance from its relationship with the local arable land in which it is set. It is likely the tomb was situated in close proximity to contemporary settlement and would have been an important funerary monument for the local communities who cultivated the wider area.
- 5.210 The tomb is not prominently visible in the landscape and comes into clear view only when approaching it from the public path from the north. Views from the cairn to the south-east, south, south-west west and north-west are screened by woodland, whilst views to the north are also largely limited by trees which line Presbytery Lane. To the north-east, along the alignment of the 'cremation passage' views are of the local arable land with views of distant hills approximately 11 km to the north-east forming the backdrop. Views east partially take in arable land and distant hills but are obscured by a tree in the field to the east of the monument. The setting of the cairn is therefore somewhat reduced by the presence of trees in the surrounding area which focusses views to the open view down the 'cremation passage' facing north-east. This view is informative in understanding and appreciating the connection between the local communities who were likely cultivating the free draining soil to the north-east and the tomb itself. The alignment of the 'cremation passage' draws views towards the largely flat arable land to the north-east, with partial views of distant hills possible. As noted above, the reason behind the orientation of court tombs in this area of Ulster may purely be down to regional preference instead of any deeper cultural reason.

³⁷ Ibid, 62

³⁸ Ibid

³⁹ Ibid, 79

Image 5.8: View north-east along 'cremation passage' towards distant hills



5.211 Figure 5.15 indicates that 12 of the proposed turbines, would be visible in ENE facing views from the area immediately north of the 'cremation passage', with the nearest turbine, Turbine 2 located 9.06 km to the ENE. Whilst the Proposed Development would introduce visual change to ENE views from this area, it would not fundamentally change how ANT022:012 Ballymacaldrack, 'Dooley's Cairn' is understood, appreciated and experienced. There is no clear evidence that views of the hills, which are only readily appreciable in clear conditions, on which the Proposed Development would be situated contributed to the cultural significance of the tomb. It is more likely that the orientation of the tomb was intended to draw the visitor's view towards the local arable land. The key relationship between the tomb and local arable land, and thus the area of likely contemporary settlement, would remain unaffected by the Proposed Development. The ability to understand the relationship between these two areas where Neolithic people lived and buried their dead would therefore also be retained.

5.212 It is therefore considered that the Proposed Development would have a negligible impact on the cultural significance of ANT022:012 Ballymacaldrack, 'Dooley's Cairn'), an asset of high importance. In accordance with Policy BH 1 of PPS6, it is considered the Proposed Development would not adversely affect the integrity of this heritage asset's setting resulting in a significance of effect of minor adverse effect which is not significant in EIA terms.

Decommissioning Effects

- 5.213 Decommissioning of the Proposed Development would not directly impact upon any known cultural heritage assets, assuming that all land-take for the decommissioning works, including access, lies within the same footprint as the construction works and thus previously mitigated with no remaining archaeological potential.
- 5.214 Any identified operational effects in respect of the setting of heritage assets would be reversed.

Mitigation

- 5.215 The preferred mitigation option in relation to archaeology and cultural heritage is always to avoid or reduce impacts through design, or through precautionary measures such as fencing off heritage assets during construction works. Impacts which cannot be eliminated in these ways will lead to residual effects.
- 5.216 Direct effects may be mitigated by an appropriate level of survey, excavation, recording, analysis and publication of the results, in accordance with a written scheme of investigation (PPS6 Policy BH4). Archaeological investigation can have a beneficial effect of increasing knowledge and understanding of the asset, thereby enhancing its archaeological and historical interest and offsetting adverse effects.

Mitigation Measures During Construction

Direct Effects

- 5.217 Direct impacts upon two heritage assets are predicted:
- HA8, an area of ridge and furrow
 - HA12, an area of ridge and furrow
 - HA13, an enclosure
- 5.218 The following mitigation is proposed:
- A programme of recording for both HA8 and HA13 is undertaken prior to construction commencing
 - Sections of the bank of HA13 are recorded as part of a watching brief of ground breaking works carried out in this area during construction.
 - A programme of recording for HA12 prior to construction commencing and a watching brief on ground breaking works taking place on the access track leading to and within the vicinity of HA12
- 5.219 As a minimum, it is recommended that a watching brief of ground breaking works in the vicinity of Aghanageeragh River is carried out as this area is considered to be of higher archaeological potential for containing previously unknown remains of low or higher importance in comparison to the rest of the ISA. Any direct construction effects upon previously unknown cultural heritage assets will be mitigated through a programme of archaeological works to include potential impacts upon or beneath

peat. All construction phase mitigation would be outlined in a written scheme of investigation and agreed with HED prior to construction commencing.

- 5.220 Accidental direct impacts upon other heritage assets within the ISA may arise should activities such as, but not limited to, ancillary drainage works, and uncontrolled plant movement take place in the vicinity of these heritage assets.
- 5.221 It is recommended that the known heritage assets (including the sections of HA8 and HA13 which do not lie within the footprint of the Proposed Development) within the ISA are demarcated prior to construction works commencing in order to highlight their presence. This may be achieved through appropriate survey, demarcation/fencing and signage. It is recommended that the following heritage assets are fenced off with a suitable buffer throughout construction to prevent accidental damage:
- HA1, sheepfold
 - HA2, structure
 - HA3, structure
 - HA4, structure
 - HA5, structure
 - HA6, livestock pen and associated bank
 - HA7, enclosure bank
 - HA8, area of ridge and furrow
 - HA12, area of ridge and furrow enclosed by a bank
 - HA13, enclosure bank
 - HA14, structure
- 5.222 Should any element of the Proposed Development layout be subject to re-design, where necessary, it is recommended that a direct impact assessment is carried out by an experienced professional archaeologist. Should any such re-design or ancillary works result in a direct impact on any of the known heritage assets within the ISA, additional mitigation work is likely to be required.

Setting Effects

- 5.223 No significant construction phase setting effects have been identified. No mitigation is recommended.

Mitigation During Operation

- 5.224 Operational effects of minor significance that have been identified upon ANT022:012 Ballymacaldrack, 'Dooley's Cairn' as a result of the Proposed Development are not significant in EIA terms. No mitigation is recommended.

Mitigation During Decommissioning

- 5.225 No decommissioning effects are predicted for any cultural heritage assets. No mitigation is recommended.

Residual Effects

5.226 Potential effects of the Proposed Development upon heritage assets resulting from its construction, operation and decommissioning are considered below.

Residual Construction Effects

Residual Construction Phase Direct Effects

5.227 Following completion of proposed mitigation, no significant residual construction effects are predicted.

Residual Construction Phase Setting Effects

5.228 Construction phase setting effects would be temporary and are not significant due to their very short duration.

Residual Operational Effects

5.229 A residual effect of Minor significance, which is not significant in EIA terms, is predicted on ANT022:012 Ballymacaldrack, 'Dooley's Cairn' throughout the operation of the Proposed Development. This effect would be reversed following the decommissioning of the Proposed Development.

Residual Decommissioning Effects

5.230 No direct residual decommissioning effects have been identified.

Cumulative Effects

5.231 Operational effects of Minor significance are predicted on ANT 022:012 Ballymacaldrack, 'Dooley's Cairn', court tomb. Cumulative impacts considering the consented Corkey and Corkey re-power wind farms and the proposed Unshinagh wind farm have been considered (Figure 5.9). It is considered that the visibility of wind turbines for the consented Corkey and Corkey re-power wind farms, and the view of two turbine tips of Unshinagh would not constitute an increase in impact magnitude in relation to the heritage asset. The relationship between the tomb and the distant hills upon which these wind farms does not contribute to its cultural significance; the key relationship between the tomb and the local arable land would remain discernible and appreciable. No further significant effects in EIA terms are predicted.

Summary

5.232 Potential effects of the Proposed Development upon cultural heritage assets resulting from its construction, operation including cumulative effects, and decommissioning have been considered.

5.233 Direct effects of negligible significance are predicted upon two heritage assets within the ISA: HA8 and HA12 and a direct effect of minor significance is predicted on HA13.

Suitable mitigation is outlined in Paras 5.210-5.213 and summarised below. It is recommended that all heritage assets within the ISA are fenced off with a suitable buffer throughout construction to prevent accidental damage.

- 5.234 Any direct effect upon archaeological remains discovered during the construction phase is unlikely to be of greater than minor significance.
- 5.235 Construction phase setting effects would be temporary and are not considered to be significant in EIA due to their very short duration.
- 5.236 A residual effect of minor significance, which is not significant in EIA terms, is predicted on ANT 022:012 Ballymacaldrack, 'Dooley's Cairn', court tomb throughout the operation of the Proposed Development.
- 5.237 Cumulative impact assessment, considering all other operational, consented and submitted applications for wind farms in the vicinity has identified no significant effects in EIA terms as a result of the Proposed Development.
- 5.238 No direct residual decommissioning effects have been identified.
- 5.239 On decommissioning the operational effects of minor significance on ANT 022:012 Ballymacaldrack, 'Dooley's Cairn', court tomb would be reversed.
- 5.240 No significant effects arising from the Proposed Development are predicted.

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- Figure 5.9 HERITAGE ASSET ANT 018: 088 Ballyveely Upper, standing stone
- Figure 5.10 HERITAGE ASSET ANT 027: 010 Dundermot, motte (and site of bailey)

- Figure 5.11 HERITAGE ASSET ANT 027: 036 Dungall, motte
- Figure 5.12 HERITAGE ASSET ANT 018: 019 Knockaholet, motte and bailey
- Figure 5.13 HERITAGE ASSET ANT 027: 022 Doonbought, fortification
- Figure 5.14 HERITAGE ASSETS AN-049 and HB04/07/010 Lissanoure Historic Park and Garden and Lissanoure Castle
- Figure 5.15 HERITAGE ASSET ANT 022: 012 Ballymacaldrack, 'Dooley's Cairn', court tomb

Glossary

Term	Definition
Archaeological Site (also 'Monuments')	Heritage assets which may consist of surface and/or sub-surface remains, features, deposits and/or material relating to past human activity with a degree of significance meriting consideration in planning decisions.
Artefact	An item of archaeological interest
Baseline	'Baseline conditions' are the environmental conditions in existence just before the occurrence of an impact - i.e. they are the conditions that would be affected.
Bronze Age	The period of human activity between c.2,500 BCE and 500 BCE
Construction activity	Vegetation removal, topsoil stripping, temporary storage of materials, ground excavation and remodelling, bare earth, movement of construction vehicles and tall features such as cranes and other construction plant.
Defence Heritage Record	Non-designated heritage assets relating to military structures in Northern Ireland. These include trenches, gun and searchlight emplacements, pillboxes, observation posts, airfields, naval and flying boat bases and air raid shelters.
Designated Heritage Asset	Assets protected by primary legislation (e.g. Listed buildings, Conservation Areas, Scheduled Monuments) or have a non-statutory designation (e.g. World Heritage Sites, Historic Parks and Gardens)
Desk study	A collation and review of relevant existing information available from published, archival or online sources, including for instance geological and hydrogeological mapping, historical maps, environmental records etc., allowing an assessment of risks to the human and environmental receptors to be undertaken.
Environmental Impact Assessment (EIA)	An assessment of certain types of major project of the significant effects that the project could have on the environment.

Environmental Statement (ES)	The report on the results of the EIA.
Geology	Geology is the study of solid earth, the material of which it is composed (principally rocks) and the processes by which they evolve.
Heritage Asset	<p>A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest.</p> <p>Some heritage assets are designated as Scheduled Monuments, Listed Buildings, World Heritage Sites, Conservation Areas, Historic Parks and Gardens, or locally designated through policies in the Local Plan. Non-designated assets may be recorded in Northern Ireland’s Sites and Monuments Records while many other assets are currently unrecorded. Information contained in SMRs is not definitive, since they may include features which, for instance, have been entirely removed, or are of uncertain location, dubious identification, or negligible importance. The identification of non-designated heritage assets is therefore to some extent a matter of professional judgement.</p> <p>Both discrete features, and extensive landscapes defined by a specific historic event, process or theme, can be defined as heritage assets; and assets may overlap or be nested within one another.</p>
Iron Age	The period of human activity between c.500 BCE and 500 CE
Listed Building	A building or structure which is considered to be of special architectural or historic interest
Mitigation	Measures which have the purpose of avoiding, reducing or compensating for adverse environmental impacts. It may also include measures to create environmental benefits.
Medieval	The period of human activity between c.500 CE and 1600 CE
Mesolithic	Middle Stone Age. The period of human activity between c.6,000 BCE and 4,000 BCE.
Modern	The period of human activity from 1900 to the present day
Neolithic	New Stone Age. The period of human activity between c.4,000 BCE and 2,500 BCE
Northern Ireland Sites and Monuments Record (NISMR)	A database maintained HED, containing records of archaeological sites, historic buildings and other aspects.

Non-Designated Heritage Asset	Assets which have no formal designation but are considered to have a degree of significance meriting consideration in planning decisions. These can include locally listed buildings, information on sites held by the Northern Ireland Sites and Monuments Record including Defence Heritage Records and Industrial Heritage Records.
Post-medieval	The period of human activity between c.1600 CE and 1900 CE
Prehistoric	The period before the year c.500 CE
Significance: HED	Heritage assets derive their significance and distinctive character from a range of factors, cultural traditions and meanings, many of which will comprise aspects of their setting. These factors may include perceived social, spiritual, historic, artistic, aesthetic, natural, scientific or other cultural values. They may also derive significance and distinctive character from physical, visual, spiritual and other cultural contexts and relationships, for example with other assets or the surrounding historic, natural or urban environment. These relationships can result from planned acts, spiritual beliefs, historical events, or through a cumulative process of use and cultural traditions over time.
Setting	The term 'setting' applies to the physical space that is part of - and contributes to - the significance and distinctive character of a heritage asset, and through which the asset may be seen, experienced, understood and enjoyed

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