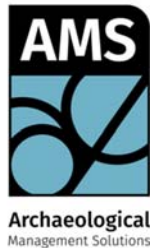


Proposed Ballynalacken Windfarm Project

Environmental Impact Assessment Report

Chapter 15: Cultural Heritage

Topic Chapter Authors:



January 2025

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Glossary of Terms

Term	Definition
Archaeological Heritage	All remains and objects and any other traces of humankind from the past, the preservation and study of which help to retrace the history of humankind and our relationship with the natural environment. Includes known archaeological sites and monuments, areas of archaeological potential, underwater archaeology and archaeological objects.
Ballynalacken Windfarm Project	Ballynalacken Windfarm including 12 No. turbines, turbine foundations and hardstanding areas, Windfarm Site Roads, Internal Windfarm Cabling, Windfarm Control Building, Site Entrances, ancillary works at and for the windfarm, along with the Internal Cable Link, Tinnalintan Substation and ancillary works, and Ballynalacken Grid Connection and grid connection works to the Eirgrid Ballyragget Substation. The Project also involves works and activities along the turbine component haul route remote from the site, including the construction of a temporary Blade Transfer Area at HR8.
Built Heritage	Standing structures, buildings, traditional and designed, and groups of buildings including streetscapes and urban vistas, which are of architectural, historical, archaeological, artistic, engineering, scientific, social or technical interest, together with their setting, attendant grounds, fixtures, fittings and contents.
Cultural Heritage	A group of resources inherited from the past that people identify independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time.
Designated	A Cultural Heritage receptor that has been assessed by the relevant authority as significant and requiring formal protection and/or inscription on a register.

Term	Definition
Enclosure	An area defined by an enclosing element (e.g. bank, wall, fosse, scarp), or indicated as such cartographically, and occurring in a variety of shapes and sizes, possessing no diagnostic features that would allow classification within another monument category. They may date to any period from prehistory onwards.
Fulacht Fia	A horseshoe-shaped or kidney-shaped mound consisting of fire-cracked stone and charcoal-enriched soil built up around a sunken trough located near or adjacent to a water supply, such as a stream, or spring, or in wet marshy areas. These are generally interpreted to have been associated with cooking and date primarily to the Bronze Age (c.2400–500 BC).
Intangible Cultural Heritage	The practices, representations, expressions, knowledge and skills, as well as the instruments, objects, artefacts and cultural spaces, that communities, groups and individuals recognise as part of their Cultural Heritage.
Receptor	Any element in the environment with demonstrable Cultural Heritage significance, which is subject, or potentially subject, to impacts because of the Proposed Scheme.
Ringfort – Rath	A roughly circular or oval area surrounded by an earthen bank with an external fosse. Some examples have two (bivallate) or three (trivallate) banks and fosses. They functioned as residences and/or farmsteads and broadly date from c.AD 500–1000.
Sensitive Aspect	Any sensitive receptor in the local Cultural Heritage environment which could be impacted by the project, used interchangeably with ‘Receptor’ above.
Setting	The immediate and extended environment of a place that is part of, or contributes to, its cultural significance and distinctive character.

List of Abbreviations

Abbreviation	Full Term
AAP	Area of Archaeological Potential
ACA	Architectural Conservation Area
ACO	Architecture Conservation Officer
AMS	Archaeological Management Solutions
ASI	Archaeological Survey of Ireland
CH	Cultural Heritage Receptor
DAHG	Department of Arts, Heritage and the Gaeltacht
DAHGI	Department of Arts, Heritage, the Gaeltacht and the Islands
DAHRRGA	Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs
DAU	Development Applications Unit
DCHG	Department of Culture, Heritage and the Gaeltacht
DEHLG	Department of the Environment, Heritage and Local Government
DHLGH	Department of Housing, Local Government and Heritage
DIER	Database of Irish Excavation Reports
DPER	Department of Public Expenditure and Reform
EIA	Environmental Impact Assessment

Abbreviation	Full Term
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
GIS	Geographic Information Systems
HEV	Historic Environment Viewer
HR	Haul Route
IFC	Irish Folklore Commission
ITM	Irish Transverse Mercator
KCC	Kilkenny County Council
LCC	Laois County Council
LVIA	Landscape and Visual Impact Assessment
NIAH	National Inventory of Architectural Heritage
NIICH	National Inventory of Intangible Cultural Heritage
NMI	National Museum of Ireland
NMS	National Monuments Service
OPR	Office of the Planning Regulator
OS	Ordnance Survey
OSi	Ordnance Survey Ireland
PO	Preservation Order
RHM	Register of Historic Monuments
RLB	Redline Boundary
RMP	Record of Monuments and Places
RPS	Record of Protected Structures
SERA	South-East Regional Authority
SMR	Sites and Monuments Record
TÉ	Tailte Éireann
TII	Transport Infrastructure Ireland
ZoN	Zone of Notification

CHAPTER 15 Cultural Heritage

EIAR 15.1 INTRODUCTION

EIAR 15.1.1 The Authors of this Chapter (Competent Experts)

The Environmental Impact Assessment (EIA) was prepared by Archaeological Management Solutions (AMS) on behalf of Ecopower Developments Ltd.

Dr Kim Rice is a Senior EIA Consultant with AMS. Dr Rice holds a BA (hons.) in Heritage Studies from Atlantic Technological University, an MA in Landscape Archaeology and a PhD in Archaeology from University College Dublin, as well as an Advanced Diploma in Planning and Environmental Law from Kings Inns. She has over twenty years of experience in the fields of archaeology, built heritage and Cultural Heritage, both in the private sector and at an academic level. Dr Rice has worked exclusively in the EIA sector for the last five years and has undertaken Cultural Heritage assessments for numerous infrastructural and development projects. She is also licensed by the Department of Housing, Local Government and Heritage (DHLGH) to undertake archaeological excavations and is a member of the Institute of Archaeologists of Ireland.

Breana McCulloch is an EIA Archaeologist with AMS. She holds a BA in Anthropology from the University of Alberta, and an MES in Archaeology from Lakehead University. Breana has over fifteen years of experience in the field of archaeology and Cultural Heritage within the private sector and has worked exclusively in the EIA sector for the last three years where she has undertaken Cultural Heritage assessments for numerous infrastructural and development projects. Breana is also a member, and current Secretary, of the Institute of Archaeologists of Ireland.

EIAR 15.1.2 Overview of Cultural Heritage and the Local Environment

This chapter of the Environmental Impact Assessment Report (EIAR) considers the potential impact of the proposed Ballynalacken Windfarm Project in relation to Cultural Heritage. Impacts from the Proposed Project on Cultural Heritage during the Construction and Operation Phases are identified, described and assessed for any likely direct and indirect significant effects.

Under Annex IV(4) of amended EIA Directive 2014/52/EU, 'Cultural Heritage', including architectural and archaeological aspects, is an environmental factor to be addressed in an EIAR. Cultural Heritage comprises archaeology, architectural heritage, folklore and history (EPA 2022, 32). Archaeology is the study of past societies through surviving structures, artefacts and environmental data and is concerned with known archaeological sites and monuments, areas of archaeological potential and underwater archaeology. Architectural heritage comprises structures, buildings — traditional and designed — and groups of buildings including streetscapes and urban vistas, which are of architectural, historical, archaeological, artistic, engineering, scientific, social or technical interest, together with their setting, attendant grounds, fixtures, fittings and contents. Architectural heritage and archaeology together form 'tangible heritage'. Folklore and history are aspects of 'intangible heritage', which also includes language, musical traditions, traditional crafts and skills, townland names, poetry and so on. These forms of Cultural Heritage are 'non-moveable, non-material and largely non-environmental although by their associations with certain sites and places, add to the character of an area' (EPA 2015).

The proposed Ballynalacken Windfarm Project is located in a moderate, undulating upland region between the towns of Castlecomer, Ballyragget, Durrow and Ballyouskill, County Kilkenny; a region with a rich and

diverse history of human settlement since prehistoric times. This extended period of occupation is reflected in the archaeological record (see Section EIAR 15.3.1.1).

EIAR 15.1.3 Sources of Information

EIAR 15.1.3.1 Relevant Guidelines, Policy and Legislation

The collation of baseline Cultural Heritage data and the evaluation of impacts to archaeological and architectural heritage has had regard to the following legislation, policy and guidance documents (Table 15-1).

Table 15-1: Relevant Guidelines, Policy and Legislation for Cultural Heritage

Type	Source
Legislation	<ul style="list-style-type: none"> • National Monuments Acts 1930 to 2014; • Heritage Act 1995 (as amended); • National Cultural Institutions Act 1997; • European Convention for the Protection of the Archaeological Heritage (Valetta Convention, 1997); • European Convention for the Protection of the Architectural Heritage (Granada Convention, 1997); • Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999; • European Landscape Convention (Florence Convention, 2000); • Planning and Development Act 2000 (as amended); • UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (Paris Convention, 2003); • Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas (ICOMOS, 2005); • Directive 2011/92/EU of the European Parliament and of the Council on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 2014/52/EU of the European Parliament and the Council (hereafter the EIA Directive).
Policy and Planning Documents	<ul style="list-style-type: none"> • <i>Framework and Principles for the Protection of the Archaeological Heritage</i> (Department of Arts, Heritage, Gaeltacht and the Islands [DAHGI] 1999);¹ • <i>Kilkenny County Council (KCC) Cultural Strategy 2018–2022: Arts, Heritage and Libraries</i> (KCC 2018);² • <i>Built & Archaeological Heritage: Climate Change Sectoral Adaption Plan</i> (Department of Culture, Heritage and the Gaeltacht [DCHG] 2019);³ • <i>Kilkenny City and County Development Plan 2021–2027</i> (KCC 2021);⁴

¹ Available at: <https://www.archaeology.ie/sites/default/files/media/publications/framework-and-principles-for-protection-of-archaeological-heritage.pdf> [Accessed: 02.08.23].

² Available at: <https://kilkennycoco.ie/eng/services/heritage/kk-cultural-strategy-english-version.pdf> [Accessed: 02.08.23].

³ Available at: <https://www.gov.ie/pdf/?file=https://assets.gov.ie/246863/2660361a-6b77-4b58-b040-aea8fd960606.pdf#page=null> [Accessed: 02.08.23].

⁴ Available at: <https://www.kilkennycoco.ie/eng/services/planning/development-plans/city-and-county-development-plan/vol1-master-ccdp-2-11-2021.pdf> [Accessed: 02.08.23].

Type	Source
	<ul style="list-style-type: none"> • <i>Laois County Development Plan 2021–2027</i> (Laois County Council [LCC] 2021);⁵ • <i>National Development Plan 2021–2030</i> (Department of Public Expenditure and Reform [DPER] 2021);⁶ • <i>Archaeology in the Planning Process</i> (Department of Housing, Local Government and Heritage [DHLGH] & Office of the Planning Regulator [OPR] 2021);⁷ • <i>A Living Tradition: A Strategy to Enhance the Understanding, Minding and Handing On of our Built Vernacular Heritage</i> (DHLGH 2021);⁸ • <i>Places for People: National Policy on Architecture</i> (DHLGH 2022a);⁹ • <i>Heritage Ireland 2030: A Framework for Heritage</i> (DHLGH 2022b).¹⁰ • <i>Castlecomer Local Area Plan 2018–2024</i> (KCC 2018).¹¹
Guidelines	<ul style="list-style-type: none"> • <i>Guidelines on the information to be contained in Environmental Impact Statements</i> (Environmental Protection Agency [EPA] 2002);¹² • <i>Advice Notes on Current Practice (in the preparation of Environmental Impact Statements)</i> (EPA 2003);¹³ • <i>Regional Planning Guidelines for the South-East Region 2010–2022</i> (South-East Regional Authority [SERA] 2010);¹⁴ • <i>Architectural Heritage Protection Guidelines for Planning Authorities</i> (Department of Arts, Heritage and the Gaeltacht [DAHG] 2011);¹⁵ • <i>Guidelines on the information to be contained in Environmental Impact Assessment Reports</i> (EPA 2022);¹⁶ • <i>National Inventory of Architectural Heritage Handbook</i> (DHLGH 2023).¹⁷

⁵ Available at: <https://laois.ie/departments/planning/review-of-laois-county-development-plan-2017-2023-2/> [Accessed: 17.08.23].

⁶ Available at: <https://www.gov.ie/pdf/?file=https://assets.gov.ie/200358/a36dd274-736c-4d04-8879-b158e8b95029.pdf#page=null> [Accessed: 02.08.23].

⁷ Available at: <https://www.archaeology.ie/sites/default/files/media/publications/archaeology-planning-process-pl13.pdf> [Accessed: 02.08.23].

⁸ Available at: <https://www.buildingsofireland.ie/app/uploads/2021/12/A-Living-Tradition.pdf> [Accessed: 02.08.23].

⁹ Available at: <https://www.gov.ie/en/publication/f9879-places-for-people-national-policy-on-architecture/> [Accessed: 02.08.23].

¹⁰ Available at: <https://www.louthcoco.ie/en/services/heritage/publications/heritage-ireland-2030.pdf> [Accessed: 02.08.23].

¹¹ Available at: <https://kilkennycoco.ie/eng/services/planning/development-plans/local-area-plans/castlecomer-local-area-plan/castlecomer-local-area-plan-20181.pdf> [Accessed: September 2024].

¹² Available at: <https://www.epa.ie/publications/monitoring--assessment/assessment/guidelines-on-the-information-to-be-contained-in-environmental-impact-assessment.php> [Accessed: 02.08.23].

¹³ Available at: <https://www.epa.ie/publications/monitoring--assessment/assessment/advice-notes-on-current-practice-in-the-preparation-of-environmental-impact-stat.php> [Accessed: 02.08.23].

¹⁴ Available at: https://www.southernassembly.ie/uploads/general-files/http---www.southernassembly_ie-docs-SE_RPG_10-22_.pdf [Accessed: 02.08.23].

¹⁵ Available at: <https://www.buildingsofireland.ie/app/uploads/2019/10/Architectural-Heritage-Protection-Guidelines-for-Planning-Authorities-2011.pdf> [Accessed: 02.08.23].

¹⁶ Available at: https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf [Accessed: 02.08.23].

¹⁷ Available at: <https://www.buildingsofireland.ie/app/uploads/2023/04/NIAH-Handbook-Edition-April-2023.pdf> [Accessed: 23.06.23].

The National Monuments Acts 1930 to 2014 are the primary legislation aimed at protecting and preserving archaeological heritage in the Republic of Ireland. At present, archaeological sites and monuments are protected under the National Monuments Acts 1930 to 2014 in one of four ways:

1. Being recorded in the Record of Monuments and Places (RMP);
2. Being registered in the Register of Historic Monuments (RHM);
3. Being a national monument in the ownership or guardianship of the Minister for Housing, Local Government and Heritage or a Local Authority; or
4. Being a national monument subject to a Preservation Order or Temporary Preservation Order.

The National Monuments Acts can also protect elements of architectural heritage or offer dual/parallel protection.

Under the terms of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999, the term ‘architectural heritage’ means: ‘all

- a) structures and buildings together with their settings and attendant grounds, fixtures and fittings;
- b) groups of such structures and buildings; and
- c) sites which are of architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest’.

The principal sources for the identification of designated architectural heritage sites are the Record of Protected Structures (RPS), as published within the Kilkenny City and County Development Plan 2021–2027 and the Laois County Development Plan 2021–2027. The National Inventory of Architectural Heritage (NIAH) Building Survey and Survey of Historic Gardens and Designed Landscapes; the RMP, Sites and Monuments Record (SMR) and historical maps were also consulted (see Section A15.6.1.1 in Appendix 15.6).

In addition, other archaeological and/or architectural features of potential Cultural Heritage interest identified through desktop research and field survey were also included in the assessment, as such undesignated receptors may have local or wider heritage significance (see Appendix 15.1).

EIAR 15.1.3.2 Additional Sources of Information

A comprehensive walkover survey of the Study Area was conducted by the EIA team in March and April of 2023, and in April 2024, while the geophysical survey was completed in May of 2023 (see Section A15.6.1.2 in Appendix 15.6). An assessment of visual impacts and impacts to setting was undertaken in November 2024.

Additionally, this chapter should be read in conjunction with the following chapters and their appendices, which present related impacts arising from the Proposed Project and proposed mitigation measures to avoid, reduce and/or offset the predicted impacts:

- Chapter 5 (Description of the Development);
- Chapter 8 (Water);
- Chapter 12 (Climate);
- Chapter 14 (Landscape and Visual); and,
- Chapter 17 (Population and Human Health).

EIAR 15.1.3.3 Summary of Consultation

Consultation relevant to the assessment of Cultural Heritage was undertaken with a number of statutory and non-statutory voluntary bodies, which is detailed in Table 15-2.

Table 15-2: Summary of Consultation

Consultee	Response and Proposed Mitigation
Development Applications Unit (DAU) of the National Monuments Service (NMS) on 28 February 2023	<ul style="list-style-type: none"> • A letter was received from the NMS with heritage-related observations/recommendations of the Department, as requested.
DAU of NMS on 2 August 2023	<ul style="list-style-type: none"> • NMS requested that the location of round towers, including Grangefertagh, were assessed for visual impacts; • Ensure that any receptors with Preservation Orders are included; • It was communicated that geophysical survey and archaeological testing would be undertaken post-consent

EIAR 15.2 CULTURAL HERITAGE PART 1: SCOPING FOR SENSITIVE ASPECTS OF CULTURAL HERITAGE

Scoping was carried out at an early stage to ensure the EIAR examines all the relevant issues that need to be included and assessed in the EIAR. The assessment of significant effects (or impacts) is an essential concept of the EIA Directive. It focuses the consideration of the effects or impacts a Project may have on the environment to those which are significant or important enough to merit assessment, review and decision-making. Scoping was carried out in accordance with Directive 2014/52/EU (as amended; 2017).

Scoping for the Environmental Topic–Cultural Heritage has been carried out by the chapter authors throughout its preparation and includes scoping for the sensitive aspects of Cultural Heritage, scoping of impacts associated with the Project, scoping of the Study Area and scoping of other relevant projects to assess any cumulative impacts.

EIAR 15.2.1 Scoping Methodology

EIAR 15.2.1.1 Scoping of Sensitive Aspects

Any Cultural Heritage receptor in the local environment which could be impacted by the project is a sensitive aspect. The following sensitive aspects **are included in this topic chapter** as they could be potentially impacted:

- Legally Protected Sites
- Other Designated Sites
- Previously Unrecorded Extant Sites (i.e., undesignated Cultural Heritage)
- Unrecorded Subsurface Sites (e.g., areas of archaeological potential)

No Sensitive Aspects were excluded from this topic chapter.

Where the Topic Author considers that it is likely, or that there is potential, for a Sensitive Aspect to be affected by the Ballynalacken Windfarm Project, this receptor is included for detailed evaluation in the EIAR topic chapter.

Where it is considered that there are no likely or potential effects, or any effects caused by the Ballynalacken Windfarm Project will be Neutral, then this Sensitive Receptor is excluded (scoped out) from the topic chapter; however, a complete list of all receptors that have been evaluated will be included in a separate Appendix to the topic chapter. Neutral impacts or effects are defined as ‘No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error’ (EPA, 2022).

EIAR 15.2.1.2 Scoping of Impact Sources and Pathways

During the various life-cycle phases of the Ballynalacken Windfarm Project, particular works and activities have the potential to be sources of impact to the Sensitive Aspects of Cultural Heritage, these are listed below:

Potential Sources of Impact from construction works and activities:

- Groundworks
- Excavation of soil
- Placement of temporary infrastructure
- Storage of soils/materials
- Deforestation activity

- Afforestation of agricultural land
- Instream works or works at watercourse edges
- Widening of public roads and site entrances
- Movement of plant/machinery

Potential Sources of Impact from operational works and activities:

- Addition of new above ground structures and works
- Groundworks /maintenance works
- Movement of plant/machinery

Potential Sources of Impact from decommissioning works and activities:

- Groundworks/Decommissioning activities
- Movement of plant/machinery

It is considered that connectivity between the sources of impacts and the Sensitive Aspect could occur via the following impact pathways (following TII 2024):

- Direct impacts (e.g., mechanical or manual excavation)
- Indirect impacts (e.g., changes in hydrology)
- Visibility (i.e., setting and visual impact)

EIAR 15.2.1.3 Scoping of the Study Area

The EIA Study Area was defined as part of the EIA Scoping for Cultural Heritage and relates to the area around the Proposed Project within which it is anticipated impacts are likely or have the potential to occur.

While the initial Study Area was determined to include the footprint of the construction works area plus 100m during the Construction Phase, and 2km from the Proposed turbines and Tinnalintan Substation for visual impacts during the Operational Phase, the scoping process evolved throughout the design process to incorporate design changes, and is based on professional judgement of the Cultural Heritage specialists and feedback from the Development Applications Unit (DAU) of NMS. As noted in the recent TII guidelines: *It is important to note that the scoping process does not end with the scoping report. All parties—Roads Authority, Design Team, and specialists—should be aware of the potential for the scope to be altered during the preparation of the EIAR* (TII 2024, 22).

Therefore, following design changes, the final Study Area for Cultural Heritage includes the RLB of the Proposed Project plus 200m (Figure 15.1), while also including HR locations as discussed in Chapter 5. In addition, on the basis of professional judgement and following consultation with the DAU of NMS, Cultural Heritage receptors of High or Very High importance within 20km of the Proposed Project were assessed for impacts to setting and/or visual impacts as a result of the Proposed Windfarm.

EIAR 15.2.1.4 Scoping of Relevant Projects & Cumulative Impacts

The evaluation of cumulative impacts to Cultural Heritage considered other plans, projects and activities.

A cumulative scoping exercise was carried out to determine the extent of the cumulative Study Area for each of the Sensitive Aspects, and determine which plans, projects or activities, if any, have potential to cause cumulative impacts to the sensitive aspects of the Cultural Heritage environment, when considered with the proposed Ballynalacken Windfarm Project.

Any plans, projects or activities which occur within the cumulative Study Area of 20km, and have potential to cause cumulative impacts with the proposed Ballynalacken Windfarm Project, are included for cumulative evaluation in this EIAR chapter and are listed in the table below.

Table 15-3: Projects included in the Cumulative Impact Evaluation

Plans, Projects and Activities scoped in for cumulative evaluation
Laois-Kilkenny Grid Reinforcement Project (construction phase impacts and operational visual impacts)
Pinewood Windfarm (operational visual impacts)
Cullenagh Windfarm (operational visual impacts)
Lisdowney Wind Farm (operational visual impacts)
Gortahile Windfarm (operational visual impacts)
Bilboa Windfarm (operational visual impacts)
White Hills Windfarm (operational visual impacts)
Telecom masts; Ballyoskill townland (operational visual impacts)
Battery Energy Storage Developments, Moatpark (operational visual impacts)
Parksgrove Solar Farm (operational visual impacts)
Tirlán Solar Farm, Ballyragget (operational visual impacts)
Ballyragget Solar Farm (operational visual impacts)
Glanbia Water Treatment Plant including Anaerobic Digester (operational visual impacts)

EIAR 15.3 CULTURAL HERITAGE PART 2: EVALUATION SECTION

EIAR 15.3.1 Overview of Baseline Environment

EIAR 15.3.1.1 Archaeological & Historical Background

EIAR 15.3.1.1.1 Prehistoric Period (c.8000 BC–AD 400)

The Irish Mesolithic is subdivided into two phases on the basis of stone tool technologies and cultural traditions – the Early Mesolithic (8000–7000/6500 BC) and Late Mesolithic (7000/6500–4000 BC) (Chapple *et al.* 2022; Woodman 2011; Bayliss & Woodman 2009). Evidence for the Irish Mesolithic tends to be concentrated around or in close proximity to coastal areas, along river and lake shores, and elevated river valley positions. Mesolithic society was characterised by small kin groups of nomadic hunter-fisher-gatherers that exploited seasonally available food resources such as fruit, nuts, berries, fish and wild fowl. The archaeological record of this period presents as the remains of temporary settlements, fishing technology, chipped stone implements and production waste (debitage).

There are no recorded Mesolithic sites within the Study Area. However, in 2001 an Early Mesolithic flint microlith was discovered while surveying spoil along the banks of the River Nore after flood-relief scheme works (Lohan 2005; Devine *et al.* 2009, 10), and a small quantity of Mesolithic flint was recovered from the River Nore during monitoring of dredging works of the river in Kilkenny City (Doyle 2004).

The Neolithic period (4000–2400 BC) witnessed the introduction of agriculture to Ireland and the change from a highly mobile hunter-gatherer lifestyle to one of a more sedentary nature based on livestock husbandry and cereal cultivation. This brought corresponding changes in settlement form, food production, burial practices and material culture (e.g., Cooney 2000). The time between 3750 and 3600 BC saw a period of rapid expansion across the country, which included the construction of timber-built rectangular houses and monumental hilltop enclosures, as well as monumental court tombs and portal tombs (e.g., Lynch 2014; Schulting *et al.* 2012; Whittle *et al.* 2011).

A Neolithic cursus monument (RMP KK005-004---- [CH074]), is located on the crest of a west-facing slope in Ballyoskill, 6.7m due west of the RLB (from the edge of the ZoN; Figure 15.5). The monument, which presents panoramic views to the south, west and north, consists of long, low, parallel earthen banks running east–west for a distance of c.310m. These ceremonial linear monuments often form part of the ritual complex of significant prehistoric sites such as those at Newgrange and Tara, County Meath (Leigh *et al.* 2018, 27).

The Bronze Age (2400–500 BC) is typically associated with the introduction and development of metal technology, the production of a diverse range of copper, bronze and gold objects, as well as the emergence of a distinct warrior elite class defined by high-status weaponry towards the end of the period (Waddell 2000). The material culture included not only weapons and tools, but also high-status items of personal adornment. This technological innovation went hand-in-hand with an intensification of agriculture that was largely facilitated by the availability of more efficient tools. A copper mine at Ross Island, County Kerry, is thought to have been the source of most of the copper used in Ireland between 2400 and 2000 BC. Excavations at the site uncovered smelting operations and a smelting camp where copper ore was processed (O’Brien 2004).

Historic finds attributed to the Bronze Age have added to our archaeological understanding of this period within County Kilkenny; for example, a number of finds were uncovered from a cist in Garrannaguilly (SMR KK005-087---- [CH186]), 922m from the RLB which included Bronze Age vessels (NMI 2007:231–4) and human remains (NMI 2007:230). A sample of bone from the cist returned a radiocarbon date of 2031–1829 cal. BC (Sikora *et al.* 2018, 8). Artefacts were also recovered from a series of cists within the Study Area; these cists

(RMP KK005-003002- to SMR KK005-003006-; CH76–CH80) occurred in association with a cairn (RMP KK005-003001-; CH075; Figure 15.5) and are located c.28.5m from the RLB. The cists, discovered in 1971 during bulldozing at a quarry in Ballyoskill, produced Bronze Age bipartite vases and miniature vases (NMI 2009:25.1, 2009:26 and 2009:27.1–2), as well as cremated human remains (NMI 2009:25.2 and 2009:28–29). Samples of the cremated bone were dated to the Early Bronze Age at 2278–1955 cal. BC (Cahill & Sikora 2011, 235–43; Prendergast & Ryan 1972, 239).

Additional Bronze Age features include *fulachtaí fia* (burnt mounds) which are amongst the most common site types in Ireland (e.g., Hawkes 2015). The sites are characterised by a low horseshoe- or kidney-shaped mound of heat-shattered stone discarded from the process of heating water in a subsoil-cut trough. Generally found in low-lying ground where the water table is close to the surface, the often wood-lined troughs filled naturally with water. The functions of *fulachtaí fia* were many and varied, from cooking to bathing places to brewing sites and sweat houses (*ibid.*). A *fulacht fia* (SMR KK005-072----) in nearby Glenmagoo or Firoda Lower townland, comprises a spread of burned stone and charcoal that is visible as a slight rise above ground.

Barrows are burial monuments that date from the Bronze Age through to the Iron Age. They consist of a circular domed area enclosed by a ditch and occasionally also by an external bank. The closest monument of this type to the Study Area comprises a mound barrow in Rathduff (RMP KK005-024----; Figure 15.3), which is located c.348m to the south.

A Late Bronze Age to Iron Age hillfort (RMP KK010-007001-; CH110; Figure 15.7) is located in the townlands of Donaghmore and Toormore, c.1.8km due south of the RLB. The monument, which is sited atop Corrandhu Hill, consists of two widely spaced roughly concentric enclosures straddling the ridge and encircling the summit. The outer enclosure has a diameter of 330m, while the diameter of the inner enclosure is 160m. Targeted excavation and geophysical survey of the monument demonstrated the presence of hut structures within the interior (O'Driscoll 2013), while Late Bronze Age radiocarbon dates were returned from ditch deposits and palisade features (O'Brien 2013).

EIAR 15.3.1.1.2 The Early Medieval Period (AD 400–1100)

The early medieval period saw significant social, cultural, political and technological changes in Ireland. The beginning of the period saw the arrival of Christianity, the gradual conversion of the population, the flourishing of Irish monasteries, the development of church sites and the spread of literacy (Ó Crónán 1995). The period, which spanned 700 years, was also a time of economic and environmental change. Surviving law tracts provide valuable insights into the nature of Irish society at the time, which suggest Ireland was roughly divided into overkingdoms, regional kingdoms and local kingdoms (*tuatha*) that largely operated as pastoral communities bounded by ties of kinship (Edwards 1996, 8).

Ringforts/raths and related monuments, such as cashels and raised/platform raths, all comprise forms of early medieval enclosed settlement (e.g., Stout 1997). Excavation and topographical studies have demonstrated that a wide variety of morphologies and dates occur within the ringfort classification (O'Sullivan *et al.* 2013, 51–72). They can be univallate, bivallate, or trivallate, can vary greatly in size, can occur singly or in dense concentrations and may or may not contain settlement evidence. Stout (2015, 73) suggested that of the approximately 60,000 recorded Irish ringforts, most were occupied between the early seventh and ninth centuries AD. Although the vast majority appear to have been built during the second half of the first millennium AD, in areas of Gaelic-Irish rule they were sometimes inhabited into the medieval period (e.g., O'Connor 1998). This is particularly true west of the Shannon, where there are examples of continued occupation in cashels as late as the seventeenth century (Fitzpatrick 2009).

Ringforts in the Study Area include a site in Tinnalintan (RMP KK005-014----; CH031; Figure 15.3), which measures 30m in diameter and includes a substantial earth and stone bank, fosse and outer bank. A second ringfort to the south-southeast in Tinnalintan (RMP KK005-015----; CH033; Figure 15.3), consists of a

subcircular area surrounded by an earth and stone bank. These ringforts are 0m and 116m from the RLB respectively.

ElAR 15.3.1.1.3 Medieval Period (AD 1100–1600)

The influx of the Anglo-Norman manorial system of territorial organisation resulted in considerable change to the settlement pattern of Kilkenny in the thirteenth century. In 1173, the Anglo-Normans established a castle at Kilkenny, and the city was the capital of Anglo-Norman manorial settlement in the following centuries. Kilkenny was part of the Lordship of Leinster, ruled by Richard Strongbow de Clare until his death in 1176, and he established a castle near the present location of Kilkenny Castle. Thus, a landscape previously characterised by displaced rural settlement now witnessed the founding of its first urban centres. These boroughs became the focus of economic, political and ecclesiastical activity in the region and served to consolidate and centralise the power of the Anglo-Norman magnates.

The medieval county of Kilkenny was divided into eleven cantreds or baronies, whose boundaries would gradually evolve into their modern divisions (Empey 1971, 128). The Study Area comprises thirteen townlands within the barony of Fassadinin, which was a later creation. Fassadinin was originally part of the Gaelic kingdom of Osraige (Ossory) and largely comprised the cantred of Odogh (Idogh) from the clan-name of Uí Duach. These cantreds formed an important part of the means of infeudation in medieval Ireland, where primary magnates granted their dependant lords cantred or half-cantred sized fiefs (MacCotter 2014, 27).

The Anglo-Norman conquest had a massive impact on the landscape of Ireland. With the conquest came a new architecture of power in the form of great stone castles, cathedrals and churches. These great buildings were designed and located to assert the new-found dominance of the Anglo-Normans over the landscape, the people and their traditions. Within the broader landscape of the Proposed Development area there are a wide array of examples of Anglo-Norman buildings, from early motte and baileys through to the subsequent masonry castles and churches.

Moated sites are generally regarded as the rural fortified settlements of the Anglo-Normans, which were constructed towards the end of the thirteenth and into the fourteenth centuries. However, in some counties in the west of Ireland they were also constructed by the Gaelic-Irish lords (e.g., O'Connor 1998). Moated sites may present as a rectilinear or circular enclosed area, occasionally raised, with a water-filled ditch and causewayed entrance. A key factor in classification of this site type is the 'water in, water out' element associated with the ditch, whereby a constant flow of water is ensured. The closest moated site to the Proposed Windfarm is LA030-028---- located in Ironmills or Kilrush townland, County Laois, c.1.1km north of the RLB. This rectangular enclosure is visible from aerial photography as a cropmark.

An Anglo-Norman motte (PO No. 5/1983; RMP KK005-023001-; CH012) and castle (PO No. 5/1983; RMP KK005-023002-; CH013) in Moatpark, are probably the remains of Tullabarry Castle, which dated from the twelfth to thirteenth century (Carrigan 1905, vol. 2, 87). The motte and castle are located c.25m from the RLB; see Figure 15.3.

To the southeast, the historic town of Ballyragget (RMP KK010-001----) was in the possession of Anglo-Norman landowner Richard le Ragged in the early thirteenth century (*ibid.*). Later medieval remains include a fifteenth-century tower house in Ballyragget (KK010-001001-).

ElAR 15.3.1.1.4 Post-Medieval to the Modern Era (AD 1650–1900)

In the seventeenth and eighteenth centuries, country estates known as demesnes emerged across the landscape. These had their origins in the 'Age of Improvement'. Demesnes consisted of designed landscapes which were usually enclosed by stone walls and were often entered through elaborate gate lodges and gateways. They often contained an area of managed woodland known as a wilderness; this included pathways for the gentry. Trees were planted along the roads in the estate to create shelter belts and avenues

along the approaches to the 'Big House'. The houses formed the centrepiece of every demesne and were generally constructed in the Palladian style which drew on aspects of Classical Roman and Greek architecture.

There are no demesnes or historic gardens within the 200m Study Area, owing to its marginal upland character. However, Haywood House (CH311; NIAH Garden Survey 261) is located c.3km north-northwest from the RLB and includes numerous Protected Structures, those listed on the NIAH Building Survey, a Recorded Monument and a site listed on the SMR; see Figure 15.7. The historic demesne and many of its associated features have been included to assess the potential for visual impacts or impacts on setting as a result of the Proposed Development.

EIAR 15.3.1.1.5 Undesignated Cultural Heritage Receptors

In regard to territorial boundaries, parish, baronial and county boundaries are typically of the greatest antiquity owing to their frequent use of topographical features already followed by older Gaelic boundaries. Civil parishes largely date to the twelfth century, being coterminous with existing Gaelic political and territorial units (Nugent 2007, 119; Ní Ghabhláin 1996). Similarly, baronies, although being institutions introduced by colonial administrations from the high medieval to the early modern period, have their origins in older Gaelic territorial units (Nugent 2007, 63; Ó Muraíle 1984).

Townlands constitute the smallest territorial unit in Ireland, with approximately 62,000 being delineated on the first-edition OS maps (Duffy 2004, 24). While first surveyed in their modern incarnation in the mid-nineteenth century, townlands have a long pedigree stretching back to the pre-Norman period (McErlean 1983). As territorial units, they ultimately derive from the Gaelic system of landholding, serving to allocate land and usage rights and to impose taxation. The existing framework of townlands was utilised during both high medieval and early modern colonial periods, serving as an expedient framework for controlling confiscated land. Many Irish townlands were mapped for the first time in the Down Survey undertaken by William Petty in the 1650s in preparation for the Cromwellian land settlement.

EIAR 15.3.1.1.6 Built Heritage

Architectural heritage assets within the Study Area include built vernacular structures; i.e., traditional forms of building and their sittings constructed using locally sourced materials, such as stone and thatch (DHLGH 2021, 28). A list of undesignated Cultural Heritage receptors within the Study Area was compiled through a combination of analysis of historical mapping and fieldwork. This list includes features such as vernacular structures and farm buildings, gate piers, stone walls, in addition to structures related to the former Waterford and Maryborough Branch of the Great Southern and Western Railway.

EIAR 15.3.1.1.7 Intangible Cultural Heritage

The local folklore collected as part of the IFC Schools' Collection contains a wealth of local information, particularly with regard to forts where treasure was reputedly hidden, sought, found and lost, and which were associated with supernatural stories. Relevant extracts from the Study Area are detailed in Appendix 15.4.

For example, there is a record of a rath in Byrnesgrove townland known as "Fáire Glas" (Roll No. 10835), which possibly refers to RMP KK005-027----. The account describes a beautiful stream running alongside the rath which no one dared fish "lest some misfortune should happen him." Another tale tells of how a girl found herself drawn to the rath, thinking it was the light of her own home.

EIAR 15.3.1.2 Overview of Cultural Heritage Receptors

Table 15-4 lists the identified, screened-in, Cultural Heritage receptors within the Study Area, with suggested importance ratings for each which will be used to assess impact on cultural heritage in Section EIAR 15.3.2.¹⁸ These include designated and undesignated archaeological, built heritage, and other cultural heritage assets. More detailed descriptions, along with magnitude of impact and significance of effect as determined through the impact assessment (Section EIAR 15.3.2), are provided in Appendix 15.1, while Appendix 15.7 lists those receptors which were scoped-out, as type and quality of effect was determined to be None or Neutral (see Section A15.6.1.4 in Appendix 15.6). Where possible setting or visual impacts, or cumulative impacts were identified, relevant receptors beyond the Study Area (up to a radius of 20km) were included for analysis (see Section A15.6.1.5 in Appendix 15.6).

¹⁸ Please note that corresponding Figures display screened-in receptors only.

Table 15-4: Cultural Heritage Baseline¹⁹

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH001	Church	Recorded Monument; listed in the SMR	KK009-013001-	Medium	Indirect Negative	Low	Slight	Closest turbine c.6.04km to NE; however, clear views to hilltop. Visual impact - although one that is consistent with emerging and baseline trends.	642918, 671294
CH002	Graveyard	Recorded Monument; listed in the SMR	KK009-013002-	Medium	Indirect Negative	Low	Slight	Closest turbine c.6.04km to NW; however, clear views to hilltop. Visual impact - although one that is consistent with emerging and baseline trends.	642931, 671319
CH003	House	Protected Structure; listed in the NIAH	RPS 525; 12803505	High	Indirect Negative	Low	Slight	Visual impact to E mostly screened by mature vegetation in the associated gardens.	642994, 675635
CH004	Church/chapel	Protected Structure; listed in the NIAH	RPS 167; 12803501	High	Indirect Negative	Low	Slight	Visual impact lessened by mature trees in graveyard and to E of road; however, Ballynalacken Hill and turbines visible.	644052, 676005
CH005	School	Protected Structure; listed in the NIAH	RPS 168; 12803503	High	Indirect Negative	Low	Slight	Visual impact to E from turbines as Ballynalacken Hill visible; however, impact partially lessened by trees to SE.	643984, 676082
CH006	House - fortified house	Recorded Monument; listed in the SMR	LA029-048----	Medium	Indirect Negative	Medium	Moderate	Closest turbine c.4.62km to ESE.	643052, 678484

¹⁹ Distance measurements are taken from the edge of the cultural heritage receptor, where evident. For archaeological sites with no above ground signature or poor preservation the distance measurements are from the outer edge of the ZoN to the redline boundary.

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH007	Church	Recorded Monument; listed in the SMR	KK001-005001-	Medium	Indirect Negative	Low	Slight	Closest turbine c.2.46km to SE; magnitude of visual impact lessened by copse of mature broadleaved trees in SE of graveyard.	645150, 678004
CH008	Graveyard	Recorded Monument; listed in the SMR	KK001-005002-	Medium	Indirect Negative	Low	Slight	Closest turbine c.2.46km to SE; magnitude of visual impact lessened by copse of mature broadleaved trees in SE of graveyard.	645116, 678001
CH009	Church/chapel	Protected Structure; listed in the NIAH	RPS C262; 12400501	High	Indirect Negative	Low	Slight	Closest turbine c.2.41km to E. Magnitude of visual impact lessened by mature broadleaved trees in churchyard.	645078, 677155
CH010	Ringfort - rath	Recorded Monument; listed in the SMR	KK005-001----	Medium	Indirect Negative	Low	Slight	Views to E and SE screened by mature trees on ringfort and mature hedgerows further to E and SE. Closest turbine c.2.35km to E.	645181, 676512
CH011	Castle - ringwork	Recorded Monument; listed in the SMR	KK005-002----	Medium	Indirect Negative	Low	Slight	Closest turbine c.1.34km to ENE; views to east partially occluded by commercial forestry plantation.	646360, 675741
CH012	Castle - motte	Preservation Order; Recorded Monument; listed in the SMR	5/1983; KK005-023001-	High	Indirect Negative	Low	Moderate	Unobstructed views to Ballynalacken Hill. See LVIA Viewpoint 'CH012 & CH013' in Appendix 15.11 and Chapter 14.	644403, 672739
CH013	Castle - unclassified	Preservation Order; Recorded Monument; listed in the SMR	5/1983; KK005-023002-	High	Indirect Negative	Low	Moderate	Unobstructed views to Ballynalacken Hill. Viewpoint 'CH012 & CH013' in Appendix 15.11 and Chapter 14.	644411, 672748

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH016	AAP: Rathduff Stream	Undesignated	N/A	Low	Direct Negative	Low	Slight	One option for proposed works to install the grid connection cabling at the bridge (CH128) includes the installation of cables by directional drilling under the bridge and watercourse, from the road corridor. This is located in an area of high archaeological potential due to both proximity to the watercourse AND proximity to CH012 and CH013 (under Preservation Order) and archaeological deposits, remains, artefacts may exist.	644512, 672754
CH018	Rail line (site of)	Undesignated	N/A	Very Low	Direct Negative	Very Low	Imperceptible	Rail line crosses through the RLB at the R432.	644593, 672959
CH022	Field system	Listed in the SMR	KK005-095----	Low	Direct Negative	Low	Slight	Mitigation recommendations stem from uncertainty of extent and preservation of field system, and the possibility for associated remains to extend north into the substation field.	644935, 672709
CH025	Lime kiln	Undesignated	N/A	Low	Indirect Negative	Low	Slight	The layout was changed on 03.04.23 to avoid running grid connection along laneway here. Now runs through corner of field to east. While it is now outside of the RLB it is in close proximity and associated, unrecorded subsurface remains could exist.	644844, 672751
CH026	Townland boundary:	Undesignated	N/A	Low	Direct Negative	Low	Slight	The RLB runs along this townland boundary which is also in close proximity to works proposed at	644944, 672809

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
	Rathduff; Tinnalintan							the Tinnalintan substation, grid connection, internal cable link, joint bay, etc.	
CH027	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Boundary c.300m in extent, potential for c.86m to be impacted by construction compound. However, boundary can be avoided and with compound cited at a c.10m distance from receptor.	644983, 672849
CH028	Townland boundary: Coole; Tinnalintan	Undesignated	N/A	Low	Direct Negative	Low	Slight	The RLB runs along this townland boundary which is also in close proximity to works proposed at the Tinnalintan substation and location for permanent storage.	644819, 672831
CH029	Vernacular structure (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	In close proximity to the Construction Works Boundary and hedgerow replant.	644829, 672854
CH030	Farm complex	Undesignated	N/A	Low	Potential Direct Negative	Low	Not Significant	No visual impact or impact to setting, as cable will not be visible once laid. Boundary features in close proximity to RLB and proposed location of cable link.	645336, 673437
CH031	Ringfort - rath	Recorded Monument; listed in the SMR	KK005-014----	Medium	Indirect Negative; Direct Negative	Low	Slight	Very slight visual impact from turbines as views to E and NE are restricted. ZoN slightly within RLB, and while the cable link is within the road, there could be extant remains associated with the monument.	645447, 673557

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH032	Townland boundary: Ballymartin; Tinnalintan	Undesignated	N/A	Low	Direct Negative	Low	Slight	Internal cable link appears to follow route parallel to the road and could impact the gate piers/wall alongside road at location of TLB.	645535, 673508
CH033	Ringfort - rath	Recorded Monument; listed in the SMR	KK005-015----	Medium	Indirect Negative	Low	Slight	No impact from construction. Only very slight visual impact from turbines as views to E and NE are restricted.	645556, 673342
CH034	Gate pier	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	In proximity to proposed location for the cable link.	645867, 673575
CH035	Gate pier	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	In proximity to proposed location for the cable link.	645871, 673593
CH036	Culvert	Undesignated	N/A	Low	Direct Negative	Low	Slight	Chapter 8 (Water) states that Rathduff_15 " Crosses through the Internal Cable Link, works in public road at W2, works in deck of bridge (includes works to parapet walls) or crossing by direction drill method at W3" (pp. 8-21). At CH036, "W2 is 1.0m in width with cables being installed in the public road above the existing culvert to install the Internal Cable Link, no new culvert or instream works will be required" (pp. 8-41).	645930, 673608
CH037	Country House	Undesignated	N/A	Low	Direct & Indirect Negative	Low	Slight	No impact from construction as cable in road, but ensure structural elements are protected during construction with fencing. Visual impact from turbines to	646172, 673654

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								ESE, those to NNE shielded by ridge and commercial forestry.	
CH040	Vernacular structure (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Structure may be located within the Construction Works Boundary and could be impacted if any associated features/ deposits/ artefacts remain.	646251, 673757
CH041	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Very Low	Not Significant	Approx. 13m of the boundary may be impacted by the crossing of the internal cable link.	646992, 673863
CH042	Field boundary	Undesignated	N/A	Very Low	Direct Negative	High	Slight	Will be crossed by the internal cable link; and up to 13m may be impacted. And may be impacted by road-widening works.	647738, 674130
CH043	Farm complex	Undesignated	N/A	Low	Indirect Negative	Medium	Slight	Structures now outside RLB, but there will be impacts to setting and visual impact (though lessened by commercial forestry).	647985, 674119
CH045	Stone wall	Undesignated	N/A	Very Low	Potential Direct Negative	Very Low	Not Significant	In close proximity to the Construction Works Boundary.	647970, 674188
CH046	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Medium	Slight	Delineates footprint of control building.	647918, 674206
CH047	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Internal cable c.2m to west of boundary and crossed by internal cabling towards T4.	647933, 674383
CH048	Townland boundary: Ballymartin; Ballynalacken	Undesignated	N/A	Low	Direct Negative	Medium	Slight	Upwards of 1.1km has the potential to be affected by the proposed development, due to the close proximity of T7 and the internal cabling route, as well as	647869, 674821

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								directly due to the internal cable route, temporary deposition area and borrow pit near T6. However, much of the TLB in this section has been previously disturbed by forestry development (though features may remain).	
CH049	Lime kiln (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Potential for direct impact during construction of telecom relay pole and laying of internal cabling.	647611, 675085
CH051	Fulacht fiadh (possible)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Potential for impact to subsurface archaeological features due to construction of T8 and associated works.	647849, 675157
CH052	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Majority of boundary may be impacted; however, magnitude of impact lowered as it has been altered by forestry works.	647856, 675236
CH053	Vernacular structures	Undesignated	N/A	Low	Indirect Negative	Low	Slight	Turbine located 150m to E with temporary construction compound 150m S. Visual impact and impact to setting.	647672, 675273
CH054	Gate piers	Undesignated	N/A	Low	Potential Direct Negative	High	Slight	Road-widening works to take place along this road, with laying of internal cabling.	647580, 675264
CH055	Fulacht fiadh (possible)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Cobbles got pushed back during forestry ditch clearance. Potential for impact to subsurface archaeological features due to construction of hardcore area and laying of internal cabling.	647864, 675865

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH056	Townland and civil parish boundary: Ballynalacken; Ballyoskill	Undesignated	N/A	Low	Direct Negative	Low	Slight	Will be crossed by temporary road leading from borrow pit and temporary deposition area to the hardcore road and internal cabling.	647947, 675866
CH057	Stone wall	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Slight	Potential for impact due to movement of plant along temporary road.	647956, 675826
CH058	Fulacht fiadh (possible)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Area of potential for burnt mounds. Low-lying marshy area in corner of field; temporary road, borrow pit and temporary deposition area proposed here.	648043, 675693
CH063	Fulacht fiadh (possible)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Along location of internal cable route and hardcore area.	647813, 675929
CH065	Fulacht fiadh (possible)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Along location of internal cable route and hardcore area.	647792, 676047
CH067	Historic townland and civil parish boundary: Attanagh; Kilmenan	Undesignated	N/A	Low	Direct Negative	Low	Slight	Historic boundary will be crossed at this point, and c.50m west-northwest along internal cable route (see historic map).	647738, 676292
CH068	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	c.12m of boundary within the Construction Works Boundary. The hedgerow here will be removed, though hedgerow along rest of boundary is slated to be improved.	647659, 676341
CH069	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Medium	Not Significant	Hedgerow is to be removed here (potentially up to 60m). And will	647683, 676501

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								be directly impacted by temporary hardcore area for T10.	
CH070	Fulacht fiadh (possible)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Waterlogged section of field with potential for fulacht fiadh.	647715, 676325
CH072	Curvilinear banks (possible)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Receptor to immediate SW of proposed turbine T10, hardstand and internal cable. Receptor comprises slight curvilinear bank on cusp of plateau; no evidence for associated ditch.	647565, 676392
CH073	Vernacular structures (in ruins)	Undesignated	N/A	Low	Potential Direct Negative	Low	Not Significant	Two structures shown to E of Cromwell's Road on OS 6-inch map. The OS 25-inch map shows two structures, an outbuilding, well and lime kiln. Complex in ruins, with structural remains covered in vegetation. Not likely to be impacted but road-widening works proposed along east side of road at laneway entrance, and hedgerow work proposed for adjacent field boundaries.	647493, 676404
CH074	Cursus	Recorded Monument; listed in the SMR	KK005-004----	High	Indirect Negative	Medium	Moderate	Visual impact; impact to setting. Closest turbine is c.230m to E. Associated with LVIA Viewpoint 'CH074'; see Appendix 15.11 and Chapter 14.	647238, 676309
CH075	Cairn - unclassified	Recorded Monument; listed in the SMR	KK005-003001-	Low	Indirect Negative	Medium	Slight	Visual impact; impact to setting. Closest turbine is c.224m to SE.	647360, 676509

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH076	Cist	Recorded Monument; listed in the SMR	KK005-003002-	Low	Indirect Negative	Low	Slight	Visual impact; impact to setting. Closest turbine is c.250m to SE.	647374, 676504
CH077	Cist	Listed in the SMR	KK005-003003-	Low	Indirect Negative	Low	Slight	Visual impact; impact to setting. Closest turbine is c.308m to SE.	647318, 676522
CH078	Cist	Listed in the SMR	KK005-003004-	Very Low	Indirect Negative	Low	Not Significant	Impact to setting; closest turbine is c.270m to SE. Magnitude of effect not as high as other cists as receptor was largely destroyed by the bulldozers	647316, 676514
CH079	Cist	Listed in the SMR	KK005-003005-	Low	Indirect Negative	Low	Slight	Visual impact; impact to setting. Closest turbine is c.243m to SE.	647386, 676517
CH080	Cist	Listed in the SMR	KK005-003006-	Low	Indirect Negative	Low	Slight	Visual impact; impact to setting. Closest turbine is c.270m to SE.	647367, 676541
CH081	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Medium	Slight	Hedgerow to be removed at eastern and western ends, though most of boundary to remain (though within the Construction Works Boundary and in close proximity to the hardcore road). Stone wall present.	647502, 676661
CH082	Kiln (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Impacted by proposed hardcore area leading to T11.	647552, 676655
CH083	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Medium	Slight	Roughly 41m of hedgerow to be removed, though the rest of it field boundary hedge line is slated for improvement, with a new hedgerow planted to the north-northeast following curve	647661, 676681

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								of proposed road. Stone wall present.	
CH084	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	c.40m of boundary impacted by turbine, hardstand, internal cable and road. A small section of hedge at the SE end of the boundary will be removed though most of it to remain intact. Some stone wall present.	647563, 676787
CH085	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Hedgerow removal, replant, and improvement is proposed along the majority of this boundary, with the W end removed to allow for a wider hardcore area (as well as internal cabling). Up to 31m may be affected by hedgerow removal and laying of hardcore, which represents a small proportion of the length of the boundary.	647704, 676761
CH086	Gate piers	Undesignated	N/A	Low	Potential Direct Negative	Low	Not Significant	Located c.6m from edge of Construction Works Boundary. Ensure receptor is not damaged during construction.	647793, 676783
CH087	Trackway	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	The hardcore area/road and internal cable route will be located just to SW of the trackway though in close proximity. Hedgerow is planned between the road and trackway.	647788, 676815
CH088	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	This field boundary actually continues on the other side (SW) of the trackway, though may be	647762, 676910

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								less extant (though visible in aerial imagery). Will be impacted by the hardcore area/road and internal cabling.	
CH089	Vernacular structures (in ruins)	Undesignated	N/A	Low	Direct Negative	Medium	Slight	Receptor impacted by internal cable and hardcore area.	647726, 676956
CH090	Gate piers	Undesignated	N/A	Low	Direct Negative	Medium	Slight	During discussion with client, it was mentioned that the gate piers would need to be removed and built like for like if avoidance not feasible.	647730, 676976
CH091	Townland boundary: Ballyoskill; Loughill	Undesignated	N/A	Low	Direct Negative	Low	Slight	Only a c.4m section of boundary will be impacted by cable (7.5m in Construction Works Boundary).	647725, 676974
CH092	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	In close proximity to hardcore road/internal cable route leading to T12. Construction Works Boundary located along boundary.	647699, 677083
CH093	Ringfort - rath	Recorded Monument; listed in the SMR	KK005-005----	Medium	Indirect Negative	Low	Slight	Views impeded to W by rising slope, which reduces magnitude of effect. Closest turbine 474m to WNW	648056, 676859
CH094	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	c.10m of hedgerow will be removed at access point to field where road and cable will cross, and an additional c.70m to be removed just south of the turbine. However, this second section will benefit from	647608, 677174

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								hedgerow replanting to swing the boundary just slightly south of current position.	
CH095	Townland boundary: Ballynalacken; Firoda Upper	Undesignated	N/A	Low	Potential Direct Negative	Very Low	Not Significant	c.600m of TLB lie within/along RLB and is in close proximity to the borrow pit north of T5, however, no impact is predicted.	648747, 674758
CH096	Stone wall	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	No impact to wall as existing road will be used. No change to receiving environment.	647971, 673758
CH097	Stone wall	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	No impact to wall. Inside redline, but existing route will be used, so no changes to receiving environment.	648032, 673768
CH098	Townland boundary: Ballymartin; Byrnesgrove	Undesignated	N/A	Low	Direct Negative	Low	Slight	Potential for accidental impact during construction of hardcore area.	648120, 673790
CH099	Townland and civil parish boundary: Ballymartin; Commons	Undesignated	N/A	Low	Direct Negative	Very Low	Not Significant	Townland boundary has been significantly altered due to commercial forestry plantation. Only impact from proposed road that will use existing forestry track.	648279, 674039
CH100	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	c.35m may be impacted by the hardcore road and internal cabling heading towards T4.	648242, 674102
CH101	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Boundary will be directly impacted by updated location for T4 and other associated works, however, magnitude of impact is	648225, 674180

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								lowered due to previous disturbance from the forestry block.	
CH102	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Boundary will be directly impacted by road and internal cable, with c.10m of hedgerow to be removed.	648212, 674247
CH103	AAP: mapped blanket peat (EPA SIS National Soils)	Undesignated	N/A	Medium	Direct Negative	Low	Slight	Has the potential to be impacted as a result of works associated with the construction of T4, T6, and the internal cabling and hardcore area between T3 and T4.	648452, 674102
CH104	Vernacular structure (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Direct impact from internal cabling.	648310, 674057
CH106	Castle - ringwork	Recorded Monument; listed in the SMR	KK005-008----	Medium	Indirect Negative	Low	Slight	Turbines 1 and 2 are located 1.89km and 1.8km to the west and southwest respectively; however, the views west and southwest are partially occluded by a rising slope and a commercial forestry plantation that reduces the magnitude of effect.	650342, 675322
CH107	Castle - unclassified	Listed in the SMR	KK005-069001-	Low	Indirect Negative	Low	Not Significant	Very poor preservation above ground so no visual impact.	651210, 673642
CH108	Moated site	Recorded Monument; listed in the SMR	KK005-069----	Medium	Indirect Negative	Low	Slight	Not very visible above ground, so only slight impact.	651208, 673616

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH109	Enclosure	Recorded Monument; listed in the SMR	KK005-027----	Medium	Indirect Negative	Low	Slight	Views to N and NE obscured by ridge and commercial forestry. Closest turbine sited 572m to NW, but only top will be visible.	649266, 673194
CH110	Hillfort	Recorded Monument; listed in the SMR	KK010-007001-	High	Indirect Negative	Medium	Moderate	Closest turbine c.2.9km to NE; however, impact consistent with emerging and baseline trends. Associated with LVIA Viewpoint 'CH110'; see Appendix 15.11 and Chapter 14.	647564, 671007
CH111	Church	Recorded Monument; listed in the SMR	KK005-060001-	Medium	Indirect Negative	Very Low	Not Significant	Only minimal visual impact as edge of site screened by mature broadleaved trees.	645922, 672746
CH112	Graveyard	Recorded Monument; listed in the SMR	KK005-060002-	Medium	Indirect Negative	Very Low	Not Significant	Only minimal visual impact as edge of site screened by mature broadleaved trees.	645933, 672763
CH113	Geophysical anomaly (possible ditch)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	In close proximity to Preservation Order receptor.	644516, 672720
CH114	Geophysical anomaly (two pairs of parallel ditches)	Undesignated	N/A	Low	Direct Negative	Low	Slight	All four parallel anomalies may be impacted by the proposed Tinnalintan substation and associated works.	644864, 672875
CH124	Enclosure	Listed in the SMR	KK005-088----	Medium	Potential Direct Negative	Low	Slight	Enclosure not visible at ground level so no visual impact.	645456, 673060
CH125	Lime kiln (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Does not appear to be extant above ground.	648320, 677452
CH127	Well (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Forested area was outside of the RLB and was not explored.	648243, 677470

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH128	Bridge	Undesignated	N/A	Low	Direct Negative	High	Moderate	Proposed works to the bridge to install the grid connection cabling includes trench works and increasing height of parapet wall or the installation of the cables by directional drilling under the bridge and watercourse from the road corridor.	644512, 672747
CH129	Benchmark	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	If extant, may be impacted by bridge works.	644503, 672742
CH132	Level crossing (site of)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	If level crossing this was probably removed, although they are usually indicated on the maps. Included as an archaeological receptor, as we cannot quantify significance.	644593, 672952
CH133	Well (site of)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	This area is now disturbed with recent upgraded pylon and hardcore, however, mitigation still recommended as exact location is unknown.	645142, 672917
CH138	Farm complex	Undesignated	N/A	Low	Indirect Negative	Medium	Slight	Area to N and NE partially obscured by ridge and commercial forestry. Slight visual impact and impact to setting.	648650, 672834
CH139	Farm complex	Undesignated	N/A	Low	Indirect Negative	Medium	Slight	Area to N and NE partially obscured by ridge and commercial forestry. Slight visual impact and impact to setting.	648622, 672924
CH140	Vernacular structures (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Likely disturbed as now within extant forestry block, but	648646, 674118

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								immediately adjacent to T3 and some remains may exist.	
CH144	AAP: Cloghnagh Stream	Undesignated	N/A	Low	Direct Negative	Low	Slight	Along proposed cable route. Chapter 8 (Water) states: "W1 is c.1.0m in width and will require the installation of a new bottomless culvert to facilitate the construction of a Windfarm Site Road over this watercourse; Wet drainage channel D1 is c.0.5m in width and will require a diversion of the channel for 50m and the installation of a new bottomless culvert to facilitate the construction of a Windfarm Site Road over this drain; D2 is 0.7m in width and will require the extension of the existing culvert by 8m to facilitate the widening of the existing forestry track over this culvert; D3 is 1.0m in width and will require the installation of a new bottomless culvert to facilitate the construction of a Windfarm Site Road over this drain" (pp. 8-41).	648526, 674105
CH145	Farm complex	Undesignated	N/A	Low	Indirect Negative	Medium	Slight	Impact to setting and visual impact lessened by commercial forestry.	648017, 673745
CH146	Lime kiln (site of)	Undesignated	N/A	Low	Potential direct	Low	Slight	Within forestry block and area of disturbance.	648343, 674104

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH147	Benchmark	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Unknown if extant. Road-widening works here, within the RLB.	647867, 673841
CH150	Benchmark	Undesignated	N/A	Low	Direct Negative	Low	Slight	May be impacted by road widening works in this area.	647679, 674499
CH153	Benchmark	Undesignated	N/A	Low	Direct Negative	Low	Slight	If extant, may be impacted by road-widening works and temporary berms at entrance to T7.	647655, 674845
CH154	Gravel pit (site of)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	May still be visible at ground level, but in area of disturbance/forestry. Not noted on first-edition six-inch OS map, however, labelled as 'disused' on the 25-inch OS map.	648054, 674789
CH157	AAP: watercourse	Undesignated	N/A	Low	Direct Negative	Low	Slight	Includes culvert and stream, as both receptors are interrelated and will both be impacted in this location.	648267, 674875
CH159	Culvert	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Culvert may be impacted by internal cable route, running parallel along field boundary to north.	648328, 674911
CH161	Benchmark	Undesignated	N/A	Low	Direct Negative	Low	Slight	If extant, may be impacted by road-widening works.	647572, 675289
CH164	Quarries (site of)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Two attached quarries, one noted as disused on the 25-inch OS map. See also, aerial images.	647472, 676050
CH168	Benchmark	Undesignated	N/A	Low	Direct Negative	Low	Slight	If extant, may be impacted by road-widening works.	647427, 676537

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH169	Vernacular structures (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Remains may occur right alongside field boundary which has the potential to be impacted by movement of plant, etc.	647514, 676804
CH177	Townland and civil parish boundary	Undesignated	N/A	Low	Potential Direct Negative	Low	Not Significant	Parish boundary and civil parish boundary in this area largely destroyed due to commercial forestry. However, there is the potential for ditches to be extant below ground.	648753, 674570
CH178	Townland and civil parish boundary	Undesignated	N/A	Low	None	N/A	N/A	Parish boundary and civil parish boundary in this area largely destroyed due to commercial plantations. However, there is the potential for ditches to be extant below ground.	648872, 674102
CH179	Vernacular structures (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	If extant, may be directly impacted by proposed T2 and associated works. However, likely previously disturbed by cut block.	648843, 673832
CH182	Lime kiln	Undesignated	N/A	Low	Direct Negative	Medium	Slight	Within/ in proximity to Construction Works Boundary. Possibility for associated features/deposits in vicinity.	648274, 674070
CH185	Gate pier and stone wall	Undesignated	N/A	Low	Direct Negative	Medium	Slight	Likely impacted by road-widening works and works related to laying of hardcore road and internal cable link and internal cabling.	647748, 674131
CH197	Stone wall	Undesignated	N/A	Very Low	Direct Negative	Low	Slight	Stone and brick wall, c.0.6m high. Boundary wall associated with Ballymartin House. Cable link will directly cross this field boundary	646118, 673693

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								at or in close proximity to the wall.	
CH205	Gate pier	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	Set up into field slightly.	648182, 673803
CH206	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Up to 20m located within the Construction Works Boundary, with internal cabling and hardcore area/road crossing boundary slightly (though it follows route of farm track).	647797, 676038
CH207	Field boundary; stone wall	Undesignated	N/A	Low	Potential Direct Negative	Very Low	Not Significant	In very close proximity to proposed works.	647747, 676298
CH208	AAP: field system	Undesignated	N/A	Low	Direct Negative	Low	Slight	T11 is likely to impact remnants of the field system as noted during walkover survey and aerial imagery.	647479, 676862
CH215	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Small 10m section may be impacted where internal cable link and joint bay access route will cross.	647595, 674060
CH216	Gate piers	Undesignated	N/A	Low	Direct Negative	Medium	Slight	Likely impacted by road-widening works, hedgerow improvement and internal cabling.	647632, 674996
CH217	Stone wall	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Approx. 20m may be impacted, though only remnants/footing are visible, and the remaining length of the receptor will not be impacted. Magnitude of effect is lowered as only a small section to be impacted and poor preservation.	647636, 676778

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH218	Stone wall	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Approx. 20m may be impacted, though only remnants/footing are visible, and the remaining length of the receptor will not be impacted. Magnitude of effect is lowered as only a small section to be impacted and poor preservation.	647723, 676769
CH220	Lime kiln	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Potential for impact due to movement of plant. c.12m from Construction Works Boundary of turbine.	647657, 677217
CH221	Stone wall	Undesignated	N/A	Very Low	Direct Negative	Medium	Not significant	Not much remaining but potential up to 65m may be impacted by construction of turbine.	647542, 677232
CH223	Well (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Within the Construction Works Boundary and may be impacted by T8 and associated works.	647800, 675278
CH224	Historical field boundary	Undesignated	N/A	Low	Direct Negative	Low	Slight	Associated with CH053. c.56m may be impacted.	647756, 675272
CH226	Historical field boundary	Undesignated	N/A	Low	Direct Negative	Low	Slight	Associated with CH053. c.20m falls within the Construction Works Boundary and may be impacted.	647620, 675170
CH228	Historical field boundary	Undesignated	N/A	Low	Direct Negative	Medium	Slight	Associated with CH053. Over 100m may be impacted (within the Construction Works Boundary).	647694, 675200
CH229	Historical field boundary	Undesignated	N/A	Low	Direct Negative	Low	Slight	Associated with CH053. c.25m falls within the Construction	647681, 675203

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								Works Boundary and may be impacted.	
CH233	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Medium	Not Significant	More than 75m of hedgerow will be removed for the concealed area, temporary berms, internal cabling route and hardcore area/road. The remaining 155m or so will benefit from hedgerow improvement.	647629, 675001
CH234	Stone enclosure	Undesignated	N/A	Very Low	Direct Negative	High	Slight	Receptor is fully within the Construction Works Boundary with the internal cable route running through it.	648388, 674950
CH236	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	Route of internal cabling will cross the boundary where the farm track is located, however, there is potential for the eastern end of the boundary to be impacted as is within the Construction Works Boundary.	647801, 674632
CH237	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	Route of internal cabling will cross the boundary where the farm track is located, however, there is potential for the eastern end of the boundary to be impacted as is within the Construction Works Boundary.	647891, 674480
CH238	Former laneway	Undesignated	N/A	Very Low	Direct Negative	Very low	Not Significant	Internal cabling and internal cable link will follow route of current laneway, and hardcore placed for road. The hedgerow along the northern side of the	647797, 674154

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								laneway will be improved, however a c.35m section will be removed for the control building. It appears that the road will not be widened. As laneway will not be altered, no mitigation required.	
CH239	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Very low	Not Significant	Route of internal cabling will cross the boundary where the farm track is located, however, there is potential for the eastern end of the boundary to be impacted as is within the Construction Works Boundary.	647927, 674299
CH240	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Very low	Not Significant	Route of internal cabling will cross the boundary where the farm track is located, however, there is potential for the eastern end of the boundary to be impacted as is within the Construction Works Boundary.	647920, 674389
CH242	Laneway	Undesignated	N/A	Low	Potential Direct Negative	Low	Not Significant	Laneway within the RLB. A hardcore area is proposed along both eastern and western ends. Construction Works Boundary follows the route of the laneway with the exception of the eastern end before a 90 degree turn north where it will be expanded for turning radius. HR13 is located at SW corner of the field, north of the laneway. A stone wall was noted at various locations along both sides of the	647923, 673750

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								laneway, and therefore, the possibility exists for remnants to remain within the hedge, along the area impacted by HR13.	
CH243	AAP: watercourse	Undesignated	N/A	Low	Direct Negative	Low	Slight	Will be impacted by road-widening works. As noted in Chapter 8 (Water): "[Drainage channel] D2 is located at an existing culvert crossing on a wet drainage channel which drains into the Ballymartin_15, which in turn drains into the Cloghnagh_010. D2 is 0.7m in width and will require the extension of the existing culvert by 8m to facilitate the widening of the existing forestry track over this culvert".	648167, 673896
CH245	Historical field boundary	Undesignated	N/A	Low	Direct Negative	Low	Slight	c.40m has the potential to be impacted and will be crossed by section of internal cabling.	648166, 674421
CH248	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Will be directly impacted by T10 and associated works, though magnitude of impact lowered as it seems to be altered for drainage.	647619, 676420
CH250	Historical field boundary	Undesignated	N/A	Very Low	Direct Negative	Very low	Not Significant	c.10m is located within the Construction Works Boundary. Crossed by route of internal cabling.	647850, 674746
CH251	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	Along the edge of the Construction Works Boundary	647874, 674672

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								with internal cabling route running parallel for length of boundary. Impact may occur due to movement of plant.	
CH252	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Road widening works will take place at the SW corner of the field with a temporary berm/concealed area. There will be hedgerow replanting and hedgerow improvement works, though impact is likely minimal.	647841, 674600
CH253	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Road widening works will take place at the SW corner of the field with a temporary berm/concealed area. There will be hedgerow replanting and hedgerow improvement works, though impact is likely minimal.	647847, 674593
CH254	Townland boundary: Tinnalintan; Srageagh	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Approx. 270m of this TLB are aligned with the RLB and internal cable link and could also be impacted by updated site of joint bay. Potential for direct impact due to movement of plant.	645306, 672949
CH255	Field boundary; iron gate; gate pier	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	The RLB and internal cable link run immediately parallel to this field boundary for half its length. The very corner where iron gate and pier are located are unlikely to be impacted. Further NW, the boundary will be directly impacted and crossed by the cable link (c.20m within the RLB).	645367, 672975

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH259	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Very Low	Not Significant	Cable link now follows alongside road and boundary may be accidentally impacted during construction works.	645876, 673575
CH260	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Very Low	Not Significant	Associated with watercourse CH36 (see above). Will be crossed by the cable link which includes crossing the watercourse.	645928, 673597
CH262	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Very Low	Not Significant	Located in close proximity to cable link route; impact unlikely.	646565, 673802
CH263	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Internal cable link runs parallel/directly along the field boundary for its length, while a joint bay is also proposed at the boundary. Joint bay access will utilize the cable link route.	647254, 674057
CH264	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	The internal cable link and joint bay access run parallel to length of boundary, in very close proximity.	647312, 674078
CH265	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Will be crossed by hardcore area/road which will be realigning the track. Construction works boundary is c.13m wide.	648272, 677488
CH266	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Very low	Not Significant	Field boundary altered between first-edition six-inch, and 25-inch OS maps. Hardcore road appears to be located at exact location of boundary.	648514, 677447
CH267	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Medium	Not Significant	Hedgerow removal will take place at field boundary where hardcore	648684, 672707

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								area/road and temporary berm will be constructed. Around 40m of boundary is located within the Construction Works Boundary.	
CH269	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Hedgerow removal will take place at field boundary where hardcore area/road will be constructed. Around 10m of hedgerow will be removed.	648719, 672830
CH274	Gate piers; stone wall	Undesignated	N/A	Very Low	Potential Direct Negative	Medium	Slight	May be directly impacted (removed?) for road.	648761, 672869
CH275	Field boundary; stone wall	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Small section will be impacted for road widening.	648888, 673025
CH277	Former trackway; stone walls	Undesignated	N/A	Very Low	Direct Negative	High	Slight	Entire length of hedgerow will be removed, with length of replanting slightly west to allow for road-widening. However, there is a stone wall here as well which will also be impacted.	648884, 673071
CH278	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Two sections of hedgerow at the north and at the SW ends of the field boundary will be removed (HR8).	652525, 668651
CH279	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Very Low	Not Significant	Crossed by internal cable route.	646539, 673786
CH280	Trackway	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Laneway will be widened but orientation will not be changed.	648768, 672880
CH281	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Medium	Not Significant	Road widening is only taking place on the SE side of the trackway though there is	648765, 672880

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								potential for impact due to movement of plant.	
CH282	Field boundary	Undesignated	N/A	Very Low	Direct Negative	High	Slight	Entire length of hedgerow will be removed, with length of replanting slightly SE to allow for road-widening. However, there is a stone wall here which will also be impacted.	648768, 672876
CH284	Townland boundary: Byrnesgrove; Commons	Undesignated	N/A	Low	Direct Negative	Low	Slight	Townland boundary has been significantly altered due to commercial forestry plantation. However, associated ditch, etc. may still be evident.	648847, 673894
CH285	Folly	National Historic Property; Protected Structure; listed in the NIAH	RPS 505; NIAH 12803004	Medium	Indirect Negative	Low	Slight	Heywood Gardens (Haywood House) is listed as a national historic property. Magnitude of impact lowered due to swath of broadleaved trees just S and SE of feature that partially screens view. Associated with LVIA Viewpoint 'CH285'; see Appendix 15.11 and Chapter 14.	646874, 681917
CH286	Folly	National Historic Property; Protected Structure; listed in the NIAH	RPS 506; NIAH 12803005	Medium	Indirect Negative	Very Low	Not Significant	Heywood Gardens (Haywood House) is listed as a national historic property. Magnitude of impact lowered due to swath of broad-leaved trees just S and SE of feature that partially screens view.	646873, 681930
CH287	Orangery	National Historic Property; Protected	RPS 507; NIAH 12803006	Medium	Indirect Negative	Low	Slight	Heywood Gardens (Haywood House) is listed as a national historic property. Magnitude of	646929, 681931

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
		Structure; listed in the NIAH						impact lowered due to swath of broadleaved trees just S and SE of feature that partially screens view. Associated with LVIA Viewpoint 'CH287'; see Appendix 15.11 and Chapter 14.	
CH288	Farmyard Complex	National Historic Property; Protected Structure; listed in the NIAH	RPS 508; NIAH 12803007	Medium	Indirect Negative	Low	Slight	Heywood Gardens (Haywood House) is listed as a national historic property. Magnitude of impact lowered due to swath of broadleaved trees just S and SE of feature that partially screens view.	647167, 681753
CH289	Ornamental garden	National Historic Property; Protected Structure	RPS 509	High	Indirect Negative	Medium	Moderate	Heywood Gardens (Haywood House) is listed as a national historic property. Associated with historic garden/demesne no.261 (Haywood House) and LVIA VP6, and Viewpoints 'CH289 (1) and (2)'; see Appendix 15.11 and Chapter 14.	647017, 681758
CH290	Round tower	Protected Structure; listed in the SMR	KK019-026175-; RPS B18	Medium	Indirect Negative	Very Low	Not Significant	Magnitude given as very low here, due to distance, description in LVIA, and that is consistent with changes to baseline environment. Associated with LVIA VP32; see Appendix 15.11 and Chapter 14.	650258, 656403
CH291	Settlement deserted-medieval	Listed in the SMR	KK001-006003-	Low	Indirect Negative	Low	Not Significant	Consistent with changes to baseline environment. The associated castle and motte (RMPs KK001-006001 and KK001-	645530, 678189

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								006002 have no visible remains above ground.	
CH293	Church	National Monument (Ownership); Recorded Monument	Nat. Mon. 282; KK013-018001-	High	Indirect Negative	Low	Moderate	Part of complex with numerous recorded sites. View from site has already been impacted by previous windfarm which is located closer in view. Associated with LVIA Viewpoint 'CH293'; see Appendix 15.11 and Chapter 14.	638671, 663684
CH294	Castle-ringwork	National Monument (Ownership); Recorded Monument	Nat. Mon. 376; KK013-059001-	High	Indirect Negative	Medium	Moderate	Ringwork situated on elevated ground with clear views to NE. Visual impact from turbines.	638352, 660549
CH308	AAP: possible ringfort	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Identified by local as potential ringfort. May be associated with lime kiln CH156. Potential for associated remains/deposits to be impacted by construction works.	647977, 675137
CH309	Ornamental garden	National Historic Property; listed on the NIAH	NIAH 12803008	High	Indirect Negative	Low	Moderate	Associated with LVIA Viewpoint 'CH309 (1) and (2)'; see Appendix 15.11 and Chapter 14. Though magnitude of effect is Low, the significance is rated as Moderate due to its High importance.	647080, 681704
CH311	Historic demesne	National Historic Property; NIAH historic demesne	NIAH 261	High	Indirect Negative	Medium	Moderate	Multiple points throughout the historic demesne have a clear sight to the proposed development (see Appendix 15.11 and Chapter 14 LVIA Viewpoints VP6 and CH285, CH287, CH289(1), CH289(2))	647139, 681837

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								CH309(1), CH309(2), CHD1, CHD2 and CHD3).	
CH312	Graveyard	Recorded Monument; listed in the SMR	LA030-026001	Medium	Indirect Negative	Medium	Moderate	Low relief remains of church, though graveyard is upstanding. Associated with LVIA Viewpoint 'CH312'; see Appendix 15.11 and Chapter 14.	647270, 679748
CH313	Castlecomer ACA	Architectural Conservation Area	N/A	High	Direct Negative	Medium	Moderate	HR9 is located within the Castlecomer ACA (see also CH314). There is a potential for accidental damage to built heritage within the ACA due to the movement of plant/transportation of components during the construction phase. The noted removal of street furniture is negligible, but the potential for direct impact leads to the Moderate significance of effect. This receptor also takes into account the numerous RPS and/or NIAH records that are located within this ACA. Special care must be paid to RPS 697/NIAH 12301069, the double gateway/wall/railings of the Creamery House; in particular the south corner along Barrack Street. There are numerous RPS/NIAH buildings along the streets that will be immediately adjacent to the haul route. Additionally, HR10 is located	653247, 672994

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								adjacent to the western end of the ACA.	
CH315	Marian shrine	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	In proximity to HR10 works area.	652988, 672958
CH316	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Very Low	Not Significant	Crossed by internal cable link.	645237, 673335
CH317	Structure	Undesignated	N/A	Low	Potential Direct Negative	Very Low	Not Significant	Structure in close proximity to RLB and cable link route.	645540, 673517
CH318	Well (site of)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	15m of hedgerow to be removed for Haul Route works (HR8).	652507, 668508

EIAR 15.3.1.3 Importance of Cultural Heritage Receptors & Sensitivity to Change

The importance rating for each Cultural Heritage receptor was based on evidence from the baseline studies, fieldwork, specialist surveys and consultation, using professional judgement, and with reference to the factors set out in Section A15.6.1.4 in Appendix 15.6. Additional guiding factors that were considered included the status (i.e., designation and level of statutory protection) of the Cultural Heritage receptor, the condition/preservation, special interest, group value, rarity, visibility in the landscape, fragility/vulnerability, amenity value and local significance (DAHG 2011, 24–30; TII 2024, 74).

EIAR 15.3.1.4 Trends in the Baseline Environment (the 'Do-Nothing' scenario)

'The do-nothing alternative is a general description of the evolution of the key environmental factors of the site and environs if the proposed project did not proceed' (EPA 2022, 35).

There will be no adverse impact on the Cultural Heritage environment if the Proposed Development does not proceed. The area encompassed by the Construction Works Area, RLB and overall Study Area will remain in their current state, although there is a **slight to moderate** potential for adverse effects to occur as a result of weather events associated with climate change, as well as other unforeseen circumstances (see Section EIAR 15.3.2.4).

EIAR 15.3.1.5 Receiving Environment (the Baseline + Trends)

No trends have been identified through the EIA that would lead to changes to the local Cultural Heritage environment. It is therefore assumed that the baseline environment identified above will be the receiving environment.

EIAR 15.3.2 Impact on Cultural Heritage of the Ballynalacken Windfarm Project**EIAR 15.3.2.1 Introduction to the Impact Evaluation Section**

The impact on Cultural Heritage of the proposed Ballynalacken Windfarm Project is evaluated in this section. Sensitive Aspects of Cultural Heritage which were scoped in for evaluation are examined in this section, as follows:

- Section EIAR 15.3.2.2: Evaluation of effects of moderate significance;
- Section EIAR 15.3.2.3: Evaluation of effects of slight significance; and,
- Section EIAR 15.3.2.6: Evaluation of cumulative effects.

Please note that those Cultural Heritage receptors with an evaluation of effect of ‘not significant’ or ‘imperceptible’ are not included in the following impact tables, in accordance with EPA guidelines (2022) which state the EIAR must focus on effects that are both likely, and significant in order to be more concise and focused.

EIAR 15.3.2.1.1 Format of the Impact Tables

The impact evaluations are presented in table format, as follows:

- Importance: the importance of the Sensitive Aspect is provided (as per the Methodology in Section A15.6.1.4 in Appendix 15.6; see also Table 1);
- Impact: information about the impact is provided including the source, pathway, timing and impact quality (i.e., positive or negative);
- Overview of Impact (general): A brief description is provided of the particular type of impact;
- Examination of Impact: The likelihood, magnitude, duration and frequency of the impact of the proposed Ballynalacken Windfarm Project on the Sensitive Aspect is evaluated (which informs the Impact Magnitude);
- Impact Magnitude: an overall magnitude rating is applied (as per the Methodology in Section A15.6.1.4 in Appendix 15.6);
- The Impact Significance is calculated (as per the Methodology in Section A15.6.1.4 in Appendix 15.6);
- Mitigation by Design: Any particularly relevant Mitigation by Design measure is identified. These measures have been incorporated into the physical design of the project – such as the windfarm site drainage system;
- The Requirement for Additional Mitigation is provided. Additional mitigation measures are only proposed where the Significance rating for the impact is of ‘Slight’ or greater than Slight significance. For Neutral Impacts (i.e., No Impact or Impacts which are Imperceptible) or for Not Significant Impacts, there is no requirement for Mitigation Measures;
- Details of the Additional Mitigation Measure(s) is provided through a short description of the measures. The full list and descriptions of the project Mitigation Measures can be found in the relevant Mitigation chapter;
- The Effectiveness of the Mitigation Measures (both Mitigation by Design and Additional Mitigation Measures) is described; and,
- The Residual Impact: the effect of mitigation is examined, and the significance of the residual impact is provided.

EIAR 15.3.2.2 Evaluation of Effects of Moderate Significance

EIAR 15.3.2.2.1 CH006: House – fortified house

Receptor:	CH006 (RMP LA029-048----		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	House – fortified house		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Ballynalacken Hill is visible to the east-southeast of the receptor, which will result in an Indirect Negative effect of Moderate significance; the closest proposed turbine will be located c.4.6km to the east-southeast.			
Impact Magnitude	Medium	Impact Significance:	Moderate
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.2.2 CH012: Castle-motte

Receptor:	CH012 (PO No. 5/1983; RMP KK005-023001-)		
Class	Archaeological Heritage		
Designation	Preservation Order; Recorded Monument; listed in the SMR		
Site Type	Castle – motte		
Importance:	High		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: There are unobstructed views east and northeast to Ballynalacken Hill from the receptor, which will result in an Indirect Negative effect of Moderate significance. Five of the proposed turbines are visible (see CH012 and CH013 in Appendix 15.11; see also Chapter 14, LVIA). Of particular note are Turbine T4 and Turbine T7, which will be located c.4.2km to the east-northeast and c.4km to the northeast respectively. However, the effect is consistent with existing and emerging baseline trends.			
Impact Magnitude	Low	Impact Significance:	Moderate
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Receptor is located on private land, so screening is not feasible. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.2.3 CH013: Castle - unclassified

Receptor:	CH013 (PO No. 5/1983; RMP KK005-023002-)		
Class	Archaeological Heritage		
Designation	Preservation Order; Recorded Monument; listed in the SMR		
Site Type	Castle – unclassified		
Importance:	High		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: There are unobstructed views east and northeast to Ballynalacken Hill from the receptor, which will result in an Indirect Negative effect of Moderate significance. Five of the proposed turbines are visible (see CH012 and CH013 in Appendix 15.11; see also Chapter 14, LVIA). Of particular note are Turbine T4 and Turbine T7, which will be located c.4.2km to the east-northeast and c.4km to the northeast respectively. However, the effect is consistent with existing and emerging baseline trends.			
Impact Magnitude	Low	Impact Significance:	Moderate
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Receptor is located on private land so screening is not feasible. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.2.4 CH074: Cursus

Receptor:	CH074 (RMP KK005-004----		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Cursus		
Importance:	High		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility and setting		
Impact Phase	Construction and Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term direct impacts to unrecorded associated subsurface remains during groundworks. Negative long-term visual impact and impact to setting from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The receptor, whose ZoN is located c.6.7m due west of the RLB, has extensive views to the west, northwest and southwest. Turbine T10 will be located c.185m to the east-northeast of the ZoN, which will result in an Indirect Negative effect of Moderate significance to the setting of the cursus. Multiple turbines/blades will be visible from this receptor (see CH074 in Appendix 15.11; see also Chapter 14, LVIA). An existing mast is located c.83m to the southeast of the receptor that lessens the magnitude of effect.			
Impact Magnitude	Medium	Impact Significance:	Moderate
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Geophysical survey		
2.	Archaeological testing		
3.	Archaeological monitoring		
4.	Screening		
5.	Remedy/offsetting		
The hilltop location, particularly in proximity to the receptor, represents an area of high archaeological potential. Thus, geophysical survey and archaeological testing will be undertaken in advance of any groundworks in field to east due to high potential for archaeology. Archaeological monitoring of all groundworks will be undertaken in this field. Screening along west of redline - to east of cursus, with native hedgerow and trees (which forms part of Biodiversity hedgerow enhancement planting), to mitigate negative visual and setting effects. Measures will also be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage. An additional compensatory measure – research in the form of geophysical survey to be undertaken at the location of the cursus subject to the agreement of NMS. Results from this research can be fed back to the interactive database and local communities.			
Effectiveness of Mitigation:			
1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation <i>in situ</i> or preservation by record for archaeological and built heritage.			
2. Archaeological testing: Trenching can minimise the archaeological impacts of a project and help to avoid/reduce costs and delays. Systematic evaluation through testing is the most commonly employed technique used to inform and develop strategies for the protection of archaeological heritage, be that through preservation <i>in situ</i> or preservation by record.			
3. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			

4. Screening: Screening can assist in minimising the visual impact of the proposed scheme in part. The effectiveness of screening in relation to the installation of wind turbines is reduced with distance from the turbine. The use of native tree species will make a positive contribution to the ecology and biodiversity of the locale.
5. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through 'citizen science'.

Residual Impact Significance:	Slight
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EIA 15.3.2.2.5 CH110: Hillfort

Receptor:	CH110 (RMP KK010-007001-)		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Hillfort		
Importance:	High		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: There are unobstructed views north to Ballynalacken Hill from the hillfort, which is located on Corrandhu Hill. This will result in an Indirect Negative effect of Moderate significance. The proposed turbines are nearly all openly visible from here except for the northernmost pair that begin to descend below the ridge revealing only partial blade sets (see Viewpoint CH110 in Appendix 15.11; see also Chapter 14, LVIA). The closest is T1, which will be located c.2.9km to the northeast. However, the effect is consistent with existing and emerging baseline trends.			
Impact Magnitude	Medium	Impact Significance:	Moderate
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Receptor is located on private land, so screening is not feasible. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.2.6 CH128: Bridge

Receptor:	CH128		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Bridge		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impacts to undesignated receptor.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Two crossing methods for the grid connection are proposed. The first involves a trench that will be dug through the length of the bridge. Consequently, the roadbed and parapet wall will be raised. The second option involves the excavation of two drill pits in the road corridor with cable ducting to be installed through directional drilling under the bridge and watercourse (see Chapter 5, Description of the Development for further details).			
Impact Magnitude	High	Impact Significance:	Moderate
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Consultation with the KCC ACO		
2.	Built heritage survey		
3.	Archaeological monitoring		
4.	Remedy/offsetting		
Consultation with ACO to determine age and importance of receptor, with built heritage survey to ensure a proper record of the receptor prior to works. Archaeological monitoring during bridge works. Offsetting is required for those effects which cannot be avoided, prevented or reduced such as use of a sympathetic design for the raised parapet walls.			
Effectiveness of Mitigation:			
1. Consultation with the KCC ACO: Consultation with the relevant specialist will ensure that this undesignated feature is appropriately assessed and the correct age and importance can be determined. This will assist in the revision of other mitigation measures.			
2. Built Heritage survey: Ensures preservation by record through a permanent visual and written record of the receptor, and detail on its current condition prior to groundworks.			
3. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
4. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.2.7 CH289: Ornamental Garden (Heywood Gardens)

Receptor:	CH289 (LCC RPS 509)		
Class	Built Heritage		
Designation	Protected Structure; National Historic Property		
Site Type	Ornamental Garden (Heywood Gardens)		
Importance:	High		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative long-term visual impact from turbines during Operational Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Views of the windfarm were confirmed in the LVIA (Chapter 14) and by site visit from this Chapter Author (AMS); see Viewpoint CH2891(1) and (2) in Appendix 15.11). All twelve proposed turbines are visible in two condensed clusters in the view's background at a distance of c.4.5km to the nearest visible turbine (see Chapter 14, LVIA). This will result in an Indirect Negative effect of Moderate significance.			
Impact Magnitude	Medium	Impact Significance:	Moderate
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Moderate

EIAR 15.3.2.2.8 CH293: Church (Ballylarkin Church)

Receptor:	CH293 (Nat. Mon. 282; RMP KK013-018001-)		
Class	Archaeological Heritage		
Designation	National Monument; Recorded Monument; listed in the SMR		
Site Type	Church (Ballylarkin Church)		
Importance:	High		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative long-term visual impact from turbines during Operational Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Around six of the proposed turbines are seen lining the distant ridge, though existing turbines in the middle distance (Lisdowney Windfarm) are more visible (see Viewpoint CH293 in Appendix 15.11; see also Chapter 14, LVIA).			
Impact Magnitude	Low	Impact Significance:	Moderate
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Moderate

EIAR 15.3.2.2.9 CH294: Castle - ringwork

Receptor:	CH294 (Nat. Mon. 376; RMP KK013-059001-)		
Class	Archaeological Heritage		
Designation	National Monument; Recorded Monument; listed in the SMR		
Site Type	Castle-ringwork		
Importance:	High		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: There are unobstructed views northeast to Ballynalacken Hill from the receptor; therefore, turbines will be visible. The closest Ballynalacken turbine is 16.7km NE of this receptor.			
Impact Magnitude	Medium	Impact Significance:	Moderate
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Moderate

EIAR 15.3.2.2.10

CH309: Ornamental Garden (Heywood Gardens)

Receptor:	CH309 (NIAH 12803008)		
Class	Built Heritage		
Designation	Protected Structure; National Historic Property		
Site Type	Ornamental Garden (Heywood Gardens)		
Importance:	High		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Views from Lutyens Sunken Garden will be limited by the screening provided by existing mature trees and the perimeter wall (see Viewpoint CH309(1) and (2) in Appendix 15.11; see also Chapter 14, LVIA). However, due to the importance of this receptor, the impact significance is rated as Moderate. The nearest Ballynalacken turbine is 4.4km from this receptor.			
Impact Magnitude	Low	Impact Significance:	Moderate
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Moderate

EIAR 15.3.2.2.11 CH311: Historic Demesne (Haywood House)

Receptor:	CH311 (NIAH 261)		
Class	Built Heritage		
Designation	NIAH historic garden/demesne; National Historic Property (Heywood Gardens)		
Site Type	Historic demesne (Haywood House)		
Importance:	High		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Multiple points throughout the historic demesne have a clear sight to the proposed development (see LVIA Viewpoint VP6 and Appendix 15.11 Viewpoints: CH285, CH287, CH289(1), CH289(2), CH309(1), CH309(2), CHD1, CHD2 and CHD3’; see also Chapter 14).			
Impact Magnitude	Medium	Impact Significance:	Moderate
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Moderate

EIAR 15.3.2.2.12 CH312: Graveyard (Kilcronan Church)

Receptor:	CH312 (RMP LA030-026001-)		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Graveyard (Kilcronan Church)		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Multiple turbines are visible from this receptor (see Viewpoint CH312 in Appendix 15.11; see also Chapter 14, LVIA).			
Impact Magnitude	Medium	Impact Significance:	Moderate
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.2.13

CH313: Castlecomer ACA

Receptor:	CH313		
Class	Built Heritage		
Designation	ACA		
Site Type	Castlecomer ACA		
Importance:	High		
Impact Title	Direct Effect		
Impact Source	Movement of plant/transportation of components		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Potential for accidental damage to built heritage (including numerous RPS/NIAH) within the ACA during the Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Potential for accidental damage to built heritage (including numerous RPS/NIAH) within the ACA as a result of HR9 and HR10 (see Figure 15.26).			
Impact Magnitude	Medium	Impact Significance:	Moderate
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Prevention (protective barriers/fencing and use of spotters)		
Precautionary measures should be taken to avoid accidental damages to built heritage within the ACA, including all adjacent RPS/NIAH, especially regarding RPS 697/NIAH 12301069 (Creamery House boundary features). Physical barriers are recommended where needed, and spotters should be used to aid in the avoidance of accidental damage.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Prevention: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3 Evaluation of Effects of Slight Significance**EIAR 15.3.2.3.1 CH001: Church – Aharney Church**

Receptor:	CH001 (RMP KK009-013001-)		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Church – Aharney Church		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: There are clear views from the receptor east and northeast to Ballynalacken Hill, which will result in an Indirect Negative effect of Slight significance. The closest turbine is c.6.4km to the northeast.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIA R 15.3.2.3.2 CH002: Graveyard

Receptor:	CH002 (RMP KK009-013002-)		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Graveyard		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: There are clear views from the receptor east and northeast to Ballynalacken Hill, which will result in an Indirect Negative effect of Slight significance. The closest turbine is c.6.4km to the northeast.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.3 CH003: House – Grennan House

Receptor:	CH003 (LCC RPS 525; NIAH 12803505)		
Class	Built Heritage		
Designation	Protected Structure; listed in the NIAH		
Site Type	House – Grennan House		
Importance:	High		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: This is a built heritage receptor of national importance. The top of Ballynalacken Hill is visible to the east from the house; however, the visual impact to the east is screened by mature broadleaf trees in the associated garden of the house. The nearest Ballynalacken turbine is c.4.7km from the receptor.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.4 CH004: Church/chapel – St Brigid’s Church

Receptor:	CH004 (LCC RPS 167; NIAH 12803501)		
Class	Built Heritage		
Designation	Protected Structure; listed in the NIAH		
Site Type	Church/chapel – St Brigid’s Church		
Importance:	High		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Ballynalacken Hill and turbines are visible to the east of the church; however, the visual impact is lessened by mature broadleaf trees in graveyard and along the road to the east of the receptor. The nearest Ballynalacken turbine is c.3.6km from the receptor.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.5 CH005: School – Attanagh School

Receptor:	CH005 (LCC RPS 168; NIAH 12803503)		
Class	Built Heritage		
Designation	Protected Structure; listed in the NIAH		
Site Type	School – Attanagh School		
Importance:	High		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Ballynalacken Hill is visible to the east and southeast of the former school; however, the visual impact is lessened by mature broadleaved trees to the southeast of the receptor. The nearest Ballynalacken turbine is c.3.6km from the receptor.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.6 CH007: Church – Rosconnell Church

Receptor:	CH007 (RMP KK001-005001-)		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Church – Rosconnell Church		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: There are unobstructed views east and southeast to Ballynalacken Hill; the closest turbine will be located c.2.5km to the southeast. The magnitude of the visual impact is lessened by a copse of broadleaf trees in the southeast quadrant of the associated graveyard.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.7 CH008: Graveyard – Rosconnell Graveyard

Receptor:	CH008 (RMP KK001-005002-)		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Graveyard – Rosconnell Graveyard		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: There are unobstructed views east and southeast to Ballynalacken Hill; the closed turbine will be located c.2.5km to the southeast. The magnitude of the visual impact is lessened by a copse of broadleaf trees in the southeast quadrant of the associated graveyard.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.8 CH009: Church/chapel – Church of the Assumption

Receptor:	CH009 (KCC RPS C262; NIAH 12400501)		
Class	Built Heritage		
Designation	Protected Structure; listed in the NIAH		
Site Type	Church/chapel – Church of the Assumption		
Importance:	High		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: There are unobstructed views east and southeast to Ballynalacken Hill; the closest turbine will be located c.2.4km to the east. The magnitude of the visual impact is lessened by mature broadleaf trees in the churchyard.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.9 CH010: Ringfort – rath

Receptor:	CH010 (RMP KK005-001-----)		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Ringfort – rath		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Ballynalacken Hill is visible to the east and southeast, while the closest turbine will be located c.2.3km due east. The magnitude of the visual impact is lessened due to the mature broadleaf trees on the banks of the ringfort and mature hedgerows to the east and southeast of the receptor.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.10

CH011: Castle - ringwork

Receptor:	CH011 (RMP KK005-002-----)		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Castle – ringwork		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The closest turbine will be visible c.1.3km to the east-southeast. However, the views east are partially occluded by commercial forestry plantation.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.11 CH016: AAP (Rathduff Stream)

Receptor:	CH016		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	AAP: Rathduff Stream		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential negative, permanent direct impacts to subsurface remains within the area of archaeological potential during groundworks if directional drilling is used at CH128 (bridge).			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The area of proposed works is located in an area of high archaeological potential due to both proximity to the watercourse and proximity to CH012 and CH013 (under Preservation Order 5/1983), and associated subsurface archaeological deposits/remains/artefacts may exist.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring during construction works in the event that archaeology is encountered during directional drilling.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIA R 15.3.2.3.12

CH022: Field system

Receptor:	CH022 (SMR KK005-095----		
Class	Archaeological Heritage		
Designation	Listed in the SMR		
Site Type	Field system		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential negative, permanent direct impacts to associated subsurface remains during groundworks and construction of substation in field to north.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Mitigation recommendations stem from uncertainty of extent and preservation of field system, and the possibility for associated remains to extend north into the substation field. .			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological testing		
2.	Archaeological monitoring		
Archaeological testing in area of proposed substation to north of field system, and archaeological monitoring during construction works.			
Effectiveness of Mitigation:			
2. Archaeological testing: Trenching can minimise the archaeological impacts of a project and help to avoid/reduce costs and delays. Systematic evaluation through testing is the most commonly employed technique used to inform and develop strategies for the protection of archaeological heritage, be that through preservation <i>in situ</i> or preservation by record.			
3. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIA R 15.3.2.3.13

CH025: Lime kiln

Receptor:	CH025		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Lime kiln		
Importance:	Low		
Impact Title	Indirect Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor or associated remains		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent indirect impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: While it is outside of the RLB it is in close proximity (c.1.8m) and associated, unrecorded subsurface remains could exist.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
3.	Archaeological monitoring		
Ensure receptor is avoided during construction of Tinnalintan substation and associated infrastructure. Archaeological monitoring in southwest corner of substation area may be required if excavation is necessary prior to laying of hardcore.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
3. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.14

CH026: Townland boundary – Rathduff; Tinnalintan

Receptor:	CH026		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Townland boundary – Rathduff; Tinnalintan		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative long-term direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> The townland boundary between Rathduff and Tinnalintan delimits the southeastern edge of the proposed Tinnalintan Substation and could be directly impacted.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
Ensure receptor is avoided by plant/machinery during construction of the Tinnalintan Substation.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.15	CH028: Townland boundary – Coole; Tinnalintan
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Receptor:	CH028		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Townland boundary – Coole; Tinnalintan		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative long-term direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The townland boundary between Coole and Tinnalintan delimits the western edge of the proposed Tinnalintan Substation and could be directly impacted.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
Ensure receptor is avoided by plant/machinery during construction of the Tinnalintan Substation.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.16 CH029: Vernacular structure (site of)

Receptor:	CH029		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Vernacular structure (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor or parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential negative long-term direct impacts to unrecorded associated subsurface remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Located in close proximity to the proposed substation and hedgerow improvement.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIA R 15.3.2.3.17

CH031: Ringfort - rath

Receptor:		CH031 (RMP KK005-014-----)	
Class		Archaeological Heritage	
Designation		Recorded Monument; listed in the SMR	
Site Type		Ringfort - rath	
Importance:		Medium	
Impact Title	Direct & Indirect Effect		
Impact Source	Groundworks; Windfarm turbines		
Impact Pathway	Destruction of parts of receptor; Visibility		
Impact Phase	Construction; Operation	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Potential negative long-term direct impacts to unrecorded associated subsurface remains during groundworks. Negative long-term visual impact from turbines during Operational Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> These works could impact unrecorded subsurface remains associated with the Recorded Monument; very slight visual impact from turbines.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
2.	Remedy/offsetting		
Archaeological monitoring to take place in vicinity of ZoN. Note that if the location of the cable link moves to the north side of road it may traverse the ZoN. Measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
2. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.18

CH032: Townland boundary – Ballymartin; Tinnalintan

Receptor:	CH032		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Townland boundary – Ballymartin; Tinnalintan		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Construction of the cable link may impact the townland boundary on either side of this narrow road. Additionally, a stone wall and other boundary features (i.e. gate piers and iron gate) were noted along the boundary immediately adjacent to the road and could be directly impacted.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
3.	Townland Boundary Survey		
4.	Archaeological monitoring		
5.	Rebuild like-for-like		
Avoidance of the townland boundary and associated features with the use of protective fencing. If avoidance is not feasible, a Townland Boundary Survey will be undertaken of the boundary sections that will be impacted by the above works in advance of groundworks. Archaeological monitoring of groundworks for those sections to be directly impacted, during construction. If the stone wall and piers are to be impacted, rebuild like-for-like.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
3. Townland Boundary Survey: Ensures that preservation by record occurs in advance of construction and that appropriate preservation by record of these valuable cultural heritage assets occurs.			
4. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
5. Rebuild like-for-like: Ensures that in the case of undesignated cultural heritage receptors (for example) the potential visual impact will be reduced and that traditional skills and crafts represented in the physical expression, traditional styles etc. of these receptors will continue to be reflected in their original context.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.19

CH033: Ringfort - rath

Receptor:	CH033 (KK005-015----		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Ringfort - rath		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Slight visual impact from turbines as views to east and northeast are restricted. The nearest Ballynalacken turbine is c.2.8km from this receptor.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.20 CH036: Culvert with associated watercourse (AAP)

Receptor:	CH036		
Class	Archaeological & Built Heritage		
Designation	Undesignated		
Site Type	Culvert with associated watercourse (AAP)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impacts during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Chapter 8 (Water) states that "W2 is 1.0m in width with cables being installed in the public road above the existing culvert to install the Internal Cable Link, no new culvert or instream works will be required" (pp. 8-41). These works could impact unrecorded subsurface remains associated with the AAP (Rathduff Stream) as well as the masonry culvert. Please note that Rathduff Stream is located in two different areas of the RLB (see CH016 in Appendix 15.7 for assessment of second location).			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Wade & Detection Survey		
2.	Archaeological monitoring		
Wade and detection survey; archaeological monitoring in area of stream due to potential for unrecorded subsurface archaeological remains and culvert of unknown age.			
Effectiveness of Mitigation:			
1. Wade & Detection Survey: Effective as a mitigation measure in that it ensures preservation <i>in situ</i> or preservation by record occurs, as appropriate.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.21

CH037: Country house – Ballymartin House

Receptor:	CH037		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Country house – Ballymartin House		
Importance:	Low		
Impact Title	Direct Effect; Indirect Effect		
Impact Source	Groundworks; movement of plant/machinery; windfarm turbines		
Impact Pathway	Damage to and/or destruction of receptor; visibility		
Impact Phase	Construction; Operation	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Damage to associated structural elements during Construction Phase; visual impact from turbines during Operation Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: No impact from groundworks as cable will be laid in road and field to the north; however, potential for inadvertent damage to associated structural elements due to movement of plant/machinery. Visual impact to receptor from turbines to east-southeast; turbines to north-northeast will be shielded by ridge and commercial forestry. The nearest Ballynalacken turbine is 2km from this receptor.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
3.	Remedy/offsetting		
Ensure receptor is avoided by plant/machinery with protective fencing. Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
3. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.22 CH040: Vernacular structure (site of)

Receptor:	CH040		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Vernacular structure (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Receptor is in close proximity to Construction Works Boundary and internal cable link.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.23

CH042: Field boundary

Receptor:	CH042		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Field boundary		
Importance:	Very low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general)</u> : Negative permanent direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project</u> : Entire length of boundary may be subject to road-widening works, and section of boundary will be crossed by the proposed cable link.			
Impact Magnitude	High	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Photographic survey		
Photographic survey and description of boundary.			
Effectiveness of Mitigation:			
1. Photographic survey: To provide a permanent visual and written record, as well as current condition, of a receptor.			
Residual Impact Significance:			Not Significant

EIA R 15.3.2.3.24

CH043: Farm complex

Receptor:	CH043		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Farm complex		
Importance:	Low		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines; control building		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines, control building during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Visual impact to receptor from turbines to east and northeast; slight visual impact from control building, though limited from the mature broadleaf trees and treed enclosure surrounding the site of the control building. The nearest Ballynalacken turbine is c.387m from this receptor.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact from the turbines. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.25

CH046: Field boundary

Receptor:	CH046		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Field boundary		
Importance:	Very low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Field boundary encloses the site of proposed control building. Boundary to be completely removed on southern side for placement of hardcore and cable link; one section in northeast corner to be impacted by internal cabling.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Photographic survey		
Photographic survey and description of boundary.			
Effectiveness of Mitigation:			
1. Photographic survey: To provide a permanent visual and written record, as well as current condition, of a receptor.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.26

CH048: Townland boundary – Ballymartin; Ballynalacken

Receptor:	CH048		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Townland boundary – Ballymartin; Ballynalacken		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: A western section of the townland boundary will be directly impacted by the internal cable leading to Turbine T7, while an eastern section of the boundary will be directly impacted by the internal cable connection between Turbines T6 and T5 as well as the proposed borrow pit. Long-term negative damage due to movement of plant may also occur at other locations along the boundary due to the general construction of Turbine T7, access road, temporary deposition area and temporary road.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
3.	Townland Boundary Survey		
4.	Archaeological monitoring		
A Townland Boundary Survey will be undertaken of the boundary sections that will be impacted by the above works in advance of groundworks. Archaeological monitoring of groundworks for those sections to be directly impacted, during construction. The remaining sections of the receptor will be avoided by plant/machinery during construction and protected with barriers/fencing.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
3. Townland Boundary Survey: Ensures that preservation by record occurs in advance of construction and that appropriate preservation by record of these valuable cultural heritage assets occurs.			
4. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.27

CH049: Lime kiln (site of)

Receptor:	CH049		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Lime kiln (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor or parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Road-widening works, hedgerow works, and the proposed locations for the telecom relay pole and internal cabling may impact the receptor.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.28

CH051: Fulacht fiadh (possible)

Receptor:	CH051		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Fulacht fiadh (possible)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Potential negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Turbine T8 and associated works may impact unrecorded remains as whole field is considered an AAP.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Geophysical survey		
2.	Archaeological monitoring		
Geophysical survey in area of potential within the construction works boundary in advance of groundworks; archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation <i>in situ</i> or preservation by record for archaeological and built heritage.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.29

CH053: Vernacular structures

Receptor:	CH053		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Vernacular structures		
Importance:	Low		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility; setting		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual and setting impacts from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Visual impacts and impacts to setting of receptor from Turbines T7 and T8. Turbine T8 will be located 150m to the east, while the telecom relay pole will be c.172m to the southwest.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Screening		
Screening of receptor with native scrub and/or trees to east and south to offset visual and setting impacts.			
Effectiveness of Mitigation:			
1. Screening: Screening can assist in minimising the visual impact of the proposed scheme in part. The effectiveness of screening in relation to the installation of wind turbines is reduced with distance from the turbine. The use of native tree species will make a positive contribution to the ecology and biodiversity of the locale.			
Residual Impact Significance:			Slight

EIA R 15.3.2.3.30

CH054: Gate piers

Receptor:	CH054		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Gate piers		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Road-widening works to take place along road, with laying of internal cabling at or in proximity to the gate piers and associated stone wall.			
Impact Magnitude	High	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
3.	Rebuild like-for-like		
Ensure piers and associated stone wall are not damaged during laying of cable. If avoidance is not feasible then rebuild like-for-like.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
3. Rebuild like-for-like: Ensures that in the case of undesignated cultural heritage receptors (for example) the potential visual impact will be reduced and that traditional skills and crafts represented in the physical expression, traditional styles etc. of these receptors will continue to be reflected in their original context.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.31 CH055: Fulacht fiadh (possible)

Receptor:	CH055		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Fulacht fiadh (possible)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general)</u> : Potential negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project</u> : Potential for impact to subsurface archaeological features due to construction of hardcore area and laying of internal cabling.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Geophysical survey		
2.	Archaeological monitoring		
Geophysical survey in area of potential in advance of groundworks; archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation <i>in situ</i> or preservation by record for archaeological and built heritage.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.32	CH056: Townland and civil parish boundary – Ballynalacken; Ballyoskill (Donaghmore; Attanagh)
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Receptor:	CH056		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Townland and civil parish boundary – Ballynalacken; Ballyoskill (Donaghmore; Attanagh)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: A c.136m section of the boundary has the potential to be impacted by the temporary road that will run parallel to the boundary. However, it will be directly impacted where the temporary road will cross the boundary.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
3.	Townland Boundary Survey		
4.	Archaeological monitoring		
A Townland Boundary Survey will be undertaken of the boundary section that will be impacted by the above works in advance of groundworks. Archaeological monitoring of groundworks for that section to be directly impacted, during construction. The remaining sections of the receptor will be avoided by plant/machinery during construction and protected with barriers/fencing.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
3. Townland Boundary Survey: Ensures that preservation by record occurs in advance of construction and that appropriate preservation by record of these valuable cultural heritage assets occurs.			
4. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.33 CH057: Stone wall

Receptor:	CH057		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Stone wall		
Importance:	Very low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: A temporary road is proposed running parallel to the field boundary/stone wall.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
Receptor will be avoided by plant/machinery during construction and protected with barriers/fencing.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.34 CH058: Fulacht fiadh (possible)

Receptor:	CH058		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Fulacht fiadh (possible)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general)</u> : Potential negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project</u> : Borrow pit, temporary deposition area and proposed temporary road directly impact possible receptor.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Geophysical survey		
2.	Archaeological monitoring		
Geophysical survey in area of potential in advance of groundworks; archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation <i>in situ</i> or preservation by record for archaeological and built heritage.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.35 CH063: Fulacht fiadh (possible)

Receptor:	CH063		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Fulacht fiadh (possible)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Potential negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Internal cable and proposed hardcore area/road directly impact possible receptor.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Geophysical survey		
2.	Archaeological monitoring		
Geophysical survey in area of potential in advance of groundworks; archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation <i>in situ</i> or preservation by record for archaeological and built heritage.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.36 CH065: Fulacht fiadh (possible)

Receptor:	CH065		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Fulacht fiadh (possible)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general)</u> : Potential negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project</u> : Internal cable and proposed hardcore area/road directly impact possible receptor.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Geophysical survey		
2.	Archaeological monitoring		
Geophysical survey in area of potential in advance of groundworks; archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation <i>in situ</i> or preservation by record for archaeological and built heritage.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIA R 15.3.2.3.37

CH067: Historic townland and civil parish boundary – Attanagh; Kilmenan

Receptor:	CH067		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Historic townland and civil parish boundary – Attanagh; Kilmenan		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impact to section of receptor from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: A section of the civil parish boundary between Attanagh and Kilmenan will be directly impacted by the internal cable and laying of hardcore area/road.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Civil Parish Boundary Survey		
3.	Archaeological monitoring		
A Civil Parish Boundary Survey will be undertaken of any boundary sections impacted by the internal cable and road (direct impact of historic boundary to west within the field as well; see historic OS map). Archaeological monitoring of groundworks in the vicinity of the boundary; ensure buffer is retained between proposed road and internal cable, and receptor during groundworks so boundary is not impacted.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Civil Parish Boundary Survey: Ensures that preservation by record occurs in advance of construction and that appropriate preservation by record of these valuable cultural heritage assets occurs.			
3. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.38 CH070: Fulacht fiadh (possible)

Receptor:	CH070		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Fulacht fiadh (possible)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general)</u> : Potential negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project</u> : Internal cabling and proposed hardcore area/road as well as hedgerow works proposed within field with archaeological potential.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Geophysical survey		
2.	Archaeological monitoring		
Geophysical survey in advance of groundworks; archaeological monitoring of all groundworks in this field.			
Effectiveness of Mitigation:			
1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation <i>in situ</i> or preservation by record for archaeological and built heritage.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.39 CH072: Curvilinear banks (possible)

Receptor:	CH072		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Curvilinear banks (possible)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general)</u> : Potential negative long-term direct impacts to unrecorded associated subsurface remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project</u> : Nature and extent of receptor is unknown and may therefore be impacted by Turbine T10 and/or associated works.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Geophysical survey		
2.	Archaeological monitoring		
Geophysical survey in advance of any groundworks in this field due to potential for archaeology. Archaeological monitoring of all groundworks in this field.			
Effectiveness of Mitigation:			
1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation <i>in situ</i> or preservation by record for archaeological and built heritage.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.40

CH075: Cairn – unclassified

Receptor:	CH075 (RMP KK005-003001-)		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Cairn – unclassified		
Importance:	Low		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Groundworks; visibility; setting		
Impact Phase	Construction; Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term direct impacts to unrecorded associated subsurface remains during groundworks. Negative long-term visual impact and impact to setting from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The receptor is located c.28.5m due west of the RLB. Turbine T10 will be located c.224m to the southeast, which will result in an Indirect Negative effect of Slight significance to the setting of the cairn. An existing mast is located c.257m to the south-southeast of the receptor that lessens the magnitude of effect.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Geophysical survey		
2.	Archaeological testing		
3.	Archaeological monitoring		
4.	Screening		
5.	Remedy/offsetting		
This hilltop location represents an area of high archaeological potential. Thus, geophysical survey and archaeological testing will be undertaken in advance of any groundworks in field with Turbine T10 to east, due to high potential for archaeology. Archaeological monitoring of all groundworks in this field. Screening along west of redline – to east of cairn – with native hedgerow and trees, to mitigate negative visual and setting effects. Measures will also be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation <i>in situ</i> or preservation by record for archaeological and built heritage.			
2. Archaeological testing: Trenching can minimise the archaeological impacts of a project and help to avoid/reduce costs and delays. Systematic evaluation through testing is the most commonly employed technique used to inform and develop strategies for the protection of archaeological heritage, be that through preservation <i>in situ</i> or preservation by record.			
3. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
4. Screening: Screening can assist in minimising the visual impact of the proposed scheme in part. The effectiveness of screening in relation to the installation of wind turbines is reduced with distance from the turbine. The use of native tree species will make a positive contribution to the ecology and biodiversity of the locale.			
5. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible			

heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through 'citizen science'.

Residual Impact Significance:

Not Significant

EIAR 15.3.2.3.41

CH076: Cist – Grave 1

Receptor:	CH076 (RMP KK005-003002-)		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Cist – Grave 1		
Importance:	Low		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Groundworks; visibility; setting		
Impact Phase	Construction; Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term direct impacts to unrecorded associated subsurface remains during groundworks. Negative long-term visual impact and impact to setting from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The receptor is located c.55m due west of the RLB. While the cist was excavated in 1971, the structural remains are extant and there is a high potential for subsurface remains in the vicinity. Turbine T10 will be located c.250m to the southeast, which will result in an Indirect Negative effect of Slight significance to the setting of the cairn. An existing mast is located c.257m to the south-southeast of the receptor that lessens the magnitude of effect.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Geophysical survey		
2.	Archaeological testing		
3.	Archaeological monitoring		
4.	Screening		
5.	Remedy/offsetting		
This hilltop location represents an area of high archaeological potential. Thus, geophysical survey and archaeological testing will be undertaken in advance of any groundworks in field with Turbine T10 to east, due to high potential for archaeology. Archaeological monitoring of all groundworks in this field. Screening along west of redline – to east of cairn – with native scrub and/or trees, to mitigate negative visual and setting effects. Measures will also be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation <i>in situ</i> or preservation by record for archaeological and built heritage.			
2. Archaeological testing: Trenching can minimise the archaeological impacts of a project and help to avoid/reduce costs and delays. Systematic evaluation through testing is the most commonly employed technique used to inform and develop strategies for the protection of archaeological heritage, be that through preservation <i>in situ</i> or preservation by record.			
3. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
4. Screening: Screening can assist in minimising the visual impact of the proposed scheme in part. The effectiveness of screening in relation to the installation of wind turbines is reduced with distance from the turbine. The use of native tree species will make a positive contribution to the ecology and biodiversity of the locale.			
5. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural			

heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through 'citizen science'.

Residual Impact Significance:

Not Significant

EIAR 15.3.2.3.42

CH077: Cist – Grave 2

Receptor:	CH077 (SMR KK005-003003-)		
Class	Archaeological Heritage		
Designation	Listed in the SMR		
Site Type	Cist – Grave 2		
Importance:	Low		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Groundworks; visibility; setting		
Impact Phase	Construction; Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term direct impacts to unrecorded associated subsurface remains during groundworks. Negative long-term visual impact and impact to setting from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The receptor is located c.108m due west of the RLB. While the cist was excavated in 1971, the structural remains are extant and there is a high potential for subsurface remains in the vicinity. Turbine T10 will be located c.308m to the southeast, which will result in an Indirect Negative effect of Slight significance to the setting of the cairn. An existing mast is located c.257m to the south-southeast of the receptor that lessens the magnitude of effect.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Geophysical survey		
2.	Archaeological testing		
3.	Archaeological monitoring		
4.	Screening		
5.	Remedy/offsetting		
This hilltop location represents an area of high archaeological potential. Thus, geophysical survey and archaeological testing will be undertaken in advance of any groundworks in field with Turbine T10 to east, due to high potential for archaeology. Archaeological monitoring of all groundworks in this field. Screening along west of redline – to east of cairn – with native scrub and/or trees, to mitigate negative visual and setting effects. Measures will also be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation <i>in situ</i> or preservation by record for archaeological and built heritage.			
2. Archaeological testing: Trenching can minimise the archaeological impacts of a project and help to avoid/reduce costs and delays. Systematic evaluation through testing is the most commonly employed technique used to inform and develop strategies for the protection of archaeological heritage, be that through preservation <i>in situ</i> or preservation by record.			
3. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
4. Screening: Screening can assist in minimising the visual impact of the proposed scheme in part. The effectiveness of screening in relation to the installation of wind turbines is reduced with distance from the turbine. The use of native tree species will make a positive contribution to the ecology and biodiversity of the locale.			

5. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through 'citizen science'.

Residual Impact Significance:

Not Significant

EIAR 15.3.2.3.43

CH079: Cist – Grave 4

Receptor: CH079 (SMR KK005-003005-)**Class** Archaeological Heritage**Designation** Listed in the SMR**Site Type** Cist – Grave 4**Importance:** Low

Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Groundworks; visibility; setting		
Impact Phase	Construction; Operation	Impact Quality:	Negative

Overview of Impact (general): Negative long-term direct impacts to unrecorded associated subsurface remains during groundworks. Negative long-term visual impact and impact to setting from turbines during Operational Phase.

Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The receptor is located c.42m due west of the RLB. While the cist was excavated in 1971, the structural remains are extant and there is a high potential for subsurface remains in the vicinity. Turbine T10 will be located c.243m to the southeast, which will result in an Indirect Negative effect of Slight significance to the setting of the cairn. An existing mast is located c.257m to the south-southeast of the receptor that lessens the magnitude of effect.

Impact Magnitude	Low	Impact Significance:	Slight
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Mitigation

Mitigation by Design	N/A
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Requirement for Additional Mitigation Measures:	Yes
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1.	Geophysical survey
2.	Archaeological testing
3.	Archaeological monitoring
4.	Screening
5.	Remedy/offsetting

This hilltop location represents an area of high archaeological potential. Thus, geophysical survey and archaeological testing will be undertaken in advance of any groundworks in field with Turbine T10 to east, due to high potential for archaeology. Archaeological monitoring of all groundworks in this field. Screening along west of redline – to east of cairn – with native scrub and/or trees, to mitigate negative visual and setting effects. Measures will also be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.

Effectiveness of Mitigation:

1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation *in situ* or preservation by record for archaeological and built heritage.
2. Archaeological testing: Trenching can minimise the archaeological impacts of a project and help to avoid/reduce costs and delays. Systematic evaluation through testing is the most commonly employed technique used to inform and develop strategies for the protection of archaeological heritage, be that through preservation *in situ* or preservation by record.
3. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation *in situ* or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.
4. Screening: Screening can assist in minimising the visual impact of the proposed scheme in part. The effectiveness of screening in relation to the installation of wind turbines is reduced with distance from the turbine. The use of native tree species will make a positive contribution to the ecology and biodiversity of the locale.

5. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through 'citizen science'.

Residual Impact Significance:**Not Significant**

EIAR 15.3.2.3.44

CH080: Cist – Grave 5

Receptor: CH080 (SMR KK005-003006-)**Class** Archaeological Heritage**Designation** Listed in the SMR**Site Type** Cist – Grave 5**Importance:** Low

Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Groundworks; visibility; setting		
Impact Phase	Construction; Operation	Impact Quality:	Negative

Overview of Impact (general): Negative long-term direct impacts to unrecorded associated subsurface remains during groundworks. Negative long-term visual impact and impact to setting from turbines during Operational Phase.

Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The receptor is located c.56m due west of the RLB. While the cist was excavated in 1971, the structural remains are extant and there is a high potential that unrecorded subsurface remains are extant in the vicinity. Turbine T10 will be located c.270m to the southeast, which will result in an Indirect Negative effect of Slight significance to the setting of the cairn. An existing mast is located c.257m to the south-southeast of the receptor that lessens the magnitude of effect.

Impact Magnitude	Low	Impact Significance:	Slight
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Mitigation

Mitigation by Design	N/A
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Requirement for Additional Mitigation Measures:	Yes
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1.	Geophysical survey
2.	Archaeological testing
3.	Archaeological monitoring
4.	Screening
5.	Remedy/offsetting

This hilltop location represents an area of high archaeological potential. Thus, geophysical survey and archaeological testing will be undertaken in advance of any groundworks in field with Turbine T10 to east, due to high potential for archaeology. Archaeological monitoring of all groundworks in this field. Screening along west of redline – to east of cairn – with native scrub and/or trees, to mitigate negative visual and setting effects. Measures will also be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.

Effectiveness of Mitigation:

1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation *in situ* or preservation by record for archaeological and built heritage.
2. Archaeological testing: Trenching can minimise the archaeological impacts of a project and help to avoid/reduce costs and delays. Systematic evaluation through testing is the most commonly employed technique used to inform and develop strategies for the protection of archaeological heritage, be that through preservation *in situ* or preservation by record.
3. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation *in situ* or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.
4. Screening: Screening can assist in minimising the visual impact of the proposed scheme in part. The effectiveness of screening in relation to the installation of wind turbines is reduced with distance from the turbine. The use of native tree species will make a positive contribution to the ecology and biodiversity of the locale.

5. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through 'citizen science'.

Residual Impact Significance:**Not Significant**

EIAR 15.3.2.3.45

CH081: Field boundary

Receptor:	CH081		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Field boundary		
Importance:	Very low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general)</u> : Negative permanent direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project</u> : Boundary to be removed at eastern and western ends (approx. 60m). Hardcore road will be immediately adjacent to boundary which contains a drystone wall c.1m tall.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Photographic survey		
Photographic survey and description of boundary.			
Effectiveness of Mitigation:			
1. Photographic survey: To provide a permanent visual and written record, as well as current condition, of a receptor.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.46

CH082: Kiln (site of)

Receptor:	CH082		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Kiln (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Possible receptor directly impacted by proposed hardcore area/road.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of ground works in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.47

CH083: Field boundary

Receptor:	CH083		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Field boundary		
Importance:	Very low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general)</u> : Negative permanent direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project</u> : 41m of hedgerow to be removed, though the rest of the boundary is slated for improvement, with a new hedgerow planted to the north-northeast following curve of proposed road. Stone wall within the boundary may be impacted.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Photographic survey		
Photographic survey and description of boundary.			
Effectiveness of Mitigation:			
1. Photographic survey: To provide a permanent visual and written record, as well as current condition, of a receptor.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.48

CH089: Vernacular structures (in ruins)

Receptor:	CH089		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Vernacular structures (in ruins)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> The remains of the vernacular structures will be directly impacted by the internal cable route and hardcore area/road.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring in area of receptor and recording of structural remains.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.49 CH090: Gate piers

Receptor:	CH090		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Gate piers		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> The gate piers will be directly impacted by the internal cable route and hardcore area/road as the road needs to be widened here.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Rebuild like-for-like		
Piers to be rebuilt like-for-like.			
Effectiveness of Mitigation:			
1. Rebuild like-for-like: Ensures that in the case of undesignated cultural heritage receptors (for example) the potential visual impact will be reduced and that traditional skills and crafts represented in the physical expression, traditional styles etc. of these receptors will continue to be reflected in their original context.			
Residual Impact Significance:			Not Significant

EIA R 15.3.2.3.50

CH091: Townland boundary – Ballyoskill; Loughill

Receptor:	CH091		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Townland boundary – Ballyoskill; Loughill		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> The internal cabling and hardcore road will impact this townland boundary comprising a stone wall. Impact magnitude is low as only c.8m falls within the Construction Works Boundary.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Townland Boundary Survey		
2.	Archaeological monitoring		
A Townland Boundary Survey and archaeological monitoring will be undertaken of the boundary section that will be impacted by the above works in advance of groundworks.			
Effectiveness of Mitigation:			
1. Townland Boundary Survey: Ensures that preservation by record occurs in advance of construction and that appropriate preservation by record of these valuable cultural heritage assets occurs.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIA R 15.3.2.3.51

CH093: Ringfort – rath

Receptor:	CH093 (RMP KK005-005-----)		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Ringfort – rath		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The closest turbine will be visible c.446m to the west (Turbine T11). However, the views west are partially occluded by a rising slope that reduces the magnitude of effect.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.52

CH098: Townland boundary – Ballymartin; Byrnesgrove

Receptor:	CH098		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Townland boundary – Ballymartin; Byrnesgrove		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impact to section of receptor from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: While the hardcore area/road will utilise the existing farm lane, the townland boundary is in close proximity and could be accidentally damaged due to the movement of plant.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
3.	Townland Boundary Survey		
Ensure receptor is avoided during construction. A townland boundary survey may be required if a section of it is to be directly impacted by any works related to the windfarm.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
3. Townland Boundary Survey: Ensures that preservation by record occurs in advance of construction and that appropriate preservation by record of these valuable cultural heritage assets occurs.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.53

CH103: AAP: Mapped Blanket peat (EPA Soils)

Receptor:	CH103		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	AAP: Blanket peat (EPA Soils)		
Importance:	Medium		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative long-term direct impacts to unrecorded associated subsurface remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Site investigations confirmed that thin peats occur within the forested area at the hardstand location for T4, and no works will take place in the unplanted area to the east of T4. However, there is potential for unrecorded subsurface remains in peaty soils which could be impacted as a result of works associated with the construction of T4, T6, and the internal cabling and hardcore area between T3 and T4.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of ground works in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.54 CH104: Vernacular structure (site of)

Receptor:	CH104		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Vernacular structure (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative long-term direct impacts to unrecorded associated subsurface remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Possible receptor directly impacted by proposed road and internal cable.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of ground works in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.55

CH106: Castle – ringwork

Receptor:	CH106 (RMP KK005-008----		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Castle – ringwork		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Turbines T6 and T5 are located 1.83km and 1.74km to the west and southwest respectively; however, the views west and southwest are partially occluded by a rising slope and a commercial forestry plantation that reduces the magnitude of effect.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.56

CH108: Moated site

Receptor:	CH108 (RMP KK005-069-----)		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Moated site		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Turbines T2 and T1 will be visible c.2.3km and 2.2km to the west and west-northwest; however, the receptor is not very visible above ground, which reduces the magnitude of effect.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.57

CH109: Enclosure

Receptor:	CH109 (RMP KK005-027-----)		
Class	Archaeological Heritage		
Designation	Recorded Monument; listed in the SMR		
Site Type	Enclosure		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Turbine T1 will be slightly visible c.400m to the northwest; however, views to the north and northwest are obscured by a ridge and commercial forestry which reduces the magnitude of effect.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.58

CH113: Geophysical anomaly: possible ditch

Receptor:	CH113		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Geophysical anomaly: possible ditch		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Possible receptor could be impacted by road-widening works.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of ground works in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.59

CH114: Geophysical anomaly: parallel ditches

Receptor:	CH114		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Geophysical anomaly: parallel ditches		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Two rows of parallel ditches could be impacted by proposed substation and associated works.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of ground works in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.60

CH124: Enclosure

Receptor:	CH124 (KK005-088----		
Class	Archaeological Heritage		
Designation	Listed on the SMR		
Site Type	Enclosure		
Importance:	Medium		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impacts to unrecorded associated remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Associated remains may be impacted by construction of internal cable link.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	Yes - Receptor and ZoN have been avoided through design.		
Requirement for Additional Mitigation Measures:			Yes
1.	Geophysical survey		
2.	Archaeological monitoring		
Receptor and ZoN have been avoided through design. Geophysical survey along route of cable link (within the RLB to west of the ZoN) would indicate the presence/extent of additional associated features. Archaeological monitoring of ground works in area of receptor.			
Effectiveness of Mitigation:			
1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation <i>in situ</i> or preservation by record for archaeological and built heritage.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.61

CH125: Lime kiln (site of)

Receptor:	CH125		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Lime kiln (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impacts to unrecorded associated remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Receptor, or associated remains, may be impacted by proposed hardcore area/road.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
3.	Archaeological monitoring		
Receptor to be avoided and protective barriers used. Archaeological monitoring of ground works in area of receptor.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
3. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.62

CH127: Well (site of)

Receptor:	CH127		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Well (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impacts to unrecorded receptor and/or associated remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Receptor may be impacted by proposed hardcore area/road.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of ground works in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.63

CH129: Benchmark

Receptor:	CH129		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Benchmark		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The benchmark (if extant) may be directly impacted by the proposed works at bridge CH128.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
Avoidance of receptor, with protective barrier if found to be extant.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.64

CH132: Level crossing (site of)

Receptor:	CH132		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Level Crossing (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impacts to unrecorded receptor during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> If extant, receptor may be impacted by proposed grid connection.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of ground works in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.65

CH133: Well (site of)

Receptor:	CH133		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Well (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impacts to unrecorded receptor and/or associated remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Receptor may be impacted by proposed grid connection or cable link. While some of this area is disturbed, the exact location of the well is unknown.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of ground works in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.66

CH138: Farm complex

Receptor:	CH138		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Farm complex		
Importance:	Low		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines; ancillary works		
Impact Pathway	Visibility; setting		
Impact Phase	Operation	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative long-term visual impact from turbines during Operational Phase; negative long-term impact on setting during Operational Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Turbine T1 will be slightly visible c.750m to the north-northeast; however, views to the north are obscured by a ridge and commercial forestry which reduces the magnitude of effect. Slight impact on setting due to the proposed hardcore area/road.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact from the turbine, though additional screening along the western side of the hardcore area/road may help to offset some of the magnitude or significance of the impact from the road.			
Effectiveness of Mitigation:			
1. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.67

CH139: Farm complex

Receptor:	CH139		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Farm complex		
Importance:	Low		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines; ancillary works		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Turbine T1 will be slightly visible c.680m to the northeast; however, views to the north are obscured by a ridge and commercial forestry which reduces the magnitude of effect.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact from the turbine. Potential indirect impact due to the proposed hardcore area/road is mitigated by measures to replant hedgerow along much of the western side of the road.			
Effectiveness of Mitigation:			
1. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.68

CH140: Vernacular structures (site of)

Receptor:	CH140		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Vernacular structures (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impact to unrecorded receptor and/or associated subsurface remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Receptor may be directly impacted by Turbine T3 and associated works. Magnitude of impact likely lower due to previous disturbance from forestry cutblock.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of ground works in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.69

CH144: AAP: Cloghnagh Stream

Receptor:	CH144		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	AAP: Cloghnagh Stream		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative long-term direct impacts to unrecorded, associated subsurface remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Impacted by works associated with T1–T3. Chapter 8 (Water) states: "W1 is c.1.0m in width and will require the installation of a new bottomless culvert to facilitate the construction of a Windfarm Site Road over this watercourse; Wet drainage channel D1 is c.0.5m in width and will require a diversion of the channel for 50m and the installation of a new bottomless culvert to facilitate the construction of a Windfarm Site Road over this drain; D2 is 0.7m in width and will require the extension of the existing culvert by 8m to facilitate the widening of the existing forestry track over this culvert; D3 is 1.0m in width and will require the installation of a new bottomless culvert to facilitate the construction of a Windfarm Site Road over this drain" (pp. 8-41).			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Wade & detection survey		
2.	Archaeological monitoring		
Wade and detection survey; archaeological monitoring in area of receptor due to potential for unrecorded subsurface archaeological remains.			
Effectiveness of Mitigation:			
1. Wade & detection survey; Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIA R 15.3.2.3.70

CH145: Farm complex

Receptor:	CH145		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Farm complex		
Importance:	Low		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility; setting		
Impact Phase	Operation	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative long-term visual impact and impact on setting from turbines during Operational Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Turbines T4 and T3 will be slightly visible c.680m and c.740m to the north-northeast and northeast respectively; however, views to the northeast are obscured by commercial forestry which reduces the magnitude of effect.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Screening will not offset the magnitude or significance of the impact from the turbine. However, measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.71

CH146: Lime kiln (site of)

Receptor:	CH146		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Lime kiln (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Receptor, or associated remains, may be impacted by proposed hardcore area/road and internal cabling route. Magnitude of impact likely lower due to previous disturbance from forestry cutblock.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of ground works in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.72

CH147: Benchmark

Receptor:	CH147		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Benchmark		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The benchmark (if extant) may be directly impacted by road-widening works.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
Avoidance of receptor, with protective barrier if found to be extant.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.73

CH150: Benchmark

Receptor:	CH150		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Benchmark		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The benchmark (if extant) may be directly impacted by the road-widening works proposed along this route and/or the movement of plant.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
Avoidance of receptor, with protective barrier if found to be extant.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.74

CH153: Benchmark

Receptor:	CH153		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Benchmark		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The benchmark (if extant) may be directly impacted by the road-widening works proposed along this route, hedgerow removal, other groundworks and/or the movement of plant.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
Avoidance of receptor, with protective barrier if found to be extant.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.75

CH154: Gravel pit (site of)

Receptor:	CH154		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Gravel pit (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Receptor, or associated remains, may be impacted by proposed hardcore area/road and internal cabling route.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of ground works in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.76

CH157: AAP: watercourse

Receptor:	CH157		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	AAP: watercourse		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative long-term direct impacts to unrecorded, associated subsurface remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Internal cabling to cross watercourse, while hedgerow works to take place alongside it.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring in area of stream due to potential for unrecorded subsurface archaeological remains and presence of culvert.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.77 CH161: Benchmark

Receptor:	CH161		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Benchmark		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The benchmark (if extant) may be directly impacted by the road-widening works proposed along this route and/or the movement of plant.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
Avoidance of receptor, with protective barrier if found to be extant.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.78

CH164: Quarries (site of)

Receptor:	CH164		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Quarries (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impacts to unrecorded associated subsurface remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Receptor, or associated remains, may be impacted by proposed road-widening and hedgerow works.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.79

CH168: Benchmark

Receptor:	CH168		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Benchmark		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The benchmark (if extant) may be directly impacted by the road-widening works proposed along this route and/or the movement of plant.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
Avoidance of receptor, with protective barrier if found to be extant.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.80 CH169: Vernacular structures (site of)

Receptor:	CH169		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Vernacular structures (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential negative permanent direct impact to unrecorded receptor and/or associated subsurface remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Receptor may be directly impacted by Turbine T11 and associated works as it may occur directly alongside the field boundary.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.81 CH179: Vernacular structures (site of)

Receptor:	CH179		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Vernacular structures (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impact to unrecorded receptor and/or associated subsurface remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Receptor will be directly impacted by Turbine T2 and associated works; likely previously disturbed by forestry cutblock.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.82

CH182: Lime kiln

Receptor:	CH182		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Lime kiln		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The lime kiln may be directly impacted by the laying of hardcore/road, laying of internal cable route, or hedgerow works which will occur in close proximity, as well as by the movement of plant.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
3.	Archaeological monitoring		
Ensure receptor is avoided during construction; avoidance of receptor, with protective barriers. Archaeological monitoring in the vicinity of the receptor.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
3. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.83 CH185: Gate pier and stone wall

Receptor:	CH185		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Gate pier and stone wall		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Entrance widening works to occur here as well as the laying of hardcore/road and internal cabling at this location.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
3.	Rebuild like-for-like		
Ensure wall and piers are not damaged during construction. If avoidance is not feasible then rebuild like-for-like.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
3. Rebuild like-for-like: Ensures that in the case of undesignated cultural heritage receptors (for example) the potential visual impact will be reduced and that traditional skills and crafts represented in the physical expression, traditional styles etc. of these receptors will continue to be reflected in their original context.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.84

CH197: Stone wall

Receptor:	CH197		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Stone wall		
Importance:	Very low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Potential for negative permanent direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> The cable link will be crossing the boundary and could impact the stone wall associated with Ballymartin House.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Rebuild like-for-like		
Ensure wall is not damaged during laying of cable. If avoidance is not feasible then rebuild like-for-like.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Rebuild like-for-like: Ensures that in the case of undesignated cultural heritage receptors (for example) the potential visual impact will be reduced and that traditional skills and crafts represented in the physical expression, traditional styles etc. of these receptors will continue to be reflected in their original context.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.85

CH208: AAP: field system

Receptor:	CH208		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	AAP: field system		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impacts to unrecorded, associated subsurface remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Turbine T11 and associated works will directly impact remnants of a field system still evident on the ground and in aerial imagery.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.86

CH216: Gate piers

Receptor:	CH216		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Gate piers		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Road-widening works to occur here, as well as hedgerow works and laying of the internal cabling.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
3.	Rebuild like-for-like		
Ensure piers are not damaged during construction. If avoidance is not feasible then rebuild like-for-like.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
3. Rebuild like-for-like: Ensures that in the case of undesignated cultural heritage receptors (for example) the potential visual impact will be reduced and that traditional skills and crafts represented in the physical expression, traditional styles etc. of these receptors will continue to be reflected in their original context.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.87

CH220: Lime kiln

Receptor:	CH220		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Lime kiln		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: While this receptor is located beyond the Construction Works Boundary, the potential exists for accidental destruction due to the movement of plant.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
Ensure receptor is not damaged during construction.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.88

CH223: Well (site of)

Receptor:	CH223		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Well (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor or parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impact to unrecorded receptor and/or associated remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Receptor may be impacted by Turbine T8 and associated works.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.89 CH224: Historical field boundary

Receptor:	CH224		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Historical field boundary		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impact to unrecorded receptor during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> May be impacted by works associated with Turbine T8.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor; recording of historical field boundary.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.90 CH226: Historical field boundary

Receptor:	CH226		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Historical field boundary		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impact to unrecorded receptor during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Receptor may be impacted by road-widening works, hardcore area/road and internal cable route leading to Turbine T8.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor; recording of historical field boundary.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.91 CH228: Historical field boundary

Receptor:	CH228		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Historical field boundary		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impact to unrecorded receptor during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Receptor is located within the Construction Works Boundary and could be impacted by movement of plant, as well as direct impact due to road-widening works, hardcore area/road and internal cable route leading to Turbine T8.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor; recording of historical field boundary.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.92 CH229: Historical field boundary

Receptor:	CH229		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Historical field boundary		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impact to unrecorded receptor during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Partially located within the Construction Works Boundary and could be impacted by movement of plant, as well as direct impact due to temporary deposition areas, hardcore area/road and internal cable route leading to Turbine T8.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor; recording of historical field boundary.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.93

CH234: Stone enclosure

Receptor:	CH234		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Stone enclosure		
Importance:	Very low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Receptor is fully within the Construction Works Boundary and is located in the direct path of the proposed internal cabling route.			
Impact Magnitude	High	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Photographic survey		
2.	Archaeological monitoring		
Photographic survey and description of structure. Archaeological monitoring during construction works.			
Effectiveness of Mitigation:			
1. Photographic survey: To provide a permanent visual and written record, as well as current condition, of a receptor.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.94

CH243: AAP: watercourse

Receptor:	CH243		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	AAP: watercourse		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impacts to unrecorded, associated subsurface remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Will be impacted by road-widening/hardcore. As noted in Chapter 8 (Water): "[Drainage channel] D2 is located at an existing culvert crossing on a wet drainage channel which drains into the Ballymartin_15, which in turn drains into the Cloghnagh_010. D2 is 0.7m in width and will require the extension of the existing culvert by 8m to facilitate the widening of the existing forestry track over this culvert".			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Wade & detection survey		
2.	Archaeological monitoring		
Wade and detection survey; archaeological monitoring in area of stream due to potential for unrecorded subsurface archaeological remains and culvert of unknown age.			
Effectiveness of Mitigation:			
1. Wade & detection survey: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.95 CH245: Historical field boundary

Receptor:	CH245		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Historical field boundary		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impact to unrecorded receptor during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Approximately 40m is located within the Construction Works Boundary and could be impacted by movement of plant, as well as direct impact due to Turbine T4.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor; recording of historical field boundary.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.96

CH254: Townland boundary – Tinnalintan; Sraleagh

Receptor:	CH254		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Townland boundary – Tinnalintan; Sraleagh		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impact to section of receptor from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The internal cable link runs parallel for approx. 270m of the townland boundary and is also the site of a proposed joint bay. Due to the close proximity, it could be accidentally damaged due to the movement of plant.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
2.	Townland Boundary Survey		
Ensure receptor is avoided during construction. A townland boundary survey may be required if a section of it is to be directly impacted by any works related to the windfarm.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
3. Townland Boundary Survey: Ensures that preservation by record occurs in advance of construction and that appropriate preservation by record of these valuable cultural heritage assets occurs.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.97 CH274: Gate piers and stone wall

Receptor:	CH274		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Gate piers and stone wall		
Importance:	Very low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: The realignment of the laneway for the new hardcore area/road, as well as hedge removal works may directly impact the receptor.			
Impact Magnitude	Medium	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barriers/fencing		
3.	Rebuild like-for-like		
Ensure wall and piers are not damaged during construction. If avoidance is not feasible then rebuild like-for-like.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barriers/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
3. Rebuild like-for-like: Ensures that in the case of undesignated cultural heritage receptors (for example) the potential visual impact will be reduced and that traditional skills and crafts represented in the physical expression, traditional styles etc. of these receptors will continue to be reflected in their original context.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.98

CH277: Former trackway; stone walls

Receptor:	CH277		
Class	Cultural Heritage; Built Heritage		
Designation	Undesignated		
Site Type	Former trackway; stone walls		
Importance:	Very low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Negative permanent direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> Entire length of hedgerow will be removed, with length of replanting slightly west to allow for road-widening. However, there is a stone wall here as well which will also be impacted.			
Impact Magnitude	High	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Rebuild like-for-like		
2.	Photographic survey		
Photographic survey and description of boundary; if much of wall is extant, then rebuild like-for-like along new field boundary.			
Effectiveness of Mitigation:			
1. Rebuild like-for-like: Ensures that in the case of undesignated cultural heritage receptors (for example) the potential visual impact will be reduced and that traditional skills and crafts represented in the physical expression, traditional styles etc. of these receptors will continue to be reflected in their original context.			
2. Photographic survey: To provide a permanent visual and written record, as well as current condition, of a receptor.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.99

CH282: Field boundary

Receptor:	CH282		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Field boundary		
Importance:	Very low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impact from construction works and activities during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Entire length of hedgerow will be removed, with length of replanting slightly southeast to allow for road-widening. However, there is a stone wall here as well which will also be impacted.			
Impact Magnitude	High	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:		Yes	
1.	Rebuild like-for-like		
2.	Photographic survey		
Photographic survey and description of boundary; if much of wall is extant, then rebuild like-for-like along new field boundary.			
Effectiveness of Mitigation:			
1. Rebuild like-for-like: Ensures that in the case of undesignated cultural heritage receptors (for example) the potential visual impact will be reduced and that traditional skills and crafts represented in the physical expression, traditional styles etc. of these receptors will continue to be reflected in their original context.			
2. Photographic survey: To provide a permanent visual and written record, as well as current condition, of a receptor.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.100	CH284: Townland boundary – Byrnesgrove; Commons
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Receptor:	CH284		
Class	Cultural Heritage		
Designation	Undesignated		
Site Type	Townland boundary – Byrnesgrove; Commons		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks; movement of plant/machinery		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general)</u> : Negative permanent direct impact from construction works and activities during Construction Phase.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project</u> : Will be directly impacted by T2 and associated works. This receptor is likely altered due to forestry works; however, some elements may remain.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Townland Boundary Survey		
2.	Archaeological monitoring		
A Townland Boundary Survey and archaeological monitoring will be undertaken of the boundary sections that will be impacted by the above works in advance of groundworks.			
Effectiveness of Mitigation:			
1. Townland Boundary Survey: Ensures that preservation by record occurs in advance of construction and that appropriate preservation by record of these valuable cultural heritage assets occurs.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.101 CH285: Folly (Heywood Gardens)

Receptor:	CH285 (LCC RPS 505; NIAH 12803004)		
Class	Built Heritage		
Designation	Protected Structure; listed in the NIAH; National Historic Property		
Site Type	Folly (Heywood Gardens)		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Views of the windfarm were confirmed in the LVIA (see Viewpoint CH285 in Appendix 15.11; see also Chapter 14, LVIA) and by site visit. Magnitude of impact lowered due to swath of broadleaved trees to south and southeast of receptor that may partially screen view. The nearest Ballynalacken turbine is c.4.7km from this receptor.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.102 CH287: Orangery (Heywood Gardens)

Receptor:	CH287 (LCC RPS 507; NIAH 12803006)		
Class	Built Heritage		
Designation	Protected Structure; listed in the NIAH; National Historic Property		
Site Type	Orangery (Heywood Gardens)		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Views of the windfarm were confirmed in the LVIA and by site visit of the Cultural Heritage specialist. The blade sets of the majority of the proposed turbines are visible from here between and above sections of dense intervening woodland vegetation (see Viewpoint CH287 in Appendix 15.11; see also Chapter 14, LVIA). Magnitude of impact lowered due to swath of broadleaved trees to south and southeast of receptor that may partially screen view. The nearest Ballynalacken turbine is c.4.7km from this receptor.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.103

CH288: Farmyard Complex (Heywood Gardens)

Receptor:	CH288 (LCC RPS 508; NIAH 12803007)		
Class	Built Heritage		
Designation	Protected Structure; listed in the NIAH; National Historic Property		
Site Type	Farmyard Complex (Heywood Gardens)		
Importance:	Medium		
Impact Title	Indirect Effect		
Impact Source	Windfarm turbines		
Impact Pathway	Visibility		
Impact Phase	Operation	Impact Quality:	Negative
Overview of Impact (general): Negative long-term visual impact from turbines during Operational Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Views of the windfarm were confirmed in the LVIA and by site visit. Magnitude of impact lowered due to swath of broadleaved trees to south and southeast of receptor that may partially screen view. The nearest Ballynalacken turbine is c.4.5km from this receptor.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Remedy/offsetting		
Measures will be undertaken to compensate for the adverse effects, such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage.			
Effectiveness of Mitigation:			
1. Remedy/offsetting: Establishes a platform for people to provide the values they attribute to their cultural heritage environment, and to better understand, protect, preserve and promote their local intangible heritage. Contributes to knowledge gain which advances our understanding of the past and helps to enhance a sense of community pride and identity. Creates a platform to engage with diverse groups of people who may connect through ‘citizen science’.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.104

CH308: AAP: possible ringfort

Receptor:	CH308		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	AAP: possible ringfort		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
<u>Overview of Impact (general):</u> Potential for negative permanent direct impacts to unrecorded, associated subsurface remains during groundworks.			
<u>Examination of the Impact of the Proposed Ballynalacken Windfarm Project:</u> The extent and nature of the feature is unknown, and potential exists for subsurface remains associated with the feature to exist within the RLB.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Geophysical survey		
2.	Archaeological monitoring		
Geophysical survey within the RLB in field to west and south; archaeological monitoring of any activity in field to west and south during Construction phase, in vicinity of feature.			
Effectiveness of Mitigation:			
1. Geophysical survey: Geophysical survey is an essential tool in the identification of potential archaeological features and deposits both at known sites and at sites where no surface expression may exist. Assists in developing strategies for the preservation <i>in situ</i> or preservation by record for archaeological and built heritage.			
2. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.3.105

CH315: Marian Shrine

Receptor:	CH315		
Class	Built Heritage		
Designation	Undesignated		
Site Type	Marian Shrine		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks for HR10		
Impact Pathway	Damage to and/or destruction of parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Potential for negative direct impact during Construction Phase.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Potential for accidental damage to the Marian shrine during groundworks for the construction of HR10 (see Figure 15.26).			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Avoidance		
2.	Protective barrier/fencing		
Precautionary measures should be taken to the Marian shrine, including the use of physical barriers where needed.			
Effectiveness of Mitigation:			
1. Avoidance: Ensures the preservation <i>in situ</i> of cultural heritage receptors.			
2. Protective barrier/fencing: Ensures that physical protection of cultural heritage receptors will occur during construction; to increase awareness of receptors for construction workers and to avoid accidental damage caused through the movement of machinery and plant.			
Residual Impact Significance:			Not Significant

EIAR 15.3.2.3.106

CH318: Well (site of)

Receptor:	CH318		
Class	Archaeological Heritage		
Designation	Undesignated		
Site Type	Well (site of)		
Importance:	Low		
Impact Title	Direct Effect		
Impact Source	Groundworks		
Impact Pathway	Destruction of receptor or parts of receptor		
Impact Phase	Construction	Impact Quality:	Negative
Overview of Impact (general): Negative permanent direct impact to unrecorded receptor and/or associated remains during groundworks.			
Examination of the Impact of the Proposed Ballynalacken Windfarm Project: Receptor may be impacted by hedgerow removal and other works associated with Haul Route Works at HR8, the location of the blade transfer area.			
Impact Magnitude	Low	Impact Significance:	Slight
Mitigation			
Mitigation by Design	N/A		
Requirement for Additional Mitigation Measures:			Yes
1.	Archaeological monitoring		
Archaeological monitoring of groundworks in area of receptor.			
Effectiveness of Mitigation:			
1. Archaeological monitoring: Effective as a mitigation measure in that it ensures that preservation <i>in situ</i> or preservation by record occurs, as appropriate. It allows for the protection of archaeological objects that may be identified during the works.			
Residual Impact Significance:			Slight

EIAR 15.3.2.4 Cross Factor Effects to Cultural Heritage

Primary climate change impacts have the potential to affect Cultural Heritage in a number of ways (DCHG 2019). The priority negative impacts of Climate Change in the vicinity of the proposed scheme are likely to be soil movement (landslip/erosion) caused by intense rainfall, long dry periods and storms; changing burial-preservation conditions (e.g., desiccation, acidification) caused by long dry periods and temperature rise; and inland flooding, caused by rainfall.

The proposed location for the Ballynalacken Windfarm partly includes a area of mapped upland blanket peat (i.e. CH103) in a central area in the southern end of the windfarm site. In addition to being ecologically important landscapes, waterlogged bogs and peatlands are areas of archaeological potential and can be particularly susceptible to the effects of climate change during periods of high temperatures, which can increase the risk of bogslides and landslips in upland areas. In order to assess the risk of landslip at the site, geotechnical site investigations were undertaken by Fehily Timoney Consulting Engineers. They recorded no evidence of past failures or signs of instability during site investigations, and although peaty topsoil was recorded at certain locations across the site with a thickness of up to 0.4m, no significant peat deposits were recorded at the site. Fehily Timoney concluded that the construction of the windfarm will not cause landslip in the area (see Appendix 7.1: Geotechnical Assessment Report).

Actions such as dewatering at turbine hardstands and borrow pits in bog areas may result in a reduction in water table levels and changes to groundwater distribution and flow. These actions may exacerbate Climate related impacts and can accelerate bogslides and landslips in upland areas, which can in turn impact known archaeological sites and exacerbate decay of organic remains. The potential for reducing the water table levels and changes to groundwater distribution and flow has been examined by HES hydrogeological engineers in Chapter 8: Water, which found that the topographical and hydrogeological setting of the proposed Ballynalacken Windfarm site location means no significant groundwater dewatering will be required during the works to the borrow pits or turbine foundations during the construction phase. Furthermore, impacts through the alteration of groundwater levels and/or flow paths were determined to be non-significant.

Climate change may also result in increased flooding which may cause damage to archaeological sites. The impacts of this flooding can be long lasting and has the potential to damage Cultural Heritage sites causing structural damage, partial loss or complete loss of built and archaeological heritage owing to velocity of streams and dynamic impact of floating objects, potential contamination of built and archaeological heritage and collections by flood water and deterioration in the drying-out phase (e.g., salts, microbiological activity), potential loss of historic fabric during flood prevention works, emergency response and post-flood recovery and rebuilding. The potential for the project site locations to be affected by flooding was examined by HES hydrogeological engineers in Chapter 8: Water (Appendix 8.3: Flood Risk Assessment Report), which found that:

- No instances of historical flooding were identified in historic OS maps;
- No instances of recurring or historic flooding were identified on OPW maps within the proposed project site;
- The proposed project site is not identified within the OPW/CFRAM Flood Zones; and,
- The proposed project site is not located within any National Indicative Fluvial Flood Zones.

Chapter 8 specialists determined that the overall risk of fluvial flooding at the project site is considered to be low, and that the risk of the project site contributing to downstream flooding is also very low, as there will be no alteration of the catchment size contributing to each of the main downstream watercourses (see Chapter 8: Water for more details).

EIAR 15.3.2.5 Summary of Effects

The EIA evaluated the probability of effects on 318 receptors in the Study Area which consisted of the RLB of the Proposed Project plus 200m, HR locations as discussed in Chapter 5, and a 20km radius from the Ballynalacken wind turbines for visual impacts (see Section A15.6.1.5 in Appendix 15.6).

No Significant Negative impacts (direct or indirect) are predicted for the proposed Ballynalacken Windfarm.

Pre-mitigation Moderate Negative effects are anticipated for thirteen (13) receptors (Section EIAR 15.3.2.2), eleven (11) of which are the result of indirect visual impacts. This includes, for example: the cursus in close proximity to the RLB (Recorded Monument KK005-004 [CH074]); CH012 (castle-motte) and CH013 (castle-unclassified) which are Recorded Monuments subject to a Preservation Order (5/1983: KK005-023001 and KK005-023002); two national monuments (Nos. 282 and 376) under the ownership of the Local Authority (church CH293 and castle-ringwork CH294, respectively); and three receptors associated with Heywood Gardens, a National Historic Property (ornamental gardens CH289 and CH309, and historic demesne CH311). Measures will be undertaken to compensate for the adverse visual effects, and an interactive database will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage, which will—for eight of the thirteen receptors—reduce the residual impact to Slight Negative.

In relation to the Cursus (CH074) in Ballyoskill townland and due to high potential for archaeology, additional mitigation will include geophysical survey and archaeological testing which will be undertaken in advance of any groundworks in the field to the east. Archaeological monitoring of all groundworks will be undertaken in this same field (where T10 and associated ancillary works are proposed). Screening along the roadside boundary east of the cursus, with native hedgerow and trees will help to mitigate negative visual and setting effects. To further offset potential adverse effects, it is proposed to carry out research in the form of geophysical survey in the field in which the Cursus monument is located, subject to the agreement of NMS. Results from this research can be fed back to the interactive database and to local communities. The residual impact at the Cursus is evaluated as Slight Negative.

There is potential for pre-mitigation Moderate Negative direct effects at two locations: CH128 (bridge) along the Ballynalacken Grid Connection, and at CH313 (Castlecomer ACA) during Haul Route Works HR9 and HR10 and during transportation of the turbine components through Castlecomer town. There are two options for proposed works at the bridge (CH128) to install the grid connection cabling which includes trench works and the subsequent increase in height of the parapet wall, or the installation of the cables through directional drilling under the bridge and watercourse (CH016) from the road corridor (see Chapter 5, Description of the Development for more details). Consultation with the ACO, a pre-construction works built heritage survey, and archaeological monitoring during bridge works will help to mitigate effects, and if the first option is selected, a sympathetic design will be implemented for the new raised parapet walls at this bridge. If directional drilling is chosen, archaeological monitoring should be undertaken during the proposed works as it is located in an area of high archaeological potential due to both proximity to the watercourse (CH016) and proximity to CH012 and CH013 (PO 5/1983; Recorded Monuments KK005-023001 and KK005-023002) as subsurface archaeological deposits, remains and/or artefacts may exist.

Within the Castlecomer ACA (CH313) precautionary measures will be taken to avoid accidental damage to built heritage assets including all adjacent RPS/NIAH, especially regarding RPS 697/NIAH 12301069 (Creamery House boundary features). Physical barriers will be used where relevant, and spotters will aid in the avoidance of accidental damage. The residual impact on CH128 and at CH313 is evaluated as Slight Negative.

Pre-mitigation Slight Negative effects are predicted for 106 receptors (Section EIAR 15.3.2.3) which includes 31 indirect adverse impacts and 77 direct impacts. Measures that will be implemented during the Construction Phase and Operational Phase to mitigate these effects, have been identified in the impact tables. These include offsetting measures for visual impacts such as the development of an interactive

database, and screening with hedgerow and trees, which will in some cases reduce the residual impact to Not Significant. Measures for potential direct effects involve pre-construction surveys such as townland boundary/civil parish boundary survey, built heritage survey, wade and detection survey, photographic survey, geophysical survey, and archaeological test trenching. Physical barriers and spotters during works will ensure the protection of receptors, and archaeological monitoring during works will ensure the preservation *in situ* or preservation by record of the receptor. Offsetting measures for direct effects include rebuilding using like-for-like materials. The residual impacts on these receptors ranges from Slight to Not Significant.

The remaining effects were assessed as Not Significant (No. 71), or Imperceptible/Neutral/None (No. 130).

ElAR 15.3.2.6 Cumulative Effects on Cultural Heritage Receptors

Cumulative effects are described as ‘The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects’ (EPA 2022, 52; TII 2024, 71). A number of projects within the 20km study area were evaluated for cumulative impacts with the Ballynalacken Windfarm Project (Figure 15-27); these are detailed in Table 15-5.

Table 15-5: Projects included in the Cumulative Impact Evaluation

Projects scoped in for cumulative evaluation	Distance from the RLB	Evaluation of Cumulative Effects
Laois-Kilkenny Grid Reinforcement Project (construction phase impacts and operational visual impacts)	0m	Currently under construction (2024). Involves a new substation next to the existing Ballyragget substation, a new 110 kV line between this new GIS station and the new station at Coolnaback, and an upgrade for the existing Ballyragget-Kilkenny overhead line. Any visual impacts will be consistent with emerging baseline trends. However, as the Grid Reinforcement route is located within the Ballynalacken Windfarm RLB, there is potential for cumulative impact to subsurface archaeology as a result of compaction from plant movement or groundworks from the Construction Phase of both projects.
Pinewood Windfarm (operational visual impacts)	4.2km	The LVIA states that the two consented developments to the north (Pinewood and Cullenagh) would likely be viewed in combination with the proposed Ballynalacken turbines; therefore, creating a cumulative visual impact at locations throughout the Cumulative Study Area during the Operational Phase, including at Cultural Heritage Receptors with Medium importance.
Cullenagh Windfarm (operational visual impacts)	9.7km	
Lisdowney Windfarm (operational visual impacts)	10.3km	The LVIA states that the existing Lisdowney turbines will be visible in the distance from many of the elevated views afforded in the immediate site surrounds, creating a cumulative visual impact at locations throughout the Cumulative Study Area during the Operational Phase.
Gortahile Windfarm (operational visual impacts)	14.1km	As per the Ballynalacken LVIA: “The elevated nature of the other existing and permitted developments in the wider eastern extent of the study area further results in a high degree of cumulative turbine visibility throughout the study area and its wider surrounds. Nevertheless, the considerable separation distance between the existing and permitted turbines in the wider eastern and western extents of the study area limits the potential for any notable negative cumulative effects” (pp 14-55).
Bilboa Windfarm (operational visual impacts)	15.4km	
White Hills Windfarm (operational visual impacts)	13.5km	

Projects scoped in for cumulative evaluation	Distance from the RLB	Evaluation of Cumulative Effects
Telecom masts; Ballyoskill townland (operational visual impacts)	0m	Adjacent to the RLB. These are existing masts in proximity to, and visible from, some of the proposed turbines.
Battery Energy Storage Developments, Moatpark (operational visual impacts)	1km	Located NW of the Eirgrid Ballyragget Substation and the cemetery. This will contribute to the increasingly industrialised nature of this area.
Parksgrove Solar Farm (operational visual impacts)	740m	A 17.346 hectare, consented solar farm, partially located within the curtilage of Ballyconra House (RPS 312). Due to the nature of the solar farm (relatively low-lying), and proximity to the already-developed Glanbia area, operational visual impacts would be minimal.
Tirlán Ballyragget Solar Farm (operational visual impacts)	1.1km	This consented solar farm is located immediately west of the Glanbia facility and while there will likely be no visual impact, it contributes to the increasingly industrialised nature of this area.
Solar Farm, Ballyragget (operational visual impacts)	1.6km	There will likely be no visual impact for this consented solar farm, however, it contributes to the increasingly industrialised nature of this area due to its close proximity to other proposed/consented solar farms and the Glanbia development.
Glanbia Water Treatment Plant (various planning references) (operational visual impacts)	c.315m northwest	Includes the installation of a new silo (consented ref. 21519), two new cooling tower units (ref. 21882; existing), and two anaerobic digesters (consented ref. 22687). There will be no cumulative impacts during construction phase. While the consented silo is 13.6m tall, this area is already developed and so is consistent with baseline trends.

Consented solar farms Parksgrove Solar Farm, Tirlán Ballyragget Solar Farm, and Ballyragget Solar Farm will be located in close proximity to the existing Glanbia Water Treatment Plant and the western end of the proposed Ballynalacken Windfarm (from 740m to 1.6km distance from the RLB). While operational visual impacts for these individual projects would likely be minimal due to their relatively low-laying nature, the accumulation of these effects—along with other projects listed in Table 15-5 such as the telecom masts at Ballyoskill and the new overhead 110kV lines and GIS substation associated with the Laois-Kilkenny Grid Reinforcement Project—will contribute to the increasingly industrialised nature of this area.

Cumulative effects to subsurface remains have the potential to occur as a result of construction works for the Laois-Kilkenny Grid Reinforcement Project, including the extension to Ballyragget Substation compound, and the proposed Ballynalacken Windfarm. While unlikely, the Grid Reinforcement route is located within the Ballynalacken Windfarm RLB; hence, there is potential for cumulative impact to subsurface archaeology as a result of compaction from plant or groundworks associated with these projects. Due to the finite nature of archaeological resources, the cumulative effects of any impacts may lead to an increase in the overall adverse effect.

In terms of indirect visual impacts, the LVIA (Chapter 14) concludes that:

*...the proposed Ballynalacken Wind Farm is considered to contribute an additional cumulative effect that is in the order of **Medium** within the Castlecomer plateau and its immediate surrounds, which will reduce to **Low***

in the wider surrounds of the study area where the proposed turbines will appear as small-scale distant features and are unlikely to generate any negative cumulative aesthetic effects with other wind energy development.

Due to the nature of the Proposed Project and the likely effects described, the potential for cumulative effects to occur is primarily limited to indirect effects to the setting of Cultural Heritage assets in the Study Area and visual impacts that may occur during the operational phase with other windfarm developments in the surrounding landscape. As noted in the LVIA (Chapter 14), two other windfarms are potentially visible from Viewpoint 6 (Heywood Gardens), and an additional windfarm is visible from Ballylarkin Church (CH293).

Of note is the cumulative adverse visual impact on features within Heywood Gardens (including CH285–CH289, CH309 and CH311). Lisdowney Windfarm will be viewed in combination with the Proposed Project (i.e. where several windfarms are within the observer's arc of vision at the same time) whereas Pinewood Windfarm has a succession view (i.e. where the observer has to turn to see the various windfarms); see Chapter 14, Landscape and Visual. Intervisibility between the windfarms will be intermittent, with some screening provided from the surrounding topography and woodland areas.

Regardless, roughly half of the Viewpoints analysed in the LVIA have views of the turbines, and the importance rating of the Heywood Gardens receptors as part of a National Historic Property result in a Moderate cumulative residual impact rating.

Overall, in terms of indirect visual impacts, the scoped-in Cumulative Projects will have a Slight to Moderate Negative Effect on receptors in the Study Area.

EIAR 15.3.3 Schedule of Environmental Commitments

Proposed mitigation measures to avoid, reduce and/or offset the predicted impacts include:

- Archaeological monitoring
- Archaeological testing
- Avoidance
- Boundary survey, including townland boundary survey
- Built heritage survey
- Geophysical survey
- Offsetting through measures such as an interactive database that will be developed and maintained to facilitate the public in recording local folklore and other intangible cultural heritage
- Photographic survey
- Protective barriers
- Rebuilding like-for-like
- Screening
- Wade & detection survey

Please refer to the impact tables in Section EIAR 15.3.2 for mitigation relating to specific Cultural Heritage receptors. Please also see Chapter 19: Mitigation & Monitoring Arrangements for more information.

EIAR 15.3.4 Statement on Certainty and Sufficiency of Information Provided

The assessment of effects has a clear documentary trail of the analysis used to arrive at conclusions that demonstrably conform to peer-reviewed standards. The methodology complies with the guidelines for archaeological assessments in the *Framework and Principles for the Protection of the Archaeological Heritage* (DAHGI 1999), the *Architectural Heritage Protection Guidelines for Planning Authorities* (DAHG 2011), as well as the legislative frameworks of the National Monuments Acts 1930–2012 (as amended), the Heritage Act 2000, the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions)

Act, 1999 and the European Convention on the Protection of the Archaeological Heritage (ratified by Ireland 1997).

The EIA methodology also complied with Archaeological Heritage Policy Objective 9E of the Kilkenny City and County Draft Development Plan 2021–2027, which requires archaeological assessment of developments in the vicinity of all archaeological sites.

The following general limitations apply to the Cultural Heritage assessment presented in this chapter:

- The assessment is based on the information available at the time of writing. There is potential for additional information to become available at a later date that may alter the assessment presented here;
- The findings conveyed in the assessment are based on information obtained from a variety of sources including regulatory data, baseline studies and field surveys, as detailed in the chapter and which are understood to be reliable. Nevertheless, the authenticity and reliability of the information cannot be guaranteed.

In general, no significant difficulties were encountered in undertaking the assessment.

EIAR 15.4 CONCLUSION

The EIA evaluated the probability of effects on 318 receptors in the Study Area, including a 20km radius from the Ballynalacken wind turbines for visual impacts, and also assessed potential impacts as a result of HR works.

No Significant Negative impacts (direct or indirect) are predicted for the proposed Ballynalacken Windfarm.

Residual impacts include five (5) Moderate Negative effects which are the result of indirect visual impacts (Section EIAR 15.3.2.2). This includes: two national monuments (Nos. 282 and 376) under the ownership of the Local Authority (church CH293 and castle-ringwork CH294, respectively); and, three receptors associated with Heywood Gardens, a National Historic Property (ornamental gardens CH289 and CH309, and historic demesne CH311).

Residual Slight Negative effects are predicted for 61 receptors (Sections EIAR 15.3.2.2 and EIAR 15.3.2.3) which includes 30 indirect adverse impacts and 31 direct impacts.

A total of 53 receptors have a residual impact of Not Significant (see Section EIAR 15.3.2.3).

The remaining effects were assessed as Not Significant (No. 71), or Imperceptible/Neutral/None (No. 130).

Cumulative effects were also assessed, and a Slight to Moderate Negative Effect on Cultural Heritage receptors in the Study Area is predicted. Due to the nature of the Proposed Project and the likely effects described, the potential for cumulative effects to occur is primarily limited to indirect effects to the setting of Cultural Heritage assets in the Study Area and visual impacts that may occur during the operational phase with other windfarm developments in the surrounding landscape, though cumulative direct effects to subsurface remains have potential to occur as a result of construction works for the Laois-Kilkenny Grid Reinforcement Project and the proposed Ballynalacken Windfarm.

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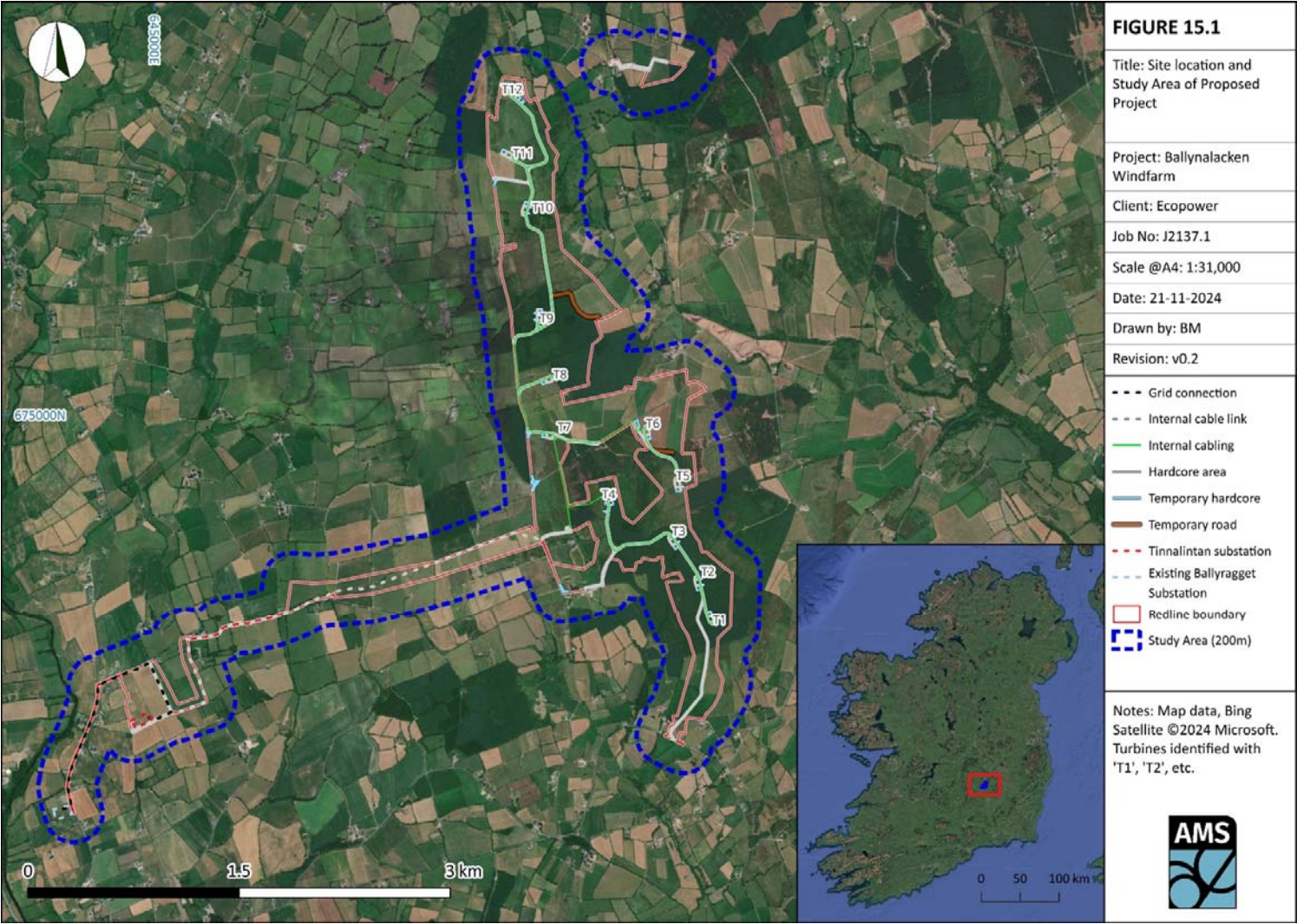


Figure 15.1: Site location and Study Area of Proposed Project.

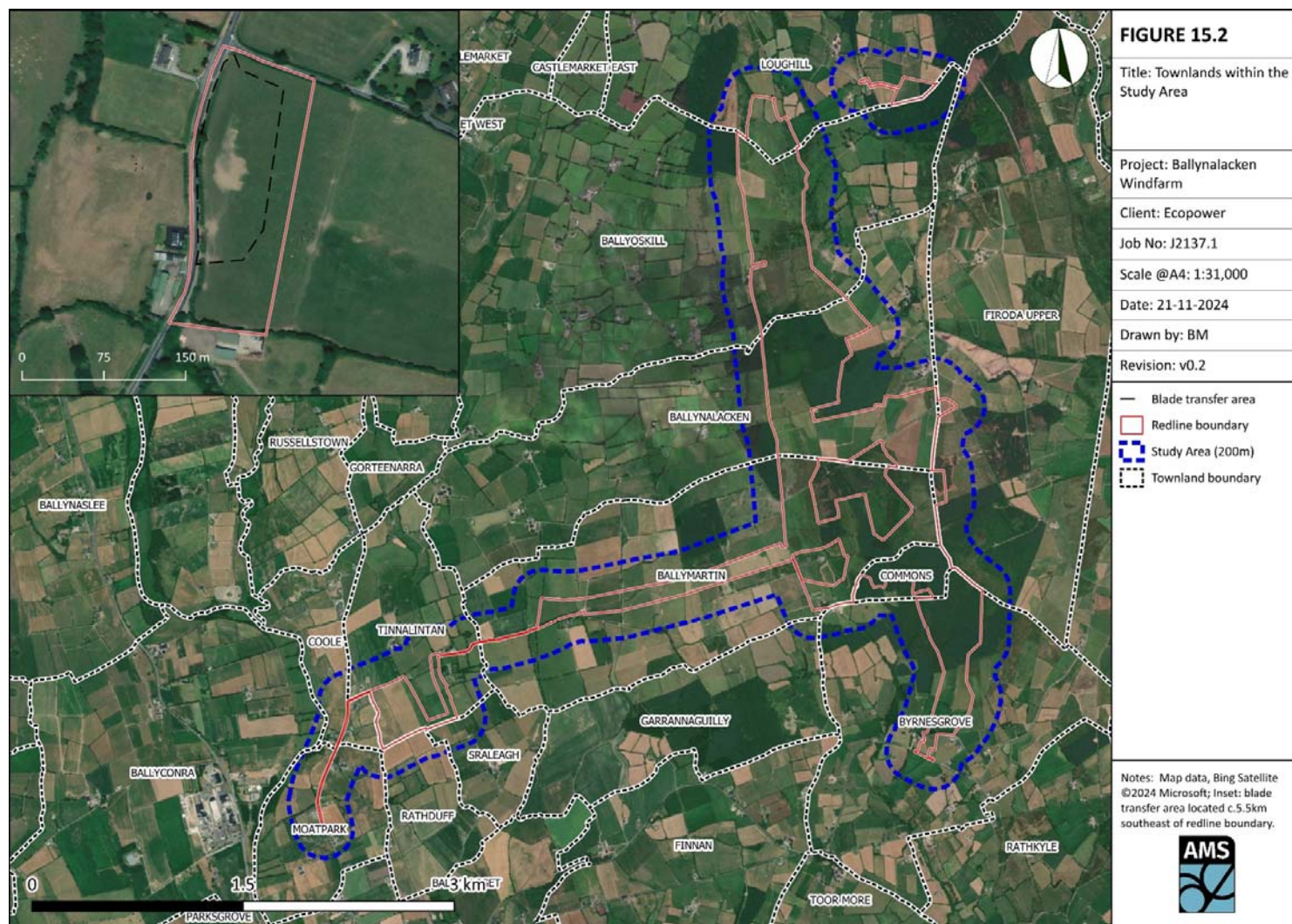


Figure 15.2: Townlands within the Study Area.



Figure 15.4: Designated/recorded Cultural Heritage receptors in the vicinity of the Study Area (2 of 3).

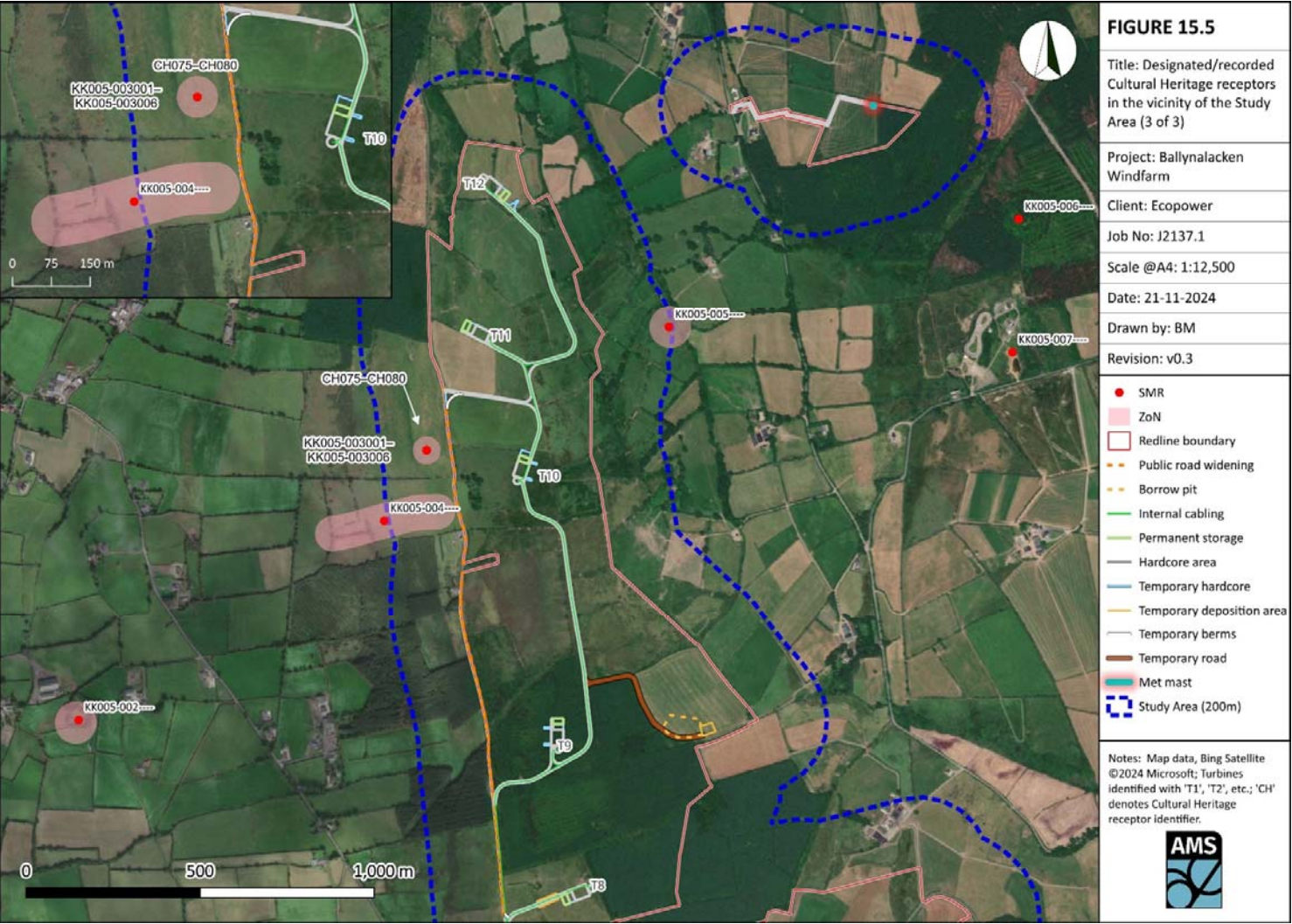


Figure 15.5: Designated/recorded Cultural Heritage receptors in the vicinity of the Study Area (3 of 3).

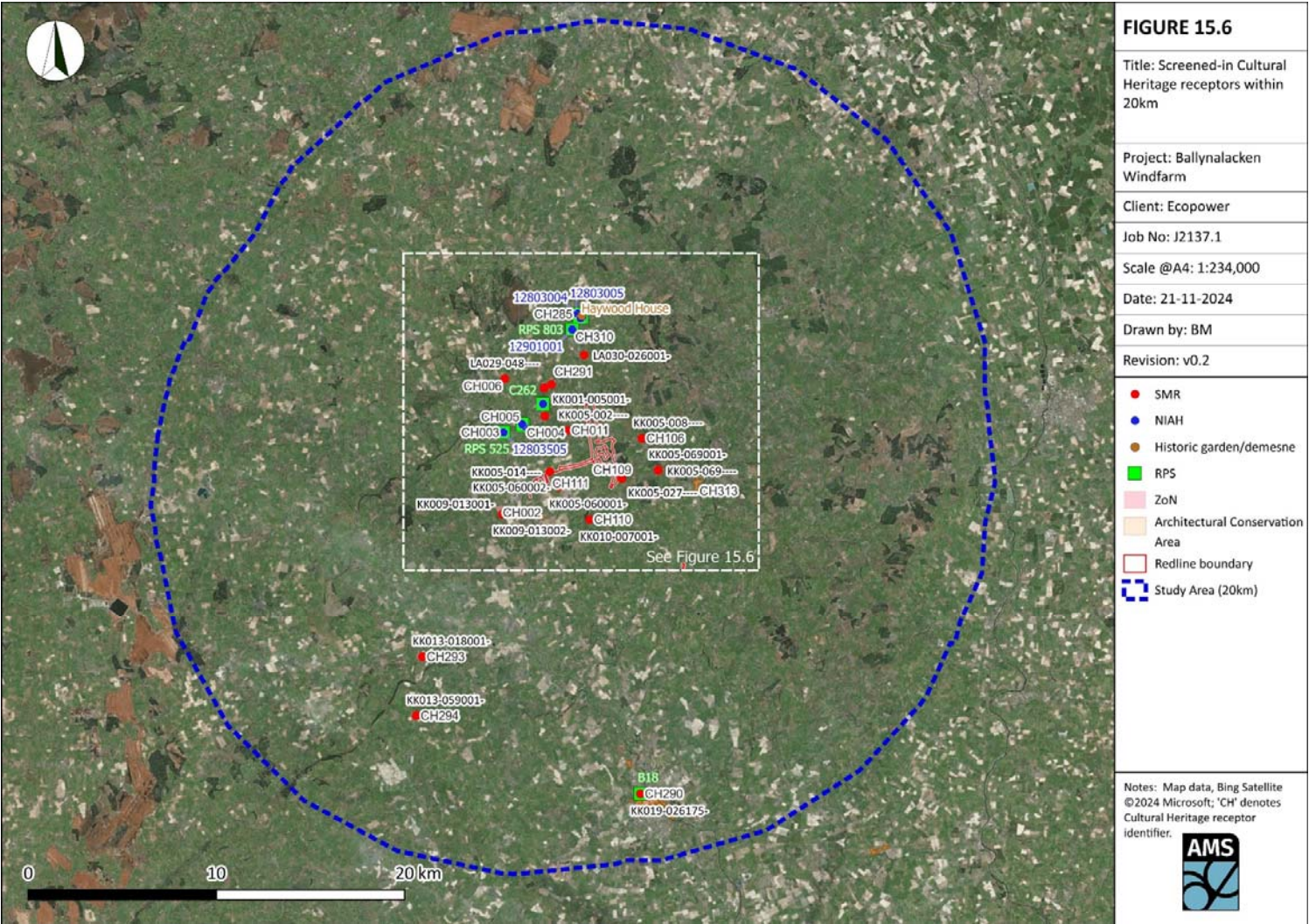


Figure 15.6: Screened-in Cultural Heritage receptors within 20km. Please note: figure does not display all designated CH within the map view; only those which are relevant to the discussion for ease of readability.

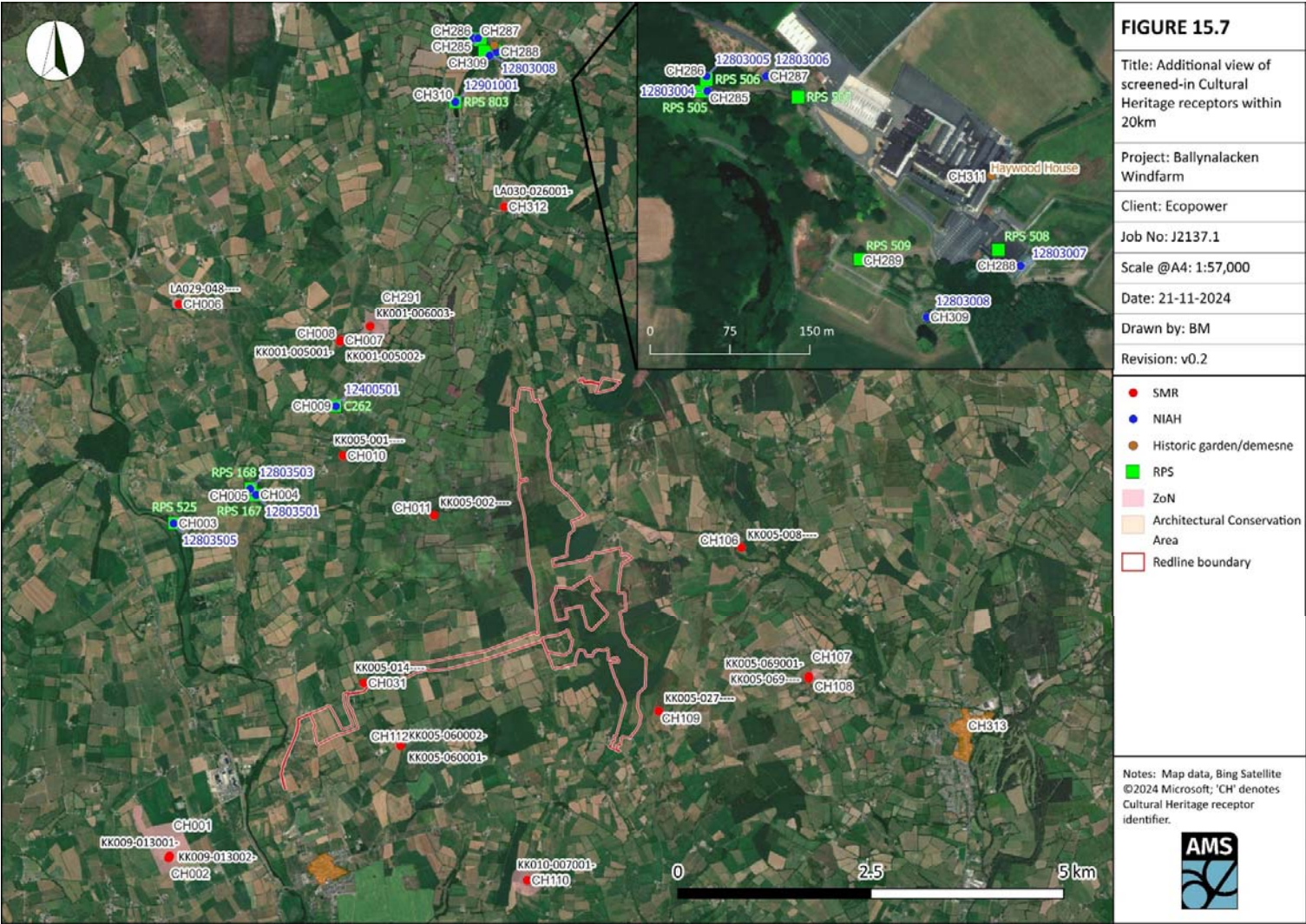


Figure 15.7: Additional view of screened-in Cultural Heritage receptors within 20km. Please note: figure does not display all designated CH within the map view; only those which are relevant to the discussion for ease of readability.

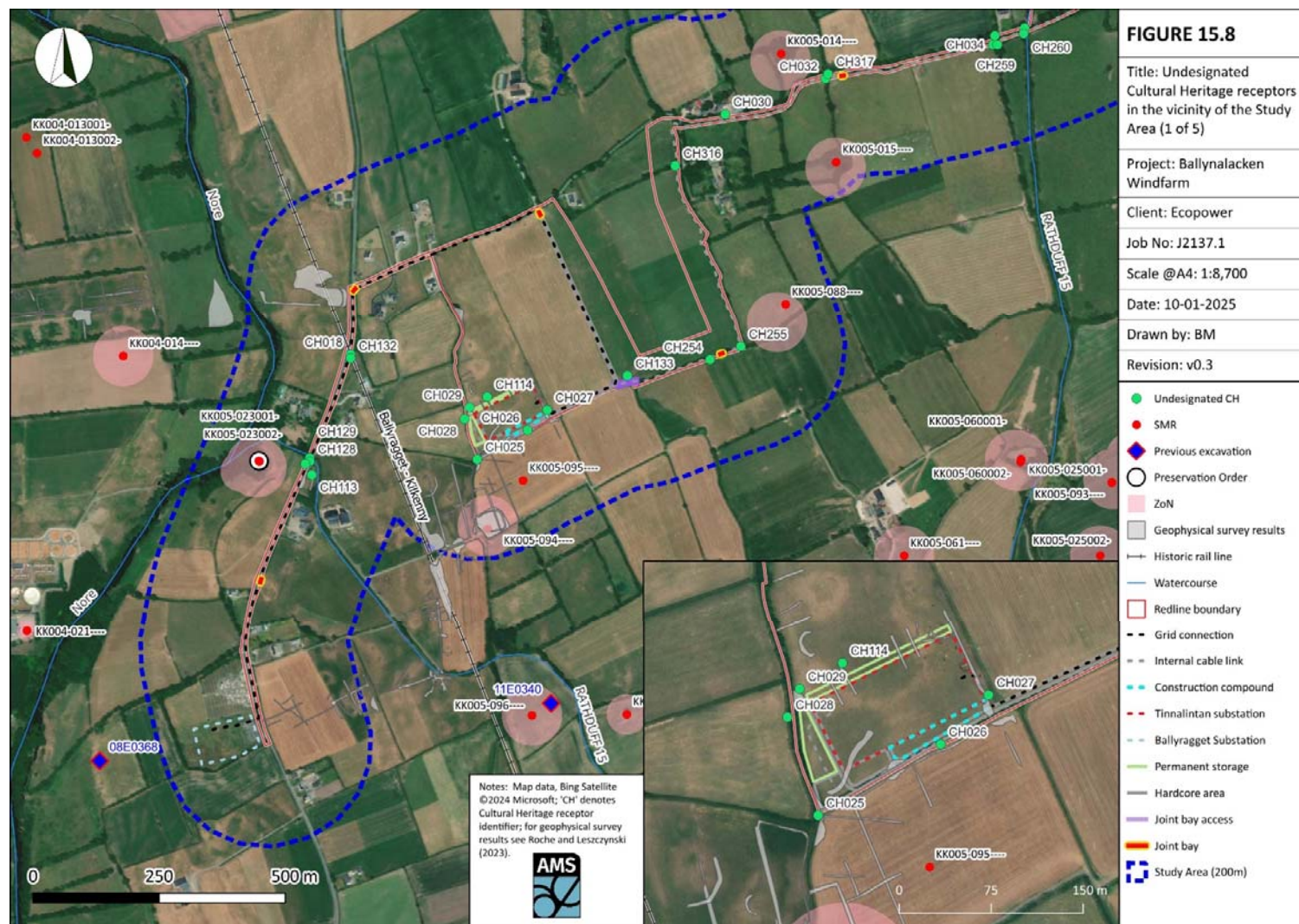


Figure 15.8: Undesignated Cultural Heritage receptors in the vicinity of the Study Area (1 of 5).

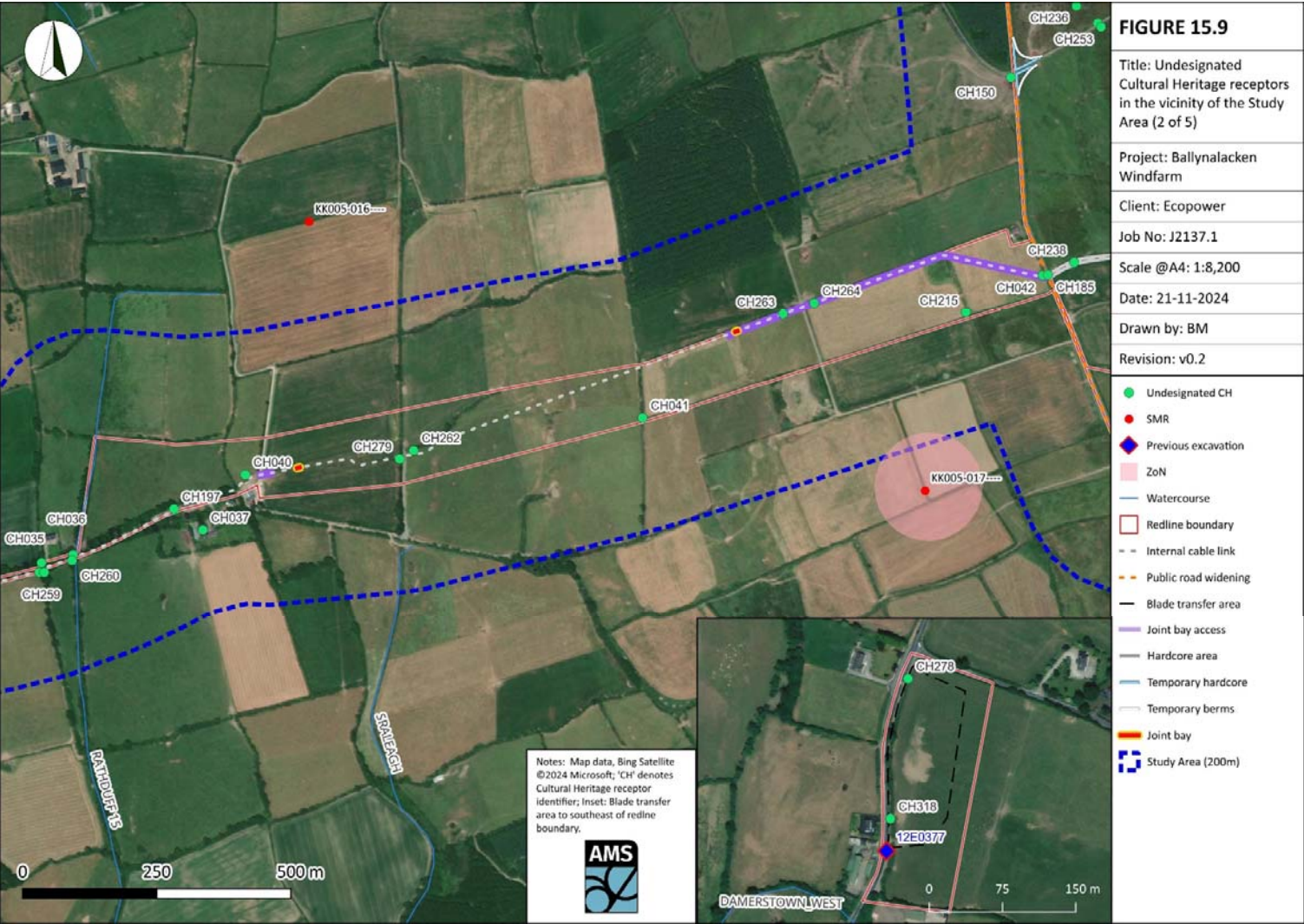


Figure 15.9: Undesignated Cultural Heritage receptors in the vicinity of the Study Area (2 of 5).

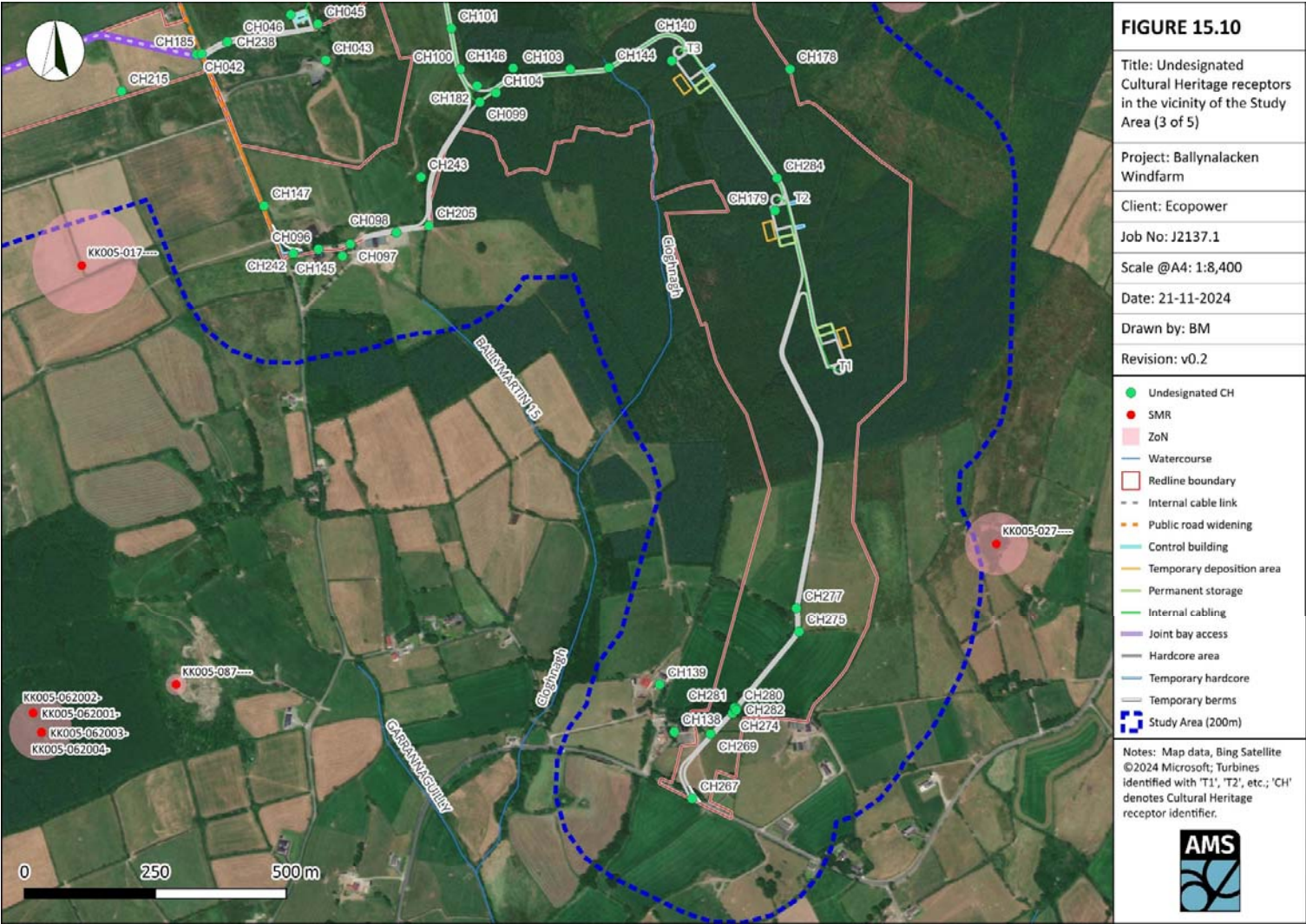


Figure 15.10: Undesignated Cultural Heritage receptors in the vicinity of the Study Area (3 of 5).



Figure 15.11: Undesignated Cultural Heritage receptors in the vicinity of the Study Area (4 of 5).

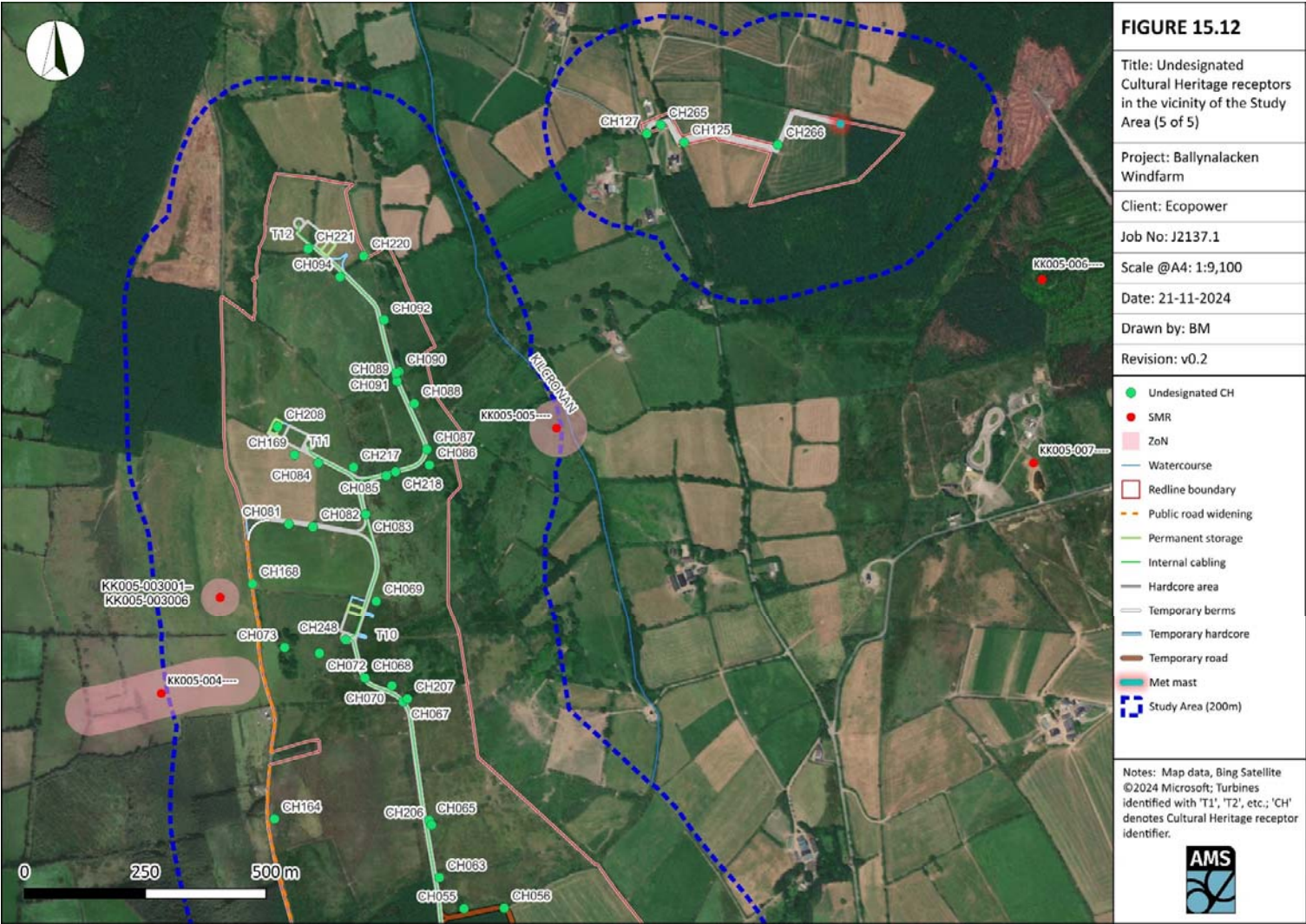


Figure 15.12: Undesignated Cultural Heritage receptors in the vicinity of the Study Area (5 of 5).

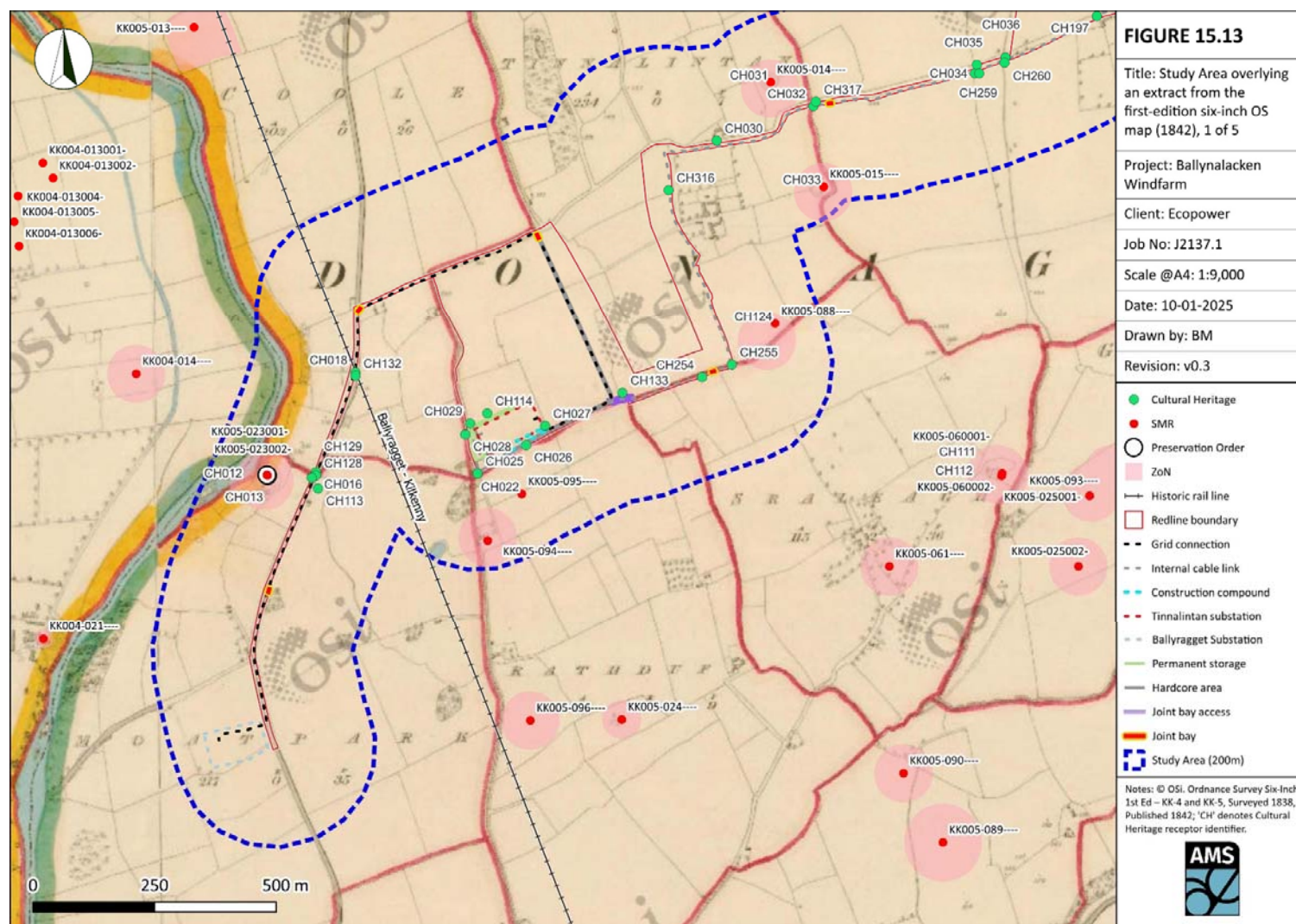


Figure 15.13: Study Area overlying an extract from the first-edition six-inch OS map (1842), 1 of 5.

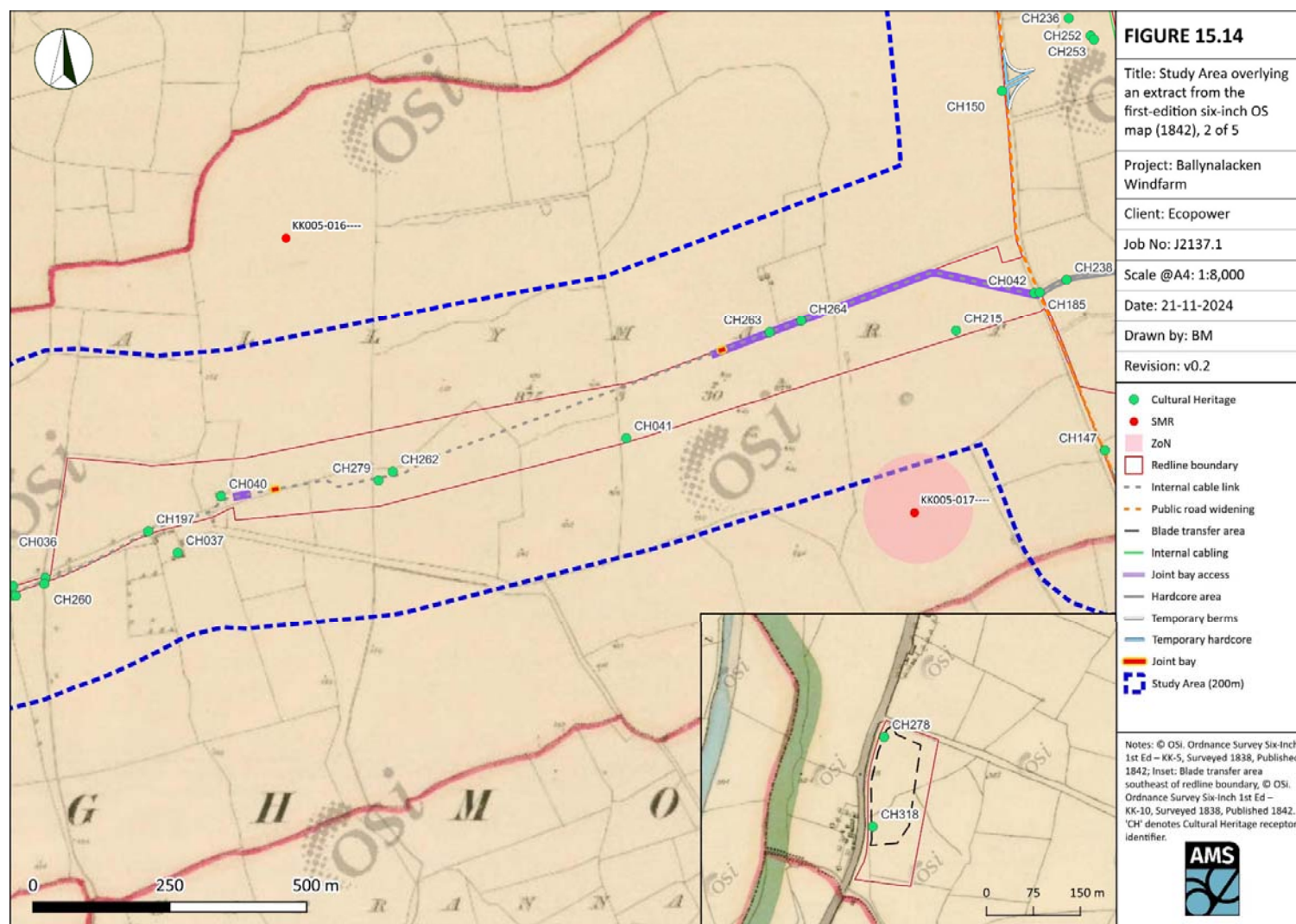


Figure 15.14: Study Area overlying an extract from the first-edition six-inch OS map (1842), 2 of 5.

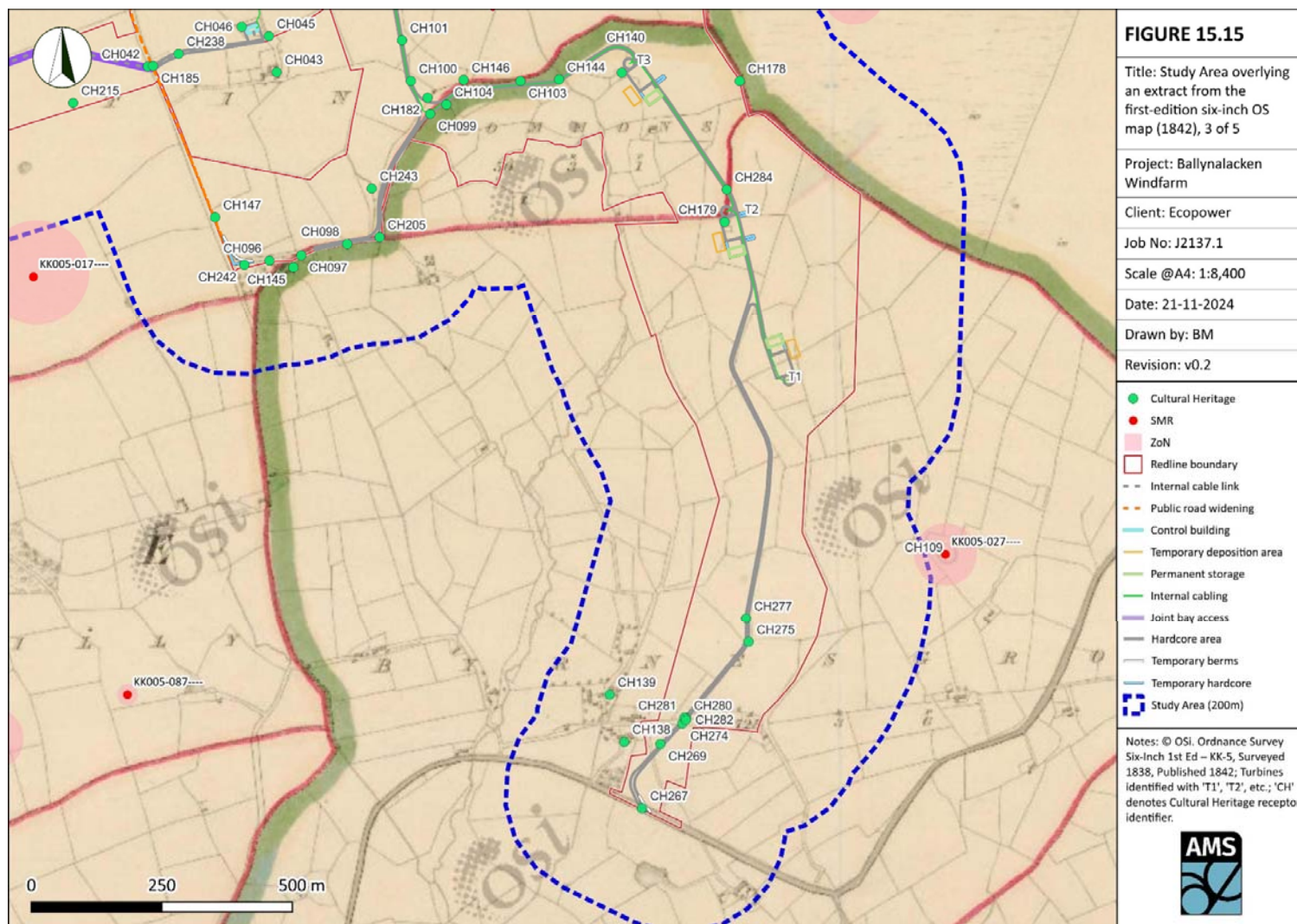


Figure 15.15: Study Area overlaying an extract from the first-edition six-inch OS map (1842), 3 of 5.

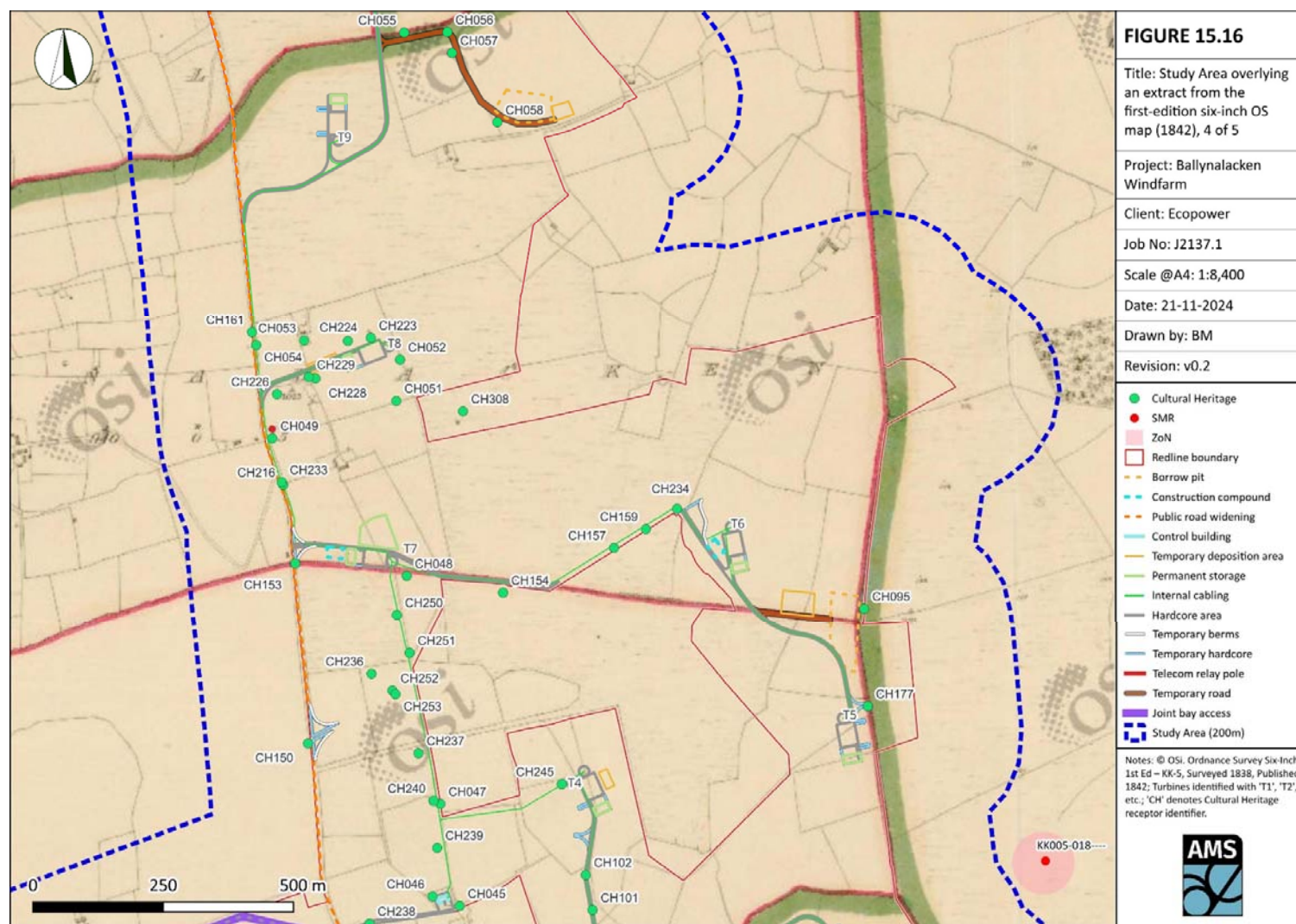


Figure 15.16: Study Area overlaying an extract from the first-edition six-inch OS map (1842), 4 of 5.

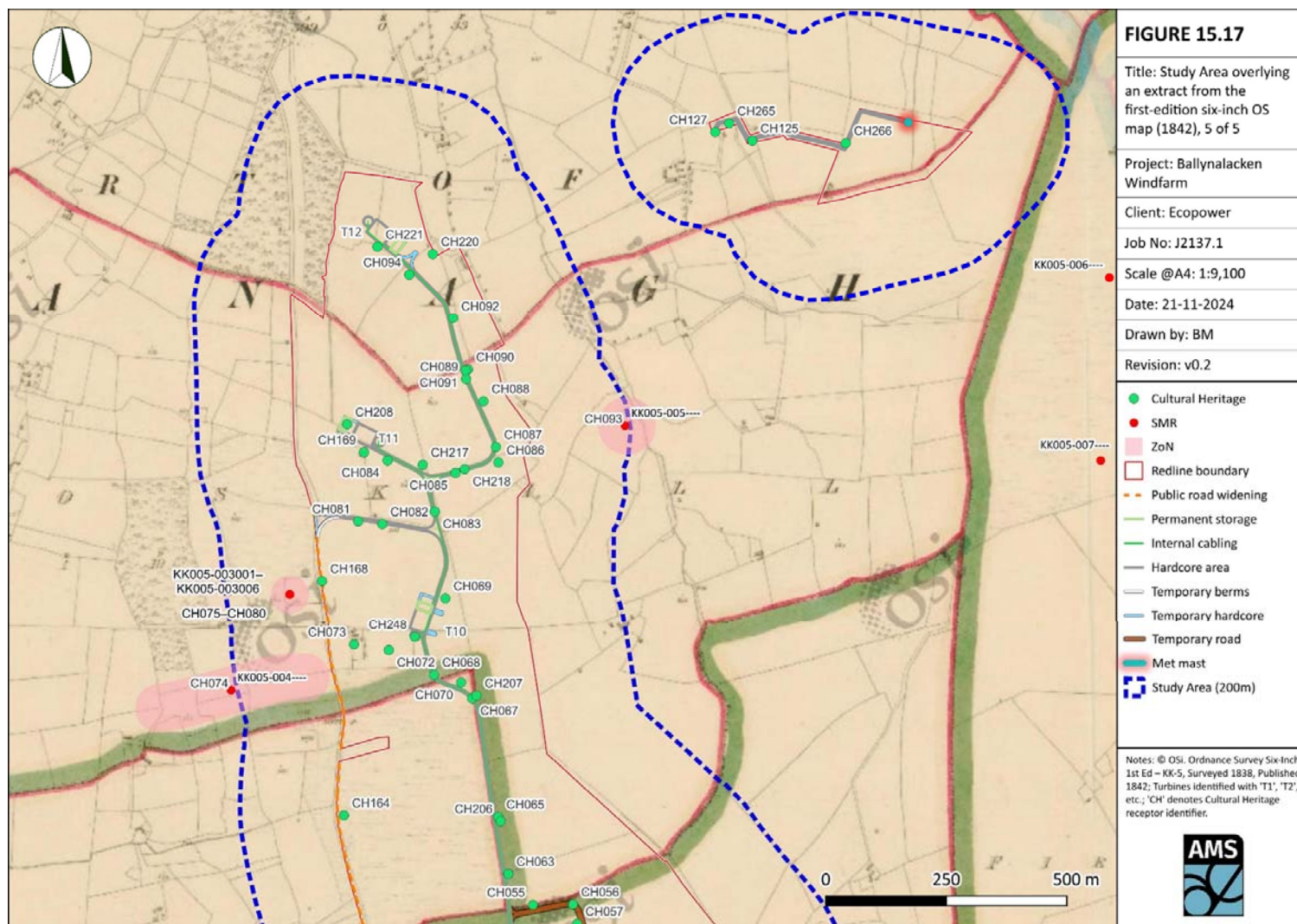


Figure 15.17: Study Area overlying an extract from the first-edition six-inch OS map (1842), 5 of 5.

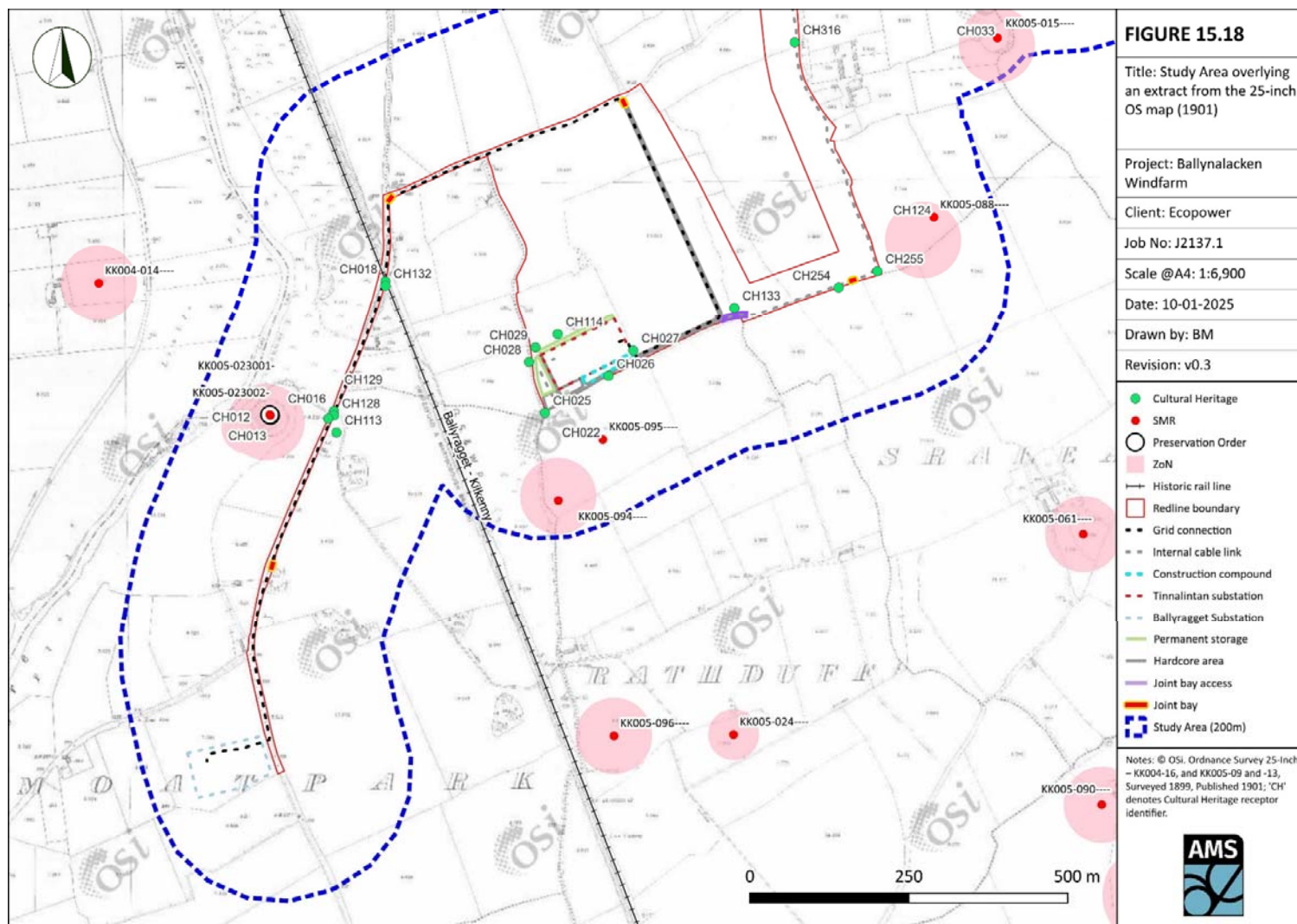


Figure 15.18: Study Area overlying an extract from the 25-inch OS map (1901).

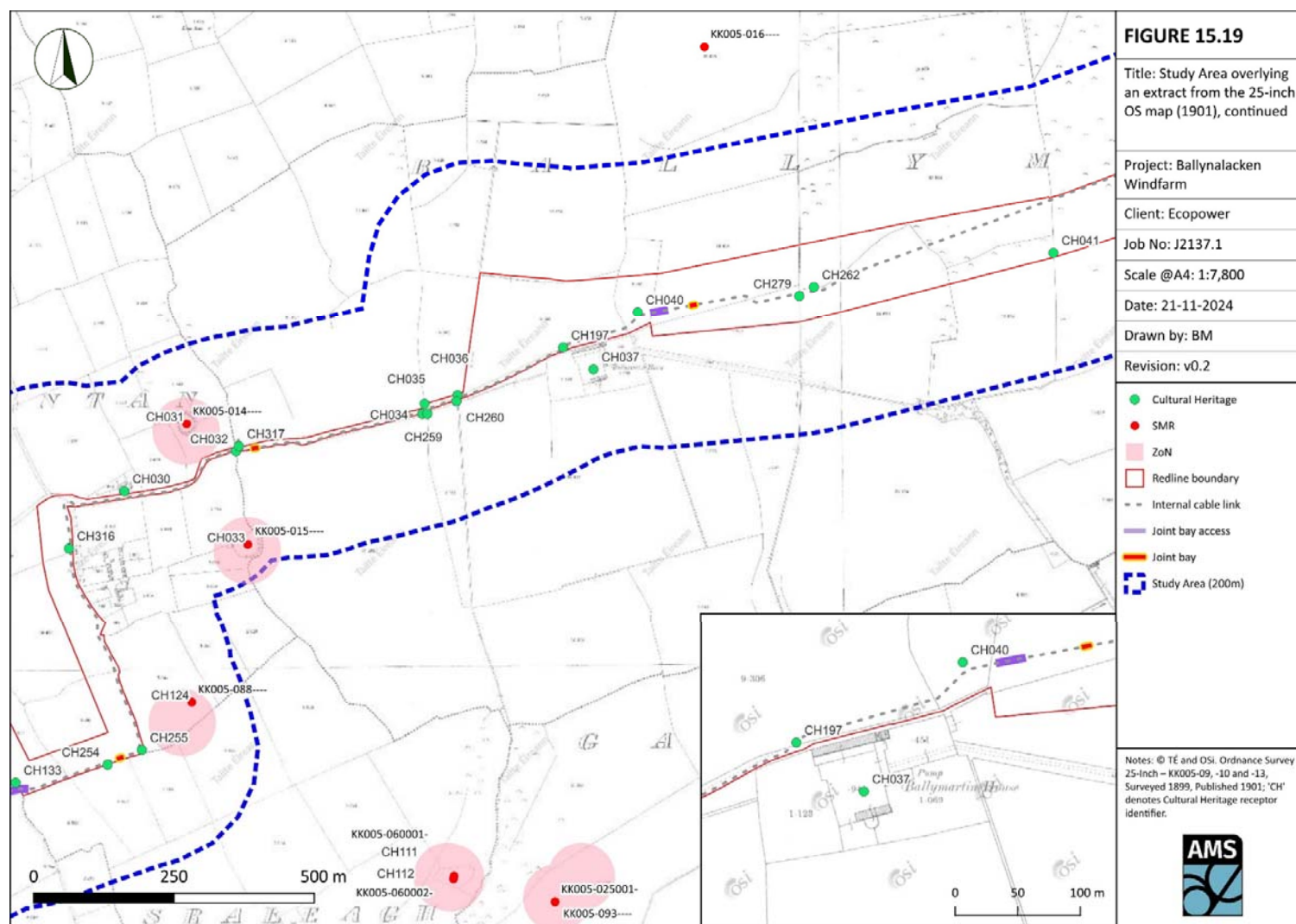


Figure 15.19: Study Area overlying an extract from the 25-inch OS map (1901), continued.

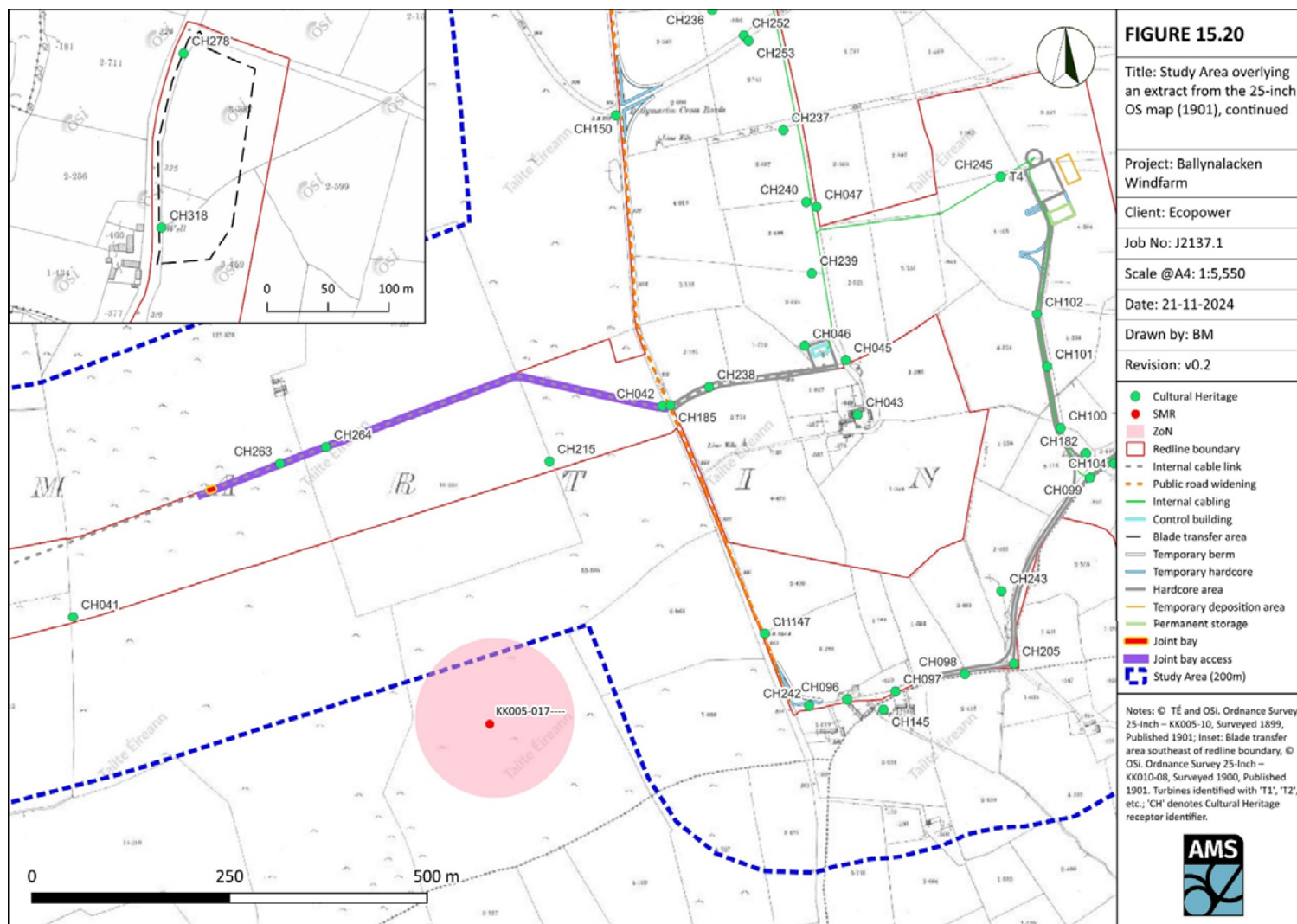


Figure 15.20: Study Area overlying an extract from the 25-inch OS map (1901), continued.

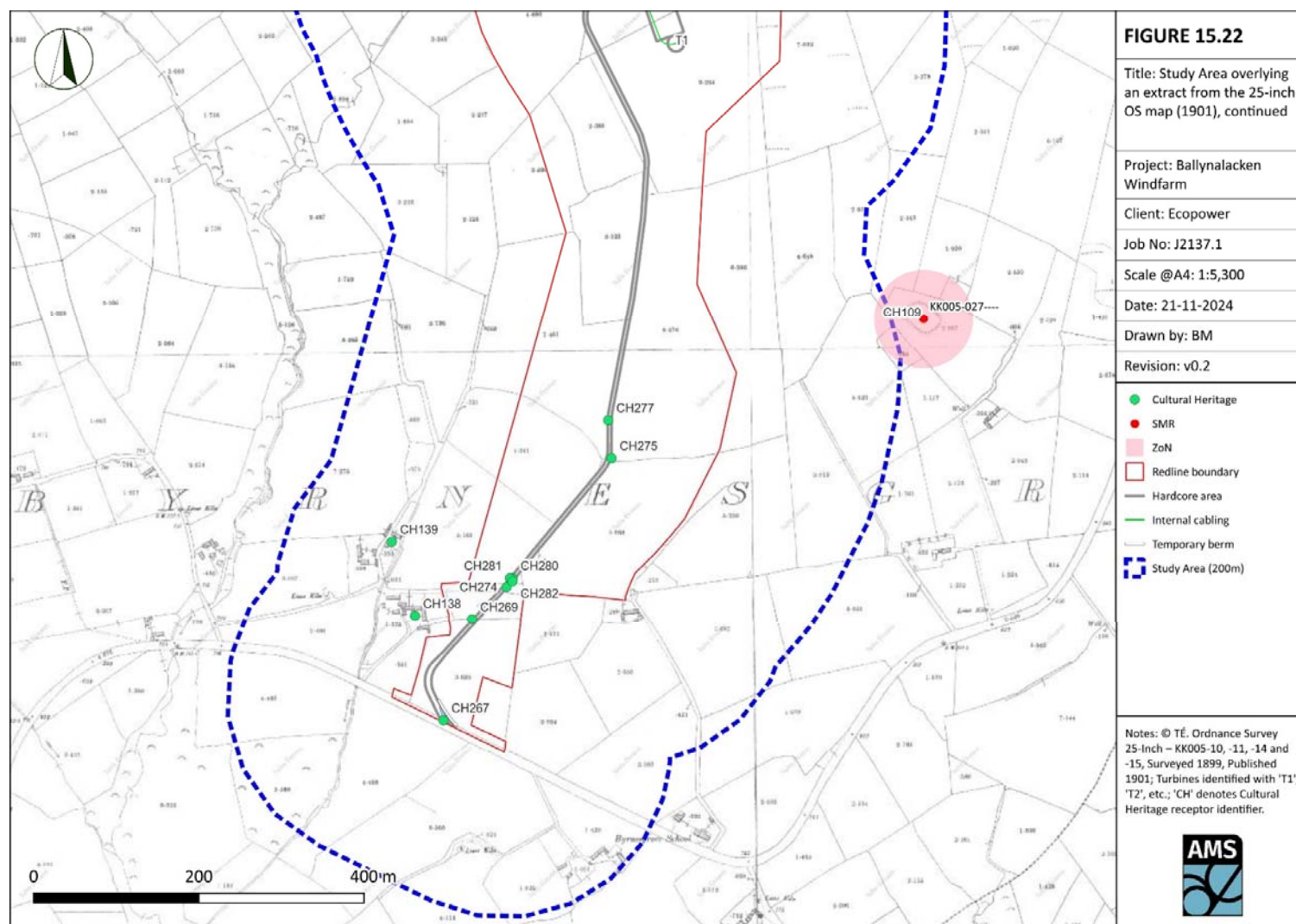


Figure 15.22: Study Area overlying an extract from the 25-inch OS map (1901), continued.

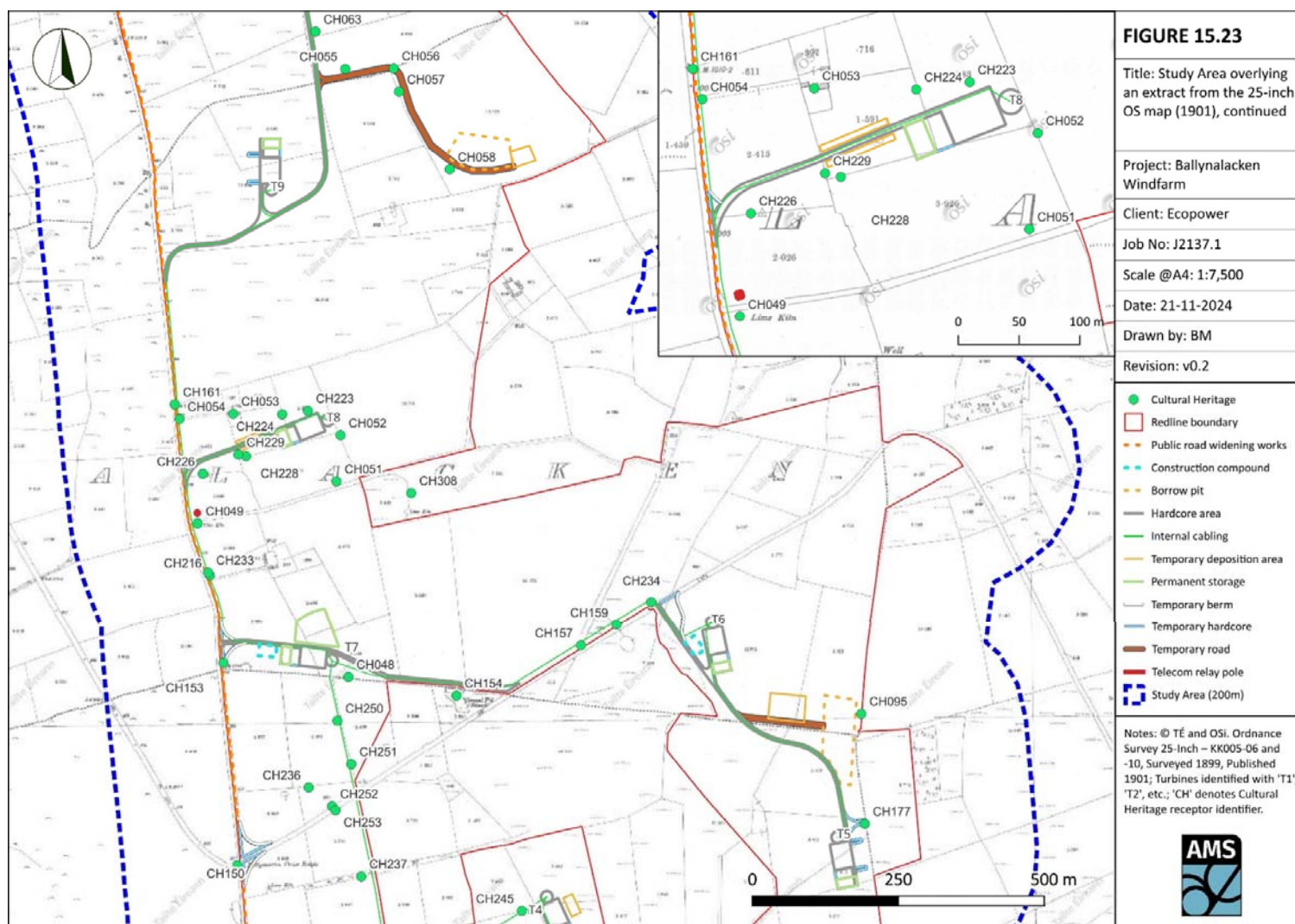


Figure 15.23: Study Area overlying an extract from the 25-inch OS map (1901), continued.

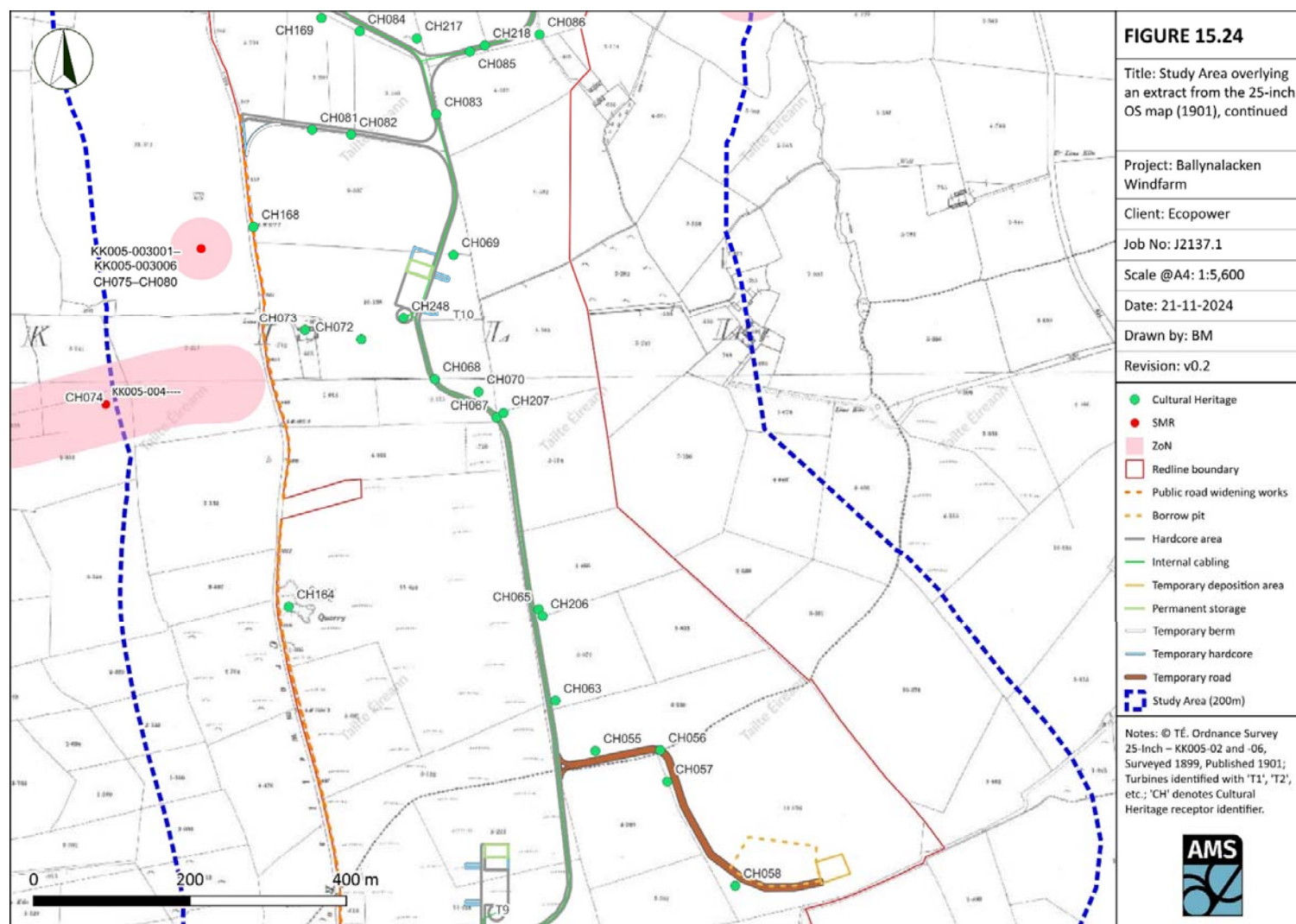


Figure 15.24: Study Area overlying an extract from the 25-inch OS map (1901), continued.

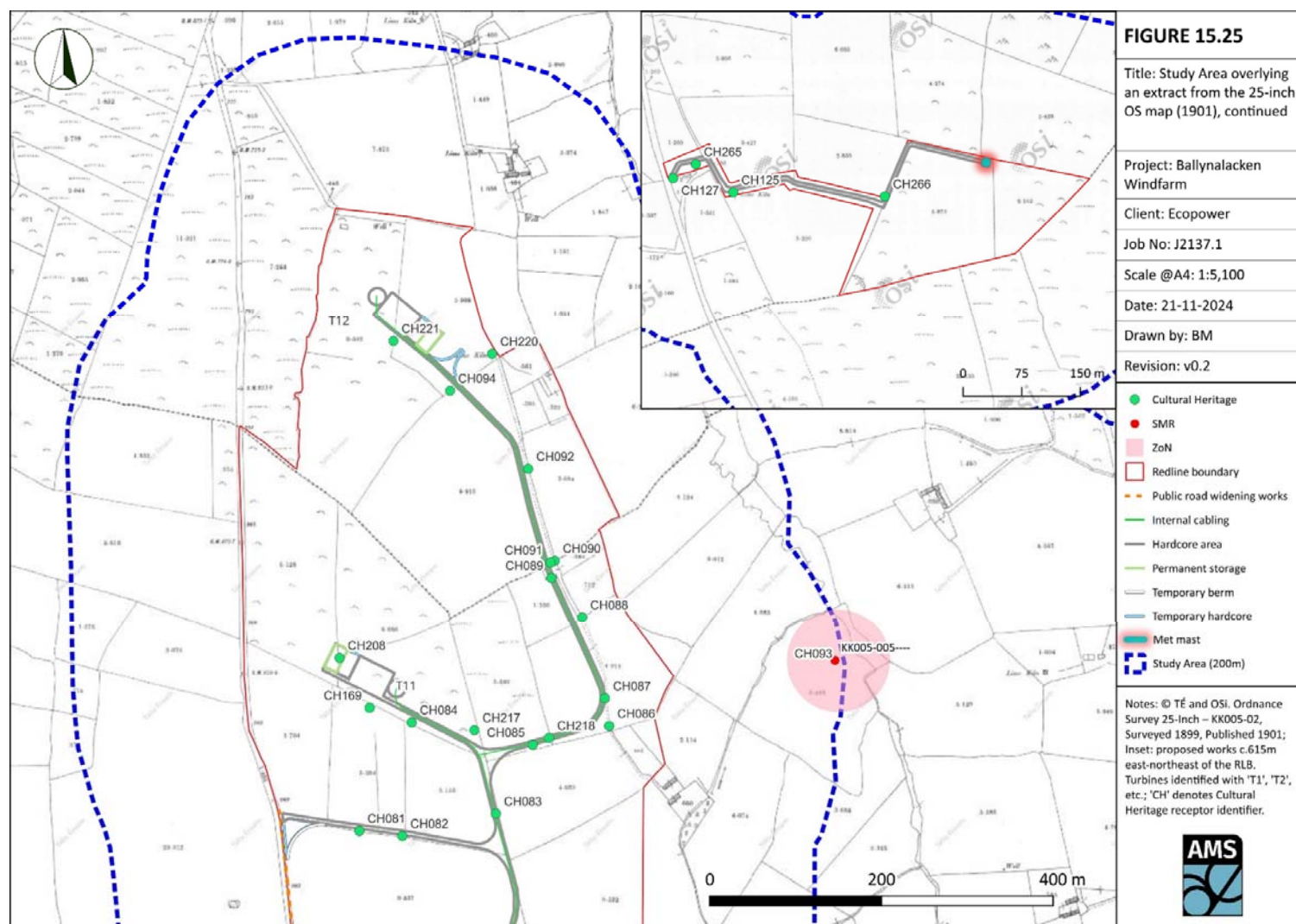


Figure 15.25: Study Area overlying an extract from the 25-inch OS map (1901), continued.

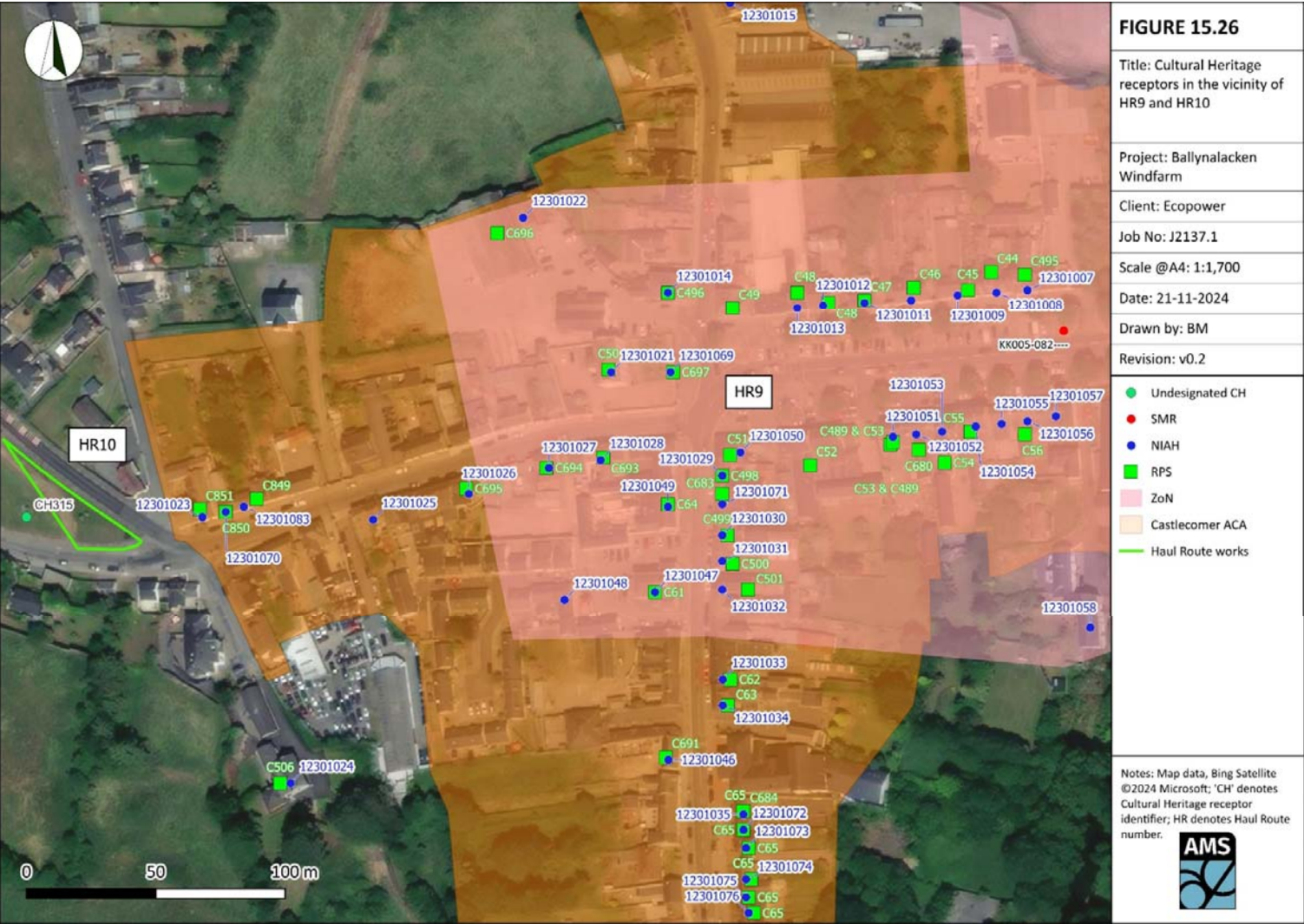


Figure 15.26: Cultural Heritage receptors in the vicinity of HR9 and HR10.

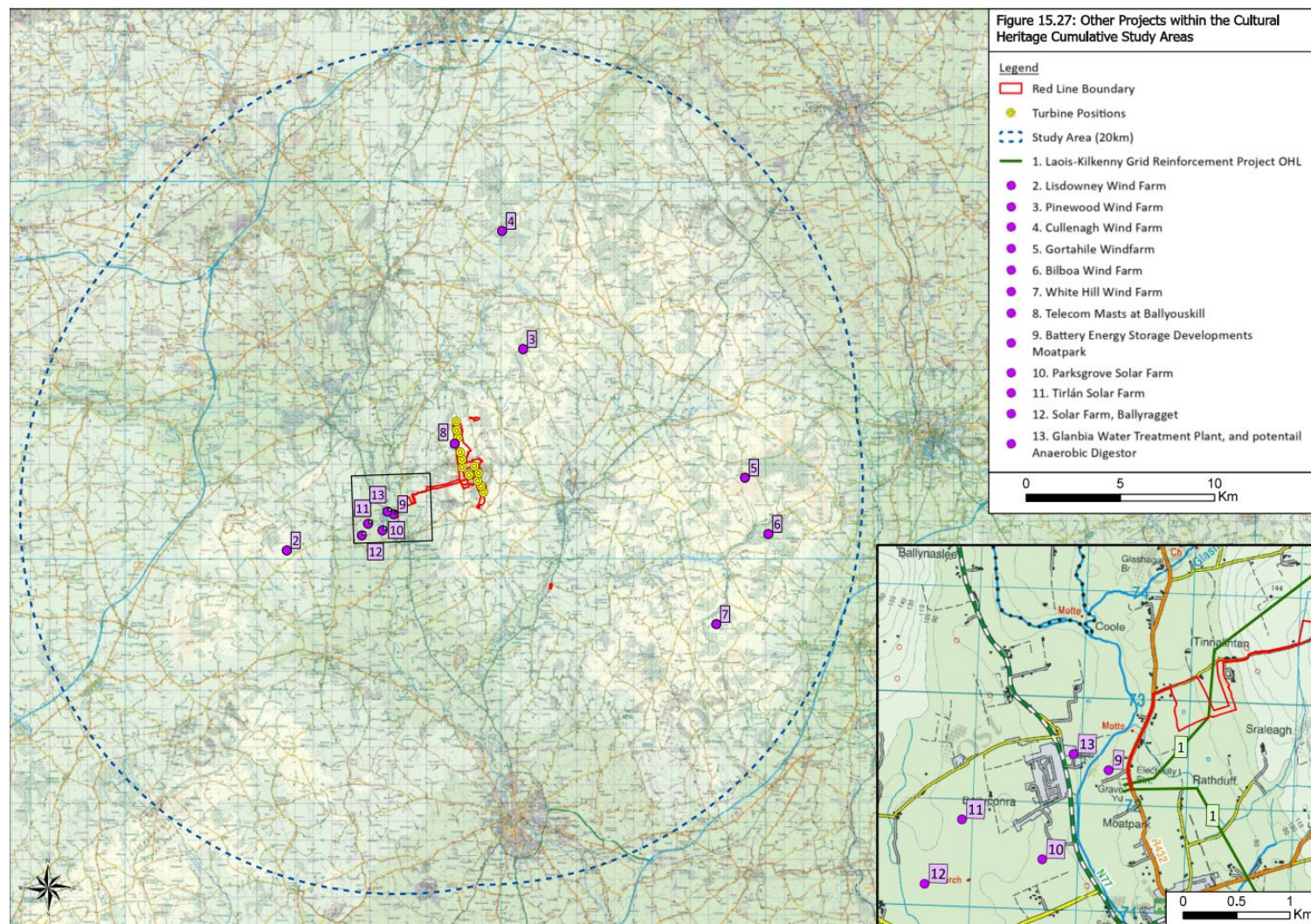


Figure 15.7: Other projects within the Cultural Heritage Cumulative Study Area (provided by Ecopower).

Appendix 15.1: Cultural Heritage Dataset

Appendix to Chapter 15: Cultural Heritage

Appendix 15.1: Cultural Heritage Dataset

Appendix 15.1 Cultural Heritage Dataset

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH001	Church	Recorded Monument; listed in the SMR	KK009-013001-	Medium	Indirect Negative	Low	Slight	Closest turbine c.6.04km to NE; however, clear views to hilltop. Visual impact - although one that is consistent with emerging and baseline trends.	642918, 671294
CH002	Graveyard	Recorded Monument; listed in the SMR	KK009-013002-	Medium	Indirect Negative	Low	Slight	Closest turbine c.6.04km to NW; however, clear views to hilltop. Visual impact - although one that is consistent with emerging and baseline trends.	642931, 671319
CH003	House	Protected Structure; listed in the NIAH	RPS 525; 12803505	High	Indirect Negative	Low	Slight	Visual impact to E mostly screened by mature vegetation in the associated gardens.	642994, 675635
CH004	Church/chapel	Protected Structure; listed in the NIAH	RPS 167; 12803501	High	Indirect Negative	Low	Slight	Visual impact lessened by mature trees in graveyard and to E of road; however, Ballynalacken Hill and turbines visible.	644052, 676005
CH005	School	Protected Structure; listed in the NIAH	RPS 168; 12803503	High	Indirect Negative	Low	Slight	Visual impact to E from turbines as Ballynalacken Hill visible; however, impact partially lessened by trees to SE.	643984, 676082
CH006	House - fortified house	Recorded Monument; listed in the SMR	LA029-048----	Medium	Indirect Negative	Medium	Moderate	Closest turbine c.4.62km to ESE.	643052, 678484
CH007	Church	Recorded Monument; listed in the SMR	KK001-005001-	Medium	Indirect Negative	Low	Slight	Closest turbine c.2.46km to SE; magnitude of visual impact lessened by copse of mature	645150, 678004

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								broadleaved trees in SE of graveyard.	
CH008	Graveyard	Recorded Monument; listed in the SMR	KK001-005002-	Medium	Indirect Negative	Low	Slight	Closest turbine c.2.46km to SE; magnitude of visual impact lessened by copse of mature broadleaved trees in SE of graveyard.	645116, 678001
CH009	Church/chapel	Protected Structure; listed in the NIAH	RPS C262; 12400501	High	Indirect Negative	Low	Slight	Closest turbine c.2.41km to E. Magnitude of visual impact lessened by mature broadleaved trees in churchyard.	645078, 677155
CH010	Ringfort - rath	Recorded Monument; listed in the SMR	KK005-001----	Medium	Indirect Negative	Low	Slight	Views to E and SE screened by mature trees on ringfort and mature hedgerows further to E and SE. Closest turbine c.2.35km to E.	645181, 676512
CH011	Castle - ringwork	Recorded Monument; listed in the SMR	KK005-002----	Medium	Indirect Negative	Low	Slight	Closest turbine c.1.34km to ENE; views to east partially occluded by commercial forestry plantation.	646360, 675741
CH012	Castle - motte	Preservation Order; Recorded Monument; listed in the SMR	5/1983; KK005-023001-	High	Indirect Negative	Low	Moderate	Unobstructed views to Ballynalacken Hill. See LVIA Viewpoint 'CH012 & CH013' in Appendix 15.11 and Chapter 14.	644403, 672739
CH013	Castle - unclassified	Preservation Order; Recorded Monument; listed in the SMR	5/1983; KK005-023002-	High	Indirect Negative	Low	Moderate	Unobstructed views to Ballynalacken Hill. Viewpoint 'CH012 & CH013' in Appendix 15.11 and Chapter 14.	644411, 672748
CH016	AAP: Rathduff Stream	Undesignated	N/A	Low	Direct Negative	Low	Slight	One option for proposed works to install the grid connection cabling at the bridge (CH128)	644512, 672754

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								includes the installation of cables by directional drilling under the bridge and watercourse, from the road corridor. This is located in an area of high archaeological potential due to both proximity to the watercourse AND proximity to CH012 and CH013 (under Preservation Order) and archaeological deposits, remains, artefacts may exist.	
CH018	Rail line (site of)	Undesignated	N/A	Very Low	Direct Negative	Very Low	Imperceptible	Rail line crosses through the RLB at the R432.	644593, 672959
CH022	Field system	Listed in the SMR	KK005-095----	Low	Direct Negative	Low	Slight	Mitigation recommendations stem from uncertainty of extent and preservation of field system, and the possibility for associated remains to extend north into the substation field.	644935, 672709
CH025	Lime kiln	Undesignated	N/A	Low	Indirect Negative	Low	Slight	The layout was changed on 03.04.23 to avoid running grid connection along laneway here. Now runs through corner of field to east. While it is now outside of the RLB it is in close proximity and associated, unrecorded subsurface remains could exist.	644844, 672751
CH026	Townland boundary: Rathduff; Tinnalintan	Undesignated	N/A	Low	Direct Negative	Low	Slight	The RLB runs along this townland boundary which is also in close proximity to works proposed at the Tinnalintan substation, grid connection, internal cable link, joint bay, etc.	644944, 672809

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH027	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Boundary c.300m in extent, potential for c.86m to be impacted by temporary construction compound. However, boundary can be avoided and with compound cited at a c.10m distance from receptor.	644983, 672849
CH028	Townland boundary: Coole; Tinnalintan	Undesignated	N/A	Low	Direct Negative	Low	Slight	The RLB runs along this townland boundary which is also in close proximity to works proposed at the Tinnalintan substation and location for permanent storage.	644819, 672831
CH029	Vernacular structure (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	In close proximity to the Construction Works Boundary and hedgerow replant.	644829, 672854
CH030	Farm complex	Undesignated	N/A	Low	Potential Direct Negative	Low	Not Significant	No visual impact or impact to setting, as cable will not be visible once laid. Boundary features in close proximity to RLB and proposed location of cable link.	645336, 673437
CH031	Ringfort - rath	Recorded Monument; listed in the SMR	KK005-014----	Medium	Indirect Negative; Direct Negative	Low	Slight	Very slight visual impact from turbines as views to E and NE are restricted. ZoN slightly within RLB, and while the cable link is within the road, there could be extant remains associated with the monument.	645447, 673557
CH032	Townland boundary:	Undesignated	N/A	Low	Direct Negative	Low	Slight	Internal cable link appears to follow route parallel to the road and could impact the gate	645535, 673508

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
	Ballymartin; Tinnalintan							piers/wall alongside road at location of TLB.	
CH033	Ringfort - rath	Recorded Monument; listed in the SMR	KK005-015----	Medium	Indirect Negative	Low	Slight	No impact from construction. Only very slight visual impact from turbines as views to E and NE are restricted	645556, 673342
CH034	Gate pier	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	In proximity to proposed location for the cable link.	645867, 673575
CH035	Gate pier	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	In proximity to proposed location for the cable link.	645871, 673593
CH036	Culvert	Undesignated	N/A	Low	Direct Negative	Low	Slight	Chapter 8 (Water) states that Rathduff_15 " Crosses through the Internal Cable Link, works in public road at W2, works in deck of bridge (includes works to parapet walls) or crossing by direction drill method at W3" (pp. 8-21). At CH036, "W2 is 1.0m in width with cables being installed in the public road above the existing culvert to install the Internal Cable Link, no new culvert or instream works will be required" (pp. 8-41).	645930, 673608
CH037	Country House	Undesignated	N/A	Low	Direct & Indirect Negative	Low	Slight	No impact from construction as cable in road, but ensure structural elements are protected during construction with fencing. Visual impact from turbines to ESE, those to NNE shielded by ridge and commercial forestry.	646172, 673654

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH040	Vernacular structure (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Structure may be located within the Construction Works Boundary and could be impacted if any associated features/ deposits/ artefacts remain.	646251, 673757
CH041	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Very Low	Not Significant	Approx. 13m of the boundary may be impacted by the crossing of the internal cable link.	646992, 673863
CH042	Field boundary	Undesignated	N/A	Very Low	Direct Negative	High	Slight	Will be crossed by the internal cable link; and up to 13m may be impacted. And may be impacted by road-widening works.	647738, 674130
CH043	Farm complex	Undesignated	N/A	Low	Indirect Negative	Medium	Slight	Structures now outside RLB, but there will be impacts to setting and visual impact (though lessened by commercial forestry).	647985, 674119
CH045	Stone wall	Undesignated	N/A	Very Low	Potential Direct Negative	Very Low	Not Significant	In close proximity to the Construction Works Boundary.	647970, 674188
CH046	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Medium	Slight	Delineates footprint of control building.	647918, 674206
CH047	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Internal cable c.2m to west of boundary and crossed by internal cabling towards T4.	647933, 674383
CH048	Townland boundary: Ballymartin; Ballynalacken	Undesignated	N/A	Low	Direct Negative	Medium	Slight	Upwards of 1.1km has the potential to be affected by the proposed development, due to the close proximity of T7 and the internal cabling route, as well as directly due to the internal cable route, temporary deposition area and borrow pit near T6. However,	647869, 674821

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								much of the TLB in this section has been previously disturbed by forestry development (though features may remain).	
CH049	Lime kiln (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Potential for direct impact during construction of telecom relay pole and laying of internal cabling.	647611, 675085
CH051	Fulacht fiadh (possible)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Potential for impact to subsurface archaeological features due to construction of T8 and associated works.	647849, 675157
CH052	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Majority of boundary may be impacted; however, magnitude of impact lowered as it has been altered by forestry works.	647856, 675236
CH053	Vernacular structures	Undesignated	N/A	Low	Indirect Negative	Low	Slight	Turbine located 150m to E with temporary construction compound 150m S. Visual impact and impact to setting.	647672, 675273
CH054	Gate piers	Undesignated	N/A	Low	Potential Direct Negative	High	Slight	Road-widening works to take place along this road, with laying of internal cabling.	647580, 675264
CH055	Fulacht fiadh (possible)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Cobbles got pushed back during forestry ditch clearance. Potential for impact to subsurface archaeological features due to construction of hardcore area and laying of internal cabling.	647864, 675865
CH056	Townland and civil parish	Undesignated	N/A	Low	Direct Negative	Low	Slight	Will be crossed by temporary road leading from borrow pit and	647947, 675866

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
	boundary: Ballynalacken; Ballyoskill							temporary deposition area to the hardcore road and internal cabling.	
CH057	Stone wall	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Slight	Potential for impact due to movement of plant along temporary road.	647956, 675826
CH058	Fulacht fiadh (possible)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Area of potential for burnt mounds. Low-lying marshy area in corner of field; temporary road, borrow pit and temporary deposition area proposed here.	648043, 675693
CH063	Fulacht fiadh (possible)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Along location of internal cable route and hardcore area.	647813, 675929
CH065	Fulacht fiadh (possible)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Along location of internal cable route and hardcore area.	647792, 676047
CH067	Historic townland and civil parish boundary: Attanagh; Kilmenan	Undesignated	N/A	Low	Direct Negative	Low	Slight	Historic boundary will be crossed at this point, and c.50m west-northwest along internal cable route (see historic map).	647738, 676292
CH068	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	c.12m of boundary within the Construction Works Boundary. The hedgerow here will be removed, though hedgerow along rest of boundary is slated to be improved.	647659, 676341
CH069	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Medium	Not Significant	Hedgerow is to be removed here (potentially up to 60m). And will be directly impacted by temporary hardcore area for T10.	647683, 676501

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH070	Fulacht fiadh (possible)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Waterlogged section of field with potential for fulacht fiadh.	647715, 676325
CH072	Curvilinear banks (possible)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Receptor to immediate SW of proposed turbine T10, hardstand and internal cable. Receptor comprises slight curvilinear bank on cusp of plateau; no evidence for associated ditch.	647565, 676392
CH073	Vernacular structures (in ruins)	Undesignated	N/A	Low	Potential Direct Negative	Low	Not Significant	Two structures shown to E of Cromwell's Road on OS 6-inch map. The OS 25-inch map shows two structures, an outbuilding, well and lime kiln. Complex in ruins, with structural remains covered in vegetation. Not likely to be impacted but road-widening works proposed along east side of road at laneway entrance, and hedgerow work proposed for adjacent field boundaries.	647493, 676404
CH074	Cursus	Recorded Monument; listed in the SMR	KK005-004----	High	Indirect Negative	Medium	Moderate	Visual impact; impact to setting. Closest turbine is c.230m to E. Associated with LVIA Viewpoint 'CH074'; see Appendix 15.11 and Chapter 14.	647238, 676309
CH075	Cairn - unclassified	Recorded Monument; listed in the SMR	KK005-003001-	Low	Indirect Negative	Medium	Slight	Visual impact; impact to setting. Closest turbine is c.224m to SE.	647360, 676509
CH076	Cist	Recorded Monument; listed in the SMR	KK005-003002-	Low	Indirect Negative	Low	Slight	Visual impact; impact to setting. Closest turbine is c.250m to SE.	647374, 676504

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH077	Cist	Listed in the SMR	KK005-003003-	Low	Indirect Negative	Low	Slight	Visual impact; impact to setting. Closest turbine is c.308m to SE.	647318, 676522
CH078	Cist	Listed in the SMR	KK005-003004-	Very Low	Indirect Negative	Low	Not Significant	Impact to setting; closest turbine is c.270m to SE. Magnitude of effect not as high as other cists as receptor was largely destroyed by the bulldozers.	647316, 676514
CH079	Cist	Listed in the SMR	KK005-003005-	Low	Indirect Negative	Low	Slight	Visual impact; impact to setting. Closest turbine is c.243m to SE.	647386, 676517
CH080	Cist	Listed in the SMR	KK005-003006-	Low	Indirect Negative	Low	Slight	Visual impact; impact to setting. Closest turbine is c.270m to SE.	647367, 676541
CH081	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Medium	Slight	Hedgerow to be removed at eastern and western ends, though most of boundary to remain (though within the Construction Works Boundary and in close proximity to the hardcore road). Stone wall present.	647502, 676661
CH082	Kiln (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Impacted by proposed hardcore area leading to T11.	647552, 676655
CH083	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Medium	Slight	Roughly 41m of hedgerow to be removed, though the rest of it field boundary hedge line is slated for improvement, with a new hedgerow planted to the north-northeast following curve of proposed road. Stone wall present.	647661, 676681
CH084	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	c.40m of boundary impacted by turbine, hardstand, internal cable	647563, 676787

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								and road. A small section of hedge at the SE end of the boundary will be removed though most of it to remain intact. Some stone wall present.	
CH085	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Hedgerow removal, replant, and improvement is proposed along the majority of this boundary, with the W end removed to allow for a wider hardcore area (as well as internal cabling). Up to 31m may be affected by hedgerow removal and laying of hardcore, which represents a small proportion of the length of the boundary.	647704, 676761
CH086	Gate piers	Undesignated	N/A	Low	Potential Direct Negative	Low	Not Significant	Located c.6m from edge of Construction Works Boundary. Ensure receptor is not damaged during construction.	647793, 676783
CH087	Trackway	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	The hardcore area/road and internal cable route will be located just to SW of the trackway though in close proximity. Hedgerow is planned between the road and trackway.	647788, 676815
CH088	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	This field boundary actually continues on the other side (SW) of the trackway, though may be less extant (though visible in aerial imagery). Will be impacted by the hardcore area/road and internal cabling.	647762, 676910

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH089	Vernacular structures (in ruins)	Undesignated	N/A	Low	Direct Negative	Medium	Slight	Receptor impacted by internal cable and hardcore area.	647726, 676956
CH090	Gate piers	Undesignated	N/A	Low	Direct Negative	Medium	Slight	During discussion with client, it was mentioned that the gate piers would need to be removed and built like for like if avoidance not feasible.	647730, 676976
CH091	Townland boundary: Ballyoskill; Loughill	Undesignated	N/A	Low	Direct Negative	Low	Slight	Only a c.4m section of boundary will be impacted by cable (7.5m in Construction Works Boundary).	647725, 676974
CH092	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	In close proximity to hardcore road/internal cable route leading to T12. Construction Works Boundary located along boundary.	647699, 677083
CH093	Ringfort - rath	Recorded Monument; listed in the SMR	KK005-005----	Medium	Indirect Negative	Low	Slight	Views impeded to W by rising slope, which reduces magnitude of effect. Closest turbine 474m to WNW	648056, 676859
CH094	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	c.10m of hedgerow will be removed at access point to field where road and cable will cross, and an additional c.70m to be removed just south of the turbine. However, this second section will benefit from hedgerow replanting to swing the boundary just slightly south of current position.	647608, 677174

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH095	Townland boundary: Ballynalacken; Firoda Upper	Undesignated	N/A	Low	Potential Direct Negative	Very Low	Not Significant	c.600m of TLB lie within/along RLB and is in close proximity to the borrow pit north of T5, however, no impact is predicted.	648747, 674758
CH096	Stone wall	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	No impact to wall as existing road will be used. No change to receiving environment.	647971, 673758
CH097	Stone wall	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	No impact to wall. Inside redline, but existing route will be used, so no changes to receiving environment.	648032, 673768
CH098	Townland boundary: Ballymartin; Byrnesgrove	Undesignated	N/A	Low	Direct Negative	Low	Slight	Potential for accidental impact during construction of hardcore area.	648120, 673790
CH099	Townland and civil parish boundary: Ballymartin; Commons	Undesignated	N/A	Low	Direct Negative	Very Low	Not Significant	Townland boundary has been significantly altered due to commercial forestry plantation. Only impact from proposed road that will use existing forestry track.	648279, 674039
CH100	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	c.35m may be impacted by the hardcore road and internal cabling heading towards T4.	648242, 674102
CH101	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Boundary will be directly impacted by updated location for T4 and other associated works, however, magnitude of impact is lowered due to previous disturbance from the forestry block.	648225, 674180

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH102	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Boundary will be directly impacted by road and internal cable, with c.10m of hedgerow to be removed.	648212, 674247
CH103	AAP: blanket peat (EPA Soils)	Undesignated	N/A	Medium	Direct Negative	Low	Slight	Has the potential to be impacted as a result of works associated with the construction of T4, T6, and the internal cabling and hardcore area between T3 and T4. Works associated with T4 will be a direct impact.	648452, 674102
CH104	Vernacular structure (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Direct impact from internal cabling.	648310, 674057
CH106	Castle - ringwork	Recorded Monument; listed in the SMR	KK005-008----	Medium	Indirect Negative	Low	Slight	Turbines 1 and 2 are located 1.89km and 1.8km to the west and southwest respectively; however, the views west and southwest are partially occluded by a rising slope and a commercial forestry plantation that reduces the magnitude of effect.	650342, 675322
CH107	Castle - unclassified	Listed in the SMR	KK005-069001-	Low	Indirect Negative	Low	Not Significant	Very poor preservation above ground so no visual impact.	651210, 673642
CH108	Moated site	Recorded Monument; listed in the SMR	KK005-069----	Medium	Indirect Negative	Low	Slight	Not very visible above ground, so only slight impact.	651208, 673616
CH109	Enclosure	Recorded Monument; listed in the SMR	KK005-027----	Medium	Indirect Negative	Low	Slight	Views to N and NE obscured by ridge and commercial forestry. Closest turbine sited 572m to NW, but only top will be visible.	649266, 673194

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH110	Hillfort	Recorded Monument; listed in the SMR	KK010-007001-	High	Indirect Negative	Medium	Moderate	Closest turbine c.2.9km to NE; however, impact consistent with emerging and baseline trends. Associated with LVIA Viewpoint 'CH110'; see Appendix 15.11 and Chapter 14.	647564, 671007
CH111	Church	Recorded Monument; listed in the SMR	KK005-060001-	Medium	Indirect Negative	Very Low	Not Significant	Only minimal visual impact as edge of site screened by mature broadleaved trees.	645922, 672746
CH112	Graveyard	Recorded Monument; listed in the SMR	KK005-060002-	Medium	Indirect Negative	Very Low	Not Significant	Only minimal visual impact as edge of site screened by mature broadleaved trees.	645933, 672763
CH113	Geophysical anomaly (possible ditch)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	In close proximity to Preservation Order receptor.	644516, 672720
CH114	Geophysical anomaly (two pairs of parallel ditches)	Undesignated	N/A	Low	Direct Negative	Low	Slight	All four parallel anomalies may be impacted by the proposed Tinnalintan substation and associated works.	644864, 672875
CH124	Enclosure	Listed in the SMR	KK005-088----	Medium	Potential Direct Negative	Low	Slight	Enclosure not visible at ground level so no visual impact.	645456, 673060
CH125	Lime kiln (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Does not appear to be extant above ground.	648320, 677452
CH127	Well (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Forested area was outside of the RLB and was not explored.	648243, 677470
CH128	Bridge	Undesignated	N/A	Low	Direct Negative	High	Moderate	Proposed works to the bridge to install the grid connection cabling includes trench works and increasing height of parapet wall or the installation of the cables	644512, 672747

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								by directional drilling under the bridge and watercourse from the road corridor.	
CH129	Benchmark	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	If extant, may be impacted by bridge works.	644503, 672742
CH132	Level crossing (site of)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	If level crossing this was probably removed, although they are usually indicated on the maps. Included as an archaeological receptor, as we cannot quantify significance.	644593, 672952
CH133	Well (site of)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	This area is now disturbed with recent upgraded pylon and hardcore, however, mitigation still recommended as exact location is unknown.	645142, 672917
CH138	Farm complex	Undesignated	N/A	Low	Indirect Negative	Medium	Slight	Area to N and NE partially obscured by ridge and commercial forestry. Slight visual impact and impact to setting.	648650, 672834
CH139	Farm complex	Undesignated	N/A	Low	Indirect Negative	Medium	Slight	Area to N and NE partially obscured by ridge and commercial forestry. Slight visual impact and impact to setting.	648622, 672924
CH140	Vernacular structures (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Likely disturbed as now within extant forestry block, but immediately adjacent to T3 and some remains may exist.	648646, 674118
CH144	AAP: Cloghnagh Stream	Undesignated	N/A	Low	Direct Negative	Low	Slight	Along proposed cable route. Chapter 8 (Water) states: "W1 is c.1.0m in width and will require	648526, 674105

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								the installation of a new bottomless culvert to facilitate the construction of a Windfarm Site Road over this watercourse; Wet drainage channel D1 is c.0.5m in width and will require a diversion of the channel for 50m and the installation of a new bottomless culvert to facilitate the construction of a Windfarm Site Road over this drain; D2 is 0.7m in width and will require the extension of the existing culvert by 8m to facilitate the widening of the existing forestry track over this culvert; D3 is 1.0m in width and will require the installation of a new bottomless culvert to facilitate the construction of a Windfarm Site Road over this drain" (pp. 8-41).	
CH145	Farm complex	Undesignated	N/A	Low	Indirect Negative	Medium	Slight	Impact to setting and visual impact lessened by commercial forestry.	648017, 673745
CH146	Lime kiln (site of)	Undesignated	N/A	Low	Potential direct	Low	Slight	Within forestry block and area of disturbance.	648343, 674104
CH147	Benchmark	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Unknown if extant. Road-widening works here, within the RLB.	647867, 673841
CH150	Benchmark	Undesignated	N/A	Low	Direct Negative	Low	Slight	May be impacted by road widening works in this area.	647679, 674499
CH153	Benchmark	Undesignated	N/A	Low	Direct Negative	Low	Slight	If extant, may be impacted by road-widening works and	647655, 674845

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								temporary berms at entrance to T7.	
CH154	Gravel pit (site of)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	May still be visible at ground level, but in area of disturbance/forestry. Not noted on first-edition six-inch OS map, however, labelled as 'disused' on the 25-inch OS map.	648054, 674789
CH157	AAP: watercourse	Undesignated	N/A	Low	Direct Negative	Low	Slight	Includes culvert and stream, as both receptors are interrelated and will both be impacted in this location.	648267, 674875
CH159	Culvert	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Culvert may be impacted by internal cable route, running parallel along field boundary to north.	648328, 674911
CH161	Benchmark	Undesignated	N/A	Low	Direct Negative	Low	Slight	If extant, may be impacted by road-widening works.	647572, 675289
CH164	Quarries (site of)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Two attached quarries, one noted as disused on the 25-inch OS map. See also, aerial images.	647472, 676050
CH168	Benchmark	Undesignated	N/A	Low	Direct Negative	Low	Slight	If extant, may be impacted by road-widening works.	647427, 676537
CH169	Vernacular structures (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Remains may occur right alongside field boundary which has the potential to be impacted by movement of plant, etc.	647514, 676804
CH177	Townland and civil parish boundary	Undesignated	N/A	Low	Potential Direct Negative	Low	Not Significant	Parish boundary and civil parish boundary in this area largely destroyed due to commercial forestry. However, there is the	648753, 674570

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								potential for ditches to be extant below ground.	
CH178	Townland and civil parish boundary	Undesignated	N/A	Low	None	N/A	N/A	Parish boundary and civil parish boundary in this area largely destroyed due to commercial plantations. However, there is the potential for ditches to be extant below ground.	648872, 674102
CH179	Vernacular structures (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	If extant, may be directly impacted by proposed T2 and associated works. However, likely previously disturbed by cut block.	648843, 673832
CH182	Lime kiln	Undesignated	N/A	Low	Direct Negative	Medium	Slight	Within/ in proximity to Construction Works Boundary. Possibility for associated features/deposits in vicinity.	648274, 674070
CH185	Gate pier and stone wall	Undesignated	N/A	Low	Direct Negative	Medium	Slight	Likely impacted by road-widening works and works related to laying of hardcore road and internal cable link and internal cabling.	647748, 674131
CH197	Stone wall	Undesignated	N/A	Very Low	Direct Negative	Low	Slight	Stone and brick wall, c.0.6m high. Boundary wall associated with Ballymartin House. Cable link will directly cross this field boundary at or in close proximity to the wall.	646118, 673693
CH205	Gate pier	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	Set up into field slightly.	648182, 673803
CH206	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Up to 20m located within the Construction Works Boundary, with internal cabling and	647797, 676038

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								hardcore area/road crossing boundary slightly (though it follows route of farm track).	
CH207	Field boundary; stone wall	Undesignated	N/A	Low	Potential Direct Negative	Very Low	Not Significant	In very close proximity to proposed works.	647747, 676298
CH208	AAP: field system	Undesignated	N/A	Low	Direct Negative	Low	Slight	T11 is likely to impact remnants of the field system as noted during walkover survey and aerial imagery.	647479, 676862
CH215	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Small 10m section may be impacted where internal cable link and joint bay access route will cross.	647595, 674060
CH216	Gate piers	Undesignated	N/A	Low	Direct Negative	Medium	Slight	Likely impacted by road-widening works, hedgerow improvement and internal cabling.	647632, 674996
CH217	Stone wall	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Approx. 20m may be impacted, though only remnants/footing are visible, and the remaining length of the receptor will not be impacted. Magnitude of effect is lowered as only a small section to be impacted and poor preservation.	647636, 676778
CH218	Stone wall	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Approx. 20m may be impacted, though only remnants/footing are visible, and the remaining length of the receptor will not be impacted. Magnitude of effect is lowered as only a small section to be impacted and poor preservation.	647723, 676769

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH220	Lime kiln	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Potential for impact due to movement of plant. c.12m from Construction Works Boundary of turbine.	647657, 677217
CH221	Stone wall	Undesignated	N/A	Very Low	Direct Negative	Medium	Not significant	Not much remaining but potential up to 65m may be impacted by construction of turbine.	647542, 677232
CH223	Well (site of)	Undesignated	N/A	Low	Direct Negative	Low	Slight	Within the Construction Works Boundary and may be impacted by T8 and associated works.	647800, 675278
CH224	Historical field boundary	Undesignated	N/A	Low	Direct Negative	Low	Slight	Associated with CH053. c.56m may be impacted.	647756, 675272
CH226	Historical field boundary	Undesignated	N/A	Low	Direct Negative	Low	Slight	Associated with CH053. c.20m falls within the Construction Works Boundary and may be impacted.	647620, 675170
CH228	Historical field boundary	Undesignated	N/A	Low	Direct Negative	Medium	Slight	Associated with CH053. Over 100m may be impacted (within the Construction Works Boundary).	647694, 675200
CH229	Historical field boundary	Undesignated	N/A	Low	Direct Negative	Low	Slight	Associated with CH053. c.25m falls within the Construction Works Boundary and may be impacted.	647681, 675203
CH233	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Medium	Not Significant	More than 75m of hedgerow will be removed for the concealed area, temporary berms, internal cabling route and hardcore area/road. The remaining 155m	647629, 675001

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								or so will benefit from hedgerow improvement.	
CH234	Stone enclosure	Undesignated	N/A	Very Low	Direct Negative	High	Slight	Receptor is fully within the Construction Works Boundary with the internal cable route running through it.	648388, 674950
CH236	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	Route of internal cabling will cross the boundary where the farm track is located, however, there is potential for the eastern end of the boundary to be impacted as is within the Construction Works Boundary.	647801, 674632
CH237	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	Route of internal cabling will cross the boundary where the farm track is located, however, there is potential for the eastern end of the boundary to be impacted as is within the Construction Works Boundary.	647891, 674480
CH238	Former laneway	Undesignated	N/A	Very Low	Direct Negative	Very low	Not Significant	Internal cabling and internal cable link will follow route of current laneway, and hardcore placed for road. The hedgerow along the northern side of the laneway will be improved, however a c.35m section will be removed for the control building. It appears that the road will not be widened. As laneway will not be altered, no mitigation required.	647797, 674154

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH239	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Very low	Not Significant	Route of internal cabling will cross the boundary where the farm track is located, however, there is potential for the eastern end of the boundary to be impacted as is within the Construction Works Boundary.	647927, 674299
CH240	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Very low	Not Significant	Route of internal cabling will cross the boundary where the farm track is located, however, there is potential for the eastern end of the boundary to be impacted as is within the Construction Works Boundary.	647920, 674389
CH242	Laneway	Undesignated	N/A	Low	Potential Direct Negative	Low	Not Significant	Laneway within the RLB. A hardcore area is proposed along both eastern and western ends. Construction Works Boundary follows the route of the laneway with the exception of the eastern end before a 90 degree turn north where it will be expanded for turning radius. HR13 is located at SW corner of the field, north of the laneway. A stone wall was noted at various locations along both sides of the laneway, and therefore, the possibility exists for remnants to remain within the hedge, along the area impacted by HR13.	647923, 673750
CH243	AAP: watercourse	Undesignated	N/A	Low	Direct Negative	Low	Slight	Will be impacted by road-widening works. As noted in Chapter 8 (Water): "[Drainage	648167, 673896

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								channel] D2 is located at an existing culvert crossing on a wet drainage channel which drains into the Ballymartin_15, which in turn drains into the Cloghnagh_010. D2 is 0.7m in width and will require the extension of the existing culvert by 8m to facilitate the widening of the existing forestry track over this culvert".	
CH245	Historical field boundary	Undesignated	N/A	Low	Direct Negative	Low	Slight	c.40m has the potential to be impacted and will be crossed by section of internal cabling.	648166, 674421
CH248	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Will be directly impacted by T10 and associated works, though magnitude of impact lowered as it seems to be altered for drainage.	647619, 676420
CH250	Historical field boundary	Undesignated	N/A	Very Low	Direct Negative	Very low	Not Significant	c.10m is located within the Construction Works Boundary. Crossed by route of internal cabling.	647850, 674746
CH251	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	Along the edge of the Construction Works Boundary with internal cabling route running parallel for length of boundary. Impact may occur due to movement of plant.	647874, 674672
CH252	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Road widening works will take place at the SW corner of the field with a temporary	647841, 674600

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								berm/concealed area. There will be hedgerow replanting and hedgerow improvement works, though impact is likely minimal.	
CH253	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Road widening works will take place at the SW corner of the field with a temporary berm/concealed area. There will be hedgerow replanting and hedgerow improvement works, though impact is likely minimal.	647847, 674593
CH254	Townland boundary: Tinnalintan; Sraleagh	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Approx. 270m of this TLB are aligned with the RLB and internal cable link and could also be impacted by updated site of joint bay. Potential for direct impact due to movement of plant.	645306, 672949
CH255	Field boundary; iron gate; gate pier	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	The RLB and internal cable link run immediately parallel to this field boundary for half its length. The very corner where iron gate and pier are located are unlikely to be impacted. Further NW, the boundary will be directly impacted and crossed by the cable link (c.20m within the RLB).	645367, 672975
CH259	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Very Low	Not Significant	Cable link now follows alongside road and boundary may be accidentally impacted during construction works.	645876, 673575
CH260	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Very Low	Not Significant	Associated with watercourse CH36 (see above). Will be crossed	645928, 673597

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								by the cable link which includes crossing the watercourse.	
CH262	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Very Low	Not Significant	Located in close proximity to cable link route; impact unlikely.	646565, 673802
CH263	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Internal cable link runs parallel/directly along the field boundary for its length, while a joint bay is also proposed at the boundary. Joint bay access will utilize the cable link route.	647254, 674057
CH264	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Low	Not Significant	The internal cable link and joint bay access run parallel to length of boundary, in very close proximity.	647312, 674078
CH265	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Will be crossed by hardcore area/road which will be realigning the track. Construction works boundary is c.13m wide.	648272, 677488
CH266	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Very low	Not Significant	Field boundary altered between first-edition six-inch, and 25-inch OS maps. Hardcore road appears to be located at exact location of boundary.	648514, 677447
CH267	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Medium	Not Significant	Hedgerow removal will take place at field boundary where hardcore area/road and temporary berm will be constructed. Around 40m of boundary is located within the Construction Works Boundary.	648684, 672707
CH269	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Hedgerow removal will take place at field boundary where hardcore	648719, 672830

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								area/road will be constructed. Around 10m of hedgerow will be removed.	
CH274	Gate piers; stone wall	Undesignated	N/A	Very Low	Potential Direct Negative	Medium	Slight	May be directly impacted (removed?) for road.	648761, 672869
CH275	Field boundary; stone wall	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Small section will be impacted for road widening.	648888, 673025
CH277	Former trackway; stone walls	Undesignated	N/A	Very Low	Direct Negative	High	Slight	Entire length of hedgerow will be removed, with length of replanting slightly west to allow for road-widening. However, there is a stone wall here as well which will also be impacted.	648884, 673071
CH278	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Two sections of hedgerow at the north and at the SW ends of the field boundary will be removed (HR8).	652525, 668651
CH279	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Very Low	Not Significant	Crossed by internal cable route.	646539, 673786
CH280	Trackway	Undesignated	N/A	Very Low	Direct Negative	Low	Not Significant	Laneway will be widened but orientation will not be changed.	648768, 672880
CH281	Field boundary	Undesignated	N/A	Very Low	Potential Direct Negative	Medium	Not Significant	Road widening is only taking place on the SE side of the trackway though there is potential for impact due to movement of plant.	648765, 672880
CH282	Field boundary	Undesignated	N/A	Very Low	Direct Negative	High	Slight	Entire length of hedgerow will be removed, with length of replanting slightly SE to allow for road-widening. However, there is	648768, 672876

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								a stone wall here which will also be impacted.	
CH284	Townland boundary: Byrnesgrove; Commons	Undesignated	N/A	Low	Direct Negative	Low	Slight	Townland boundary has been significantly altered due to commercial forestry plantation. However, associated ditch, etc. may still be evident.	648847, 673894
CH285	Folly	National Historic Property; Protected Structure; listed in the NIAH	RPS 505; NIAH 12803004	Medium	Indirect Negative	Low	Slight	Heywood Gardens (Haywood House) is listed as a national historic property. Magnitude of impact lowered due to swath of broadleaved trees just S and SE of feature that partially screens view. Associated with LVIA Viewpoint 'CH285'; see Appendix 15.11 and Chapter 14.	646874, 681917
CH286	Folly	National Historic Property; Protected Structure; listed in the NIAH	RPS 506; NIAH 12803005	Medium	Indirect Negative	Very Low	Not Significant	Heywood Gardens (Haywood House) is listed as a national historic property. Magnitude of impact lowered due to swath of broad-leaved trees just S and SE of feature that partially screens view.	646873, 681930
CH287	Orangery	National Historic Property; Protected Structure; listed in the NIAH	RPS 507; NIAH 12803006	Medium	Indirect Negative	Low	Slight	Heywood Gardens (Haywood House) is listed as a national historic property. Magnitude of impact lowered due to swath of broadleaved trees just S and SE of feature that partially screens view. Associated with LVIA Viewpoint 'CH287'; see Appendix 15.11 and Chapter 14.	646929, 681931

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH288	Farmyard Complex	National Historic Property; Protected Structure; listed in the NIAH	RPS 508; NIAH 12803007	Medium	Indirect Negative	Low	Slight	Heywood Gardens (Haywood House) is listed as a national historic property. Magnitude of impact lowered due to swath of broadleaved trees just S and SE of feature that partially screens view.	647167, 681753
CH289	Ornamental garden	National Historic Property; Protected Structure	RPS 509	High	Indirect Negative	Medium	Moderate	Heywood Gardens (Haywood House) is listed as a national historic property. Associated with historic garden/demesne no.261 (Haywood House) and LVIA VP6, and Viewpoints 'CH289 (1) and (2)'; see Appendix 15.11 and Chapter 14.	647017, 681758
CH290	Round tower	Protected Structure; listed in the SMR	KK019-026175-; RPS B18	Medium	Indirect Negative	Very Low	Not Significant	Magnitude given as very low here, due to distance, description in LVIA, and that is consistent with changes to baseline environment. Associated with LVIA VP32; see Appendix 15.11 and Chapter 14.	650258, 656403
CH291	Settlement deserted-medieval	Listed in the SMR	KK001-006003-	Low	Indirect Negative	Low	Not Significant	Consistent with changes to baseline environment. The associated castle and motte (RMPs KK001-006001 and KK001-006002 have no visible remains above ground.	645530, 678189
CH293	Church	National Monument (Ownership); Recorded Monument	Nat. Mon. 282; KK013-018001-	High	Indirect Negative	Low	Moderate	Part of complex with numerous recorded sites. View from site has already been impacted by previous windfarm which is located closer in view. Associated	638671, 663684

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								with LVIA Viewpoint 'CH293'; see Appendix 15.11 and Chapter 14.	
CH294	Castle-ringwork	National Monument (Ownership); Recorded Monument	Nat. Mon. 376; KK013-059001-	High	Indirect Negative	Medium	Moderate	Ringwork situated on elevated ground with clear views to NE. Visual impact from turbines.	638352, 660549
CH308	AAP: possible ringfort	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Identified by local as potential ringfort. May be associated with lime kiln CH156. Potential for associated remains/deposits to be impacted by construction works.	647977, 675137
CH309	Ornamental garden	National Historic Property; listed on the NIAH	NIAH 12803008	High	Indirect Negative	Low	Moderate	Associated with LVIA Viewpoint 'CH309 (1) and (2)'; see Appendix 15.11 and Chapter 14. Though magnitude of effect is Low, the significance is rated as Moderate due to its High importance.	647080, 681704
CH311	Historic demesne	National Historic Property; NIAH historic demesne	NIAH 261	High	Indirect Negative	Medium	Moderate	Multiple points throughout the historic demesne have a clear sight to the proposed development (see Appendix 15.11 and Chapter 14 LVIA Viewpoints VP6 and CH285, CH287, CH289(1), CH289(2) CH309(1), CH309(2), CHD1, CHD2 and CHD3).	647139, 681837
CH312	Graveyard	Recorded Monument; listed in the SMR	LA030-026001	Medium	Indirect Negative	Medium	Moderate	Low relief remains of church, though graveyard is upstanding. Associated with LVIA Viewpoint 'CH312'; see Appendix 15.11 and Chapter 14.	647270, 679748

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH313	Castlecomer ACA	Architectural Conservation Area	N/A	High	Direct Negative	Medium	Moderate	HR9 is located within the Castlecomer ACA (see also CH314). There is a potential for accidental damage to built heritage within the ACA due to the movement of plant/transportation of components during the construction phase. The noted removal of street furniture is negligible, but the potential for direct impact lends to the Moderate significance of effect. This receptor also takes into account the numerous RPS and/or NIAH records that are located within this ACA. Special care must be paid to RPS 697/NIAH 12301069, the double gateway/wall/railings of the Creamery House; in particular the south corner along Barrack Street. There are numerous RPS/NIAH buildings along the streets that will be immediately adjacent to the haul route. Additionally, HR10 is located adjacent to the western end of the ACA.	653247, 672994
CH315	Marian shrine	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	In proximity to HR10 works area.	652988, 672958
CH316	Field boundary	Undesignated	N/A	Very Low	Direct Negative	Very Low	Not Significant	Crossed by internal cable link.	645237, 673335

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH317	Structure	Undesignated	N/A	Low	Potential Direct Negative	Very Low	Not Significant	Structure in close proximity to RLB and cable link route.	645540, 673517
CH318	Well (site of)	Undesignated	N/A	Low	Potential Direct Negative	Low	Slight	Approx. 30m of hedgerow to be removed near potential area of well for Haul Route works (HR8).	652507, 668508

Appendix 15.2: Summary of Archaeological Excavations in the Study Area

Appendix to Chapter 15: Cultural Heritage

Appendix 15.2: Summary of Archaeological Excavations in the Study Area

Appendix 15.2 Summary of Archaeological Excavations in the Study Area

Licence Number	08E0368
Townland	Moatpark
Site Name	Moatpark
Site Type	No archaeological significance
ITM	644095 672152
Description	A series of test-trenches were excavated on the footprint of the proposed development of a dwelling house and associated siteworks at Moatpark, Ballyragget in compliance with the planning conditions as the site lies on the edge of a constraint zone of KK005-023001 to -003, a motte, castle and chapel site (possible). No features of an archaeological nature were uncovered in any of the trenches.

Appendix 15.3: Inventory of Archaeological Objects from the NMI Topographical Files

Appendix to Chapter 15: Cultural Heritage

Appendix 15.3: Inventory of Archaeological Objects from the NMI Topographical Files

Appendix 15.3 Inventory of Archaeological Objects from the NMI Topographical Files

Townland	NMI Reg.	Simple Name	Material	Database Notes
Ballyconra	N/A	N/A	N/A	N/A
Moatpark	N/A	N/A	N/A	N/A
Coole	N/A	N/A	N/A	N/A
Byrnesgrove	N/A	N/A	N/A	N/A
Commons	N/A	N/A	N/A	N/A
Loughill	N/A	N/A	N/A	N/A
Firoda Upper	N/A	N/A	N/A	N/A
Ballymartin	N/A	N/A	N/A	N/A
Rathduff	N/A	N/A	N/A	N/A
Tinnalintan	N/A	N/A	N/A	N/A
Ballyoskill	2009:29:00	Human remains	Bone	Cremated human remains
Ballyoskill	2009:28:00	Human remains	Bone	Cremated human remains
Ballyoskill	29:27.1	Vessel	Ceramic	Found during quarrying. The vessel is undecorated. It is flat-bottomed, bipartite vessel with an everted rim. The vessel is dull-brown/grey internally. The ware is coarse and friable with mica and quartz inclusions in the grit. The vessel is almost complete except for a large chip missing from the rim and neck at one point. The outer surface bears an encrustation of the fill of the cist.
Ballyoskill	29:27.2	Vessel	Ceramic	Found during quarrying. One base and two body sherds, sic small sherds in a finds bag, a bag tiny clay particles/powder and three body sherds bagged separately. Some of the sherds are decorated with rows of diagonal lines.
Ballyoskill	2009:26:00	Vase	Ceramic	Found during quarrying. Flat-bottomed, bipartite vessel with a sharply everted rim. The ware is very coarse and friable with visible mica and quartz inclusions in the grit. The vessel is dull grey in colour on the outer and inner surfaces, the core is buff streaked. Decoration occurs on the rim and body but not on the base. The ornament is organised in horizontal zones. The rim top bears three parallel rows of D-shaped (thumbnail?) impression, the two raised areas in between being decorated with radial strokes. The edge of the rim is ornamented with short oblique strokes. A plain area follows below which is a row of D-shaped depressions bordered on the lower side by four false relief edges

Appendix 15.3: Inventory of Archaeological Objects from the NMI Topographical Files

Townland	NMI Reg.	Simple Name	Material	Database Notes
				ornamented with oblique strokes, the upper forming two herringbone patterns. There follows a false relief band decorated with vertical strokes and bordered on either side by a row of D-shaped depressions. This is followed by a row of four false relief ridges decorated with oblique strokes. Bordering this is a zone of conjoined D-shaped impressions and a row of individual similar impressions. Defined by a thin groove on each side is a further zone of these impressions. The two lowermost zones are composed of irregular areas in false relief infilled with vertical strokes.
Ballyoskill	29:25.1	Vase	Ceramic	Found during quarrying. Flat-bottomed, bipartite vessel with a sharply everted rim. The ware is very coarse and dull grey in colour with traces of mica in the grit. The rim and body are decorated and the base is plain. On the upper surface of the rim the decoration consists of three ridges in false relief decorated with a series of short strokes forming a herringbone pattern. The edge of the rim also bears decoration in the form of herring-bone pattern. The ornament of the body is arranged in a series of horizontal zones encircling the vessel. These will be described in order from the neck to the base. The neck is decorated with a band of herringbone ornament, defined by an incised groove both above and below. Below this is a groove from which depends a row of chevrons in false relief. The lower part of this band is defined by a second row of triangular depressions, and the middle portions is infilled with comb-impressions. Below this are two bands of false relief decorated with incised herringbone decoration. This is followed by a further band of herringbone ornament bordered on each side by a thin undecorated band. Below this again is a band in false relief infilled with comb-impressions, defined above and below or ornament is a blank space below which occur two bands of vertically disposed comb-impressions. Almost complete vessel (7 small sherds separate).
Ballyoskill	29:25.2	Human remains	Human remains	Found during quarrying. Found with 2009:25.1. Two tiny fragments.
Ballynalacken	N/A	N/A	N/A	N/A

Appendix 15.4: Extracts from the Irish Folklore Commission Schools' Collection

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Appendix 15.4: Extracts from the Irish Folklore Commission Schools' Collection

Appendix 15.4 Extracts from the Irish Folklore Commission Schools' Collection

Townland	Collector / Informant	Extract Detail	Dúchas archive website link
Rathduff	Micheal Nolan & Imelda Hegarty	A story is told about Cantwells court castle about a turfman and Cromwell. It is said that when Cromwell's soldiers tried to take the castle they could not get in. One day a man was coming with a load of turf. They arrested him and told him if he would show them a way into the castle they would let him go. He asked if they would give him some money and they said they would. He brought them to an underground passage and they got inside and took the castle. When he asked them for the money they hanged him and said that if he would betray his own he would surely betray them. They say his ghost used to appear at a place near the castle on the road to town in the shape of a crowing hen and they called the place Innsecirce.	https://www.duchas.ie/en/cbes/4758568/4755393
Rathduff	Margy Manning & Mrs Mary Purcell	It was always believed by the old people that they shouldn't touch any thing in the old raths because they thought the faries would not like them to do anything even to the fence. One old man used to laugh about it and didn't seem to believe it. One day he was repairing the fence in an old rath near his home. Seeing a very large stone a little bit out from the gap, he thought it would help him to fill it quickly so he put it in the gap. That night he got a very bad pain in his hand and for a while it was very painful and he wasn't able to get any cure for it. An old woman hearing about it asked him how did he hurt it. He told her about lifting the big stone, and she said he shouldn't have touched it and to put it back quickly. He did so and his hand got well very soon.	https://www.duchas.ie/en/cbes/4758568/4755440/4924687
Rathduff	Margy Manning & Mrs Mary Purcell	In a farm near Kilkenny a big stone stood in the middle of the field and it was about fourteen cwt. weight.	https://www.duchas.ie/en/cbes/4758568/4755447
Rathduff	Imelda Hegarty	The owner was going to till the field and thought it would be easier if the stone would be removed. He told his workmen to get a horse and cart and they would go and remove the stone. Four men got the stone into the car and the horse moved a few yards and then stopped and nothing would get the horse to move further down the field. At last one of the men said "We will see if he will go back." and he did so without any bother. Then they took the stone out of the car. One fellow said that he would remove it some other way, so he got a sledge and broke it up. He brought it away in small pieces. That evening after milking the men were in the dairy settling the milk. The dairy was nicely cleaned and suddenly they heard the wind rising very high outside. There happened to be a heap of sand in the yard. Most of it was whirled into the dairy. The milk was ruined and the dairy made filthy. the men knew that it was not right to have touched the stone as it was part of an old cairn. So they put back all the pieces and they never touched it afterwards and every thing was all right.	https://www.duchas.ie/en/cbes/4758568/4755526/4925104
Ballyoskill	Mr M. Whyte	This townland lies to south of Johnswell and is situated between Kilmogar and Kilderry and Ballasalla. The old rath is still to be seen, but there are no stories in connection with it.	https://www.duchas.ie/en/cbes/4742027/4729408/4932952
Ballyoskill	Mr P. Dooley	Holy Wells are associated with almost every country. The famous Lourdes on the Continent which is renowned for its cures is well known to everyone. In our own locality is one called Ladywell. This is situated in Mr Kennedy's field in Castlemarket. People drink its water	https://www.duchas.ie/en/cbes/4742027/4729402

Appendix 15.4: Extracts from the Irish Folklore Commission Schools' Collection

Townland	Collector / Informant	Extract Detail	Dúchas archive website link
		and go there to pray when they require a cure. The Pilgrimage commences on 15th August and continues until 8th September. It is opened by a procession. Host of people from all parts visit the Well that day. Those who go recite the full Rosary on their knees, while doing a journey around the Well. They then drink the water and when going home leave some ____ on a bush near the well. The local people have marvellous faith in the Pilgrimage. They visit the well several times during the year too. No one knows the exact history of the well.	
Ballyoskill	James Bergin	There are a good many fairy forts in this district known as McGrath's, Keye's rath, Kenny's rath, and two belonging to the Keoughan's. The people around this district generally call them rath's. Mc Grath's is in the townland of Tinnilenton Keye's rath is in the townland of Ballyouskill Keoughan's raths are in the townland of Tinnilenton and there is another rath on top of the hill in the townland of Ballinalacken. Some of them are in view of each other. There are two rings in McGrath's rath, first there is a ring of bushes on rise then there is a hollow and a rise again. There is a rath on the top of the hill. It is a big circular rise with some bushes growing around it and one lone bush up on the top of it. Michael Dooley and his brother Martin heard music in it once when they were gathering sprigs about it. Another time they were stones that were around it and when they had them filled and just going away they met a strange woman dressed in a grey shawl and a shirt who said to them "ye have a good load of stones but it is well for ye that ye said your prayers this morning." There is a holy well in one of the rath's in Keoughans and a Saint lived in it long ago and it is said that it was he that used to drink out of it.	https://www.duchas.ie/en/cbes/4742027/4729427/4933168
Byrnesgrove	Mary Murphy & Mrs Comerford	There are several raths in this district but the "Fáire Glas" in Byrnesgrove is in the district of Castlecomer. It is situated in a medium sized field in which many tall trees grow. There is a beautiful stream running at one side. This stream in summer teams with trout but no one dare try catching them lest some misfortune should happen him. There are the ruins of an old house there also. There are the ruins of an old house where lived a man who was said to deal with evil spirits. There is a lovely pond there with lillies growing on it. The fairies were said to dance around it last year. One night a girl was sent by her father for an ass. She could shorten her way by crossing the rath. Darkness fell quickly that night. It was very dark as she went home. She saw as she thought the light in her own house. When she came up to it she found she was at rath.	https://www.duchas.ie/en/cbes/4742025/4729185/4818494?HighlightText=F%C3%A1ire+Glas&Route=stories&SearchLanguage=ga

Appendix 15.5: Townlands in the Study Area

Appendix to Chapter 15: Cultural Heritage

Appendix 15.5: Townlands in the Study Area

Appendix 15.5 Townlands in the Study Area

Townland	Gaelic Name	Suggested Meaning	Civil Parish	Barony
Ballymartin	<i>Baile Uí Mháirtín</i>	<i>Baile</i> 'townland, town, homestead'; <i>Uí 'Ó'</i>	Donaghmore	Fassadinin
Ballynalacken	<i>Baile na Leacan</i>	<i>Baile</i> 'townland, town, homestead'; <i>leaca</i> 'hillside'	Donaghmore	Fassadinin
Ballyoskill	<i>Baile Oscail</i>	<i>Baile</i> 'townland, town, homestead'	Attanagh	Fassadinin
Byrnesgrove	<i>Baile na gCnáthach</i>	<i>Baile</i> 'townland, town, homestead'	Kilmacar	Fassadinin
Commons	<i>An Coimíneas</i>	The Commons	Kilmacar	Fassadinin
Coole	<i>An Chúil</i>	<i>Cúil</i> 'corner, nook'	Donaghmore	Fassadinin
Damerstown West	<i>Baile an Daiméaraigh Thiar</i>	<i>Baile</i> 'townland, town, homestead'	Dysart	Fassadinin
Firoda Upper	<i>Fír Ó nDuach Uachtarach</i>	<i>Fír (Fíoghair)</i> 'dineen, verge, border, skyline'	Castlecomer	Fassadinin
Garrannaguilly	<i>Garrán na nGiollaí</i>	<i>Garrán</i> 'grove'; <i>gearan na ngiollaí</i> '...of the servants'	Donaghmore	Fassadinin
Loughill	<i>Leamhchoill</i>	'elm wood'	Attanagh	Fassadinin
Moatpark	<i>Páirc an Mhóta</i>	<i>Páirc</i> 'field'; <i>móta</i> 'moat, earthen embankment'	Donaghmore	Fassadinin
Rathduff	<i>An Ráth Dhubh</i>	<i>Dubh</i> 'black'; <i>ráth</i> 'ringfort'	Donaghmore	Fassadinin
Sraleagh	<i>An tSraith Liath</i>	<i>Liath</i> 'grey, grey place, grey house'; <i>sraith</i> 'holm, river-meadow, valley-bottom'	Donaghmore	Fassadinin
Tinnalintan	<i>Tigh na Liantán</i>	<i>Teach</i> 'house'; <i>tigh na lintáin</i> '...of the nets'	Donaghmore	Fassadinin

Appendix 15.6: Methodology for the evaluation of Cultural Heritage

Appendix to Chapter 15: Cultural Heritage

Appendix 15.6: Methodology for the evaluation of Cultural Heritage

Appendix 15.6 Methodology for the evaluation of Cultural Heritage

A15.6.1 Methodology Applied

The methodology for the appraisal of the Proposed Project with regards to Cultural Heritage was based on the EPA's *Guidelines on the information to be contained in Environmental Impact Assessment Reports* (EPA 2022) and Transport Infrastructure Ireland's (TII) guidelines, *Cultural Heritage Impact Assessment of TII National Roads and Greenway Projects* (TII 2024)¹ along with the accompanying Standards Document (TII forthcoming), which sets out the expected requirements in relation to Cultural Heritage for EIARs.

The EIA process for Cultural Heritage was divided into six main components:

1. Identification and appraisal of known and potential Cultural Heritage receptors within the receiving environment through baseline studies of statutory and non-statutory heritage lists, archives, publications and other sources, including consultations;
2. Field surveys of Cultural Heritage receptors to supplement the desktop research, which included a walkover survey and geophysical survey;
3. Identification and description of impacts/effects on Cultural Heritage from the Proposed Project;
4. Quantitative and qualitative assessment of the significance of effects on Cultural Heritage receptors from the Proposed Project;
5. Consideration of appropriate mitigation to minimise effects arising from the Proposed Project; and,
6. Description of cumulative and residual effects to Cultural Heritage from the Proposed Project.

The Study Area for Cultural Heritage includes the Redline Boundary (RLB) of the Proposed Project plus 200m (Figure 15.1 and Figure 15.2) and includes an analysis of the Haul Route (HR) locations. In addition, on the basis of professional judgement and following consultation with the DAU of NMS, designated Cultural Heritage receptors within 20km of the Proposed Project were assessed for impacts to setting and/or visual impacts as a result of the Proposed Windfarm (Figure 15.6 and Figure 15.7).

A15.6.1.1 Categorising Cultural Heritage Assets

For the purposes of the assessment, Cultural Heritage assets were categorised broadly as follows:

- Archaeological Heritage — World Heritage Properties; national monuments; archaeological sites and monuments listed on the RMP, RHM and/or the SMR; archaeological objects recorded in the National Museum of Ireland (NMI) Topographical Files and Finds Database; previously unrecorded (undesigned) potential archaeological sites identified through geophysical survey; areas where undesigned archaeological sites, material and deposits potentially occur;
- Built Heritage — designated Protected Structures and Architectural Conservation Areas (ACAs); buildings and historic gardens listed on the NIAH; previously unrecorded (undesigned) structures of architectural heritage interest;
- Intangible Cultural Heritage — local folklore traditions documented in the Irish Folklore Commission (IFC) Schools' Collection; skills, crafts and traditions listed in the National Inventory of Intangible Cultural

¹ Available at: <https://www.tiipublications.ie/library/PE-ARC-02009-01.pdf> [Accessed: 23.07.24].

Heritage (NIICH); sites, areas or features of potential Cultural Heritage value.

In this assessment, tangible Cultural Heritage assets are captured under the relevant sections on archaeology and built heritage, while intangible Cultural Heritage associations (i.e., historical and folklore associations) are referred to, where known, in the archaeological and historical background with further information presented in the Appendices.

Reference numbers (e.g. CH001), were assigned to each identified Cultural Heritage receptor, as recommended in the EPA and TII guidelines (EPA 2022; TII 2024); see Appendix 15.1. The baseline Cultural Heritage environment is described in Section EIAR 15.3.1.

A15.6.1.1.1 World Heritage Properties and Tentative World Heritage List

There are no UNESCO World Heritage Properties, or properties included on the Tentative List (an inventory of properties that each State intends to consider for nomination to the UNESCO World Heritage List), within the Study Area. The closest World Heritage Site, *Brú na Boinne*, lies c.106km to the northeast of the Proposed Project RLB. The Royal Sites of Ireland are included (since 2010) on the Tentative List for World Heritage Site status and were proposed again in 2021 as part of a serial nomination for same. The Rock of Cashel in County Tipperary is the closest of the Royal Sites and is located c.48km to the southwest of the proposed Ballynalacken Windfarm Project.

A15.6.1.1.2 National Monuments List

A national monument, as defined in Section 2 of the National Monuments Act 1930, means a monument *'...the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto.'* The current list of national monuments in State care (Ownership and Guardianship) for County Kilkenny was published in 2009.² There are no national monuments in State Care within the Proposed Scheme; however, two national monuments were scoped-in for potential visual impacts (No. 282; RMP KK013-018001; CH293 and No.376; RMP KK013-059001; CH294); Figure 15.6.

A15.6.1.1.3 List of Monuments Subject to Preservation Orders

Section 8(1) of the National Monuments Act 1930 provides for the Minister to place a Preservation Order (PO) on a monument which the Minister considers to be a national monument under threat. The current list of Preservation Orders detailing all monuments that have had a Preservation Order or a Temporary Preservation Order placed on them was published by the NMS in June 2019.³ There are no national monuments in State care subject to Preservation Orders within the Proposed Scheme. However, a motte and bailey (KK005-023001-, KK005-023002- and KK005-023003-) with a Preservation Order, is sited c.26m due west of the Proposed Project RLB (from the edge of the Zone of Notification [ZoN]) in Moatpark townland; Figure 15.3.

A15.6.1.1.4 Record of Monuments and Places

The RMP is the statutory list of protected places and monuments established under Section 12(1) of the National Monuments (Amendment) Act 1994. The RMP for County Kilkenny was published in 1996 in paper

² Available at: <https://www.archaeology.ie/sites/default/files/media/pdf/monuments-in-state-care-kilkenny.pdf> [Accessed: 02.08.23].

³ Available at: <https://www.archaeology.ie/sites/default/files/media/publications/po19v1-all-counties.pdf> [Accessed: 02.08.23].

form with accompanying location maps which have been scanned and published online.⁴ During the current assessment the scanned lists and accompanying location maps were used to check whether a monument or place is subject to legal protection under the National Monuments Acts through its inclusion on the RMP. See Figures 15.3 to 15.5 for the designated Cultural Heritage receptors in the vicinity of the Study Area.

A15.6.1.1.5 Sites and Monuments Record

The NMS of the DHLGH maintains a publicly accessible database known as the SMR, available through the Historic Environment Viewer (HEV).⁵ This contains current information on known archaeological sites and monuments and includes a ZoN for sites and monuments. The zones do not define the exact extent of the monuments, but rather are intended to identify them for the purposes of notification under Section 12(3) of the National Monuments Acts 1930 to 2004. See Figures 15.3 to 15.5 for the designated Cultural Heritage receptors in the vicinity of the Study Area.

A15.6.1.1.6 Database of Irish Excavation Reports

The Database of Irish Excavation Reports (DIER), also commonly known as the 'Excavations Bulletin' (summary accounts of archaeological excavations in Ireland), is maintained by Wordwell publishers with the support of the DHLGH and is accessible online.⁶ TII also makes available reports commissioned as a result of its road projects via the TII Digital Heritage Collections.⁷ One previous archaeological investigation is recorded from the Study Area for the Proposed Project. A summary of the investigation is provided in Appendix 15.2 and its location is shown on Figure 15.8.

A15.6.1.1.7 Record of Protected Structures

Under the Planning and Development Act 2000 (as amended), Local Authorities are required to maintain an RPS as part of their Development Plan.⁸ These are structures recognised by the Local Authority as having special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. The legal protections afforded to Protected Structures are set out in Part IV of the Planning and Development Act 2000, as amended.

The RPS provides positive recognition of a structure's importance and protection from adverse impacts. A Protected Structure, unless otherwise stated in the RPS, includes the interior of the structure, the land lying within its curtilage, any other structures and their interiors lying within that curtilage, plus all of the fixtures and features that form part of the interior or exterior of any of these structures. The National Monuments Acts 1930 to 2014 can also protect elements of the architectural heritage or offer dual/parallel protection. See Figures 15.3 to 15.5 for the designated Cultural Heritage receptors in the vicinity of the Study Area.

A15.6.1.1.8 National Inventory of Architectural Heritage

The NIAH is a nationwide survey of post-1700 architectural heritage including buildings, structures and historic landscapes and gardens, carried out under the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. The NIAH comprises a Building Survey and a Survey

⁴ Available at: [https://www.archaeology.ie/sites/default/files/media/pdf/Archaeology-RMP-Kilkenny-Manual-\(1996\)-0022.pdf](https://www.archaeology.ie/sites/default/files/media/pdf/Archaeology-RMP-Kilkenny-Manual-(1996)-0022.pdf) [Accessed: 02.08.23].

⁵ Available at: <https://maps.archaeology.ie/HistoricEnvironment/> [Accessed: 02.08.23].

⁶ Available at: <https://excavations.ie/> [Accessed: 02.08.23].

⁷ Available at: <https://repository.dri.ie/catalog/v6936m966> [Accessed: 02.08.23].

⁸ Available at: <https://www.kilkennycoco.ie/eng/services/planning/conservation/record-of-protected-structures/20221124-county-rps-appendix-i.pdf> [Accessed: 02.08.23].

of Historic Gardens and Designed Landscapes.⁹ These surveys are used to advise Local Authorities in relation to structures of interest within their functional areas. The purpose of the surveys is to highlight a representative sample of the architectural heritage of each county and to raise awareness of the wealth of architectural heritage in Ireland. Not all buildings and structures listed on the NIAH are legally protected through inclusion on the RPS. See Figures 15.3 to 15.5 for the designated Cultural Heritage receptors in the vicinity of the Study Area.

A15.6.1.1.9 Additional Built Heritage Datasets

The Kilkenny City and County Development Plan 2021–2027 contains a list of ACAs. The designation of ACAs aims to identify an area of special character and architectural interest, preserve that special character and promote an awareness of this significance. There are no ACAs in the Study Area; however, HR9 and HR10 are located within or in proximity to the Castlecomer ACA (CH313; Figure 15.26).

One ‘national historic property’ has also been scoped-in to the assessment due to the potential for visual impacts. National Historic Properties is responsible for the care and maintenance of a number of nationally important historic properties in Ireland, including Heywood Gardens which is located c.4.6km north of the Study Area; Figure 15.7.

A15.6.1.1.10 Historical Maps and Satellite Imagery

Undesignated potential Cultural Heritage receptors were identified through analysis of aerial photography, satellite imagery and historical mapping, which were verified during the walkover and geophysical surveys (see Section A15.6.1.2). The cartographic sources included the Down Survey Maps (1657)¹⁰ and Griffiths Valuation maps. The first-edition six-inch Ordnance Survey (OS) map for County Kilkenny (surveyed 1838; Figures 15.13 to 15.17), and the first-edition 25-inch map (surveyed 1899; Figures 15.18 to 15.25), were reviewed online through the Tailte Éireann (TE) Irish Townland and Historical Viewer¹¹ and Geohive Map Viewer,¹² as well as the NMS HEV, and the Heritage Maps viewer of the Heritage Council.¹³

Satellite and aerial imagery were also reviewed throughout the assessment, including Google Earth via Google Earth Pro; Digital Globe and orthophotographs via OSI’s MapViewer; Bing Satellite and Google Satellite via QGIS (version 3.22) XYZ Tiles.

A15.6.1.1.11 National Museum of Ireland Topographical Files

The NMI Topographical Files and Finds Database, available in the Antiquities Division, Kildare Street, Dublin 2, were accessed by appointment by AMS on the 6 and 7 June 2023. All of the townlands from the Study Area were checked against the NMI Topographical Files and Finds Database; the results are presented in Appendix 15.3.

A15.6.1.1.12 Archaeological Surveys

The archaeological surveys consulted included *The Urban Archaeology Survey: County Kilkenny* (Farrelly *et al.* 1993), which comprised a review of the urban archaeology of Kilkenny that was undertaken from 1991–92. *An Industrial Archaeological Survey of County Kilkenny* (Hammond 1990) details the results of a survey of the

⁹ Available at: <https://www.buildingsofireland.ie/buildings-search/> [Accessed: 02.08.23].

¹⁰ Available at: <https://downsurvey.tchpc.tcd.ie/index.html> [Accessed: 02.08.23].

¹¹ Available at: <https://osi.maps.arcgis.com/apps/webappviewer/index.html?id=bc56a1cf08844a2aa2609aa92e89497e> [Accessed: 02.08.23].

¹² Available at: <https://webapps.geohive.ie/mapviewer/index.html> [Accessed: 02.08.23].

¹³ Available at: <https://www.heritagemaps.ie/WebApps/HeritageMaps/index.html> [Accessed: 02.08.23].

industrial heritage of the county that was carried out by Fred Hamond between 1987 and 1989. In 2008, the Kilkenny Archaeological Project was established as part of the Heritage Council's INSTAR programme in order to collate and publish reports produced as part of archaeological investigations of Kilkenny's urban landscape from 1968–2006. The Preliminary Audit of Archaeological Landscapes in County Kilkenny was conducted in 2019 by KCC, in order to identify potential landscapes of cultural, economic, social and environmental value for inclusion in the County Development Plan 2021–2027.¹⁴

A15.6.1.1.13 National Soil Database

The National Soil Database is a national database of soil geochemistry and accompanying mapping resource, and also includes the National Soil Archive. The data presented in the soils database are underpinned by underlying geology and parent material, and factors such as soil type, land use, anthropogenic effects and climatic effects are also incorporated.¹⁵

The database was searched for local riverine, peatland and wetland environments. These are considered to be of high archaeological potential as they may contain features such as *fulachtaí fiadh*, ancient bridging sites, fords, mills, trackways and hurdles, as well as producing archaeological objects such as log boats, organic and palaeoenvironmental remains, in addition to prehistoric votive offerings such as axeheads and metalwork. Two Areas of Archaeological Potential (AAP) have been identified in the Study Area. The presence or absence of archaeology in these areas can generally only be established through invasive investigation (e.g. test excavation and palaeoenvironmental assessment), with other forms of investigation (e.g., geophysical surveys, metal detector surveys and underwater surveys) undertaken as appropriate.

A15.6.1.1.14 Irish Folklore Commission Schools' Collection

The IFC Schools' Collection, which is a rich source of local information, is gradually being made accessible online as part of the Dúchas Project,¹⁶ a collaboration between University College Dublin, Dublin City University and the (then) Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media to digitise the National Folklore Collection. The Schools' Collection was searched for entries pertaining to the folklore, traditions and oral histories of the Study Area, which are presented in Appendix 15.4.

A15.6.1.1.15 Placenames Database of Ireland

Placenames can provide clues to a townland's historical associations (e.g., Ballymartin = *Baile Uí Mháirtín* – The Town of Martin; Castlemarket = *Caisleán an Mhargaidh* – The Castle of the Market), archaeology (e.g., Moatpark = *Páirc an Mhóta* – Park/Green of the Motte; Rathkyle = *Ráth Choill* – The Hazel Rath) and geography (e.g. Toor More = *An Tuar Mór* – The Big Paddock/Field; Coole = *An Chúil* – The Corner/Nook).

A search of the Placenames Database of Ireland¹⁷ was undertaken for the fourteen townlands in the Study Area, these are all listed in Appendix 15.5; see also Figure 15.2.

¹⁴ Available at: <https://consult.kilkenny.ie/en/consultation/kilkenny-city-and-county-draft-development-plan-2021-2027/chapter/931-archaeological-heritage> [Accessed: 04.08.23].

¹⁵ Available at: <https://data.gov.ie/dataset/national-soils-database> [Accessed: 02.08.23].

¹⁶ Available at: <https://www.duchas.ie/en> [Accessed: 02.08.23].

¹⁷ Available at: <https://www.logainm.ie/en/> [Accessed: 02.08.23].

A15.6.1.2 Field Surveys

A15.6.1.2.1 Walkover Survey

A comprehensive walkover survey of the Study Area was carried out by Breana McCulloch and Dr Fergal Donoghue of AMS over six days from the 14 to 16 March and the 5 and 6 April 2023, as well as on the 25 April 2024 to supplement the desktop research. The survey assisted in:

- Confirming the nature, location, condition and extent of archaeological sites and monuments and architectural heritage features impacted by the Proposed Project;
- Noting additional unidentified archaeological sites and monuments and architectural heritage assets as defined under the National Monuments Acts 1930 to 2014 and Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999;
- Evaluating the magnitude of impact and significance of effect of the Proposed Scheme; and,
- Providing a photographic record and field notes of individual undesignated features of potential archaeological and architectural heritage interest; see Figures 15.8 to 15.12 for undesignated Cultural Heritage receptors in the vicinity of the Study Area.

A15.6.1.2.2 Geophysical Survey

Liamóg Roche of AMS directed a geophysical survey of a section of the Study Area in Moatpark, Rathduff and Tinnalintan townlands in May 2023.¹⁸ The data from this survey suggested the presence of a number of anomalies in proximity to an enclosure in Rathduff (SMR KK005-094----). The northeast corner of this enclosure presented as a ditched feature (37-54). Ring-ditches (37-01 and 37-08), penannular anomalies (37-09 and 37-10) and possible field divisions (37-39 and 37-42) were also recorded as were a number of anomalies that may represent areas of burning (e.g. a hearth, *fulacht fiadh*, kiln, modern event, etc.). Refer to Roche and Leszczynski (2023) for more information.

A15.6.1.3 Modelling and Assessment

A15.6.1.3.1 Compilation of Base Maps

The Cultural Heritage assets identified through the baseline study were digitally mapped using open-source Geographical Information System (GIS) software QGIS (version 3.22) and cross-checked with current RMP, SMR, NIAH and RPS datasets. The historical mapping, geophysical survey results and satellite imagery were explored to identify undesignated structures and features of potential Cultural Heritage interest, which were then verified in the walkover surveys. Vector data for the Proposed Project were imported and examined to assess the potential impact on the identified heritage assets.

A15.6.1.3.2 Cultural Heritage Inventory

An inventory of Cultural Heritage receptors was compiled, drawing on data from the baseline study, walkover surveys and geophysical survey. The inventory includes a brief description and appraisal of each Cultural Heritage receptor, as well as their legal status and suggested importance (Appendix 15.1). The relative importance of each Cultural Heritage receptor asset was rated in terms of Very High, High, Medium, Low, Very Low/Negligible or Unknown, in accordance with the EPA and TII guidelines (EPA 2022; TII 2024, 65). Relative importance derives from a number of factors including current designation (i.e. RMP, RHM, SMR,

¹⁸ This report was prepared for the proposed Gathabawn Windfarm site; however it included the above-named townlands in the interest of potential design options for both the Gathabawn and Ballynalacken windfarms.

RPS, NIAH, or none), preservation/condition and archaeological, architectural, historical, artistic, cultural, scientific, social or technical interest.

A15.6.1.4 Methodology used to Describe the Baseline Environment and Evaluate Effects

The EIA considers the potential for significant environmental impacts to affect the baseline Cultural Heritage environment as a direct and/or indirect result of the Proposed Project. The baseline conditions are defined as the existing state of the environment and how it may develop in the future in the absence of the Proposed Scheme. Impacts from the Proposed Project on Cultural Heritage during the Construction and Operation Phase are identified, described and assessed for any likely direct and indirect significant effects.

The potential impact of the Proposed Project on Cultural Heritage was carried out with reference to the published EPA guidelines (EPA 2022) and the TII Guidelines (TII 2024). The assessment included both quantitative assessment and qualitative judgement.

The importance rating for each Cultural Heritage receptor was based on evidence from the baseline studies, fieldwork, specialist surveys and consultation, using professional judgement, and with reference to the factors set out in Table 1 (see TII 2024, Table 5.6). Additional guiding factors that were considered included the status (i.e. designation and level of statutory protection) of the Cultural Heritage receptor, the condition/preservation, special interest, group value, rarity, visibility in the landscape, fragility/vulnerability, amenity value and local significance (DAHG 2011, 24–30; TII 2024, 74).

Table 1: Criteria for Assessing the Importance of Cultural Heritage Receptors

Importance	Criteria Considered
Very High	Designated built heritage receptors rated as being of international importance, including associated historic gardens and designed landscapes; Designated features of international intangible heritage value; Designated historic landscapes of international value; National monuments; Other designated cultural heritage receptors of international importance; and, World Heritage Properties;
High	Architectural Conservation Areas; Built heritage receptors rated as being of national importance by the NIAH, including associated buildings and designed landscapes; Historic landscapes (designated or undesignated) of outstanding interest and of demonstrable national value. These will be well-preserved historic landscapes exhibiting considerable coherence, time-depth, or other critical factors; Other designated or undesignated cultural heritage receptors of demonstrable national importance; Places or features of national intangible heritage value; Protected Structures; Recorded Monuments (or sites and monuments scheduled for inclusion on the RMP) of high quality and importance; Sites and monuments subject to a Preservation Order or Temporary Preservation Order; Undesignated receptors of high quality and importance; and, World Heritage Tentative List Properties;
Medium	Built heritage receptors rated as being of regional importance by the NIAH, including associated historic gardens and designed landscapes; Historic landscapes of regional value (designated or undesignated);

Importance	Criteria Considered
	Historic townscapes or built-up areas with demonstrable historic integrity in their buildings or built settings (e.g., including street furniture and other structures); Other designated or undesignated receptors of regional cultural heritage importance; Places or features of regional intangible heritage value; and, Recorded monuments (or sites and monuments scheduled for inclusion on the RMP).
Low	Built heritage receptors rated as being of local importance by the NIAH, including associated historic gardens and designed landscapes; Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations; Historic townscapes or built-up areas of limited historical integrity in their buildings, or built settings (e.g. including street furniture and other structures); Other designated or undesignated cultural heritage receptors of local importance; Places or features of local intangible heritage value; Receptors compromised by poor preservation of contextual associations with inherent, albeit limited, cultural heritage value; and, Undesignated historic buildings of modest quality in their fabric or historical associations.
Negligible	Receptors/landscapes with very little surviving Cultural Heritage interest; and Buildings of no architectural, historical, archaeological, artistic, cultural, scientific, social, traditional or technical interest; buildings of an intrusive character.
Unknown	The importance of the receptor has not yet been ascertained (e.g., a possible archaeological feature identified through geophysical survey that may or may not be archaeological, or an area of archaeological potential). In such cases, the significance of effect will be 'Indeterminable'.

Likely effects from the Proposed Project on the Cultural Heritage environment were categorised as direct, indirect, positive and/or negative adverse in accordance with the TII Guidelines (TII 2024, 66–67):

- **Direct Effect** — an effect that is directly attributable to the Proposed Project;
- **Indirect Effect** — an effect that results indirectly from the Proposed Project because of the direct effects, which may be away from the Proposed Project;
- **Positive Effect** – a change that enhances or improves the quality of the Cultural Heritage environment; and,
- **Negative/Adverse Effect** – a change that reduces the quality of the Cultural Heritage environment. Includes total or partial loss of a site, monument, structure or its attendant grounds, visual intrusion, severance, degradation of setting and/or amenity.

The predicted magnitude (level) of impact was rated as Very High, High, Medium, Low or Very Low/Negligible (TII 2024, Table 5.7), as detailed in Table 2. The predicted magnitude of impact was evaluated by considering the type and quality of impact/effect, extent and context, probability, duration and frequency of impact/effect (EPA 2022, 50–52).

Table 2: Magnitude of Impact/Effect on Cultural Heritage

Magnitude of Impact	Descriptors of Impact/Effect
Very High	Major alteration to, or complete loss of a key Cultural Heritage receptor. Effects likely to be experienced at a very large scale; considered permanent and irreversible.
High	Notable or long-term change to key Cultural Heritage characteristics or receptors.
Medium	Moderate or long-term change over a restricted area, or a moderate change in key Cultural Heritage characteristics or receptors.
Low	Minor short or medium-term change over a restricted area, or a minor change in key Cultural Heritage characteristics or receptors.
Negligible	Imperceptible change in Cultural Heritage characteristics or receptors.

The predicted significance of effect was evaluated by comparing the predicted magnitude of impact/effect with the suggested importance of the Cultural Heritage receptor using the schedule and definitions of significance adapted from the EPA (2022, Table 3.4) and TII Guidelines (2024, 69–70). Significance of effect for Cultural Heritage are classified and summarised as in Table 3; see also Image 15.1 (below).

Table 3: Significance of Effects on Cultural Heritage

Significance of Effect	Descriptors of Effect
Profound	An effect which obliterates a cultural heritage receptor of high or very high importance.
Very Significant	An effect which, by its character, magnitude, duration or intensity, significantly alters most of an important aspect of the Cultural Heritage environment.
Significant	An effect which, by its character, magnitude, duration or intensity alters an important aspect of the Cultural Heritage environment.
Moderate	An effect that changes the character of the Cultural Heritage environment in a manner that is consistent with existing and emerging baseline trends
Slight	An effect which causes noticeable changes in the character of the Cultural Heritage environment without affecting its importance.
Not Significant	An effect which causes noticeable changes in the character of the Cultural Heritage environment but without significant consequences. However, the cumulative effects of such impacts may lead to an overall adverse effect.
Imperceptible	An effect capable of measurement but without significant consequences. Such effects can be positive or negative.

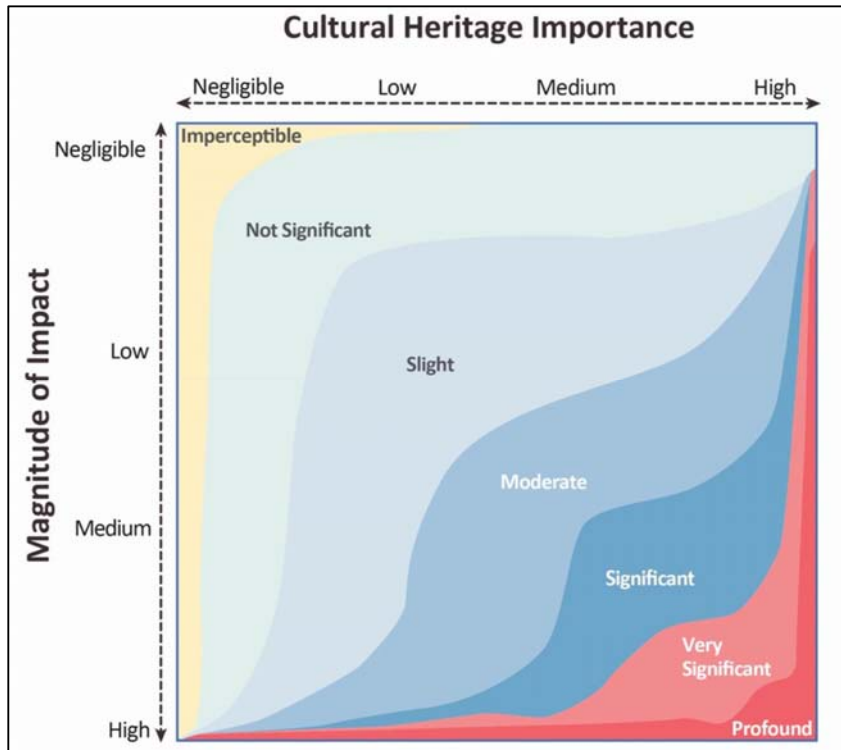


Image 15.1: Chart showing classifications of the significance of effects for cultural heritage receptors (after EPA 2022, Figure 3.4).

An assessment of cumulative effects was also considered as part of the EIA. The EPA guidelines describe cumulative effects as *“The addition of many minor or insignificant effects of other projects, to create larger, more significant effects”* (2022, 52). The assessment baseline included the Proposed Project and proposed developments with planning permission in the vicinity that are likely to give rise to significant cumulative effects on Cultural Heritage (TII 2024, 71).

The interaction of effects between Cultural Heritage and other environmental factors was considered throughout the design and environmental evaluation of the Proposed Project.

A15.6.1.5 Methodology for Setting the Study Area

The EIA Study Area was defined as part of the EIA Scoping for Cultural Heritage (Section EIAR 15.2) and relates to the area around the Proposed Project within which it is anticipated impacts are likely or have the potential to occur.

While the initial Study Area was determined to include the footprint of the construction works area plus 100m during the Construction Phase, and 2km from the Proposed turbines and Windfarm Substation for visual impacts during the Operational Phase, the scoping process evolved throughout the design process to incorporate design changes, and based on professional judgement of the Cultural Heritage specialists and feedback from the Development Applications Unit (DAU) of NMS. As noted in the recent TII guidelines: *It is important to note that the scoping process does not end with the scoping report. All parties—Roads Authority, Design Team, and specialists—should be aware of the potential for the scope to be altered during the preparation of the EIAR* (TII 2024, 22).

Therefore, following design changes, the final Study Area for Cultural Heritage includes the RLB of the Proposed Project plus 200m (Figure 15.1), while also including HR locations as discussed in Chapter 5 (see Figure 5.17). In addition, on the basis of professional judgement and following consultation with the DAU of

NMS, Cultural Heritage receptors of High or Very High importance within 20km of the Proposed Project were assessed for impacts to setting and/or visual impacts as a result of the Proposed Windfarm.

A15.6.1.6 Approach to Defining Mitigation

A key objective of the EIA was to develop mitigation measures to avoid, prevent and reduce adverse effects on Cultural Heritage during the Construction and Operational Phases. Mitigation was considered at all stages of the Project lifecycle to avoid significant adverse effects to Cultural Heritage receptors and to preserve important receptors (TII 2024, 74). The mitigation measures were developed in consultation with the Project Designers, Design Team and relevant statutory bodies. In addition, primary mitigation measures were developed in consultation with the Design Team to avoid important Cultural Heritage receptors through design solutions.

Appendix 15.7: Cultural Heritage Receptors that were Scoped Out

Appendix to Chapter 15: Cultural Heritage

Appendix 15.7: Cultural Heritage Receptors that were Scoped Out

Appendix 15.7 Cultural Heritage Receptors that were Scoped Out

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH014	Geophysical anomaly (possible ditch)	Undesignated	N/A	Unknown	None	N/A	N/A	No longer any impact due to layout changes; screened out.	644600, 672311
CH015	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	No longer any impact from cable and outside of study area; screened out.	644591, 672390
CH017	Rail bridge	Undesignated	N/A	Low	None	N/A	N/A	Screened out as no impact to bridge and now outside study area.	644840, 672330
CH019	Geophysical anomaly (possible ring-ditches)	Undesignated	N/A	Unknown	None	N/A	N/A	No impact as cable has been rerouted; screened out and now outside study area.	644748, 672494
CH020	Rail bridge	Undesignated	N/A	Low	None	N/A	N/A	No impact; receptor screened out and now outside study area.	644740, 672557
CH021	Enclosure	Listed in the SMR	KK005-094----	Low	None	N/A	N/A	No impact to setting or visual impact as not well defined above ground and now outside of the RLB. No impact; screened out.	644865, 672613
CH023	Vernacular structures (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	No longer impacted due to layout change; screened out.	644734, 672753
CH024	Townland boundary	Undesignated	N/A	Low	None	N/A	N/A	No longer impacted due to layout change; boundary not extant in area of road that will be impacted.	644836, 672739
CH038	Gate and piers	Undesignated	N/A	Low	None	N/A	N/A	No longer within RLB; screened out.	646251, 673693
CH039	Gate and piers	Undesignated	N/A	Low	None	N/A	N/A	No longer within RLB; screened out.	646263, 673694

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH044	Stone wall; gate pier	Undesignated	N/A	Very Low	None	N/A	N/A	Gate pier: 647995, 674134. No longer in RLB; screened out.	647982, 674167
CH050	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	Along RLB, however works are now located further from the field boundary, and boundary may have been altered due to forestry block. Screened out.	647904, 675099
CH059	Vernacular structures (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	No construction here as existing forestry track will be used. However, any works in the area of the structures should be archaeologically monitored. Screened out.	648300, 675762
CH060	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	50m section of boundary along route of road. Site layout change; screened out.	648479, 675867
CH061	Farm complex	Undesignated	N/A	Low	None	N/A	N/A	Road veers to W to avoid complex; no impact. Site layout change; screened out.	648563, 675909
CH062	Gate pier	Undesignated	N/A	Very Low	None	N/A	N/A	Existing track will be used for haulage, no construction in this area. Site layout change; screened out.	648522, 676105
CH064	Stone wall	Undesignated	N/A	Very Low	None	N/A	N/A	Existing track will be used for haulage, no construction in this area. Site layout change; screened out.	648579, 676189
CH066	Marian shrine	Undesignated	N/A	Low	None	N/A	N/A	No longer within study area; road no longer being used for access. Screened out.	648621, 676243

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH071	Vernacular structure (site of)	Undesignated	N/A	Low	None	N/A	N/A	Located within RLB but no works or access proposed in this area and no impact is predicted. Screened out.	647483, 676242
CH105	Townland boundary; parish boundary	Undesignated	N/A	Low	None	N/A	N/A	Area correlating to RLB already disturbed by commercial forestry plantation. No works in proximity to TLB. Screened out.	648932, 674022
CH115	Geophysical anomaly (penannular anomaly)	Undesignated	N/A	Unknown	None	N/A	N/A	Now located outside of the study area. Screened out.	644788, 672438
CH116	Geophysical anomaly (penannular anomaly)	Undesignated	N/A	Unknown	None	N/A	N/A	Now located outside of the RLB. Screened out.	644766, 672697
CH117	Geophysical anomaly (rectilinear)	Undesignated	N/A	Unknown	None	N/A	N/A	Now located outside of the study area. Screened out.	644750, 672430
CH118	Geophysical anomaly (group of three sub-oval anomalies)	Undesignated	N/A	Unknown	None	N/A	N/A	Now located outside of the study area. Screened out.	644702, 672320
CH119	Geophysical anomaly (two penannular ditches)	Undesignated	N/A	Unknown	None	N/A	N/A	Now located outside of the study area. Screened out.	644770, 672307
CH120	Geophysical anomaly (single linear feature)	Undesignated	N/A	Unknown	None	N/A	N/A	Now located outside of the study area. Screened out.	644773, 672458

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH121	Geophysical anomaly (rectilinear)	Undesignated	N/A	Unknown	None	N/A	N/A	Now located outside of the RLB and no impact predicted. Screened out.	644858, 672693
CH122	Geophysical anomaly (linear feature)	Undesignated	N/A	Unknown	None	N/A	N/A	Now located outside of the RLB and no impact predicted. Screened out.	644907, 672702
CH123	Geophysical anomaly (linear feature)	Undesignated	N/A	Unknown	None	N/A	N/A	Within the RLB but outside of Construction Works Boundary and will not be impacted.	644832, 672952
CH126	Kiln (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Outside of the RLB and was not explored. Screened out.	648263, 677450
CH130	Quarry (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Still extant and visible in HEV, aerial images. Within the RLB but distant from the proposed infrastructure. Screened out as no impact.	648479, 677333
CH131	Benchmark	Undesignated	N/A	Low	None	N/A	N/A	At site of former level crossing (?). Screened out as no impact if extant.	644601, 672969
CH134	Lime kiln (site of?)	Undesignated	N/A		None	N/A	N/A	Within the 200m buffer around the RLB but will not be impacted. Screened out.	648705, 672553
CH136	Culvert	Undesignated	N/A		None	N/A	N/A	Near entrance to the SE section of the scheme. Along access route? Screened out as will not be impacted.	648579, 672761
CH137	Lime kiln (site of?)	Undesignated	N/A		None	N/A	N/A	Within the 200m buffer around the RLB but will not be impacted. Screened out.	648544, 672860

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH141	Vernacular structures (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Likely disturbed as now within extant forestry block. Within the RLB but c.35m from the Construction Works Boundary and not likely to be impacted.	648701, 674010
CH142	Trigonometrical point	Undesignated	N/A	Unknown	None	N/A	N/A	In disturbed area; screened out as in area of dense forestry and unclear if extant. Also outside RLB and works area.	648827, 674738
CH143	Culvert	Undesignated	N/A	Low	None	N/A	N/A	In disturbed area; screened out as there will be no impact.	648450, 674283
CH148	Lime kiln (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Outside RLB; screened out.	647840, 674081
CH149	Lime kiln (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Slight changes noted in aerial imagery. Screened out as will not be directly impacted; uncertain if extant.	647733, 674462
CH151	Benchmark	Undesignated	N/A		None	N/A	N/A	Outside RLB; no impact.	647550, 674637
CH152	Benchmark	Undesignated	N/A		None	N/A	N/A	Outside RLB; no impact.	647453, 674783
CH156	Lime kiln (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Outside RLB and beyond works areas. Screened out.	647965, 675107
CH160	Lime kiln (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Screened out as no impact.	647586, 675081
CH162	Vernacular structures (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Screened out as no impact. Previous disturbance from forestry.	647950, 675629
CH163	Benchmark	Undesignated	N/A	Low	None	N/A	N/A	Located at RLB, but road depicting OS benchmark on the OS 25-inch	647478, 675919

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								map appears to be located further W of current road take. Will not be impacted.	
CH166	Trigonometrical point at former townland/civil parish boundary	Undesignated	N/A	N/A	None	N/A	N/A	Trig. point visible on both OS maps. The former townland boundary and civil parish boundary runs WSW-ENE here, but no trace of it was noted on the ground during fieldwork. Screened out.	647444, 676237
CH167	Vernacular structures (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Nothing noted above ground during walkover survey. Interesting kink in the field boundary/road that seems to go around structures. But road-widening is to only take place on opposite side of road. As no upstanding remains, no impact by movement of plant, etc.	647434, 676438
CH170	Benchmark	Undesignated	N/A	Low	None	N/A	N/A	Within the RLB, but no road-widening works, etc. proposed here. No impact.	647363, 676844
CH171	Benchmark	Undesignated	N/A	Low	None	N/A	N/A	Within the RLB, but no road-widening works, etc. proposed here. No impact.	647362, 676996
CH172	Benchmark	Undesignated	N/A	Unknown	None	N/A	N/A	Outside RLB and beyond works areas. Screened out.	647368, 677176
CH173	Benchmark	Undesignated	N/A	Low	None	N/A	N/A	Outside RLB and beyond works areas. Screened out.	647357, 677323
CH174	Benchmark	Undesignated	N/A	Low	None	N/A	N/A	Outside RLB and beyond works areas. Screened out.	647354, 677451

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH175	Well (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Located c.50m from the Construction Works Boundary and unlikely to be impacted.	647537, 677367
CH180	Townland boundary: Sraleagh; Ballymartin	Undesignated	N/A	Low	None	N/A	N/A	Now located outside of the study area. Screened out.	645651, 673171
CH181	Townland boundary	Undesignated	N/A	Low	None	N/A	N/A	Screened out as no impact; outside of RLB.	644839, 672729
CH183	Trackway (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Screened out as no impact.	648360, 674125
CH184	AAP: watercourse; bridge	Undesignated	N/A		None	N/A	N/A	No impact; Castlecomer Stream does not extend into RLB. Screened out.	648693, 675761
CH186	Cist	Listed in the SMR	KK005-087----	Low	None	N/A	N/A	Setting of site has been effected by presence of quarry to east presents more of an impact. Receptor not visible as set into ground. Screened out.	647699, 672924
CH187	Castle - unclassified	Recorded Monument; listed in the SMR	KK005-080----	Low	None	N/A	N/A	No visible impact as castle structure not extant, any surviving remains are below ground. Screened out.	646457, 675031
CH188	Enclosure	Listed in the SMR	KK005-017----	Low	None	N/A	N/A	No visual impact or impact to setting as receptor not visible at ground level. Screened out.	647519, 673727
CH189	Redundant record	Recorded Monument; listed in the SMR	KK005-016----	Unknown	None	N/A	N/A	Outside study area. Screened out.	646370, 674230
CH190	Enclosure	Listed in the SMR	KK005-013----	Low	None	N/A	N/A	No visual impact as site was identified from aerial photo and is	644261, 673670

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								not visible at ground level. Screened out.	
CH191	AAP: watercourse	Undesignated	N/A	Unknown	None	N/A	N/A	Stream has been modified, no impact. Screened out.	648273, 675722
CH192	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	No impact. Screened out.	647837, 675925
CH193	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	No impact. Screened out.	647785, 676150
CH194	AAP: infilled stream/marshy area	Undesignated	N/A	Unknown	None	N/A	N/A	Updated site layout no longer traverses this field. Screened out.	647594, 676239
CH195	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	No impact. Screened out.	647607, 676287
CH196	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	No impact. Screened out.	647440, 676902
CH198	Gate and pier	Undesignated	N/A	Low	None	N/A	N/A	No impact as outside of RLB - screened out.	646430, 673653
CH199	Gate piers	Undesignated	N/A	Low	None	N/A	N/A	No impact as outside of RLB - screened out.	646537, 673641
CH200	Culvert	Undesignated	N/A	Very Low	None	N/A	N/A	No impact as outside of RLB - screened out.	646767, 673600
CH201	AAP: marshy area	Undesignated	N/A	Unknown	None	N/A	N/A	Screened out, as no stream in vicinity, nothing noted on historical mapping. Likely natural.	647536, 674132
CH202	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	No impact. Orientated SW–NE. Screened out.	647743, 676963
CH203	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	No impact, previously disturbed. Screened out.	648180, 674821

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH204	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	Will be impacted by works associated with T6, however, screened out as the boundary is similar to that across the road and has been altered/dug out.	648437, 674963
CH209	AAP: limestone outcrop	Undesignated	N/A		None	N/A	N/A	Not impacted by proposed development; screened out.	647594, 676636
CH210	AAP: stream; drystone culvert	Undesignated	N/A	Unknown	None	N/A	N/A	Not impacted by proposed development; screened out.	644998, 673269
CH211	AAP: well (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Not impacted by proposed development; screened out.	644971, 673262
CH212	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	Grid connection will follow current roadway; screened out.	644416, 672243
CH213	Structure (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Beyond study area; screened out.	644762, 672448
CH214	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	Not on historical mapping. Will not be impacted. Screened out.	647735, 674090
CH219	Gate piers	Undesignated	N/A	Low	None	N/A	N/A	Located at the RLB but route will not be used for access. No impact. Screened out.	647668, 677215
CH222	Laneway; field boundaries; stone wall	Undesignated	N/A	Low	None	N/A	N/A	Site layout has been updated and this will no longer be impacted. Screened out.	647678, 675103
CH225	Historical field boundary	Undesignated	N/A	Low	None	N/A	N/A	Associated with CH053. Outside of Construction Works Boundary.	647730, 675285
CH227	Structure (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Outside of Construction Works Boundary and not likely to be impacted. Screened out.	647686, 675159

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH230	Laneway (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Site layout has been updated and this will no longer be impacted. Screened out.	647701, 675010
CH231	AAP: well (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Site layout has been updated and this will no longer be impacted. Screened out.	647747, 675049
CH232	Structure (site of)	Undesignated	N/A	Unknown	None	N/A	N/A	Site layout has been updated and this will no longer be impacted. Screened out.	647726, 675034
CH235	AAP: marshy area	Undesignated	N/A	Unknown	None	N/A	N/A	This area may have been created due to drainage, etc. associated with the forestry blocks. Screened out.	648416, 674907
CH241	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	Not likely to be impacted and beyond Construction Works Boundary. Screened out.	647975, 674188
CH244	Historical field boundary	Undesignated	N/A	Unknown	None	N/A	N/A	Located within the RLB, but will not be impacted by the new layout; screened out.	648164, 674043
CH246	Field boundary; stone wall	Undesignated	N/A	Very Low	None	N/A	N/A	Beyond Construction Works Boundary. Screened out.	648299, 674079
CH247	AAP: landscape	Undesignated	N/A	Unknown	None	N/A	N/A	Outside RLB. No designated sites in area.	649388, 675466
CH249	Historical field boundary	Undesignated	N/A	Unknown	None	N/A	N/A	Within the RLB but now located away from the Construction Works Boundary and turbine. Screened out.	648550, 675002
CH256	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	After layout change, boundary is outside of the RLB and will not be	645479, 673099

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								impacted by cable link. Screened out.	
CH257	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	After layout change, boundary is outside of the RLB and will not be impacted by cable link. Screened out.	645541, 673134
CH258	Field boundary	Undesignated	N/A	Very Low	Neutral	Negligible	Imperceptible	Joint bay location has now been relocated and the layout has changed. This boundary now falls outside of the study area.	645653, 673188
CH261	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	No longer crossed after layout change. RLB and cable link will be in close proximity but follow roadway. Screened out.	646045, 673649
CH268	Trackway	Undesignated	N/A	Very Low	None	N/A	N/A	Screened out. Track on first-edition six-inch OS map was orientated slightly differently, while no trackway was depicted on the 25-inch OS map.	648699, 672756
CH270	Stone wall; gate piers	Undesignated	N/A	Low	None	N/A	N/A	Screened out as located at edge of RLB and will not be impacted by proposed works.	648682, 672873
CH271	Culvert	Undesignated	N/A	Very Low	None	N/A	N/A	Screened out as located at edge of RLB and will not be impacted by proposed works.	648694, 672868
CH272	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	Screened out as located at edge of RLB and will not be impacted by proposed works.	648699, 672868

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH273	Field boundary; stone wall	Undesignated	N/A	Very Low	None	N/A	N/A	Screened out as located at edge of RLB and will not be impacted by proposed works.	648709, 672874
CH276	Field boundary	Undesignated	N/A	Very Low	None	N/A	N/A	Screened out. Field boundary is slightly within the Construction Works Boundary at its SE end, however the proposed works are located within the current farm track and the boundary will not be impacted.	648869, 673037
CH283	Stone wall; gate pier	Undesignated	N/A	Very Low	None	N/A	N/A	N end of boundary within RLB; however, potential structure and most of field boundary now lie outside the RLB due to site layout changes. No impact.	646243, 673722
CH292	Castle - Anglo-Norman masonry castle	National Historic Property; listed in the SMR; Protected Structure; listed in the NIAH	KK019-026078-; RPS B197; 12001066; NIAH Garden Survey 1738	High	None	N/A	N/A	No visual impact as confirmed through site visit, therefore no impact.	650794, 655734
CH295	Church	National Monument (ownership); Recorded Monument; Protected Structure; listed in the NIAH	Nat. Mon. 114; LA018-031002-; RPS 353; 12801802	High	None	N/A	N/A	No visual impact: Views to S & SW occluded by mature chestnut trees in graveyard. Further to SW, views occluded by Cullenagh Mountain, and to SE by Baunogemeely Mountain.	653517, 690271
CH296	Round tower	National Monument (ownership); Recorded Monument	Nat. Mon. 114; LA018-031005-	High	None	N/A	N/A	No visual impact from base of tower, tower not accessible to public, or without ladder. Views to S & SW occluded by mature chestnut trees in graveyard. Further to SW, views occluded by	653507, 690253

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
								Cullenagh Mountain, and to SE by Baunogemeely Mountain. However, presumably the turbines will be visible from the top of the tower; although tower not publicly accessible.	
CH297	Church	National Monument (ownership); Recorded Monument	Nat. Mon. 114; LA019-016----	High	None	N/A	N/A	No visual impact: Views to S occluded by Fossy Mountain and to SE by Baunogemeely Mountain.	654406, 689948
CH298	Church	National Monument (ownership); Recorded Monument	Nat. Mon. 115; LA032-020002-	High	None	N/A	N/A	No visual impact: Views to SW occluded by Clogrennan Hill.	667271, 677859
CH299	Ringfort - rath	National Monument (ownership); Recorded Monument	Nat. Mon. 567; LA037-002----	High	None	N/A	N/A	No visual impact: Views to W and SW occluded by Clogrennan Hill.	666643, 676729
CH300	Cave	National Monument (ownership); Recorded Monument	Nat. Mon. 399; KK014-017----	High	None	N/A	N/A	No visual impact, caverns located below ground.	650883, 665029
CH301	Church	National Monument (ownership); Recorded Monument	Nat. Mon. 670; KK018-032001-	High	None	N/A	N/A	No visual impact as confirmed through site visit.	638317, 656473
CH302	Castle - tower house	National Monument (ownership); Recorded Monument; Protected Structure	Nat. Mon. 274; KK020-003----; RPS C423	High	None	N/A	N/A	View N obscured by Oliver's Hill and NW by Purcell's Kill, views also occluded by farm buildings and trees. No visual impact.	657343, 657919
CH303	Religious house - Augustinian canons	National Monument (ownership); Recorded Monument	Nat. Mon. 74; KK008-047001-	High	None	N/A	N/A	Views E and ENE obscured by Ballylehaun Hill and Knockmannon Hill. No visual impact.	630744, 669814

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
CH304	Round tower	National Monument (ownership); Recorded Monument	Nat. Mon. 74; KK008-047004-	High	None	N/A	N/A	Views E and ENE obscured by Ballylehaun Hill and Knockmannon Hill. No visual impact.	630711, 669808
CH305	Religious house - Augustinian canons	National Monument (guardianship); Preservation Order; listed in the SMR; Protected Structure; listed in the NIAH	Nat. Mon. 344 & 331; PO 46/1936; KK019-026068-; RPS B114; 12000213	High	None	N/A	N/A	No visual impact as confirmed through site visit.	650847, 656112
CH306	Castle - tower house	National Monument (ownership); listed in the SMR; Protected Structure	Nat. Mon. 522; KK019-026074-; B122	High	None	N/A	N/A	No visual impact as confirmed through site visit.	651104, 655983
CH307	Religious house - Franciscan friars	National Monument (ownership); listed in the SMR	Nat. Mon. 72; KK019-026101-	High	None	N/A	N/A	No visual impact as confirmed through site visit.	650502, 656338
CH310	Gazebo	Protected Structure; listed on the NIAH	RPS 803; NIAH 12901001	Medium	None	N/A	N/A	Within the historic boundary of Haywood Demesne. Site visit confirmed no visual impact.	646635, 681105
CH314	Historic town	Recorded Monument; listed in the SMR	KK005-082	Medium	None	N/A	N/A	While HR9 is located within the ZoN for the historic town, there are no predicted impacts.	653389, 673030
N/A	Ditch/drain	Undesignated	N/A	Negligible	Neutral	Negligible	Imperceptible	Appears modern and nothing noted on historical OS mapping. Screened out.	648121, 675681
N/A	AAP: stream	Undesignated	N/A	Unknown	None	N/A	N/A	It is not noted on historical OS mapping and not of archaeological significance.	645481, 673500

Receptor	Site Type	Status	Reference	Importance	Type & Quality of Effect	Magnitude of Impact	Significance of Effect	Comments	ITM
N/A	Ditch; marshy area	Undesignated	N/A	Unknown	None	N/A	N/A	Likely modern drainage works. Will not be impacted by development. Screened out.	647693, 674089
N/A	Drain/ditch	Undesignated	N/A	Negligible	None	N/A	N/A	Likely modern drainage works. Will not be impacted by development. Screened out.	647792, 675025
N/A	Culvert; watercourse	Undesignated	N/A	Negligible	Neutral	Negligible	Imperceptible	Not depicted on the historical mapping or HEV; likely modern drainage works. Screened out.	647903, 673750

Appendix 15.8: Kilkenny City and County Development Plan 2021-2027: Policy Objectives

Appendix to Chapter 15: Cultural Heritage

Appendix 15.8: Kilkenny City and County Development Plan 2021-2027: Policy Objectives

Appendix 15.8 Kilkenny City and County Development Plan 2021–2027: Policy Objectives

Cultural Heritage	
Archaeological Resources	
No.	Objective
9C	To protect archaeological sites and monuments (including their setting), underwater archaeology, and archaeological objects, including those that are listed in the Record of Monuments and Places, and in the Urban Archaeological Survey of County Kilkenny or newly discovered sub-surface and underwater archaeological remains.
9D	To carry out further research on the eighteen archaeological landscapes as identified in the Preliminary Audit of Archaeological Landscapes in County Kilkenny.
9E	To develop an enhanced policy framework for the three priority sites identified in Section 9.3.1.1 above, plus for any additional sites identified through Objective 9D above.
No.	Development Management Requirements
N/A	The Council will have regard to the archaeological landscapes associated with the areas listed above in the Plan and may, if considered necessary, require an impact assessment for proposed development which could have a significant impact on the identified landscape.
N/A	To endeavour to preserve in situ all archaeological monuments, whether on land or underwater, listed in the Record of Monuments and Places (RMP), and any newly discovered archaeological sites, features, or objects by requiring that archaeological remains are identified and fully considered at the very earliest stages of the development process and that schemes are designed to avoid impacting on archaeological heritage.
N/A	To require archaeological assessment, surveys, test excavation and/or monitoring for planning applications in areas of archaeological importance if a development proposal is likely to impact upon in-situ archaeological monuments, their setting and archaeological remains.
N/A	To ensure that development within the vicinity of a Recorded Monument is sited and designed appropriately so that it does not seriously detract from the setting of the feature or its zone of archaeological potential. Where upstanding remains of a Recorded Monument exist a visual impact assessment may be required to fully determine the effect of any proposed development.
N/A	To require the retention of surviving medieval plots and street patterns and to facilitate the recording of evidence of ancient boundaries, layouts etc. in the course of development.
N/A	To safeguard the importance of significant archaeological landscapes from developments that would unduly sever or disrupt the relationship, connectivity and/or inter-visibility between sites.
Protected Structures	
No.	Objective
9F	To provide assistance to owners of Protected Structures in undertaking essential repairs and maintenance by the provision of relevant information.
9G	To respond to the Ministerial recommendation to include in the RPS, structures which have been identified as being of regional, national or international significance in the National Inventory of Architectural Heritage survey and to

Appendix 15.8: Kilkenny City and County Development Plan 2021-2027: Policy Objectives

	consider for inclusion those rated as being of local significance.
9H	To continue to review the Record of Protected Structures and add or delete structures as appropriate.
9I	To ensure all digital mapping for the Record of Protected Structures is up to date and current, and readily accessible to the public
Historic Gardens and Designed Landscapes	
No.	Development Management Requirements
N/A	To seek the protection and sustainable management of historic gardens, parklands and designed landscapes in the Kilkenny County and City, their setting and their visual amenity.
N/A	To request visual impact and /or an architectural heritage impact assessment where development is considered to, have a potential impact on a historic landscape or protected structure.
N/A	To protect elements of designed landscapes within the attendant grounds of Protected Structures, including boundary features.

Natural Heritage	
Hedgerows	
No.	Development Management Requirements
N/A	To protect existing woodlands, trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character of the county, and to ensure that proper provision is made for their protection and management, when undertaking, approving or authorising development.
N/A	To retain hedgerows, and other distinctive boundary treatment such as stone walls, when undertaking, authorising or approving development; where the loss of the existing boundary is unavoidable as part of development, to ensure that a new hedgerow is planted using native species, and species of local provenance to replace the existing hedgerow and/or that the wall is re-built using local stone and local vernacular design
N/A	To require the planting of native broadleaf species, and species of local provenance, in new developments as appropriate. See Appendix G for a list of native trees and shrubs.

Economic Development	
Tourism	
No.	Objective
5C	To continue to develop sustainable high-quality tourism, leisure and complementary activities for the City & County with the key stakeholders enhancing the position of Kilkenny as a Hero site within Ireland's Ancient East branding.

Appendix 15.9: Kilkenny County Council Cultural Strategy: Arts, Heritage and Libraries 2018-2022: Themes and Actions

Appendix to Chapter 15: Cultural Heritage

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Appendix 15.9 Kilkenny County Council Cultural Strategy: Arts, Heritage and Libraries 2018–2022: Themes and Actions	
Strategic Priority 2	
Increase and diversify participation in culture	
No.	Objective
N/A	Develop and support programmes which encourage active participation in identifying, recording, protecting, communicating and enjoying Kilkenny's heritage.
No.	Actions
N/A	Continue to play a key role in collecting, preserving and communicating the local history, heritage and arts of County Kilkenny through the local studies service. Expand and communicate our content to local and worldwide audiences by developing local digital collections to optimise accessibility.
N/A	Activate the cultural community, stakeholders and local communities to provide diverse opportunities for engagement.
N/A	Work with communities, agencies and other key partners to encourage participation and to identify, record and protect Kilkenny's rich built, natural and cultural heritage.
Strategic Priority 4	
Engage children and young people in culture	
No.	Objective
N/A	Support, develop and promote programmes which engage young people in Kilkenny's heritage, to develop life-long interest.
No.	Actions
N/A	Provide opportunities for formal and informal learning in a variety of ways from early childhood to young people in cooperation with local stakeholders, agencies and community organisations.
Strategic Priority 5	
Communicate the value of culture	
No.	Objective
N/A	Ensure that the economic, social, cultural and environmental value of Kilkenny's heritage to the county and its communities is recognised and communicated.

Appendix 15.10: Castlecomer Local Area Plan 2019-2024

Appendix to Chapter 15: Cultural Heritage

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6.1.2 Castlecomer Architectural Conservation Area

There is a distinct cross pattern to the street layout in the centre of Castlecomer, with the four most significant streets converging on one central point offering a focal point to the townscape. In the mid 17th century the lands on which Castlecomer are now located were given to Sir Christopher Wandesforde who laid out the town to his own specifications. Due to the carefully planned proportions of the town a strong sense of formality can be observed in the urban environment. Several significant vistas can be observed within the designated areas, with notable viewpoints looking east from Barrack Street down High Street and looking south down Kilkenny Street (pp 28).

High Street	Also known as The Square, High Street is an example of the impressive character of Castlecomer, with its generous dimensions, lime tree lined footpaths and buildings of distinguished architectural merit such as the prominent Creamery House. The street width to building height ratio is particularly generous, with the street width exceeding forty metres at some points and building heights ranging from two to three storeys. The resulting urban environment benefits from its east west orientation in providing a bright spacious but formal urban environment. Classically proportioned buildings augment the formal character of the streetscape, with the majority of the buildings fronting onto High Street having historical or architectural merit. Features of significance include Wyatt styled tripartite fenestration, applied renderings and traditional shopfronts. There is a sharp definition between public and private open space in the town, with public space in the spaces between building frontages and private space accessed through laneways under distinctive carriage arches.
Kilkenny Street	Contrasts with the generous dimensions of High Street, with street widths ranging from 10 to 15 metres and building heights not exceeding three storeys. The street has a north south orientation and is relatively flat in nature. Several significant clusters of institutional buildings are located on the street that reflects the evolution and heritage of the town. The old school house that is currently the public library is said to have been the first purpose built educational building in the town and it offers an imposing landmark on the street. Two significant residential clusters are located on Kilkenny Street, the first was built to house the Royal Irish Constabulary officers, stationed at the nearby barracks. Built in the early 20th century, Sunlight Villas is a cluster consisting of four dwellings with the same design features relating to the arts and crafts and partly the Edwardian movement distinguishing the buildings from their surroundings. The second significant residential cluster called Florence Terrace was built by Captain Wandesford in the early 20th century to house workers of the nearby Coalmines. The cluster is distinguished from the surrounding built form due to its distinctive locally manufactured red brick with the locally produced wrought iron fencing embellishing the street presence of the cluster.

Appendix 15.11: Assessment of Visual Effects including Photomontages from Cultural Heritage Receptors (Extract from Chapter 14, LVIA)

Appendix to Chapter 15: Cultural Heritage

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Appendix 15.11 Assessment of Visual Effects including Photomontages from Cultural Heritage Receptors (Extract from Chapter 14, LVIA)

This appendix is an extract from Chapter 14: Landscape and Visual Assessment. The chapter's author, Richard Barker (MLA MILI) of Macro Works Ltd, provides the full textual assessment of visual effects from the following cultural heritage receptors.

VP No.	Existing View	Visual Impact Magnitude
CH012 + CH013	<p>Moat adjacent to R432 at Moatpark - This Moat does not appear to be a regularly visited heritage feature that is contained within private farmland. Consequently, it is not strictly a relevant view for the LVIA and this viewpoint location has principally been selected for the purposes of the Cultural Heritage Assessment. Nonetheless, in the interests of a robust assessment it will be considered that it gets some visitation. The very low number of viewers contributes to this receptor only having a Medium sensitivity from an LVIA perspective.</p> <p>The view in question runs across a gently rising fore-to-middle ground of farmland and forestry and is framed by mature coniferous treelines in the foreground. A low ridge contains the view in the middle distance.</p>	Five of the proposed turbines are visible from here rising with partial blade sets above the skyline ridge at a modest scale. They are well spaced and aside from not rotating freely above the ridge, they are seen in a legible manner. They are well accommodated in this productive rural vista, albeit they increase the diversity and intensity of built development. Overall, the magnitude of visual impact is deemed to be Low .
CH074	<p>Cursus at Ballyoskill - This Cursus does not appear to be a regularly visited heritage feature that is contained within private farmland. Consequently, it is not strictly a relevant view for the LVIA and this viewpoint location has principally been selected for the purposes of the Cultural Heritage Assessment. Nonetheless, in the interests of a robust assessment it will be considered that it gets some visitation. The very low number of viewers contributes to this receptor only having a Medium sensitivity from an LVIA perspective.</p> <p>The view in question is directly uphill to the east where it takes in a slope of marginal grazing topped by hedgerow vegetation and</p>	The partial blade sets of one close turbine can be seen along with the blades of three others at a slightly further distance, which are partially obscured by vegetation and one of the communications masts. The visible turbines are not overbearing, but will draw the attention of Cursus visitors. However, those same visitors will have had closer and clearer views of the turbines approaching the wind farm along the access road required to get to the Cairn. The substantial screening of the nearby turbines makes for a slightly ambiguous view of them rotating against the skyline ridge. However, it is also important to note that the principal visual amenity at this location relates to broad downslope views in the opposite direction to the development. Overall, the magnitude of visual impact is deemed to be Medium .

Appendix 15.11: Assessment of Visual Effects including Photomontages from Cultural Heritage Receptors (Extract from Chapter 14, LVIA)

	forestry. There are also two communications masts on the near skyline ridge.	
CH110	<p>Hillfort at Toor More – The Toor More Hillfort does not appear to be a regularly visited heritage feature that is contained within private farmland. Consequently, it is not strictly a relevant view for the LVIA and this viewpoint location has principally been selected for the purposes of the Cultural Heritage Assessment. Nonetheless, in the interests of a robust assessment it will be considered that it gets some visitation. The very low number of viewers contributes to this receptor only having a Medium sensitivity from an LVIA perspective.</p> <p>The view in question, runs along a broad ridge of farmland and forestry that is interspersed with occasional farmsteads.</p>	The proposed turbines are nearly all openly visible from here except for the northernmost pair that begin to descend below the ridge revealing only partial blade sets. The turbines are seen at a prominent scale, but are not overbearing in relation to the broad land form and landcover patterns from which they rise. They are seen in a clear and legible manner trailing along the ridge and are well accommodated in a thematic sense within this productive upland setting, albeit they introduce a considerably increased intensity of built development. It is not considered that they would unduly detract from the visitor experience at this ringfort site as they form a discrete part of the surrounding rural hinterland. On balance of these factors, the magnitude of visual impact is deemed to be Medium-low .
CH285	Sham Castle and Gothic Ruins at Heywood – This is a key node and popular photo point for Heywood visitors who take advantage of framed views through the intact ruin windows backed by a dense woodland setting. This is the key view that has been depicted in the photomontage. Again, this is an historic built feature encountered by visitors moving between the car park and the formal gardens.	There is no potential for visibility of the proposed turbines from here due to screening by the intervening historic structure and dense vegetation just beyond. The magnitude of effect is Negligible by default.
CH287	The Orangery at Heywood – This is another historic garden folly-type feature of the Heywood Demesne encountered by those making their way between the car park and the formal gardens. However, it is important to note that the depicted view is from the elevated rear façade of the building from the school access road and this is not the main view of the front façade of the structure afforded to garden visitors. For these visitors, the uphill view of the ornate stonework structure is in the opposite direction to the site. The depicted view is used as a worst-case in relation to potential visual exposure to the proposed development within the context of the Orangery. For this reason the sensitivity is downgraded to Medium relative to other Heywood heritage receptors.	<p>The blade sets of the majority of the proposed turbines are visible from here between and above sections of dense intervening woodland vegetation. It is a cluttered and slightly ambiguous view of the turbines in terms of scale and distance as little can be seen of the distant hilltop context in which they are situated. However, it is a fleeting and oblique view of the distant turbines afforded to frequent visitors to the school, as opposed to tourists and garden visitors.</p> <p>On balance of the reasons outlined above, the magnitude of visual impact is deemed to be Medium-low.</p>

Appendix 15.11: Assessment of Visual Effects including Photomontages from Cultural Heritage Receptors (Extract from Chapter 14, LVIA)

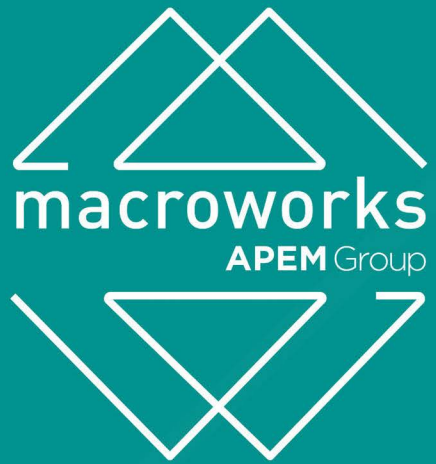
CH289 (1)	<p>Heywood Gardens No.1 – This is a very similar view to VP6 from the LVIA set of viewpoints as it is from the same sequence of garden terraces that would have cascaded down from the front of the former Heywood House position in the direction of Ballynakill Village, which it is understood was the focal point of the designed view. For this reason, the depicted view has been oriented in this direction.</p> <p>Beyond the formal garden terraces of manicured lawns fringed by ornamental shrub planting is a rolling pastoral demesne setting that descends into a wooded valley to the south. Distant hills of farmland, forestry and woodland can be seen to the southeast.</p>	<p>All twelve proposed turbines are visible in two condensed clusters in the view's background at a distance of c. 4.5km to the nearest visible turbine. The turbines will likely draw the eye in this scenic vista, characterised by more traditional rural land uses such as immediate formal gardens, with agriculture and forestry beyond. Nonetheless, the proposed turbines present backed by the sky with a low degree of contrast and are considered to have a sub-dominant visual presence in this broad view.</p> <p>Aesthetically, this is not an ideal view of a wind farm due to its condensed nature, which generates a notable degree of visual clutter and visual irritation. Nonetheless, the variation in the perceived scale of the turbines highlights the depth of the proposed development across the distant elevated lands. Furthermore, the proposed turbines do not appear incongruous along the upland ridge, which is characterised by other working land uses and built features such as the extensive areas of commercial forestry and existing telecommunications towers. Nonetheless, the proposed development will marginally detract from the scenic amenity afforded in this pastoral scenic view. Thus, the magnitude of visual impact is deemed Medium-low.</p>
CH289 (2)	<p>Heywood Gardens No.2 – The formal approach to the Lutyens sunken garden from the manicured terraces that fronted Heywood house is via a short terraced avenue lined by pleached lime trees. These frame the approach and sunken garden gateway but also afford framed lateral views to the south across the demesne as it blends into rural fields, forests and woodlands. Like the view from the house terraces, these lateral views are directed towards Ballinakill Village, but framed by hills in the middle distance to the southeast.</p>	<p>The view of the proposed turbines is very similar to that described previously from the nearby VP6 and CH1. Again, the view of the turbines is peripheral to the main view towards the sunken garden gateway, but also in the context of the perpendicular southward views towards Ballinakill. Contextually, the add an increased level of built development to the distant rural setting, but not one that is out of keeping with that productive landscape or one that unduly detracts from the visitor experience of Heywood gardens. Overall, the magnitude of visual impact is deemed to be Medium-low.</p>
CH293	<p>Ballylarkin Abbey – Ballylarkin Abbey does not appear to be a regularly visited heritage feature that is contained within private farmland. Consequently, it is not strictly a relevant view for the LVIA and this viewpoint location has principally been selected for the purposes of the Cultural Heritage Assessment. Although there is no dedicated car parking, there is a small turnstile gate at the roadside that invites visitation and in the interests of a robust assessment it will be considered that it gets some visitors. The very low number of</p>	<p>Around six of the proposed turbines are seen lining the distant ridge at a small scale and with a low degree of contrast against the sky. They are considerably less noticeable than the nearer cluster of turbines which also make the proposed turbines an additional characteristic feature of the view rather than a novelle one. The proposed turbines, if noticed, are seen in a clear and legible manner. Overall, the magnitude of visual impact is deemed to be Low-negligible.</p>

Appendix 15.11: Assessment of Visual Effects including Photomontages from Cultural Heritage Receptors (Extract from Chapter 14, LVIA)

	<p>viewers contributes to this receptor only having a Medium sensitivity from an LVIA perspective.</p> <p>The view in question sweeps across a broad and undulating upland plateau of farmland, woodland and forestry and there are four modest sized wind turbines rising from it in the middle distance. A more distant ridgeline can also be seen to the north east.</p>	
CH309 (1)	<p>Lutyens Sunken Garden at Heywood – This is a view from within the concentric terraces of the Lutyens sunken garden within Heywood Demesne. It is an intimate and tranquil space with ornate stonework and planting and a central water feature fountain that is further enclosed by mature broadleaf trees just beyond its perimeter walls to the south and east.</p>	<p>The proposed turbines will be substantially screened from view by a combination the perimeter wall and a series mature Beech trees (only semi-deciduous). Even in winter months, it is likely to be difficult to discern distant turbine blades through the dense intervening branches and dead leaves. Consequently, the magnitude of impact is deemed to be Negligible.</p>
CH309 (2)	<p>Heywood Gardens No.3 – Relative to view CH2 which is also within the context of Lutyens sunken garden, this view is slightly elevated and provides a greater sense of the rolling rural landscape that extends beyond the garden walls to the south. A linear woodland runs away from the viewer towards an upland context of farmland and forestry, but is substantially screened by a large Beech tree.</p>	<p>The proposed turbines are substantially screened by the large foreground Beech tree with only two of the blade sets rotating amongst branches to the right hand side of it. Even in winter, the dense branches and dead leaves of the semi-deciduous specimen tree will provide substantial screening of the development. The path down into the garden descends directly below this point so the opportunity to obtain a clearer view by moving to the right is not readily available. Overall, the distant view of partial turbine blade sets within a separate productive rural area, does not materially diminish the visitor experience here and the visual impact is deemed to be Low-negligible.</p>
CH310	<p>Gills Pond Road at Heywood – This view is from the edge of the Heywood demesne in the direction of Ballynakill Village, where a small boat landing and folly-like shelter is provided. It is understood to be a pond formerly used for recreational boating by the owners of Heywood House. The view to the south takes in an informal lake side path that leads down to Ballinakill village, which is framed by a thin band of riparian vegetation that partially obscures views of the pond. Scrubby farmland is evident on the opposite side of the pond and a distant farmed / forested ridge can be seen to the south.</p>	<p>The proposed development presents in an almost identical manner as in VP6 and VP7A from the LVIA viewpoint set. Some of the proposed turbines present slightly stunted as the distant ridge will partially screen the towers of the southernmost turbines in the array. In general, the proposed turbines will be viewed from here in a highly condensed cluster and will generate a degree of visual clutter and irritation, especially due to the partial screening by intervening tree tops. Nevertheless, in terms of scale and function, the proposed turbines will not appear as incongruous built features along the productive upland ridge, which is very much a part of the background setting of this localised pond view. Thus, the magnitude of visual impact is deemed Medium-low.</p>

Appendix 15.11: Assessment of Visual Effects including Photomontages from Cultural Heritage Receptors (Extract from Chapter 14, LVIA)

CH312	Kilcronan Graveyard – This is a view from next to the Kilcronan Graveyard near a local road intersection. It is an overgrown graveyard that does not appear to be frequently visited and would not normally be included in an LVIA set of receptors other than it also being representative of local community views. Undulating terrain cloaked in forestry and farmland leads to a vegetated ridgeline in the middle distance.	<p>This is an end-on view of the proposed development as the turbines run away from the viewer along the ridge at a modest scale. The turbines range in visual exposure from fully visible to just blades depending on distance and intervening screening. The nearest cluster is seen tightly stacked in a cluttered manner as is the most distant group. There are two partially visible turbines that serve as a visual link between the two groups and provide some less cluttered legibility to the array. The proposed wind farm is well assimilated into this productive upland setting in terms of scale and function, but it does introduce a greater intensity of built development.</p> <p>On balance of the factors outlined above, the magnitude of visual impact is deemed to be Medium-low.</p>
CHD1	Walkway near The Obelisk at Heywood – This is an enclosed view of the Obelisk flanked by near wooded slopes. It is an early view obtained by visitors to Heywood who have parked their cars in the front entrance car park and are making their way towards the formal gardens.	There is no potential for visibility of the proposed turbines from here due to screening by intervening landform and dense vegetation. The magnitude of effect is Negligible by default.
CHD2	Heywood Gardens No.4 – This is a view obtained from a terraced cloister / arbour that lies to the western side and at a slightly lower level to the main terraced lawns that would have cascaded down from Heywood House. Its main orientation is to the west / southwest overlooking the river that runs through the demesne and is backed by woodland vegetation.	There is no potential for visibility of the proposed turbines from here due to screening by the intervening historic structure. The magnitude of effect is Negligible by default.
CHD3	Walkway at Heywood – This view is afforded from just downhill from the terraced arbour subject of CH9, which can be seen in the upper foreground. At the lower level is a pathway that leads along the river to the south which is flanked by mature woodland on its western side.	<p>Around five of the proposed turbines can be seen from here rising above a nearby grassy ridge. They are contained in a tight cluster which will generate visual clutter and there is also some scale / distance confusion as the more distant ridge on which they sit is obscured from view. Nonetheless they are seen at a modest scale, peripheral to the main woodland river corridor which is the principal source of visual amenity here.</p> <p>Overall, the magnitude of visual impact is deemed to be Medium-low.</p>



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CULTURAL HERITAGE PHOTOMONTAGES

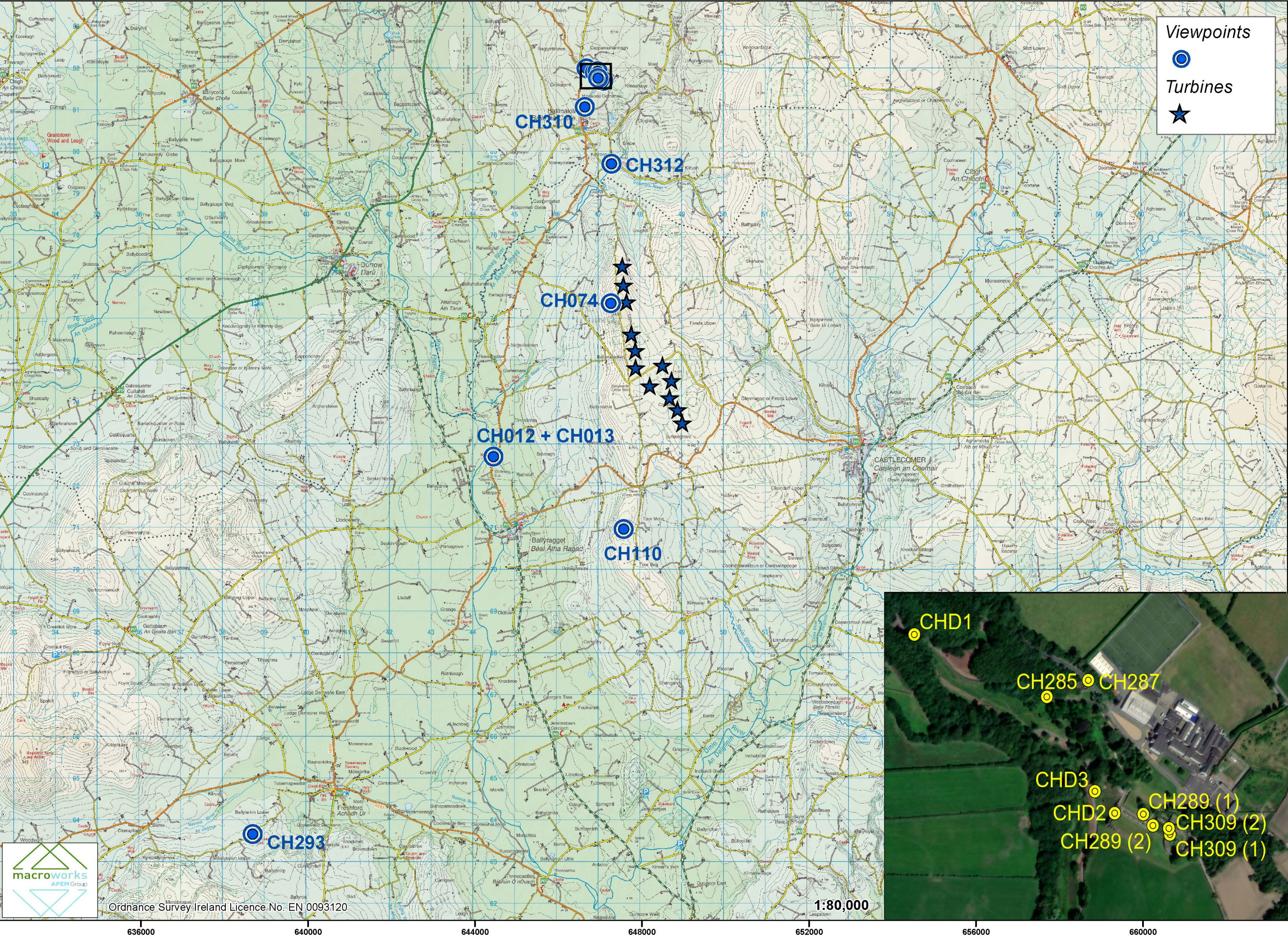
Ballynalacken Wind Farm

September 2024



LVIA | TVIA | Landscape Design | Visibility Analysis | Glint and Glare | Verified Photomontages | CGI | Shadow Flicker Analysis

Heritage viewpoint locations selected for the Ballynalacken Wind Farm project











Ballynalacken Turbines not visible in this photomontage. Transparent Wireframe included to illustrate the location of the Ballynalacken Turbines.











Ballynalacken Turbines partially visible in this photomontage. Transparent Wireframe included to illustrate the location of the Ballynalacken Turbines.

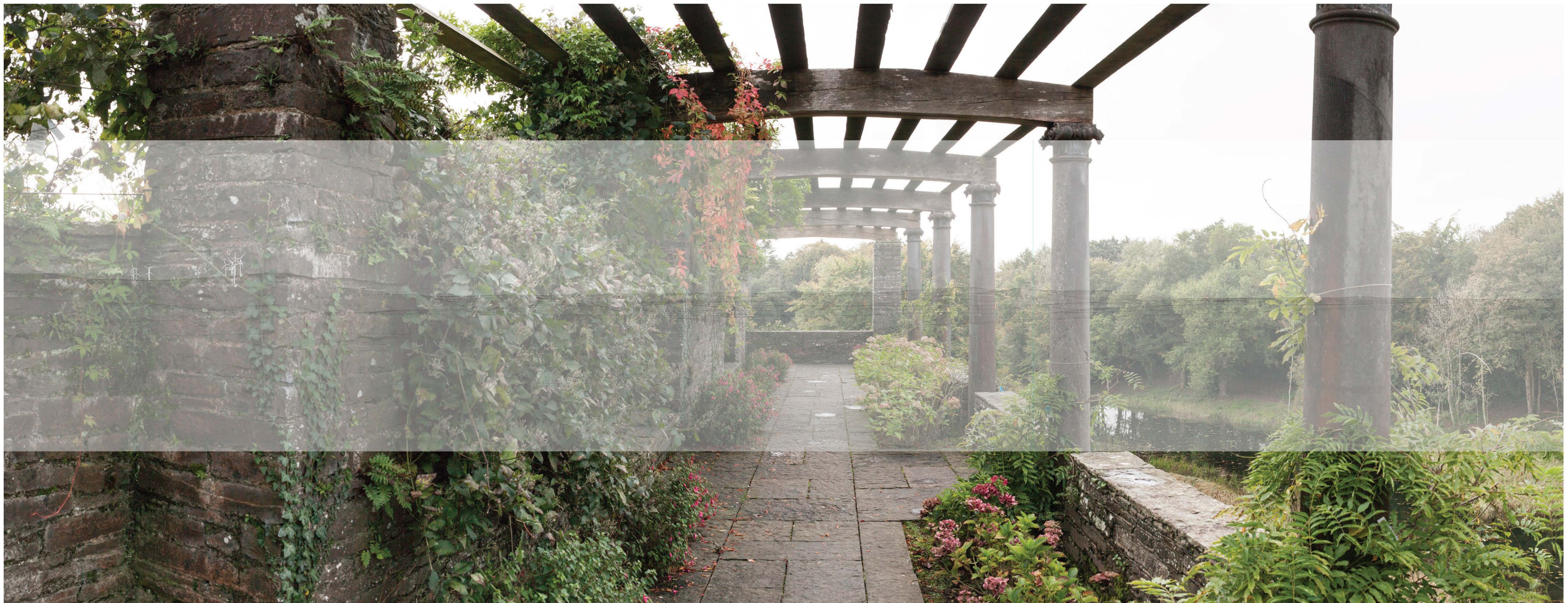








Ballynalacken Turbines not visible in this photomontage. Transparent Wireframe included to illustrate the location of the Ballynalacken Turbines.



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