

Chapter 26: Cultural Heritage





ORIEL WIND FARM PROJECT

Environmental Impact Assessment Report Chapter 26: Cultural Heritage

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26 CHAPTER 26 – CULTURAL HERITAGE

26.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) provides an assessment of the potential impacts of the Oriel Wind Farm Project (hereafter known as “the Project”) on cultural heritage sites/assets. For the purposes of this chapter the term ‘cultural heritage’ encompasses archaeological heritage, architectural heritage and cultural heritage sites. Specifically, this chapter considers the potential impact of the following elements of the Project during the construction, operational and maintenance, and decommissioning phases:

- Onshore infrastructure (i.e. onshore cable, onshore substation) of the Project; and
- Offshore cable in the intertidal area above the low water mark (LWM) including the Transition Joint Bay (TJB).

In addition, this chapter also considers the impact of the offshore wind farm on cultural heritage setting.

The assessment presented is informed by the following technical chapters and appendices:

- Chapter 5: Project Description (volume 2A);
- Chapter 15: Marine Archaeology (volume 2B);
- Chapter 27: Seascape, Landscape and Visual Amenity;
- Appendix 26-1: Cultural Heritage Report; and
- Appendix 27-1: Seascape, Landscape and Visual Amenity – Accompanying Graphics.

This chapter summarises information contained within appendix 26-1: Cultural Heritage Report, which must be read in conjunction with this chapter.

The details and competencies of the specialist who prepared this chapter can be found in volume 2A, chapter 1: Introduction.

26.2 Purpose of this chapter

The primary purpose of the EIAR is to provide an assessment of the likely direct and indirect significant effects of the Project on cultural heritage. In particular, this EIAR chapter:

- Presents the existing cultural heritage baseline (archaeological heritage, architectural heritage and cultural heritage) established from desk studies, field inspection, geophysical survey, archaeological test excavation in sensitive areas and design team consultation (section 26.7 and appendix 26-1: Cultural Heritage Report);
- Identifies any assumptions and limitations encountered in compiling the environmental information (section 26.7.7);
- Presents an assessment of the potential likely significant effects on cultural heritage arising from the Project (section 26.10), based on the information gathered and the analysis and assessments undertaken. It also examines the possible setting effects of the offshore infrastructure of the Project on cultural heritage sites (appendix 26-1: Cultural Heritage Report). An assessment of potential cumulative impacts is provided in section 26.11 and an assessment of transboundary effects is outlined in section 26.12; and

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- Highlights any necessary monitoring (section 26.10.6) and/or measures (section 26.10.5) which could prevent, minimise, reduce or offset the possible effects in order to safeguard any monuments, features or finds of antiquity or features of local cultural heritage interest.

A marine archaeological assessment has also been carried out and assesses the effects of the offshore wind farm area and the offshore cable corridor. It included a wider search area encompassing 2 km from the offshore wind farm area and the offshore cable corridor boundaries, up to the LWM (see volume 2B, chapter 15: Marine Archaeology).

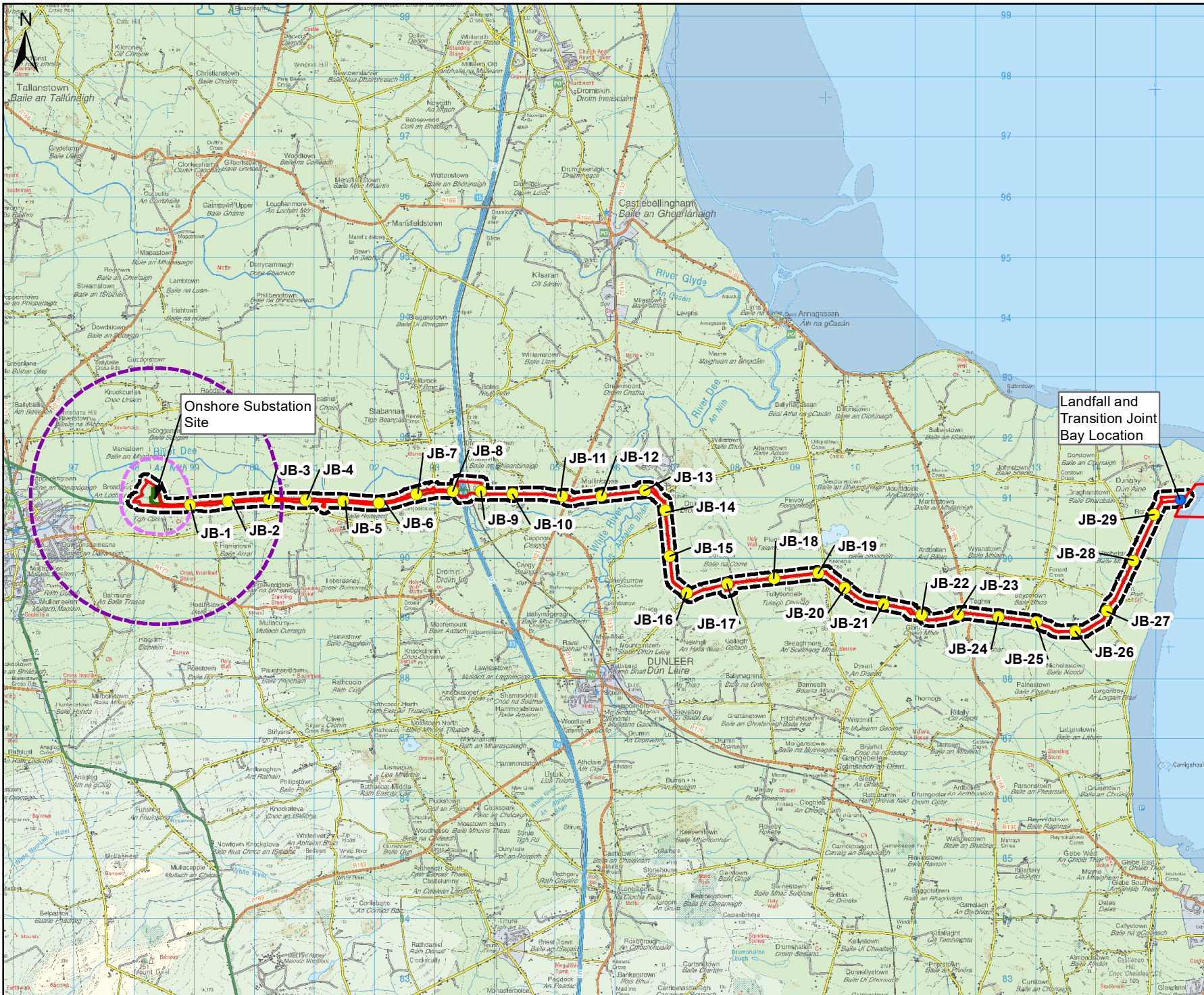
26.3 Study area

The area examined for this study includes the full extent of the onshore elements of the Project (see volume 2A, chapter 5: Project Description). To understand and to characterise the character, context and significance of the cultural heritage landscape, the baseline desk study took account of all designated archaeological and architectural heritage sites within an initial 1 km radius from the onshore infrastructure of the Project (see section 4 of appendix 26-1: Cultural Heritage Report). This 1 km Cultural Heritage Study Area is wide enough to assess the immediate archaeological, architectural and cultural heritage potential of the Project. Professional judgement was used to determine where the Cultural Heritage Study Area should be extended to consider archaeological sites/monuments or historic structures that lie beyond its boundaries.

As required and where appropriate, the relationship of structures, sites, monuments, and complexes that fall outside this Cultural Heritage Study Area were considered and evaluated. Informed by the baseline desk study evaluation, a study area measuring 100 m either side of the planning application boundary of the onshore elements of the Project and a study area measuring 500 m from the onshore substation boundary was then established in order to inform the likely significant physical impacts from an archaeological and cultural heritage perspective (Figure 26-1).

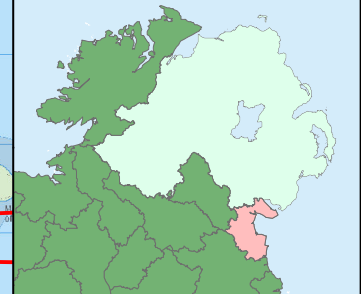
Based on the desk study and windshield survey, a 2 km radius study area from the substation site was chosen to evaluate potential setting impacts on the nearby historic assets. This is described further in appendix 26-1: Cultural Heritage Report (section 1.5.1) for the onshore substation site at Stickillin.

This methodology has ensured that a robust assessment has been undertaken on all recorded cultural heritage assets within and in proximity to the Project, and that the likely significant impacts are considered.



- Legend**
- Planning Application Boundary
 - 100m buffer from the Planning Application Boundary
 - 500m buffer from the Planning Application Boundary (Physical Impact)
 - 2km buffer from the Onshore Substation Site (Setting Impact)
 - Joint Bays

Data Sources: OWL, Tailte Éireann.



Client

Project

Oriel Wind Farm Project

Title

**Figure 26-1:
Cultural Heritage Study Area**

rps West Pier Business Campus,
Dun Laoghaire,
Co Dublin,
Ireland.

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Issue Details	
Drawn By: NR	Project No. MDR15205
Checked By: CD	File Ref: MDR15205Arc3074F01
Approved By: CC	Projection: ITM (IRENET 95) Geographic Co-ordinates: ETRS89
Scale: 1:85,000 @A4	
Date: 31/01/2024	

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. All levels are referred to Ordnance Datum, Malin Head.
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26.4 Policy context

Planning policy on renewable energy infrastructure is presented in volume 2A, chapter 2: Policy and Legislation. This section presents planning policy that specifically relates to cultural heritage.

Chapter 9 (Built Heritage) of the Louth County Development Plan (LCC, 2021), sets out the policies in relation to built heritage, covering archaeology (recorded monuments and national monuments, zones of archaeological potential, walled towns, battlefield sites, UNESCO World Heritage Sites (WHS) and Tentative Sites, architectural heritage including Architectural Conservation Areas (ACAs), historic gardens and designed landscapes, and vernacular architectural heritage (appendix 26-1: Cultural Heritage Report, section 3).

Table 26-1 below summarises the policy framework relevant to cultural heritage, and where it is considered in this chapter.

Table 26-1: Summary of relevant policy framework and where it is considered in the EIAR.

Summary of relevant policy framework	How and where considered in the EIAR
Louth County Council Development Plan 2021-2027	
Archaeology Heritage Policy Objectives	
<p>BHC1: To protect and enhance archaeological sites and monuments, underwater archaeology, and archaeological objects listed in the Record of Monuments and Places (RMP), and/or the Register of Historic Monuments and seek their preservation (i.e. presumption in favour of preservation in situ or in exceptional cases, at a minimum, preservation by record) through the planning process and having regard to the advice and recommendations of the National Monuments Service of the Department of Housing, Local Government and Heritage (DHLGH) and the principles as set out in the 'Framework and Principles for the Protection of the Archaeological Heritage' (Department of Arts, Heritage, Gaeltacht and the Islands (DAHGI), 1999).</p>	<p>The DHLGH RMP list on archaeology.ie has been consulted to determine what RMPs and Register of Historic Monuments are in the vicinity of the Project</p> <p>Geophysical survey and test excavation was carried out in areas in proximity or in the immediate vicinity of a recorded monument or a Zone of Archaeological Potential (see appendix 26-1: Cultural Heritage Report). This was carried out under licence to the DHLGH.</p>
<p>BHC3: To protect known and unknown archaeological areas, sites, monuments, structures and objects, having regard to the advice of the National Monuments Services of the DHLGH.</p>	<p>This chapter presents an impact assessment of impact on Zones of archaeological Potential and RMP sites. Section 26.10.5 of this chapter outlines mitigation measures where appropriate.</p>
<p>BHC5: To protect all sites and features of archaeological interest discovered subsequent to the publication of the Record of Monuments and Places (i.e. preservation in situ or in exceptional circumstances, at a minimum preservation by record) having regard to the advice and recommendations of the National Monuments Section of the DHLGH.</p>	
<p>BHC6: To ensure any development, either above or below ground, adjacent to or in the immediate vicinity of a recorded monument or a Zone of Archaeological Potential (including formerly walled towns) shall not be detrimental to or detract from the character of the archaeological site or its setting and be sited and designed to protect the monument and its setting. Where upstanding remains exist, a visual impact assessment may be required.</p>	
<p>BHC7: To require applicants seeking permission for development within Zones of Archaeological Potential and other sites as listed in the Record of Monuments and Places to include an assessment of the likely archaeological potential as part of the planning application and the Council may require that an on-site archaeological assessment is carried out by trial work, prior to a decision on a planning application being taken.</p>	
<p>BHC10: To require, as part of the development management process, archaeological impact assessments, geophysical surveys, test excavations and monitoring, as appropriate, where development proposals involve ground clearance of more than half a hectare or for linear developments over one kilometre in length or for developments in proximity to areas with a density of known archaeological monuments and history of discovery, as identified by a licensed archaeologist.</p>	

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Summary of relevant policy framework	How and where considered in the EIAR
Protected Structures Relevant Objectives	
<p>BHC20: To ensure that any development, modification, alteration, or extension affecting a protected structure and/or its setting is sensitively sited and designed, is compatible with the special character and is appropriate in terms of the proposed scale, mass, density, layout, and materials of the protected structure.</p> <p>BHC21: The form and structural integrity of the protected structure and its setting shall be retained and the relationship between the protected structure, its curtilage and any complex of adjoining buildings, designed landscape features, designed views or vistas from or to the structure shall be protected.</p> <p>BHC22: To prohibit inappropriate development within the curtilage and/or attendant grounds of a protected structure. Any proposed development within the curtilage and/or attendant grounds must demonstrate that it is part of an overall strategy for the future conservation of the entire complex including the structures, demesne and/or attendant grounds.</p> <p>BHC23: To require that all planning applications relating to protected structures contain the appropriate documentation as described in the Architectural Heritage Protection Guidelines for Planning Authorities (DAHG, 2011) or any variation thereof, to enable a proper assessment of the proposed works and their impact on the structure or area.</p>	<p>The Louth County Development Plan 2021-2027 Record of Protected Structures (RPS) was consulted to identify RPS sites within the Cultural Heritage Study Area (see section 26.7.3).</p> <p>The field inspection for the Project assesses the extent and nature of the protected structure and attendant grounds (see appendix 26-1: Cultural Heritage Report).</p>
Historic Gardens and Designed Landscapes	
<p>HC38: To ensure new development will not adversely affect the site, setting or views to and from historic gardens and designed landscapes of heritage significance.</p> <p>BHC39: To require proposals for new development in designed landscapes and demesnes include an appraisal of the landscape, designed views and vistas, and an assessment of significant trees or groups of trees, where appropriate, in order to inform site appropriate design proposals.</p> <p>BHC 41: To have regard to the 'Architectural Heritage Protection Guidelines' (DAHG, 2011) and the 'Guidance Notes for the 'Appraisal of Historic Gardens, Demesnes, Estates and their Settings' (Cork County Council (CCC), 2006) in the appraisal and description of Historic Gardens and Designed Landscapes, and any subsequent Guidelines.</p>	<p>The National Inventory of Architectural Heritage (NIAH) garden survey was examined for Historic Gardens within the Cultural Heritage Study Area. As the NIAH is a record only survey, fieldwork established the nature of survival at each location (see appendix 26-1: Cultural Heritage Report).</p>
Historic Building Stock (Vernacular Heritage)	
<p>BHC42: To promote, where feasible, the protection, retention, sympathetic maintenance and appropriate revitalisation and use of the vernacular built heritage, including thatched cottages and other structures in both urban and rural areas, which contribute to the streetscape and landscape character and deter the demolition of these structures.</p> <p>BHC44: To encourage the re-use and adaption of existing historic buildings in a manner compatible with their character.</p>	<p>The field inspection was carried out to identify any unrecorded cultural heritage/vernacular features within the Cultural Heritage Study Area (see appendix 26-1: Cultural Heritage Report)</p>

A list of the relevant legislation, standards and guidelines which were considered and consulted for the purposes of the Project are provided in appendix 26-1: Cultural Heritage Report. In summary, the assessment was informed by the following international obligations and legislation:

Legislation

- National Monuments Acts, 1930 to 2014;
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999;

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- Planning and Development Act 2000, as amended; and
- Heritage Act, 1995, as amended.

The National Monuments Acts (1930-2014) serve to protect archaeological sites and features as well as the potential for new discovery in Ireland on dry land. The regulation of work that might encounter archaeology is governed by the National Monuments Service (NMS) at the Department of Housing, Local Government and Heritage (DHLGH). The Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 was enacted in October 2023 and while this Act is now law, most of its provisions will not enter into force until the Minister for Housing, Local Government and Heritage has made one or more Commencement Orders. This means that the National Monuments Acts have therefore not yet been repealed and remain in force.

Conventions

- The European Landscape Convention (ELC), ratified by Ireland 2002 European Landscapes Convention 2010. (The Department of the Environment, Heritage and Local Government 'Landscape and Landscape Assessment Guidelines' have been in draft form since 2000, however the Draft National Landscape Strategy (NLS) was launched in July 2014);
- Council of Europe (2005), Framework Convention on the Value of Cultural Heritage for Society, 'Faro Convention';
- Council of Europe (1992), European Convention on the Protection of the Archaeological Heritage (ratified by Ireland 1992), 'Valetta Convention';
- Council of Europe (1985), Convention for the Protection of the Architectural Heritage of Europe (ratified by Ireland 1997), 'Granada Convention'; and
- The UNESCO World Heritage Convention, 1972.

Guidelines

- DAHG (now DCHG) (2011), Architectural Heritage Protection Guidelines for Planning Authorities, Department of Arts, Heritage and the Gaeltacht;
- DAHGI (now DCHG) (1999), Framework and Principles for the Protection of the Archaeological Heritage, Department of Arts, Heritage, Gaeltacht and Islands;
- Historic England (2017), The Setting of Heritage Assets, Historic Environment Good Practice Advice in Planning Note 3 (Second Edition);
- Department of Arts, Heritage and the Gaeltacht (2015), National Landscape Strategy for Ireland 2015-2025, Department of Arts, Heritage and the Gaeltacht;
- The Heritage Council (2013), Historic Landscape Characterisation in Ireland: Best Practice Guidance;
- The Burra Charter (2013), the Australia ICOMOS Charter for Places of Cultural Significance;
- The Heritage Council (2010), Proposals for Irelands Landscapes;
- Historic Scotland (2010), Managing Change in the Historic Environment;
- National Roads Authority (NRA) (2005), Guidelines for the Assessment of Archaeological Heritage Impact of National Road Schemes;
- NRA (2006), Guidelines for the Testing and Mitigation of the Wetland Archaeological Heritage for National Road Schemes;

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- Draft TII guidelines for Cultural Heritage Impact Assessment of TII Projects;
- ICOMOS Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas, 2005;
- Department of Arts, Heritage, Gaeltacht and Islands (1999), Frameworks and Principles for the Protection of the Archaeological Heritage; and
- Department of Housing, Local Government and Housing (2023), Archaeology and Flood Relief Schemes Guidelines.

Codes of Practice

The NMS has issued a series of Codes of Practice to ensure that best practice is adopted in construction schemes. While there is no specific Code of Practice for work in the renewables sector, the following Codes of Practice apply: Code of Practice with the: Railway Procurement Agency (RPA) (RPA and DEHLG, 2006); Iarnród Éireann (IÉ) (IÉ and DAHG, 2012) ; Bord na Móna (Bord na Móna and DAHG, 2012); Irish Concrete Federation (ICF) (ICF and DEHLG, 2009); ESB Networks (ESB and DEHLG, 2009); EirGrid (EirGrid and DEHLG, 2009); Bord Gáis Éireann (Bord Gáis and DAHGI, 2002); Coillte (Coillte and DELG, 2003); and Transport Infrastructure Ireland (TII and DAHRRGA, 2017).

26.5 Consultation

Table 26-2 summarises the issues raised relevant to cultural heritage, which have been identified during consultation activities undertaken to date, together with how these issues have been considered in the production of this EIAR chapter. Volume 2A, chapter 6: Consultation provides details on the types of consultation activities undertaken for the Project between 2019 and 2023 and the consultees that were contacted.

Table 26-2: Summary of key consultation issues raised during consultation on cultural heritage.

Date	Consultee and type of response	Issues raised	Response to issue raised and/or where considered in this chapter
27 September 2019	Louth County Council – EIA Scoping Response	Substation connection crossing third party lands and the identified route should minimise disturbance of special amenity/ archaeology areas.	The onshore cable route has been selected to minimise disturbance to archaeological areas, and the mitigation section 26.10.5 outlines the measures to further reduce, and where appropriate, mitigate impacts on cultural heritage.
January 2021	NMS, DHLGH – Geophysical Survey Licence Application	Licence issued. Reference: 21R0012	Geophysical survey carried out and report issued to the DHLGH 21/01/2021. The result of the survey is discussed in detail in appendix 26-1: Cultural Heritage Report.
July 2021	NMS, DHLGH– Archaeological Testing Licence Application	Licence issued. Reference: 21E0036	Archaeological Testing carried out and report issued to the DHLGH 17/07/2021. The result of the testing is discussed in detail in appendix 26-1: Cultural Heritage Report.
June - December 2023	Pre-application meetings with An Bord Pleanála	Examine potential for heritage issues from Project viewpoints.	An assessment of the potential for the offshore infrastructure to impact on cultural heritage setting features is provided in section 26.10.
January 2023	Member of the public during public consultation	Query regarding mapping of the key heritage aspects along the cable route.	Key heritage assets have been identified through both a desktop study and site-specific surveys (section 26.7), and have been assessed in section 26.10 with appropriate mitigation provided in section 26.10.5. The design

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Date	Consultee and type of response	Issues raised	Response to issue raised and/or where considered in this chapter
7 November 2023	On-line presentation to the NMS, DHLGH, which included the Underwater Archaeology Unit.	NMS was presented with a project overview, followed by an outline of the cultural heritage (above LWM) assessment for the EIAR. This included the methodology, baseline, potential impacts and proposed mitigation measures. The presentation also included an overview of the Marine Archaeology (below LWM) (see volume 2B, chapter 15: Marine Archaeology).	of the Project has also been adapted to avoid impacts with all areas of archaeological interest. In its role as a prescribed body under the Planning and Development Regulations (as amended), the NMS will review the cultural heritage EIAR, the archaeological testing and geophysical survey results and will formally comment on the application as appropriate through the DAU.

26.6 Methodology to inform the baseline

The evaluation of the archaeological and cultural heritage resource of the Project was based on a desk study of published and unpublished documentary and cartographic sources and a site inspection. This was followed by a geophysical survey (Licence Reference: 21R0012) and test trench excavation (Licence Reference: 21E0036) in archaeologically sensitive areas within the Cultural Heritage Study Area.

26.6.1 Desktop study

Information on cultural heritage within the Cultural Heritage Study Area was collected through a detailed desktop review of existing studies and datasets. The evaluation process ensures that all designations relating to cultural heritage assets as well as cultural heritage features that are revealed through research, field assessment and consultation are clearly articulated.

All designated sites of international, national and local importance within the Cultural Heritage Study Area were identified using a number of sources. Consideration of the historic environment included UNESCO World Heritage Sites and candidate sites on the Tentative List for inscription onto the World Heritage List, National Monuments, recorded archaeological monuments (RMP), records of protected structures, designed landscapes, architectural conservation areas, National Inventory of Architectural Heritage (NIAH) building and garden survey sites, structures of architectural heritage merit (vernacular, urban and rural), cultural heritage features, industrial heritage, placenames, language and inherited traditions. An explanation of each designation is provided in appendix 26-1: Cultural Heritage Report.

A review of the following sources of information (obtained from the Department of Housing, Local Government and Heritage) took place between the period of January 2020 and January 2024 in order to inform the assessment. This is the most up to date information available at the time of writing this EIAR.

- UNESCO World Heritage Sites (WHS) and Tentative World Heritage Sites and those monuments on the tentative list;
- National Monuments in State care, as listed by the National Monuments Service (NMS) of the Department of Culture, Heritage and the Gaeltacht (DCHG);
- Sites with Preservation Orders;
- Sites listed in the Register of Historic Monuments;

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- Record of Monuments and Places (RMP) and the Sites and Monuments Record (SMR) from the Archaeological Survey of Ireland;
- National Inventory of Architectural Heritage (NIAH) Building Survey;
- National Inventory of Architectural Heritage (NIAH) Garden Survey (unvalidated paper survey only); and
- The NMS maintains the Historic Shipwreck Inventory, which is a particular archive that retains information on shipwreck events and also on ports and harbours. More recent records of shipwreck are contained in the national wreck site database, accessible as an online portal maintained by the NMS and updated to 2018. The Irish National Seabed Survey, INFOMAR, is a further resource that is accessible online.

The following sources of information were obtained from the Historic Environment Record of Northern Ireland (HERoNI):

- Northern Ireland Sites and Monuments Record (NISMR);
- Northern Ireland Buildings Database (Listed buildings);

A review of the following information was also undertaken:

- Record of Protected Structures (RPS) in the relevant County Development Plans (i.e. Louth 2021-2027, Meath (2021-2027), Cavan (2022-2028), Monaghan (2019-2025), Fingal (2023-2029), Dublin City (2022-2028);
- A review of topographical files held in the National Museum of Ireland;
- Cartographical Sources, OSi Historic Mapping Archive, including early editions of the Ordnance Survey including historical mapping (such as Down Survey 1656 Map, Taylor and Skinner 1777 map) (OSI.ie, <https://downsurvey.tchpc.tcd.ie/logainm.ie>);
- The Irish archaeological excavations catalogue (i.e. Excavations bulletin and Excavations Database) (Excavations.ie);
- Place names (Logainim.ie, Stubbs 1999, Joyce 1910-20, Louth Field Names Project <https://louth.azimap.com/>);
- National Folklore Collection (Duchas.ie);
- A review and interpretation of aerial imagery (OSI Aerial Imagery 1995, 2000, 2005, Aerial Premium 2013-2018, Digital Globe 2011-2013, Google Earth 2001–2022, Bing 2022) used in combination with historic mapping to map potential cultural heritage assets (OSI.ie and Google Earth);
- A review of existing guidelines and best practice approaches (see appendix 26-1: Cultural Heritage Report, section 3); and
- Other documentary sources (as listed in the references section of appendix 26-1: Cultural Heritage Report).

As part of the reporting process the following was also carried out:

- A description and assessment of the receiving archaeological, architectural; and cultural heritage environment;
- A review of design details and project layout;

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- Identification and evaluation of the significance of the impact of the Project on the receiving archaeological, architectural and cultural heritage environment; and
- Creation of a list of cultural heritage assets and areas of potential for the onshore elements of the Project that might be subject to impact (see section 26.7).

26.6.2 Field assessment survey

Field walkover Survey

A field assessment, comprising a windshield survey¹ and a field walkover survey, was undertaken to assess the designated cultural heritage features of each component of the onshore elements of the Project, and to identify unrecorded features, structures and areas of archaeological potential. This exercise was informed by documentary and cartographic analysis. The field assessment also informed the discussion of potential setting impacts of the Project on protected sites and provided a photographic record of the existing landscape. The detailed field assessment results are provided in appendix 26-1: Cultural Heritage Report.

Archaeological investigations

The desktop study and field inspection highlighted three areas of archaeological potential recommended for further investigation. These areas comprised the footprint of the onshore substation in Stickillin and the area of the cable route that runs in the vicinity of the churches at Drumcar and Clonmore ecclesiastical site (RMP Ref: LH018-005, LH018-019001) (appendix 26-1: Cultural Heritage Report).

A geophysical survey (Licence Reference: 21R0012) was carried out in two greenfield areas, in the townland Stickillin within the onshore substation site and Drumcar in the vicinity of a recorded archaeological monument (see further details including map of area surveyed in appendix 26-1: Cultural Heritage Report). Numerous features of archaeological potential were identified in both areas. Archaeological test excavation (Licence Reference: 21E0036) was carried out in both these areas in order to establish the nature and significance of the features identified during the geophysical survey.

The test excavation, under the same licence was also carried out in the vicinity of Clonmore Church, adjacent to the onshore cable route along the roadside verge. A geophysical survey was not possible at this location.

The testing and geophysical survey results are summarised and provided along with the full testing report in appendix 26-1: Cultural Heritage Report. The geophysical survey and testing reports have been issued to the NMS, Department of Housing, Local Government and Heritage in accordance with the conditions of licences issued.

A summary of the surveys undertaken to inform the cultural heritage impact assessment are outlined in Table 26-3.

¹ Windshield surveys are also known as 'drive by' surveys. These surveys allow the surveyor to record and note features from the car. Such surveys are supplemented with surveys by foot where required.

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Table 26-3: Summary of site-specific survey data.

Title	Extent of survey	Overview of survey	Survey contractor	Date	Reference to further information
Field assessment: windshield survey and field walkover to above the LWM	Onshore elements of the Project	To assess the context of the Project within the wider receiving historic environment.	Courtney Deery Heritage Consultancy	28/08/2019 11/12/2019	Appendix 26-1: Cultural Heritage Report (section 1.5).
Archaeological investigation (Licenced): geophysical survey and archaeological testing	Onshore elements of the Project (specifically, Clonmore, Drumcar and Stickillin)	To assess areas of archaeological potential.	Courtney Deery Heritage Consultancy	Geophysical survey January 2021, Testing 19/04/2021 (for a five-day period)	Appendix 26-1: Cultural Heritage Report (section 1.6).
Windshield survey and cultural heritage site visits	Offshore elements of the Project	To assess potential setting impacts	Courtney Deery Heritage Consultancy	16/11/2022- (for a three-day period)	Appendix 26-1: Cultural Heritage Report (section 2).

26.6.3 Cultural heritage setting

Theoretical visibility does not imply visual impact. It presents a worst-case, bare earth scenario and does not consider detailed landforms (e.g. artificial cuttings, embankments, motorways), localised screening, vegetation, settlement, buildings, minor topographical changes, or atmospheric conditions. In contrast with landscape designations, which embrace very extensive tracts of land, designated heritage assets and complexes tend to be more limited in extent, including historic gardens, and, unlike expansive landscapes, have defined settings.

Following accepted guidance, setting is related to the surroundings in which a heritage asset is experienced, appreciated and understood (Historic Scotland, 2010; Historic Scotland, 2020; Historic England 2017). The offshore elements of the Project will be visible from several designated cultural heritage assets; however, not all sites are sensitive to changes in the coastal environment. Whilst a proposed development may be present within the visual envelope of a cultural heritage site this does not automatically mean there is an impact on its setting. In most instances, there is no potential to generate effects or significantly impact the setting of heritage assets, as distant seascape views are only incidental to the site. For such a potential, the views of the coastal environment/seascape would form a substantive contribution to the significance, understanding and experience of the asset and relate closely to its visual, functional or aesthetic relationship with the sea.

In order to inform the setting impact assessment, the Cultural Heritage Setting Study Area was initially based on the spatial extent of the Seascape, Landscape and Visual Impact Assessment for the offshore infrastructure of the Project, which comprises a 60 km radius from the centre of the offshore wind farm area. This area was based on the Zone of Theoretical Visibility (ZTV) of the Project (see chapter 27: Seascape, Landscape and Visual Amenity) and is shown in Figure 27-2 in appendix 27-1: Seascape, Landscape and Visual – Accompanying Graphics. The ZTV defines the area from which a development may potentially be visible (either partially or totally) from the surrounding topography. Theoretical visibility however does not imply visual impact. It presents a bare earth scenario and does not consider landforms (e.g. artificial cuttings, embankments, motorways), localised screening, vegetation, settlement, buildings, minor topographical changes or atmospheric conditions.

An initial desk-based examination of the heritage assets within the ZTV was carried out (see appendix 26-1: Cultural Heritage Report). As there are over 3,400 heritage assets located within the ZTV, the sites were divided into:

- General seascape sensitivity categories (i.e. those that have a setting that relies on the coastal/seascape environment and is therefore sensitive to change in that environment):

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- Category A-C (i.e. A: Defence/lookout sites, B: Functional and C: Coastal Aesthetic, totalling 126 sites); and
- Sites that are generally incidental to it which are less sensitive or not sensitive to visual change in the seascape:
 - Category D, approximately 3,286 sites.

A selection of twelve sites and complexes within each of the seascape categories were visited in the field to assess the potential impact of the offshore wind farm on their setting. A representative sample of twelve sites was chosen for evaluation in order to examine the potential effects of the offshore infrastructure on the seascape category groups. The selection of sites was based on:

- The desk study and windshield survey;
- Proximity to the coast and sensitivity to potential coastal setting impacts;
- Publicly accessible national monuments (NM) within 5 km of the coastal zone; and
- Upstanding monuments.

These sites serve as a representative sample for the potential effects of the offshore infrastructure on other coastal sites in the landscape (see section 26.7.5 and appendix 26-1: Cultural Heritage Report).

The assessment included in chapter 27: Seascape, Landscape and Visual Amenity identified historic gardens and designed landscapes in proximity to the coast that have potential for marine or coastal setting and views as a major and key characteristic of these designed landscapes (i.e. Category C sites). The setting impact methodology and assessment, which examines the potential effects on the setting of cultural heritage sites within the receiving cultural heritage environment is provided in appendix 26-1: Cultural Heritage Report.

26.7 Baseline environment

26.7.1 Introduction

The Project crosses the ‘Dunany, Boyne Estuary Coast’ and the ‘Muirhevna Plain’ Landscape Character Areas (LCA’s). Surviving within each of these LCAs are sites, monuments, structures and activities that have collectively influenced the historic character of these landscapes today.

The rich coastal landscape has always been a focus for human activity, with the sea providing a source of food and raw materials as well as a means of travel, trade and communication and a place to build communities. As such, the Dunany coast would have been an attractive prospect for settlement since the earliest of times. The earliest evidence is found along the coast is at Dunany where a large collection of surface flint finds was identified, most of which were Neolithic (4000-2200BC) with a single tanged point representing late Mesolithic activity (5000-4000BC).

Equally, the Project is located within a rich agricultural landscape that is generally flat and undulating with the fertile lands drained by the River Dee and White River, which also attracted early settlers, and settlement activity that continues to the present day. Neolithic and Bronze Age (2400-500BC) activity has been identified during the excavations associated with development in Richardstown in the lowling floodplain of the River Dee. These rivers also attracted milling industries in the eighteenth and nineteenth centuries.

There is a distinct distribution pattern of early medieval sites in this landscape, the monuments relating to the period include ringforts, holy wells and churches (e.g. at Drumcar, Clonmore, Dunany, Port and Stickillin) and souterrains (e.g. at Broadlough and Stickillin). The early medieval sites in this landscape are widely distributed; they are primarily located in proximity to rivers or taking advantage of localised natural ridges in the landscape where the lands are well drained and gently undulating. The distribution of the medieval (Anglo-Norman) sites (castles and churches) in this landscape generally mirror the location of the early medieval sites.

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The first wave of mid-sized houses and their associated gardens, parkland and structures (including outbuildings, entranceways and lodges) occurred in the eighteenth century where they were concentrated in the more fertile areas of the Cultural Heritage Study Area, on the high ground with views of the coast (Dunany and Drumcar). There are several middle-sized farmhouses dating to the late 19th century along the road network. They lie somewhere between vernacular structures and larger country houses. It was common in the second half of the 19th century that prosperous farmers replaced earlier often thatched houses with more substantial farmhouses and retained the outbuildings. They were influenced by the larger Georgian style country houses and consequently the new farmhouses were formal in style containing two and sometimes three storeys, with slated hipped roofs and the front door centrally placed in the façade with the windows and chimneys symmetrically arranged. They were often named after the townland they were constructed (e.g. Charleville and Togher).

A detailed archaeological and historical background of the landscape through which the onshore cable route runs and the cultural heritage sites within it, are provided in appendix 26-1: Cultural Heritage Report. This appendix must be read in conjunction with this chapter.

26.7.2 Townlands and toponymy

The Project passes through 16 townlands in the baronies of Ferrard and Ardee (Figure 26-2); from east to west the onshore cable route traverses the townlands of Dunany and Mitchelstown in the parish of Dunany, then through the townlands of Port, Nicholastown and Boycetown in the parish of Port; Togher, Painestown and Clonmore in the parish of Clonmore; Tullydonnell, Corstown, and Drumcar in the parish of Drumcar; Mullincross in the parish of Kilsaran; Charleville and Dromgoolestown in the parish of Stabannan; Richardstown in the parish of the same name; and finally Stickillin in the parish of Stickillin.

Townland names are a valuable source of information, not only on the topography, land ownership and land use within the landscape, but also on its history, archaeological monuments and folklore. While most placenames were anglicised or translated relatively accurately, some were corrupted virtually beyond recognition. There are names of both Anglo Norman and Irish in origin in the Cultural Heritage Study Area (see appendix 26-1: Cultural Heritage Report), referencing topographical features (e.g. a meadow in Clonmore, hillock in Tullydonnell, lake in Broadlough), vegetation (possibly a white thornbush in Dunany), industry (a weir in Drumcar, mill in Mullincross) as well as archaeological sites (e.g. the 'Dun' of Dunany, which also includes the name Áine). The names of Anglo Norman origin refer to landowners names (e.g. Dromgoolestown and Richardstown).

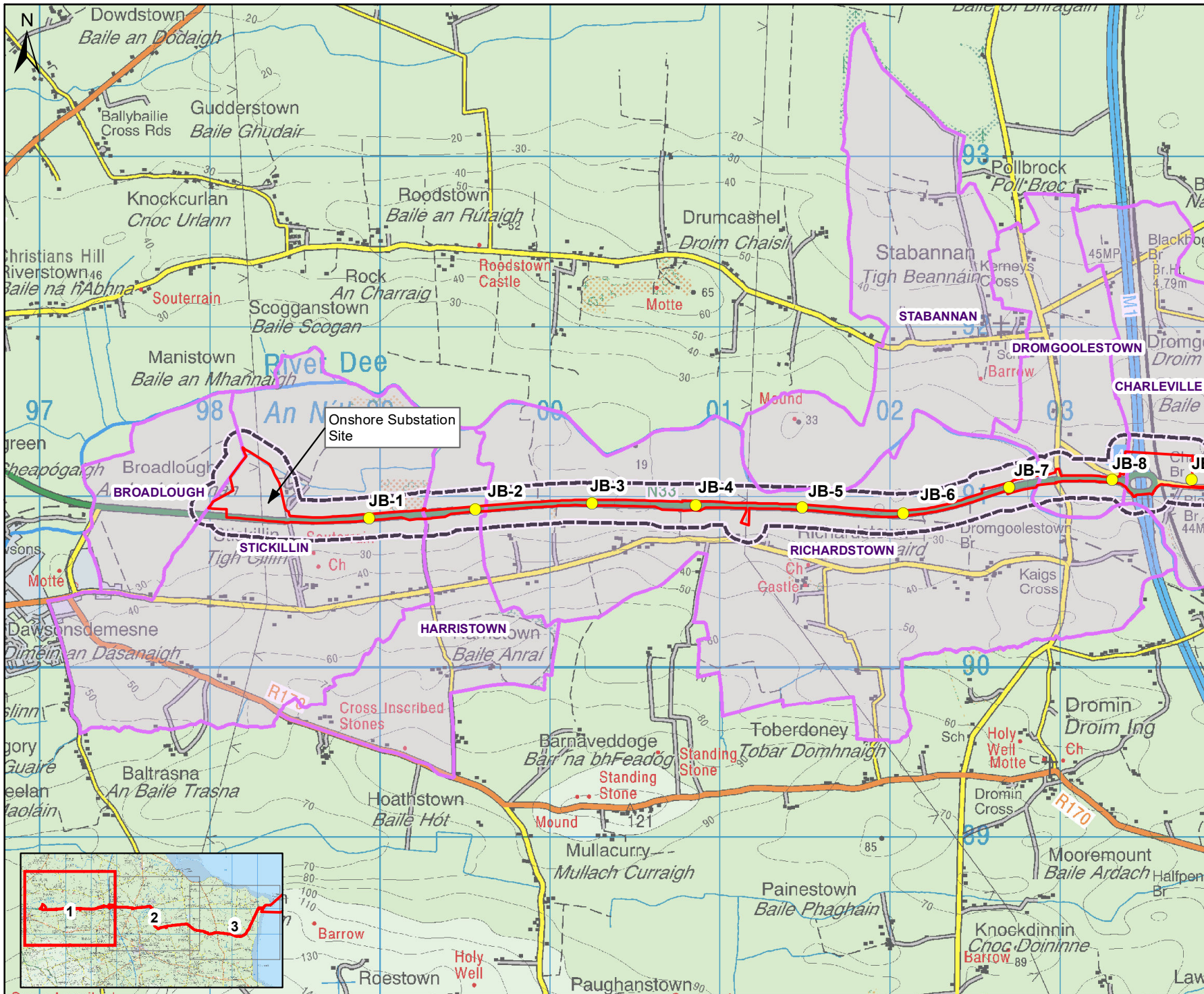
26.7.3 Archaeological, architectural and cultural heritage designated sites

National monuments and world heritage sites

There are no UNESCO World Heritage Sites, Tentative WHS, National Monuments (state owned or vested in the care of local authorities), sites with preservation orders or register of historic monuments sites within the Cultural Heritage Study Area.

Recorded archaeological sites

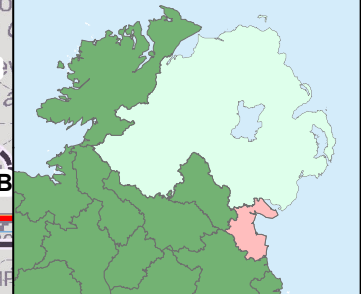
There are 16 recorded archaeological sites (RMP/SMR sites) located within 100 m of the Project (Figure 26-3) and three within 500 m of the onshore substation site. They are described and discussed in their archaeological and historical context in appendix 26-1: Cultural Heritage Report.



Legend

- Planning Application Boundary
- 100m buffer from the Planning Application Boundary
- Joint Bays

Data Sources: OWL, Tailte Éireann, CSO.



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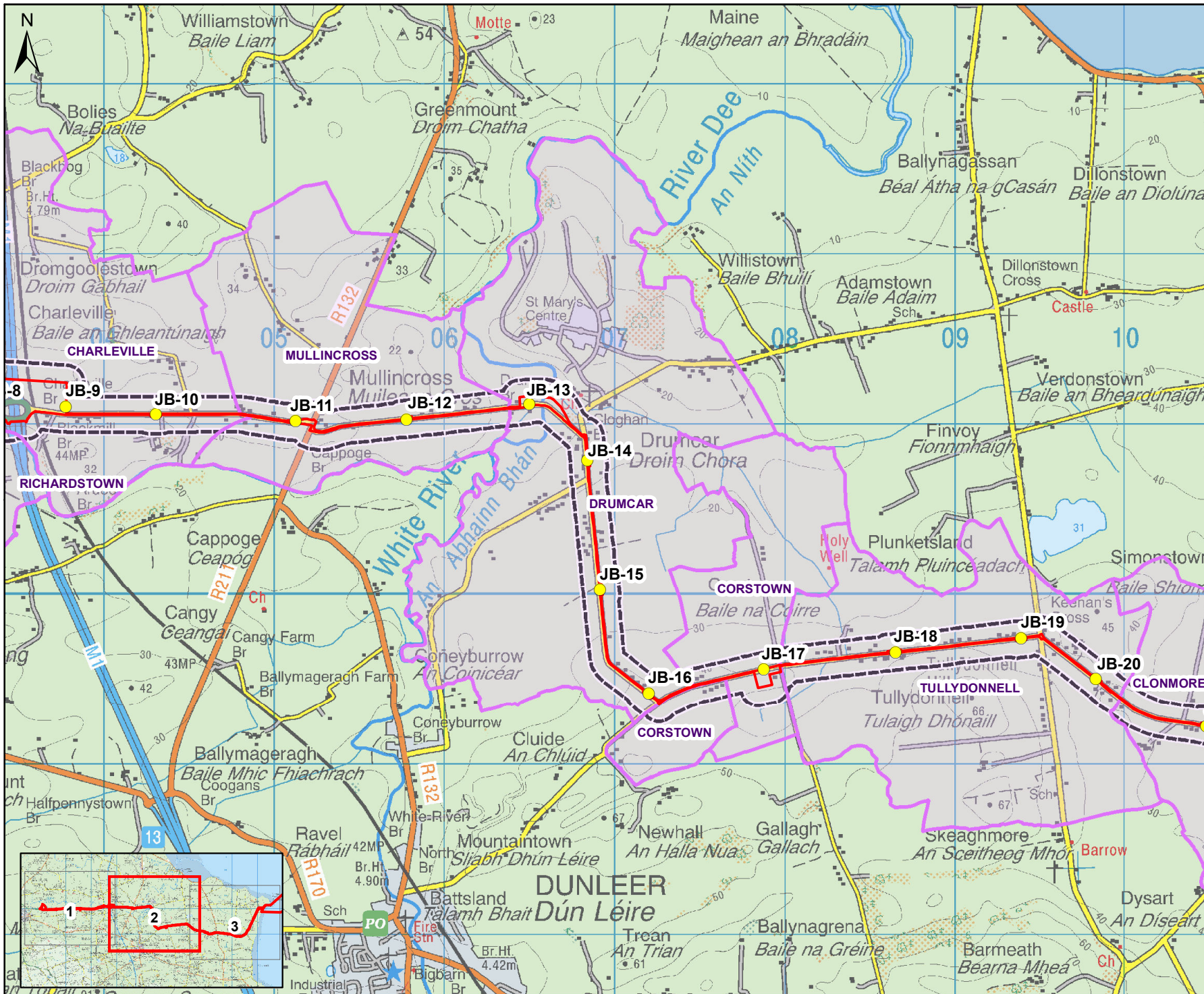
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Title
**Figure 26-2:
Townlands in the Cultural
Heritage Study Area
Map 1 of 3**

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- Joint Bays

Data Sources: OWL, Tailte Éireann, CSO.

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**Figure 26-2:
Townlands in the Cultural
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Map 2 of 3**

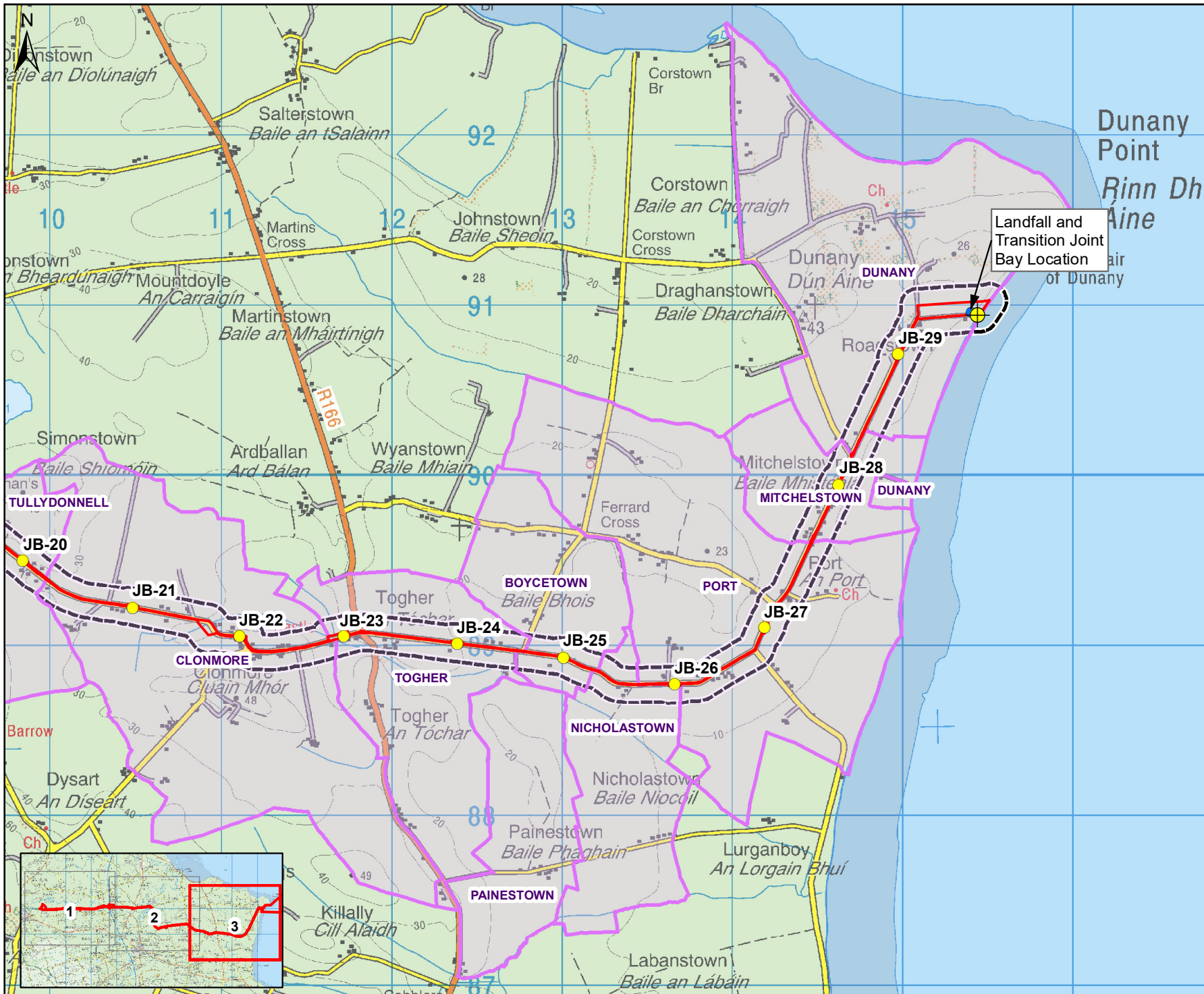
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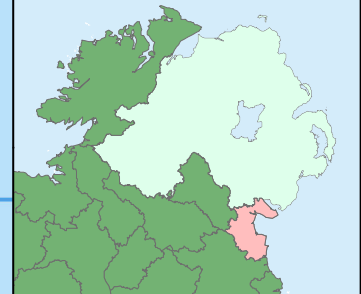
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Legend

- Planning Application Boundary
- 100m buffer from the Planning Application Boundary
- Landfall Location
- Joint Bays
- Proposed Transition Joint Bays

Data Sources: OWL, Tailte Éireann, CSO.



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Project

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Title

**Figure 26-2:
Townlands in the Cultural
Heritage Study Area
Map 3 of 3**



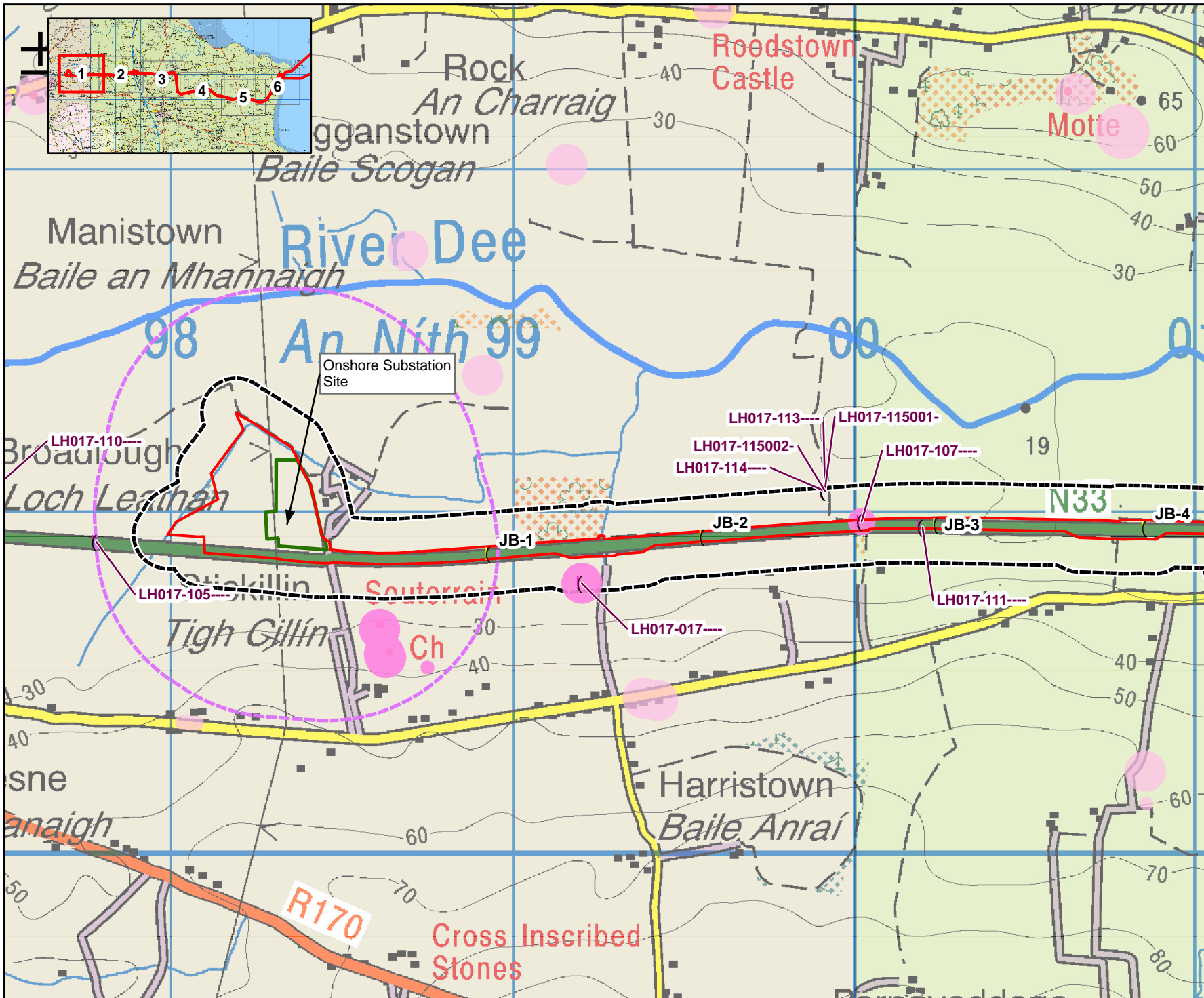
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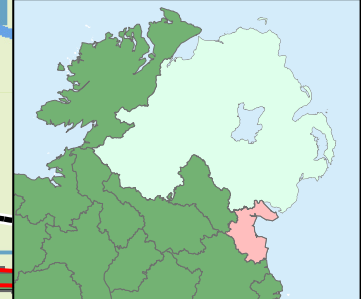
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- Legend**
- Planning Application Boundary
 - 100m buffer from the Planning Application Boundary
 - Joint Bays
 - RMP and SMR sites
 - 500m buffer from the Onshore Substation Site
 - RMP Zone of Notification

RMP = Record of Monuments and Places
 SMP = Sites and Monuments Record
 Data Sources: OWL, Tailte Éireann, National Monuments Service.



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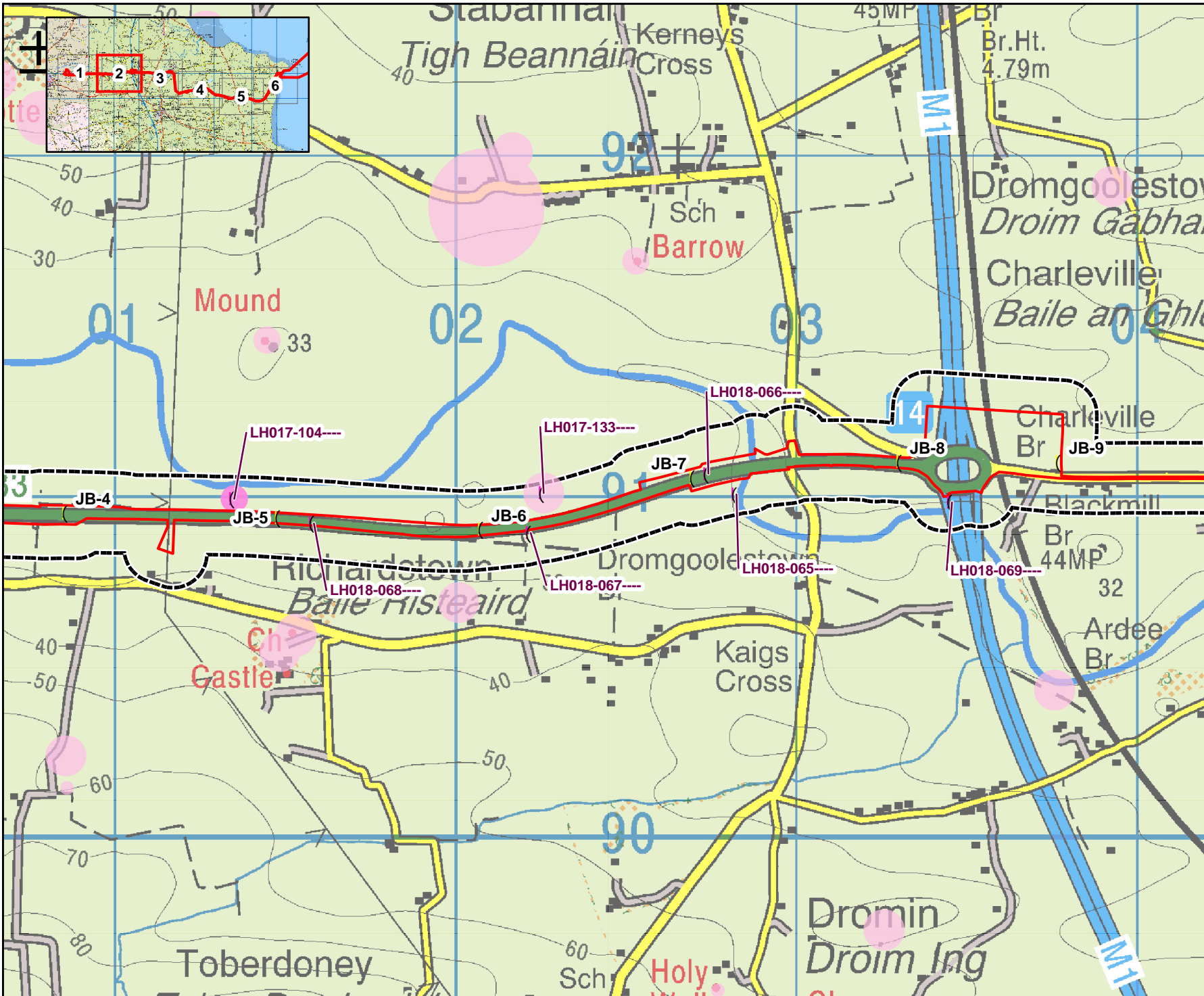
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**Figure 26-3:
 RMP/SMR sites within 100m
 of the Project
 Map 1 of 6**

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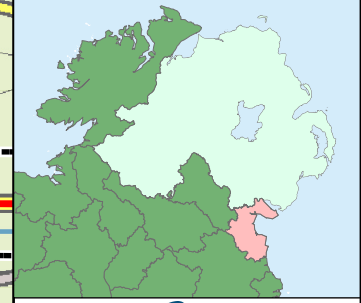
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**Figure 26-3:
RMP/SMR sites within 100m
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Map 2 of 6**



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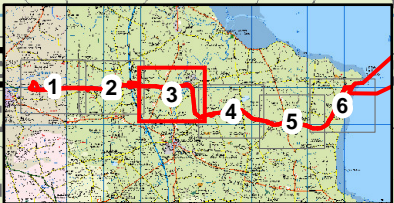
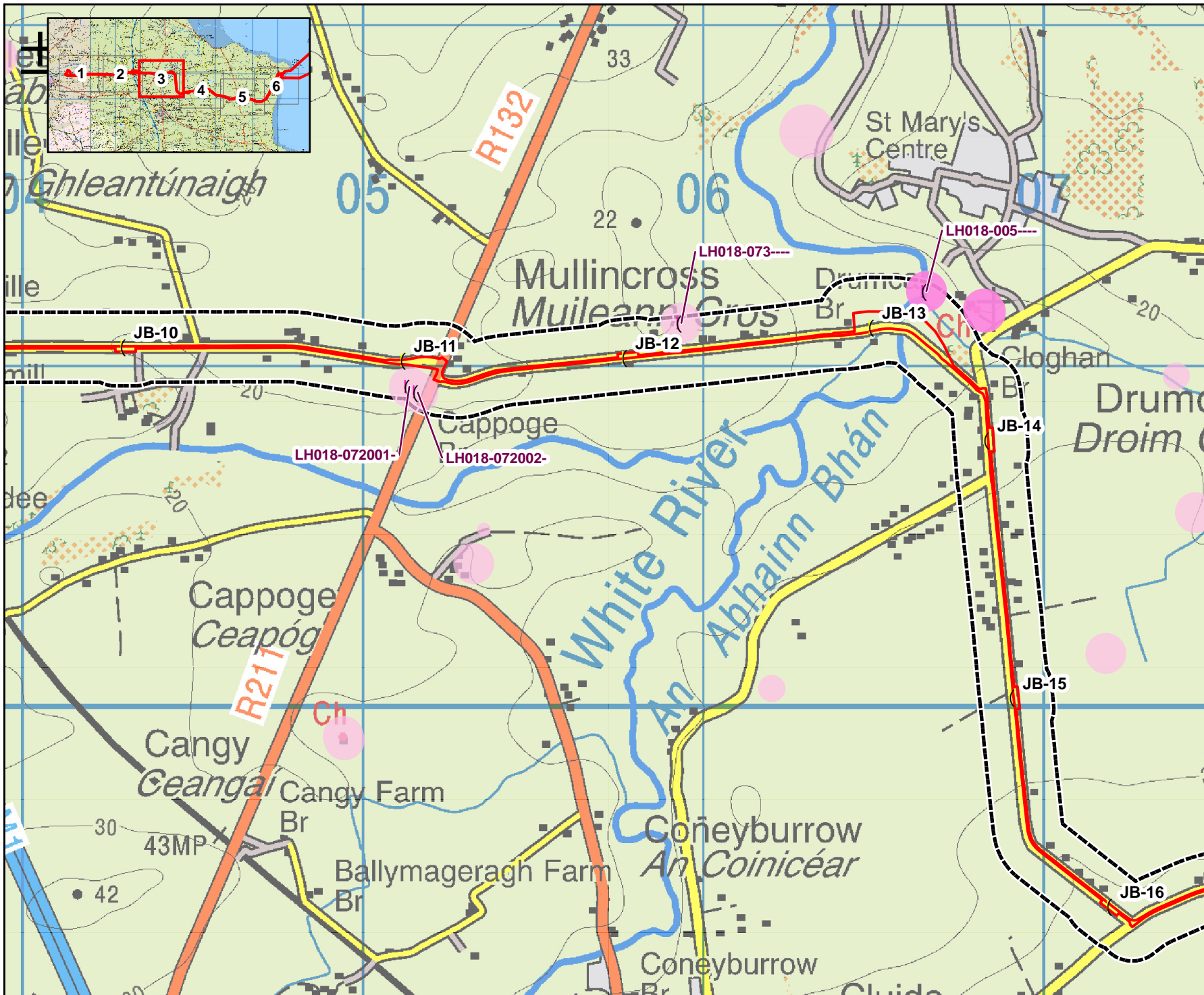
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- - - 100m buffer from the Planning Application Boundary
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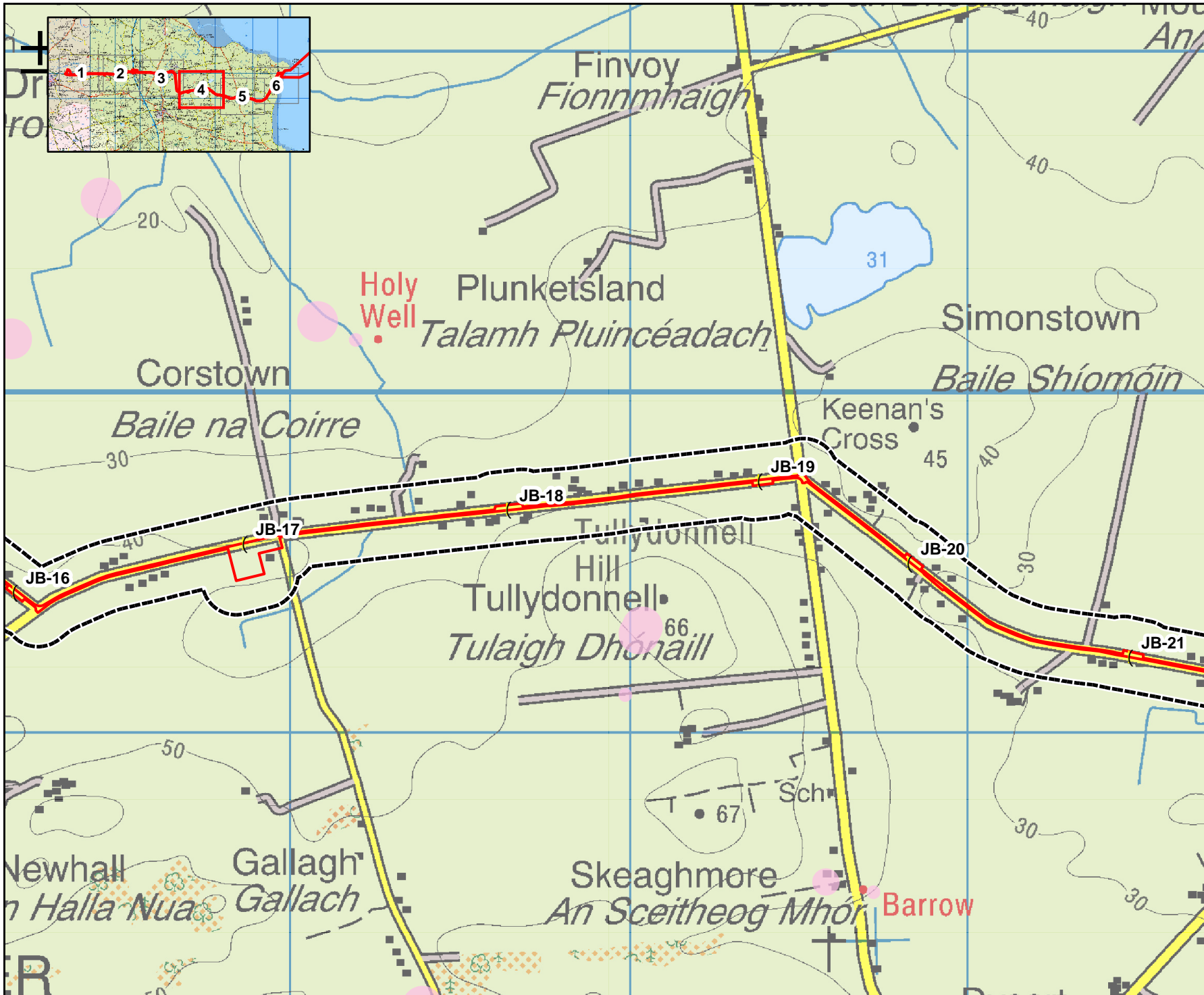
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**Figure 26-3:
 RMP/SMR sites within 100m
 of the Project
 Map 3 of 6**

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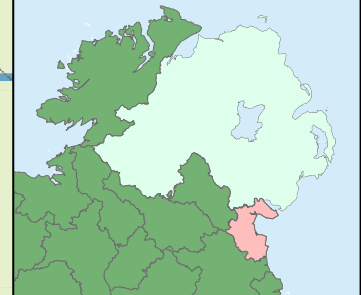
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- Legend**
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 - 100m buffer from the Planning Application Boundary
 - Joint Bays
 - RMP and SMR sites
 - 500m buffer from the Onshore Substation Site
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 Data Sources: OWL, Tailte Éireann, National Monuments Service.



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**Figure 26-3:
RMP/SMR sites within 100m
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Map 4 of 6**



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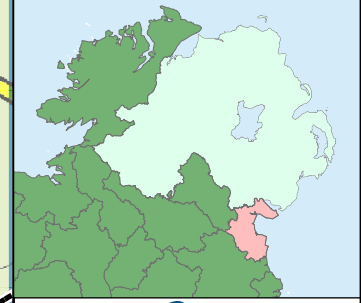
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- Legend**
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 - RMP and SMR sites
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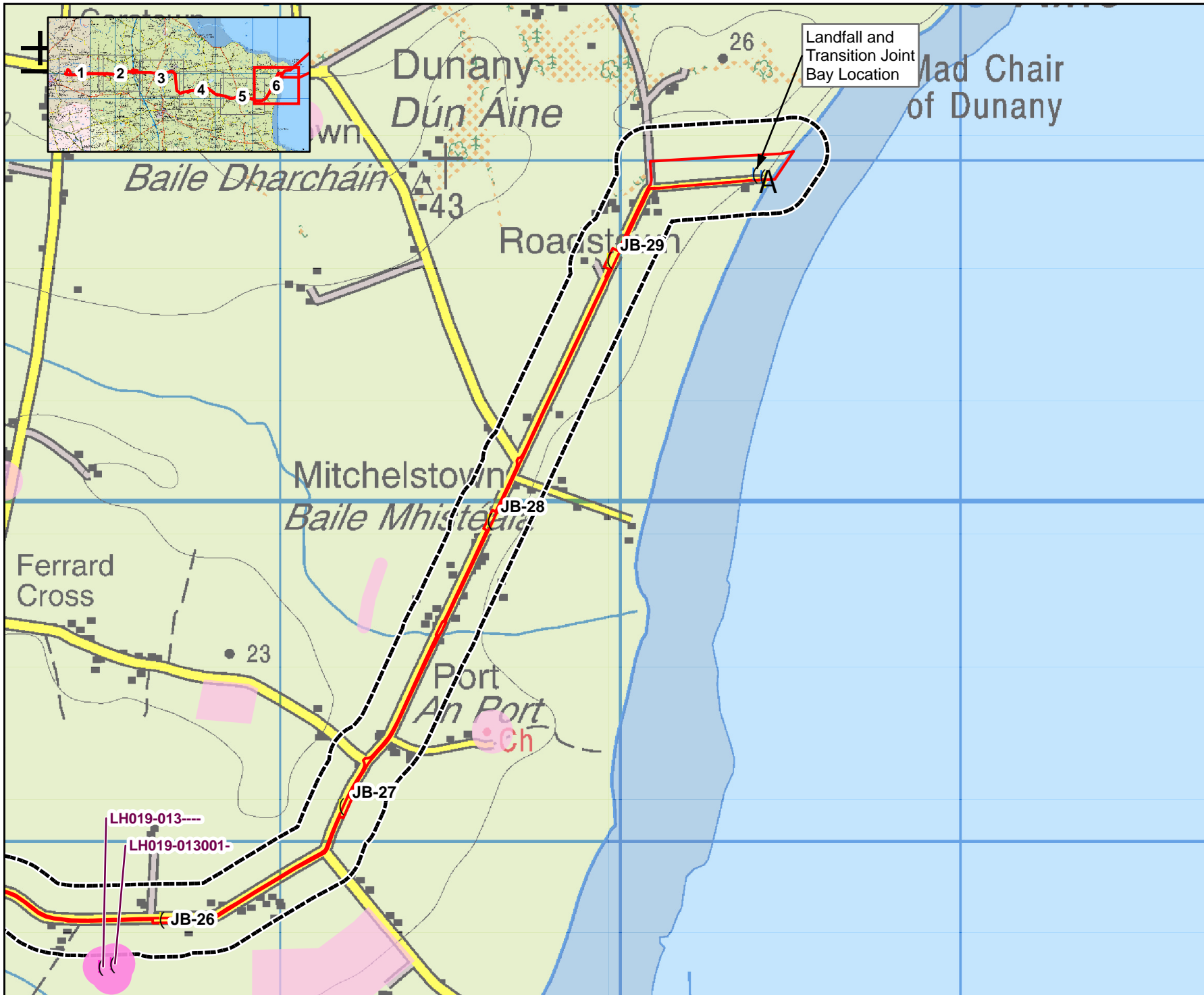
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Title **Figure 26-3:
RMP/SMR sites within 100m
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Map 5 of 6**

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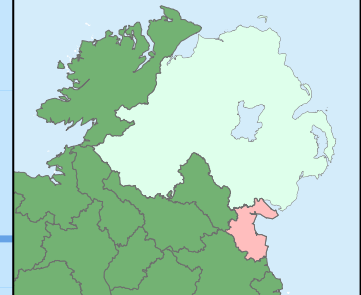
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Landfall and Transition Joint Bay Location

- Legend**
- Planning Application Boundary
 - 100m buffer from the Planning Application Boundary
 - { Joint Bays
 - { Proposed Transition Joint Bays
 - A Landfall Location
 - (RMP and SMR sites
 - 500m buffer from the Onshore Substation Site
 - RMP Zone of Notification

RMP = Record of Monuments and Places
 SMP = Sites and Monuments Record
 Data Sources: OWL, Tailte Éireann, National Monuments Service.



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**Figure 26-3:
RMP/SMR sites within 100m
of the Project
Map 6 of 6**



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Of these 16 recorded archaeological sites, 12 sites are located along the line of the relatively new N33 road and have been fully archaeologically excavated and consequently do not have any implications for the Project. Similarly, whilst the onshore cable route is 40 m north of the RMP Zone of Notification² (ZoN) of the identified enclosure site (LH017-017) in Stickillin, the N33 (through which the onshore cable route passes) in this area has been fully archaeologically resolved. These 12 sites have therefore been scoped out of the assessment (see section 26.8.3).

The onshore cable route runs through the RMP ZoN of the upstanding remains of the medieval complex at Clonmore (comprising two church sites, a graveyard and a tower) and immediately to the south of the possible site of an ecclesiastical site in Drumcar. The location of the ecclesiastical site at Drumcar is inferred from a brief reference in written sources (it has also been suggested that it may be located further east where the existing church and graveyard lies on the ridge above the river).

The onshore cable route in the areas where it passes through the RMP ZoN's are considered to be Areas of Archaeological Potential (AAP); that is: AAP3-Clonmore (comprising three adjacent RMP sites LH018-019001-002 to 003 and LH018-023) and AAP4- Drumcar (RMP LH018-005). These areas are described in detail appendix 26-1: Cultural Heritage Report).

Table 26-4 below lists the areas of archaeological potential (AAP) where the onshore cable route runs through or in close proximity to the ZoN of RMP sites at Clonmore and Drumcar which may be sensitive to effects from the Project. These areas were subject to further investigations as described in section 26.6.2 below.

Table 26-4: RMP/SMR where the onshore cable route crosses the zones of notification of the sites.

AAP reference	RMP reference	Site type	Townland	ITM	Distance
AAP3	LH018-019 001-002,	Church (x2)	Clonmore	711028, 789093 711069, 789087	Onshore cable route runs through the zone of notification of this site
	LH018-019 -003	Graveyard	Clonmore	711029, 789086	Onshore cable route runs through the zone of notification of this site
	LH018-023	Castle - tower house	Clonmore	711188, 789074	Zone of notification of the site is at least 35 m north of the onshore cable route
AAP4	LH018-005	Ecclesiastical site	Drumcar	706578,791234	The onshore cable route is located just outside the zone of notification of this site

There are no RMP sites within the onshore substation site or at the landfall location.

There are 35 recorded archaeological sites (RMP sites) within a 2 km radius of the onshore substation site. A desk based assessment and windshield survey determined that the substation would have no impact on the setting of these sites (see appendix 26-1: Cultural Heritage Report).

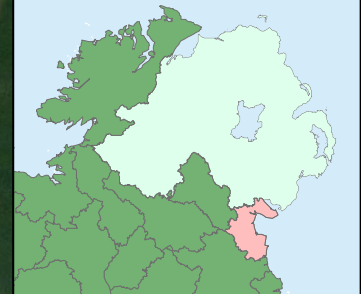
² A "zone of notification" around an RMP/SMR site is intended to identify them for the purposes of notification under Section 12 of the National Monuments Act (1930-2004). The zones do not define the exact extent of the monuments.



AAP3 Clonmore

- Legend**
- Planning Application Boundary
 - Joint Bays
 - Areas of Archaeological Potential (AAP)
 - RMP and SMR sites
 - RMP Zone of Notification

RMP = Record of Monuments and Places
 SMP = Sites and Monuments Record
 AAP = Areas of Archaeological Potential
 Data Sources OWL, Tailte Éireann.



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Title **Figure 26-4:**
Aerial view of the Onshore Cable Route as it passes through AAP3 – Clonmore and AAP 4 – Drumcar

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Approved By: CC	Projection: ITM (IRENET 95) Geographic Co-ordinates: ETRS89
Scale: 1:2,500 @ A4	Date: 31/01/2024

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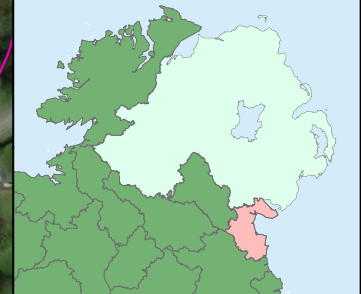


AAP4 Drumcar

Legend

- Planning Application Boundary
- Joint Bays
- Areas of Archaeological Potential (AAP)
- RMP and SMR sites
- ◆ Record of Protected Structures
- RMP Zone of Notification

RMP = Record of Monuments and Places
 SMP = Sites and Monuments Record
 AAP = Areas of Archaeological Potential
 Data Sources OWL, Tailte Éireann.



Client

Project

Oriel Wind Farm Project

Title

**Figure 26-4:
 Aerial view of the Onshore Cable
 Route as it passes through AAP3
 - Clonmore and AAP 4 - Drumcar**

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ORIEL WIND FARM PROJECT – CULTURAL HERITAGE

Protected structures

There are ten protected structures and two NIAH sites, comprising either roadside properties or properties that have roadside boundaries fronting the road network through which the onshore cable route runs (Figure 26-5). These sites are listed Table 26-5 below and described in the field assessment in appendix 26-1: Cultural Heritage Report).

Table 26-5: RPS and NIAH sites within 100 m of the Project.

RPS	NIAH	Site type	Townland	NGR	Description	Distance from the Project
LHS019-009	13901902	Dunany House	Dunany	314822, 291454	Detached multiple-bay two-storey house, built c. 1720, altered and extended c. 1770, enlarged and castellated c. 1820.	The onshore cable runs through the southeastern edge of the demesne within an agricultural field outside of the designed core of the demesne. A temporary compound and a permanent 5 m wide access track is also proposed here.
LHS019-010	13901903	Seagrave House	Dunany	315031, 290886	Detached four-bay two-storey house, built c. 1850. Asymmetric timber gabled porch to south c. 1960, two-storey lean-to extension to northeast.	The onshore cable route runs in the road verge in front of the property.
LHS019-011	13901904	Roadstown House	Dunany	315082, 290888	Detached three-bay two-storey house, built c. 1840. Single-storey return enlarged to two-storey; section of single-storey return remains to east.	The onshore cable route runs in the road verge in front of the property.
LHS019-003	13901911	Seaview House	Boycetown	312679, 288834	Detached three-bay two-storey over basement house, built c. 1840. T-plan, flat-roofed extension to northeast, lean-to to east.	The onshore cable route runs in the road verge in front of the property.
LHS019-014	13901912	Darby's (former dwelling)	Togher	311868, 289065	Detached five-bay two-storey house, built c. 1800, now also in use as public house. It has retained its early character with its thick battered walls and deep window openings.	The onshore cable route runs in the road verge in front of the property.
LHS019-015	13901913	Togher House	Togher	311959, 288982	A detached house built c. 1700. Triple gabled rear elevation. Pitched slate roofs with rebuilt red brick chimneystacks.	The onshore cable route runs in the road verge in front of the property.
LHS015-027	13901503	Drumcar House	Drumcar (St Mary's Hospital)	306612, 291529	Detached five-bay three-storey over basement former country house, built 1777, now used as a residential care home.	The onshore cable route runs approximately 400 m south of the protected structure. It runs along the southernmost extent of the former demesne lands and through its treelined boundary and shelterbelt.
LHS018-054	13901840	Old Rectory	Drumcar	306692, 290935	Detached three-bay two-storey over basement former rectory, built c. 1800, now in use a private house.	The onshore cable route runs in the road verge in front of the property.

ORIEL WIND FARM PROJECT – CULTURAL HERITAGE

RPS	NIAH	Site type	Townland	NGR	Description	Distance from the Project
LHS018-052	13901837	Drumcar Bridge	Drumcar	306537, 291105	Humpback four-arched stone road-over-river bridge, built c. 1750, crossing the River Dee. Coursed rubble stone spandrels and parapets, vertical coping to parapets, Random rubble stone voussoirs to arches, concrete to bases c. 2000. Rounded cutwaters to south. Bitmac road surface to single carriageway.	The onshore cable route diverts to the field to the north of the bridge and does not cross the bridge.
LHS018-055	13901841	Drumcar Corn Mill	Drumcar	306485, 291070	Detached multiple-bay two-storey corn mill, built c. 1800, no longer in use. L-plan, single-story stone addition to north, cast-iron and timber wheel to south. Remains of pitched slate roof, clay ridge tiles. Random rubble stone walling.	The onshore cable route runs in the road verge in front of the property.
N/A	13901914	Vernacular structure	Togher	311798, 289104	Detached four-bay two-storey house, built c. 1820.	The onshore cable route runs in the road verge in front of the property
N/A	13901936	Charleville House	Stabannan	704290, 790846	Record only in the NIAH.	The entrance gates associated with the house front the road. The onshore cable route runs in the road verge in front of the property 230 m from the house

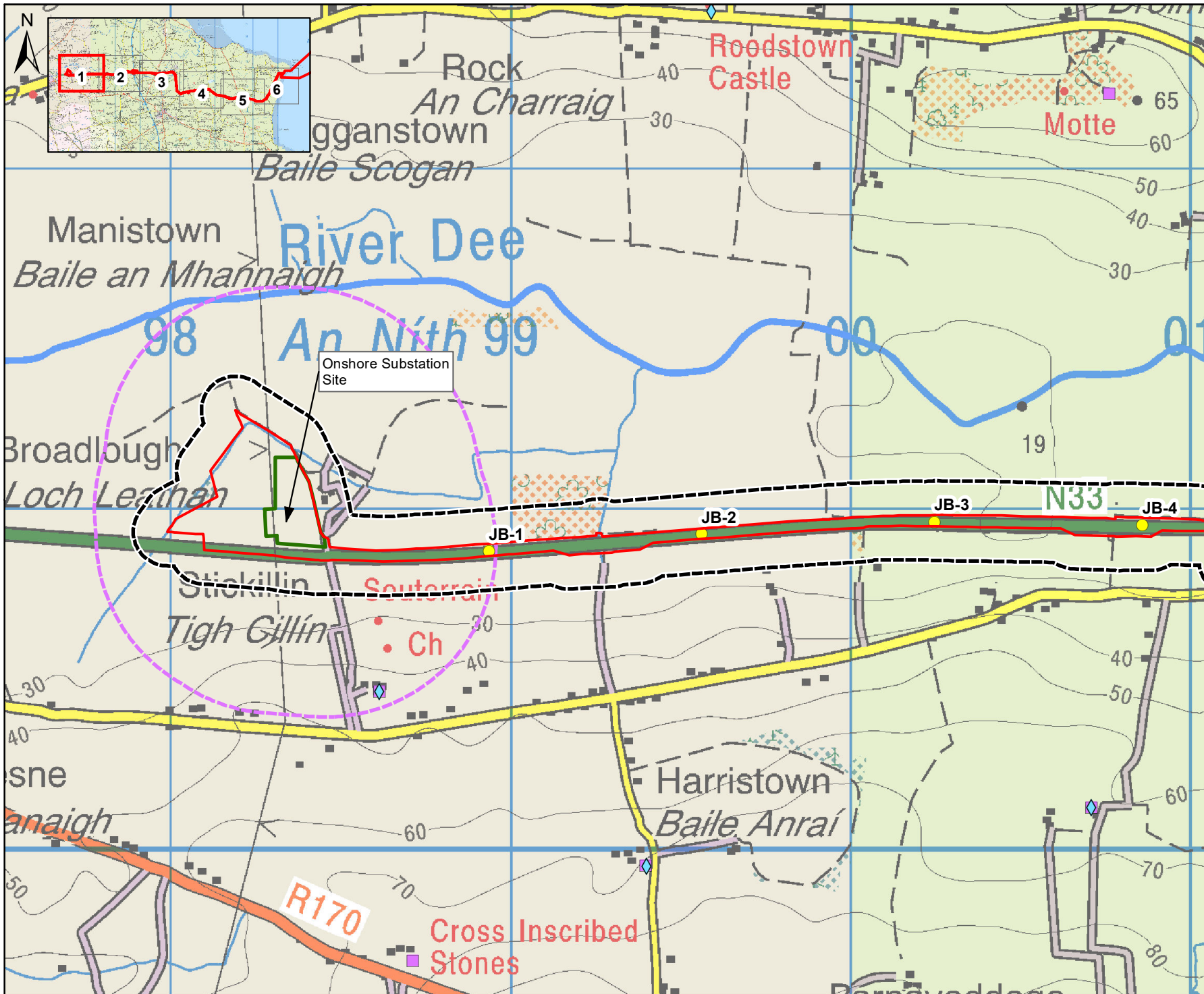
The onshore cable route travels through agricultural farmland along the southeastern periphery of Dunany Demesne (RPS LHS019-009). It enters the demesne from the east at the coastal cliff edge and runs parallel to its southeastern boundary. Construction in this area includes a temporary construction compound and a permanent access track (approximately 5 m wide), the cable exists through a secondary farm access gate. The principal designed core, comprising the protected structures and ruins of a church and graveyard, is centrally located within the demesne lands and is surrounded by a dense shelterbelt of trees, it is accessed from a formal treelined avenue to the east of the demesne. There is no visual link between the historic core to the proposed onshore cable works area (see field inspection in appendix 26-1: Cultural Heritage Report).

The onshore cable route also runs within the southernmost periphery of demesne lands associated with Drumcar House (now St Mary's Hospital) (RPS LHS015-027) in woodland. The landscape within the demesne is considerably altered and many modern buildings are clustered near the principal structure and historic core, interspersed with modern landscaping (see field inspection in appendix 26-1: Cultural Heritage Report).

Joint bay 13 is proposed on the southern side of Drumcar Road to the west of Drumcar Bridge (RPS LHS018-052) and Drumcar Corn Mill (RPS LHS018-055), which are both protected structures. At this location there are rubble stone walls (CH6, see site output of site inspection section below in section 26.7.4 aligning both sides of the road. These walls support the cultural heritage character of the area and of these protected structures.

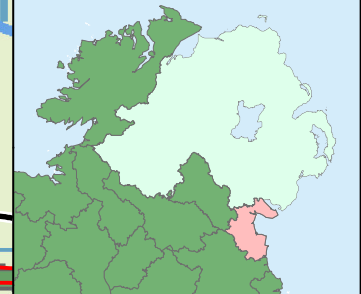
There are no protected structures or NIAH sites within 100 m of the onshore substation site or the landfall location.

There are 14 protected structures and NIAH sites within a 2 km radius of the onshore substation site. A desk based assessment and windshield survey determined that the substation would have no impact on the setting of these sites (see appendix 26-1: Cultural Heritage Report).



- Legend**
- Planning Application Boundary
 - 100m buffer from the Planning Application Boundary
 - 500m buffer from the Onshore Substation Site
 - Joint Bays
 - ◆ RPS
 - NIAH Sites

RPS = Record of Protected Structures
 NIAH = National Inventory of Architectural Heritage
 Data Sources: OWL, Tailte Éireann, National Monuments Service, Louth County Council.



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Project

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**Figure 26-5:
RPS and NIAH sites within
100 m of the of the Project
Map 1 of 6**



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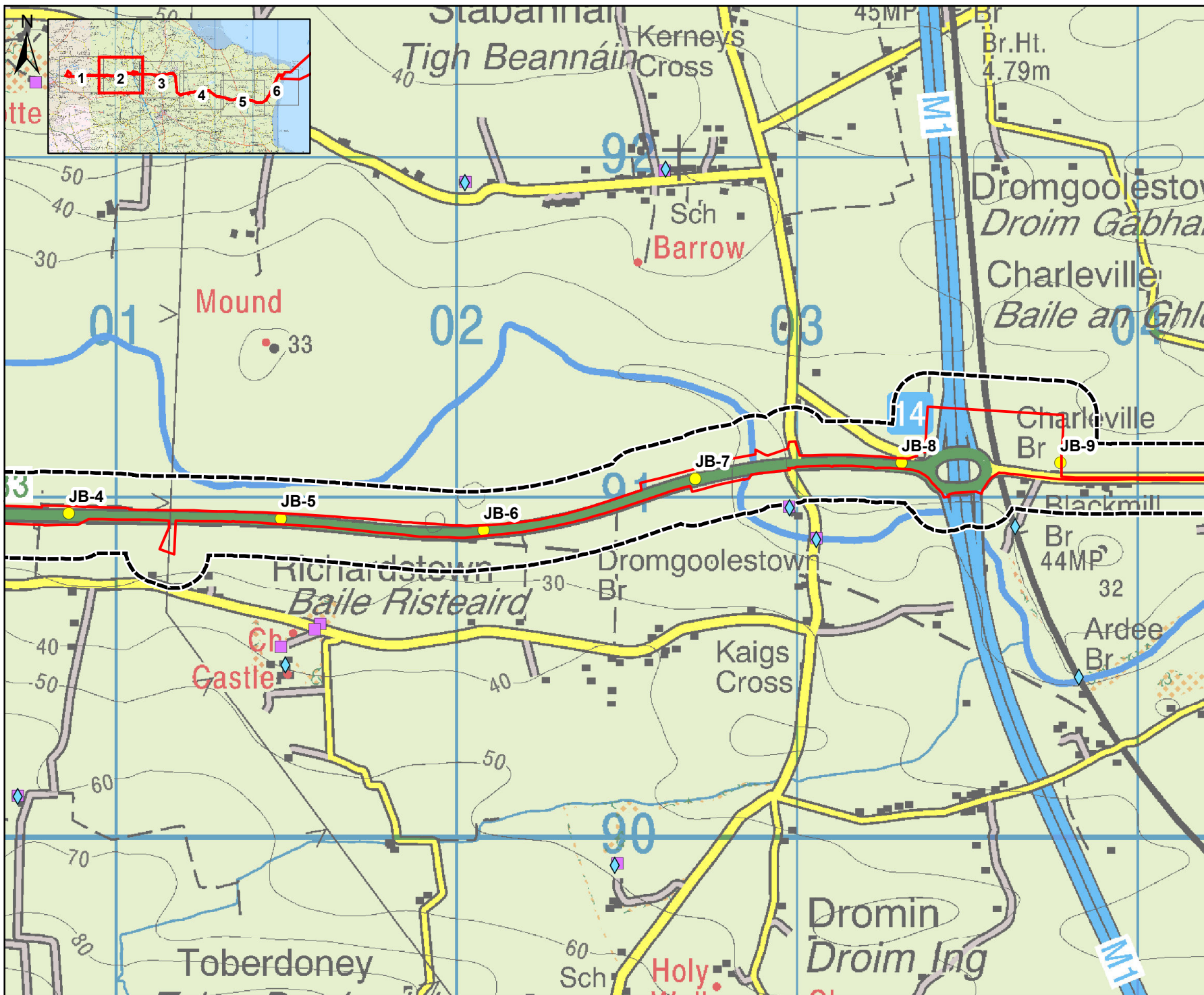
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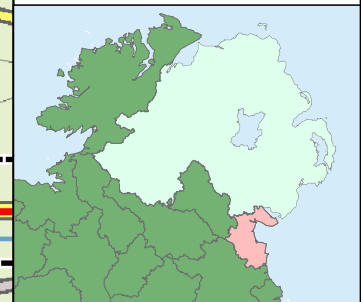
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Legend

- Planning Application Boundary
- 100m buffer from the Planning Application Boundary
- 500m buffer from the Onshore Substation Site
- Joint Bays
- ◆ RPS
- NIAH Sites

RPS = Record of Protected Structures
 NIAH = National Inventory of Architectural Heritage
 Data Sources: OWL, Tailte Éireann, National Monuments Service, Louth County Council



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**Figure 26-5:
RPS and NIAH sites within
100 m of the of the Project
Map 2 of 6**

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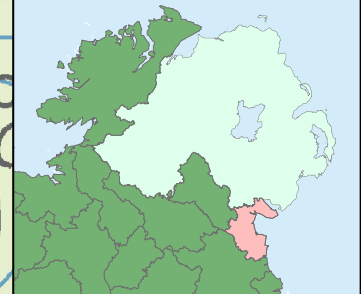
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- Legend**
- Planning Application Boundary
 - 100m buffer from the Planning Application Boundary
 - 500m buffer from the Onshore Substation Site
 - Joint Bays
 - ◆ RPS
 - NIAH Sites

RPS = Record of Protected Structures
 NIAH = National Inventory of Architectural Heritage
 Data Sources: OWL, Tailte Éireann, National Monuments Service, Louth County Council.



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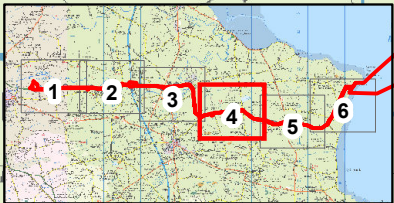
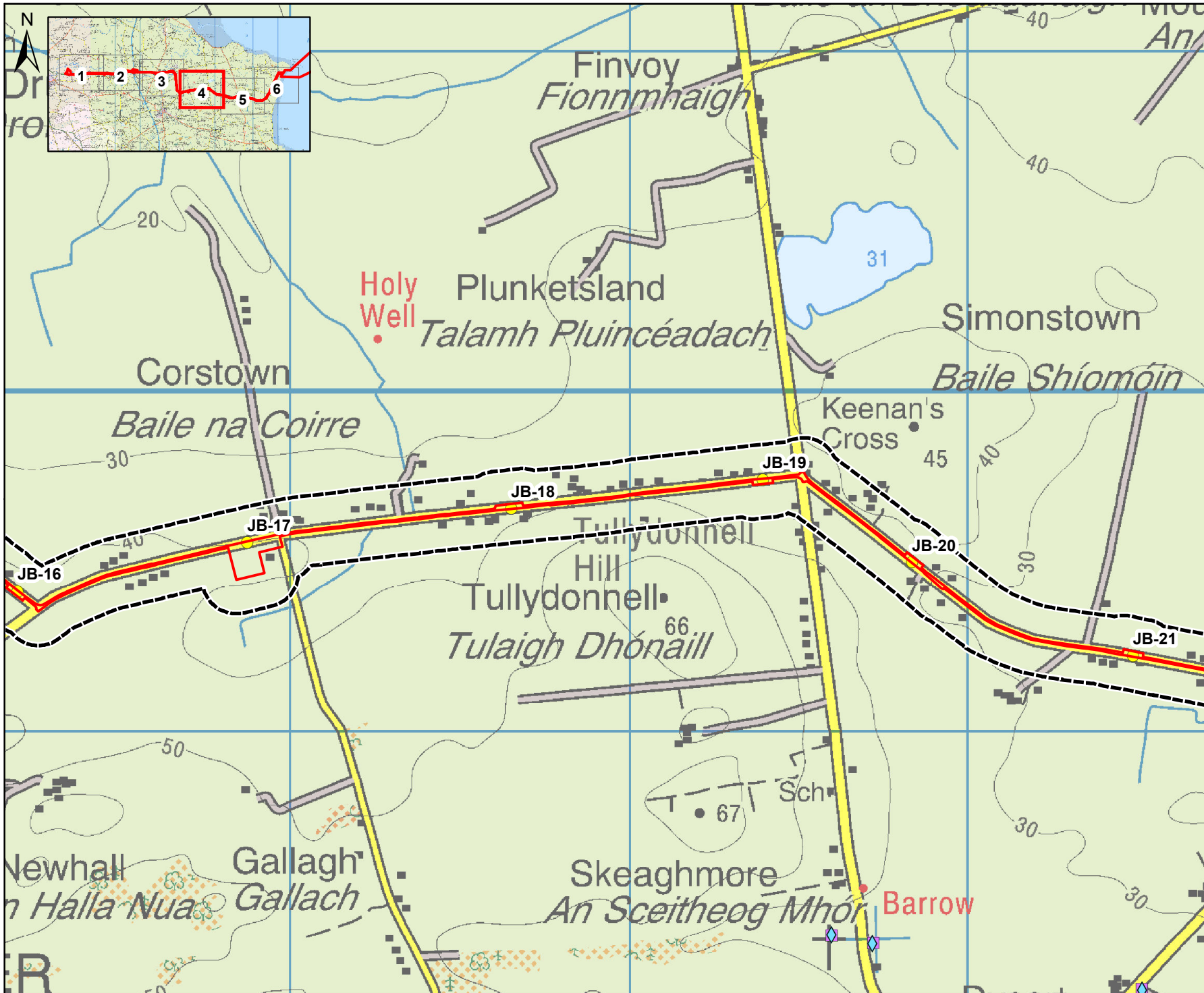
**Figure 26-5:
RPS and NIAH sites within
100 m of the of the Project
Map 3 of 6**

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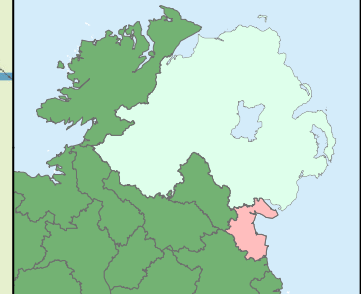
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Drawn By: NR	Project No. MDR1520b
Checked By: CD	File Ref:
Approved By: CC	MDR1520bArc3077F01
Scale: 1:15,000 @A4	Projection: ITM (IRENET95) Geographic Co-ordinates: ETRS89
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- Legend**
- Planning Application Boundary
 - 100m buffer from the Planning Application Boundary
 - 500m buffer from the Onshore Substation Site
 - Joint Bays
 - ◆ RPS
 - NIAH Sites

RPS = Record of Protected Structures
 NIAH = National Inventory of Architectural Heritage
 Data Sources: OWL, Tailte Éireann, National Monuments Service, Louth County Council.



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Title **Figure 26-5:
RPS and NIAH sites within
100 m of the of the Project
Map 4 of 6**



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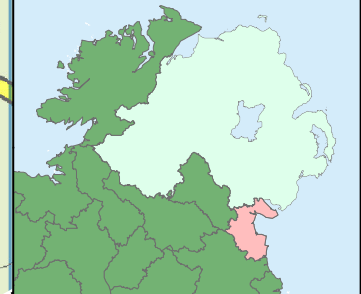
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- Legend**
- Planning Application Boundary
 - 100m buffer from the Planning Application Boundary
 - 500m buffer from the Onshore Substation Site
 - Joint Bays
 - ◆ RPS
 - ◆ NIAH Sites

RPS = Record of Protected Structures
 NIAH = National Inventory of Architectural Heritage
 Data Sources: OWL, Tailte Éireann, National Monuments Service, Louth County Council



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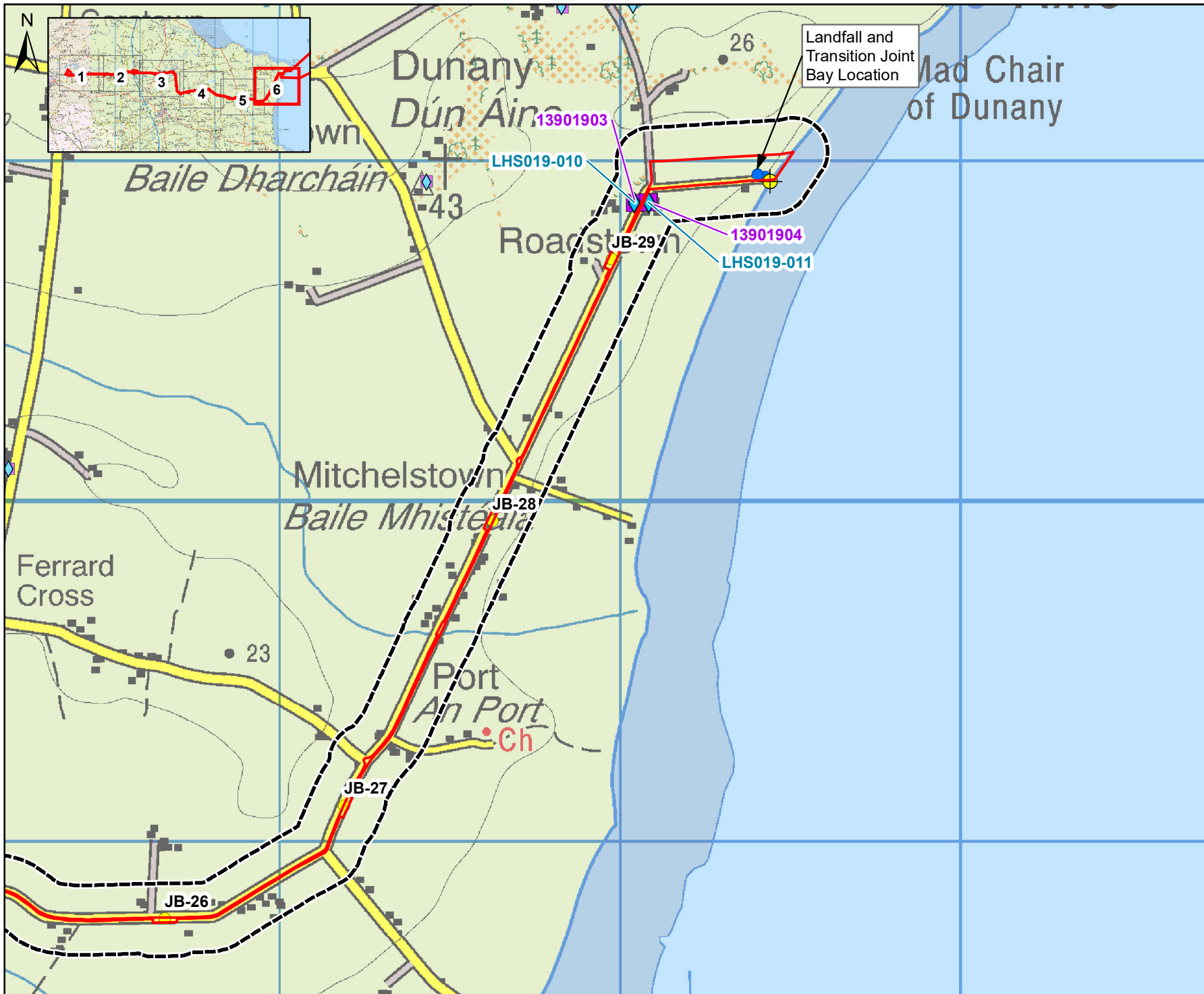
Project
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**Figure 26-5:
 RPS and NIAH sites within
 100 m of the of the Project
 Map 5 of 6**

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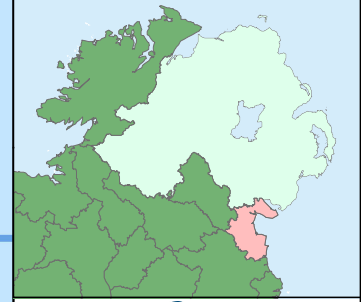
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Legend

- Planning Application Boundary
- 100m buffer from the Planning Application Boundary
- 500m buffer from the Onshore Substation Site
- Joint Bays
- Proposed Transition Joint Bays
- ⊙ Landfall Location
- ◆ RPS
- NIAH Sites

RPS = Record of Protected Structures
 NIAH = National Inventory of Architectural Heritage
 Data Sources: OWL, Tailte Éireann, National Monuments Service, Louth County Council



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**Figure 26-5:
RPS and NIAH sites within
100 m of the of the Project
Map 6 of 6**



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ORIEL WIND FARM PROJECT – CULTURAL HERITAGE

NIAH historic garden survey sites

There are three NIAH historic garden survey sites (GS) that will be traversed by the onshore cable route (Figure 26-6).

Two of the sites are associated with protected structures, Dunany House and Drumcar House and another with a NIAH record site in Charleville (Table 26-6).

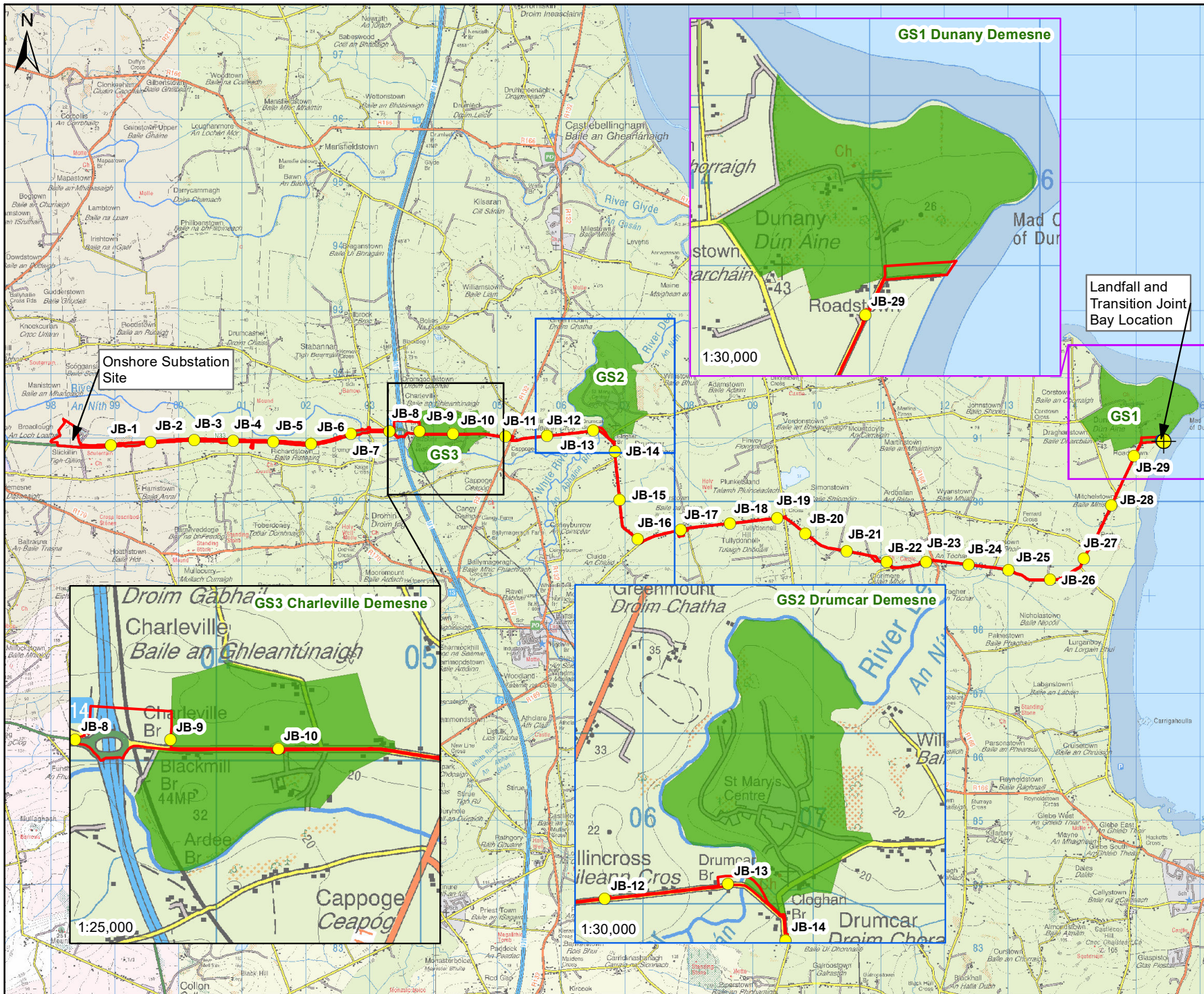
The onshore cable route and transition joint bay will run through agricultural lands associated with the intact Dunany Demesne (GS ID: GS1) in farmland at the southeastern edge of the demesne.

The onshore cable route will also cross the southernmost boundary of Drumcar Demesne (GS ID: GS2), which comprises a slight ditch and a wide band or shelterbelt of broadleaf trees. The onshore cable then continues through a field of level damp pasture which is part of the farmland in the periphery of the demesne.

The passing bay associated with joint bay 10 lies in farmland that was once parkland associated with the former Charleville Demesne (GS ID: GS3).

Table 26-6: NIAH garden survey (GS) sites.

GS ID	Garden ID	NIAH building / RPS reference	Name	NIAH description	Distance
GS1	LH0028	LHS019-009, 139011902	Dunany House	Sizeable demesne for early 18 th century house. Fine mature trees. Cross-country course in grounds. Woodland drives.	Onshore cable route runs through agricultural land in the periphery of the demesne. A temporary construction compound and permanent access track (5 m wide) is proposed within the demesne.
GS2	LH0026	13901503, LHS015-027	St. Mary's Hospital (Drumcar House)	House on high ground and formerly sheltered by heavy bands of tree cover. Fine views from the south front of the house to the sea in the distance. Ground drops to south to River Dee, which bounds demesne on the west side. Landscaping little changed from c. 19 th century to mid-20 th century. Many modern buildings clustered near the house, interspersed with modern landscaping. The site footprint is visible, the boundary is defined. The drive / main access position has changed. A housing development has been constructed over the core landscape. Woodlands survive but the footprint has changed, some parkland.	Onshore cable route runs through agricultural land and woodland in the demesne in the periphery of the demesne.
GS3	LH0017	N/A	Charleville	Landscaped park for demesne from mid-17 th century. Presumably laid out for later or altered house. Housing has been constructed in the western peripheral landscape. Fine mature trees, parkland and farmland.	Passing bay associated with joint bay 10 within an agricultural field that was previously part of the parkland of the former demesne.

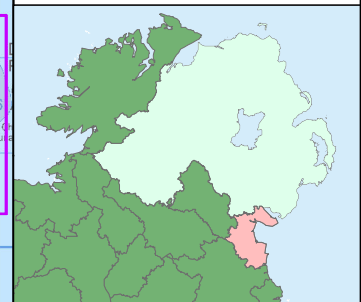


Legend

- Planning Application Boundary
- Joint Bays
- ⊕ Landfall Location
- NIAH Historic Garden Survey Sites

NIAH = National Inventory of Architectural Heritage

Data Sources: OWL, Tailte Éireann, National Monuments Service, Louth County Council.



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**Figure 26-6:
NIAH Garden Survey Sites**



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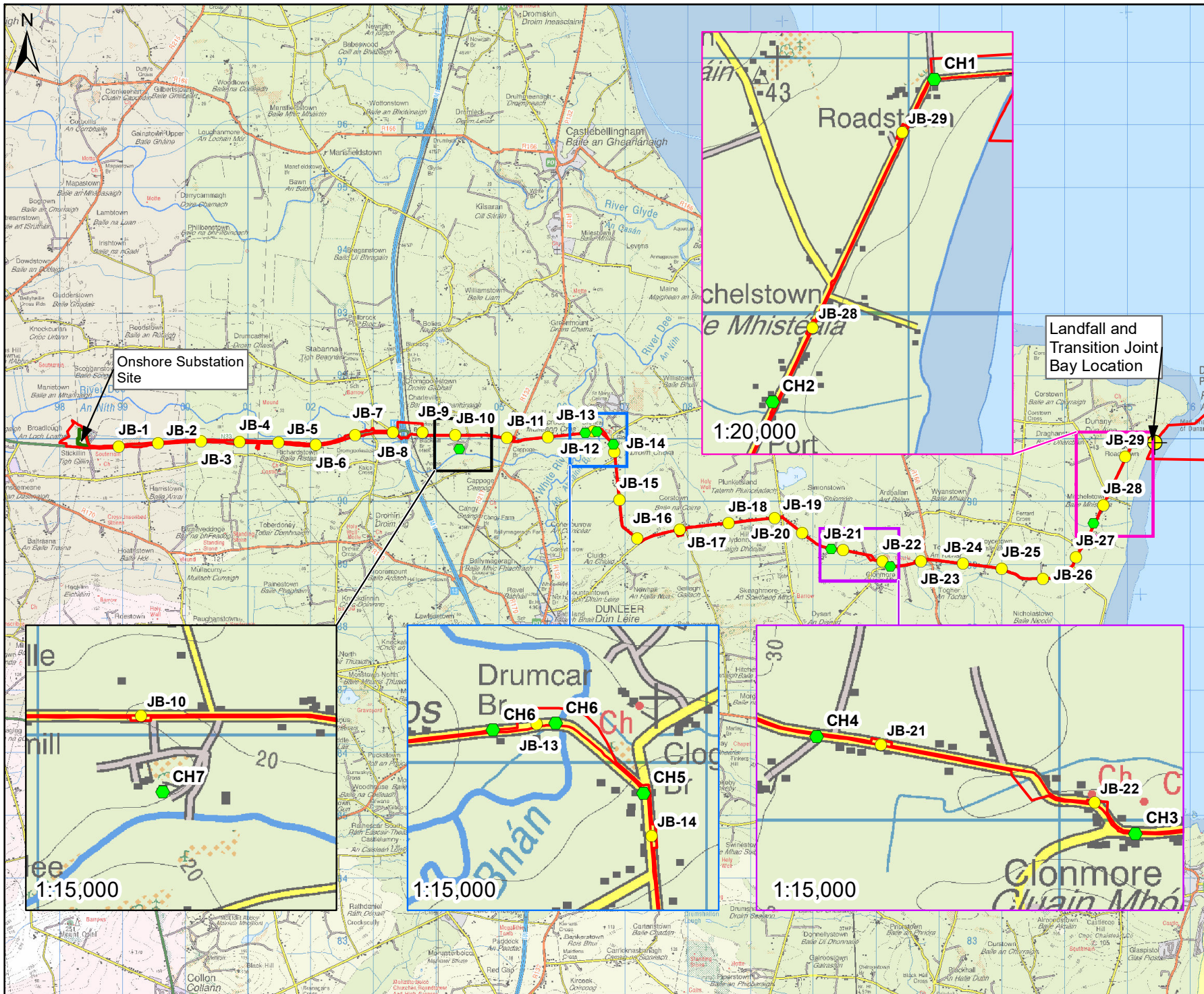
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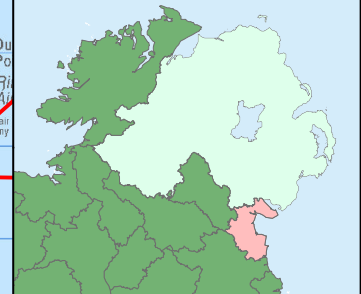
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- Legend**
- Planning Application Boundary
 - Joint Bays
 - ⊕ Landfall Location
 - Undesignated Cultural Heritage features

Data Sources: OWL, Tailte Éireann.



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Title

**Figure 26-7:
Undesignated Cultural Heritage
features along the Onshore
Cable Route**

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ORIEL WIND FARM PROJECT – CULTURAL HERITAGE

26.7.4 Outputs of the desk based assessment and field assessment

Field Inspection

A field assessment was carried out on 28 August and 11 December 2019. It was carried out to provide a baseline record of the archaeological, architectural and cultural heritage potential of the lands affected by the Project. The field assessment is detailed in appendix 26-1: Cultural Heritage Report with accompanying illustrations, historic map sources and photographs.

Previously unidentified cultural heritage sites were identified during the field inspection, as well as areas of archaeological potential, which have the potential to be impacted by the onshore elements of the Project. This was supported by a review of the previous excavations carried out as part of the N33 Road Scheme development and other local developments, and of various documentary and cartographic sources.

Areas of Archaeological Potential (AAP)

As demonstrated in the archaeological and cultural heritage background (see appendix 26-1: Cultural Heritage Report) the archaeological excavations carried out in advance of the construction of the N33 has indicated the subsurface archaeological potential of greenfields in the vicinity of Stickillin. Similarly, the proximity of the onshore cable route to the RMP sites in Drumcar and Clonmore also increase the archaeological potential to reveal below ground archaeological features.

Table 26-7 lists areas of archaeological potential (AAP1 - AAP7, Figure 26-8) through which the onshore cable route runs and in Stickillin where the onshore substation site is located. AAP3 and AAP4, at Clonmore and Drumcar are in the ZoN of RMP sites. Twenty-three joint bay locations (JB8–JB30) are either on a grass verge or in a private field and as such have a general greenfield archaeological potential (the remaining seven are located in the hard shoulder of the N33). The joint bay at Nicholastown, JB26 (AAP2) is in the same field as enclosure sites (RMP LH019-013).

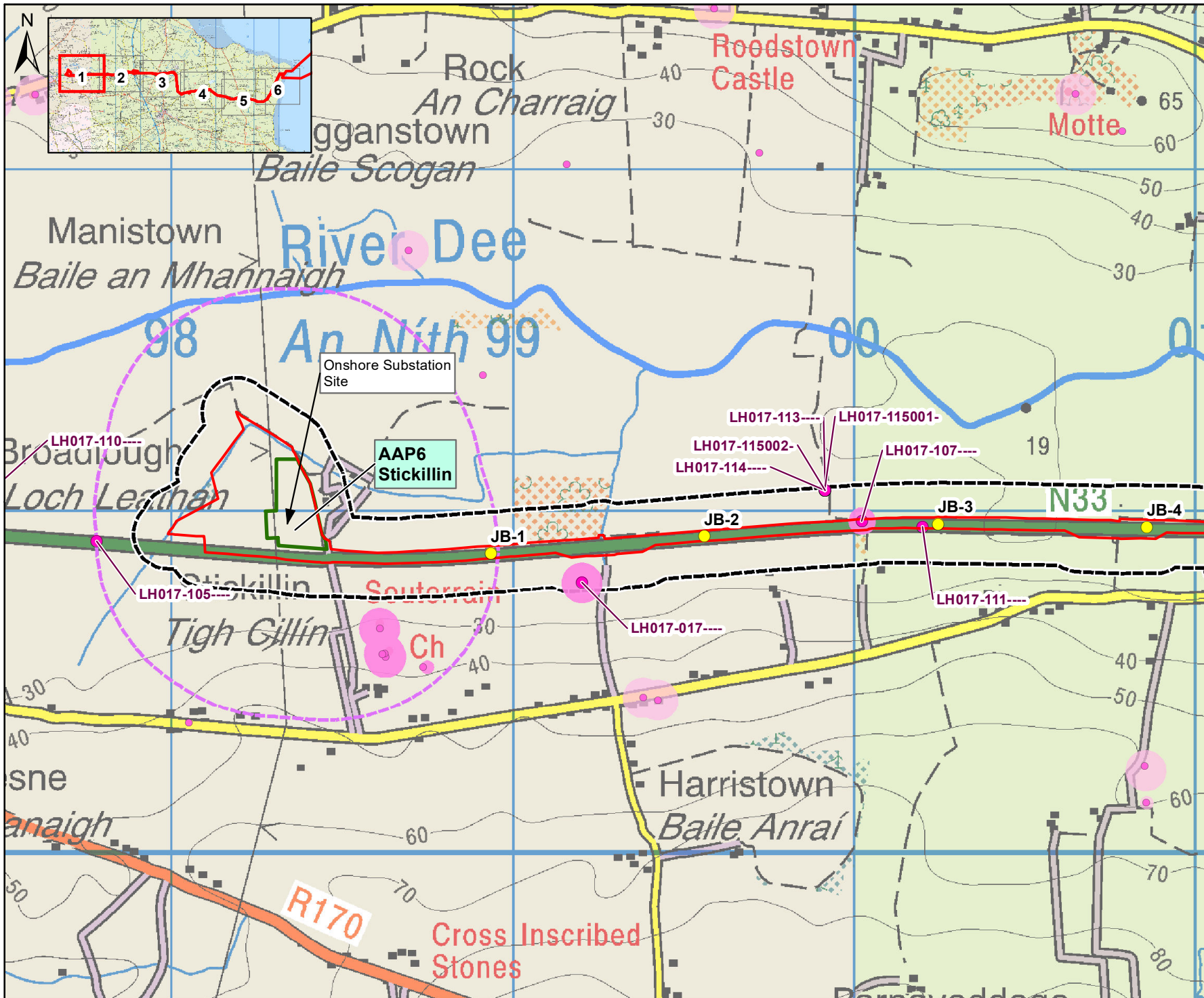
There are also underground cables proposed for riverine crossings in Drumcar (associated with AAP4), at Charleville, Drumcar, Clonmore (associated with AAP3) and at Port/Mitchelstown, and the exit and entry points of the cables are of greenfield archaeological potential.

Table 26-7: Areas of Archaeological Potential (AAP) along the onshore cable route.

AAP reference	Site type	Townland	Location
AAP1	General greenfield potential	Dunany	Greenfield within Dunany Demesne. A large number of stray finds dating to the prehistoric period have been found in the ploughsoil on Dunany Headland.
AAP2	Area of archaeological potential in the vicinity of a RMP site	Port/ Boycetown	Joint bay 26, in the vicinity of townland boundary and also RMP LH019-013 (enclosure sites further south in the same field).
AAP3	Area of archaeological potential in the vicinity of a RMP site (see section 26.7.4)	Clonmore	The onshore cable route as it passes Clonmore castle church and graveyard (RMP LH018-023, LH018-019001 and -002). Joint bay 22 is located in this area.
AAP4	Area of archaeological potential confirmed by geophysical survey and testing in the vicinity of a RMP site (see section 26.7.4), Drumcar ecclesiastical site (RMP LH018-005). West of the River Dee a ring ditch approximately 10 m in diameter (Bronze Age / Iron Age) and a possible field system medieval in date was identified in geophysical survey and testing. East of the River Dee further ditches, pits and spreads which are also of medieval date were identified. The presence of medieval pottery	Drumcar	Onshore cable route in Drumcar, comprising the construction corridor in the greenfield area on both sides of the River Dee and to the south Drumcar ecclesiastical site (RMP LH018-005). Joint bay 13 is located in this area.

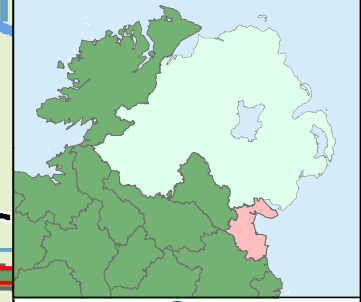
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AAP reference	Site type	Townland	Location
	in some of the features indicate habitation at or nearby the site. These features could be associated with nearby milling and/or ecclesiastical activity or both.		
AAP5	General greenfield area of archaeological potential. The N33 revealed archaeological sites in this general area in advance of construction.	Charleville Drumgoolestown	Onshore cable route runs through greenfield to the east of the M1/Rail line. Onshore cable route runs through the greenfield to the west of the M1. Joint bay 9 and a temporary compound is proposed in this field.
AAP6	Area of archaeological potential comprising a burnt mound remains and a possible ditched enclosure (see section 26.7.4)	Stickillin	Onshore substation site located in greenfield.
AAP7	Greenfield potential	In various locations	<p>Passing bays, joint bays, HDD crossings to install onshore cable, fibre optic cable connections and open cut trenches for river /road crossings and construction compounds that are located in greenfield/riverine locations.</p> <p>General greenfield/riverine archaeological potential at the following joint bays, HDD crossing or open cut trenches:</p> <ul style="list-style-type: none"> • <i>Joint bays</i> JB8, JB9, JB10 – Charleville JB11, JB12 – Mullincross JB13 – Drumcar JB14, JB15, JB16, JB17 (and temporary compound) – Drumcar JB18, JB19, JB20 – Tullydonnell JB21, JB22 – Clonmore JB23, JB24 – Togher JB25 – Boycetown JB26 (see AAP2), JB27 – Port JB28 – Mitchelstown JB29 – Dunany TJB – Dunany • <i>HDDs</i> HDD crossing at River Dee in Richardstown HDD crossing beneath the M1 motorway and Dublin to Belfast rail line in Charleville and temporary compound HDD crossing at River Dee in Drumcar (see AAP4) HDD crossing at Port Stream in Togher HDD crossing at Salterstown Stream in Mitchelstown • <i>Temporary Compounds</i> Temporary compound in Charleville Temporary compound in Drumcar • <i>Open cut trenches</i> Port Stream in Clonmore Crossing of drainage ditch at Drumcar Newhall Stream at Tullydonnell



- Legend**
- Planning Application Boundary
 - 100m buffer from the Planning Application Boundary
 - 500m buffer from the Onshore Substation Site
 - Joint Bays
 - AAP
 - RMP and SMR sites
 - RMP Zone of Notification

RMP = Record of Monuments and Places
 SMP = Sites and Monuments Record
 AAP = Areas of Archaeological Potential
 Data Sources: OWL, Tailte Éireann, National Monuments Service.



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**Figure 26-8:
Areas of Archaeological Potential
along the Onshore Cable Route
Map 1 of 6**



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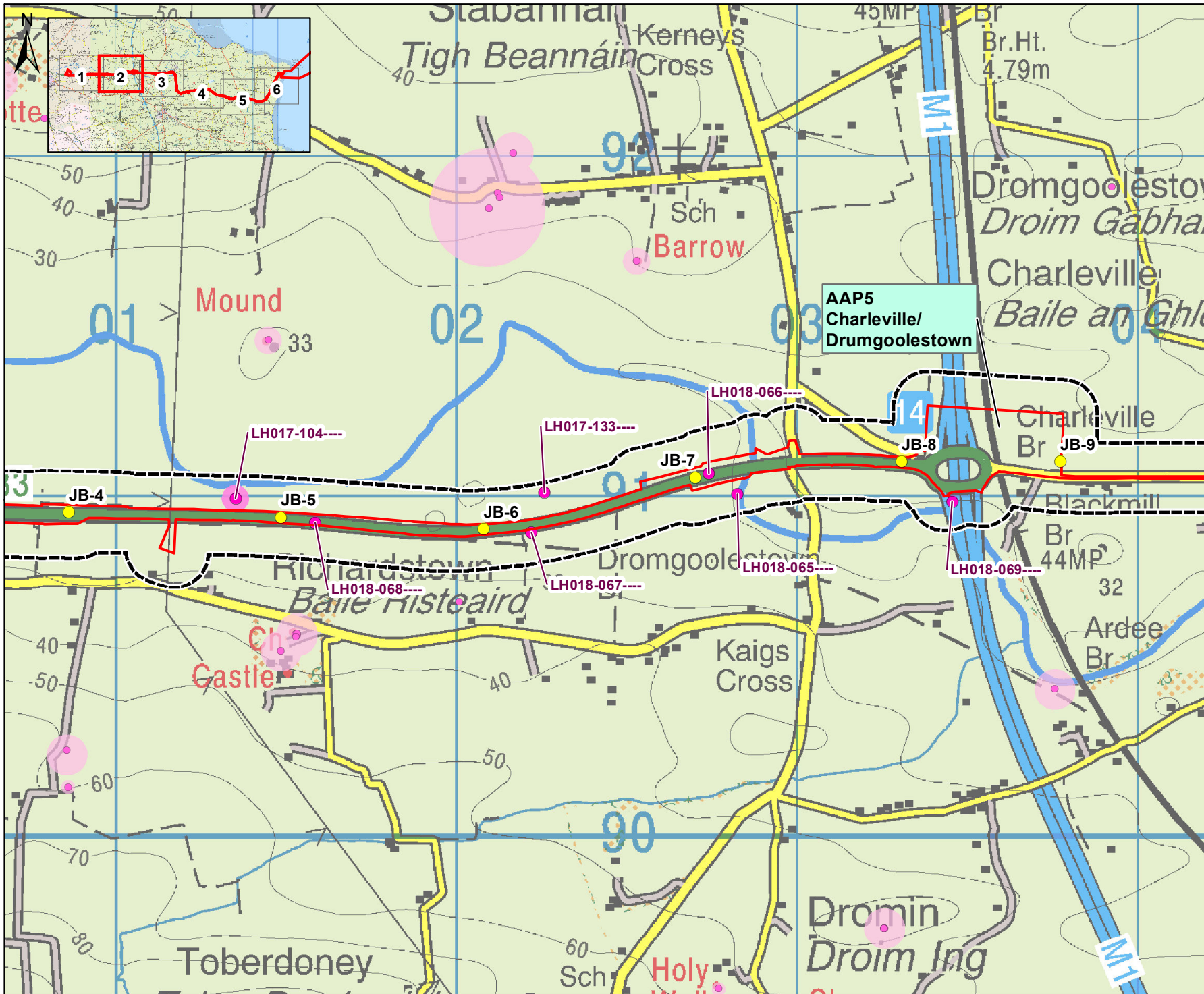
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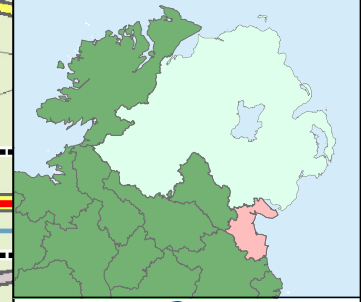
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- Legend**
- Planning Application Boundary
 - 100m buffer from the Planning Application Boundary
 - Joint Bays
 - AAP
 - RMP and SMR sites
 - RMP Zone of Notification

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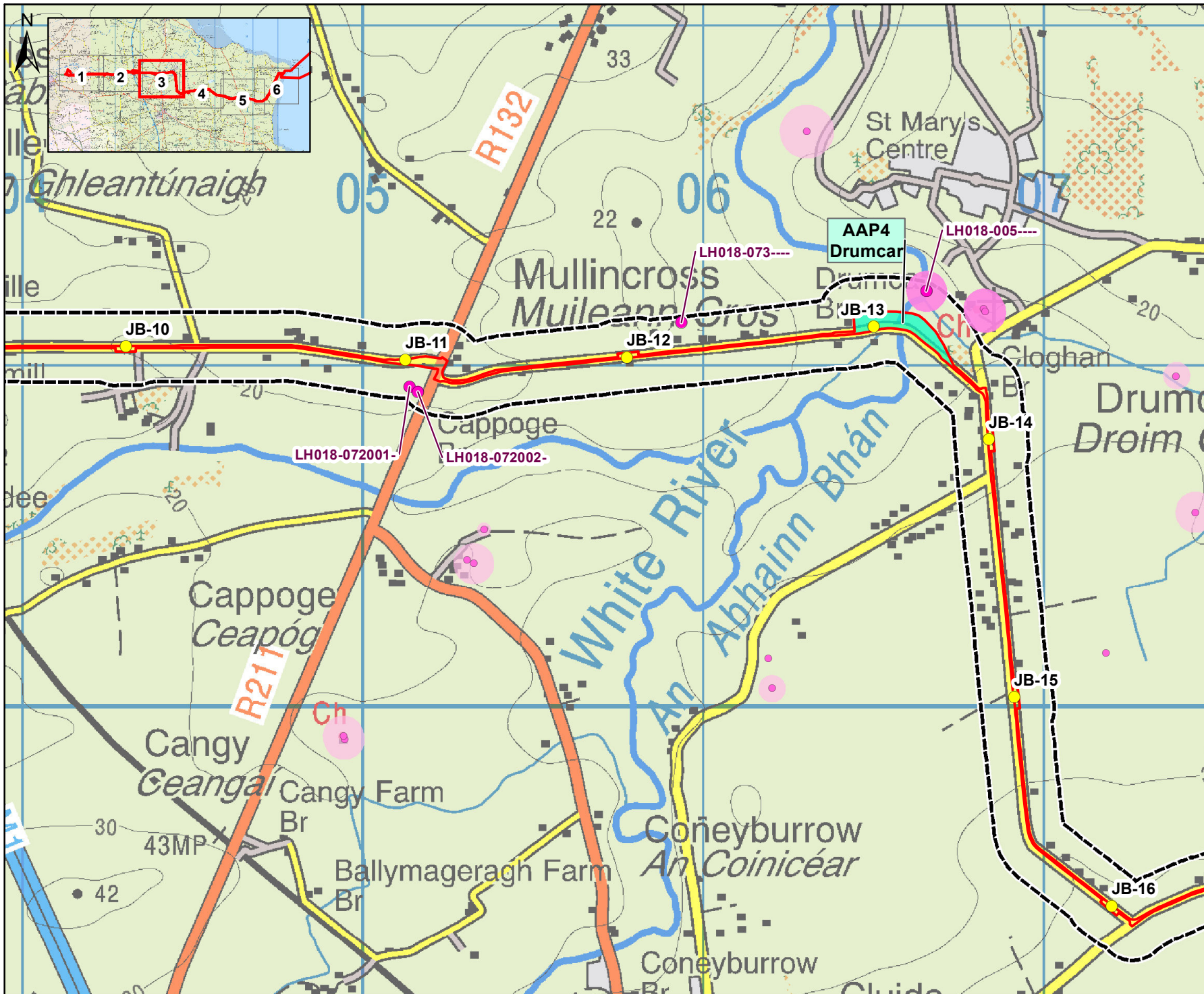
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Title **Figure 26-8:**
Areas of Archaeological Potential
along the Onshore Cable Route
Map 2 of 6

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Legend

- Planning Application Boundary
- ▭ 100m buffer from the Planning Application Boundary
- Joint Bays
- AAP
- RMP and SMR sites
- RMP Zone of Notification

RMP = Record of Monuments and Places
 SMP = Sites and Monuments Record
 AAP = Areas of Archaeological Potential
 Data Sources: OWL, Tailte Éireann, National Monuments Service

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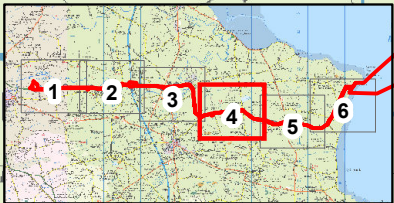
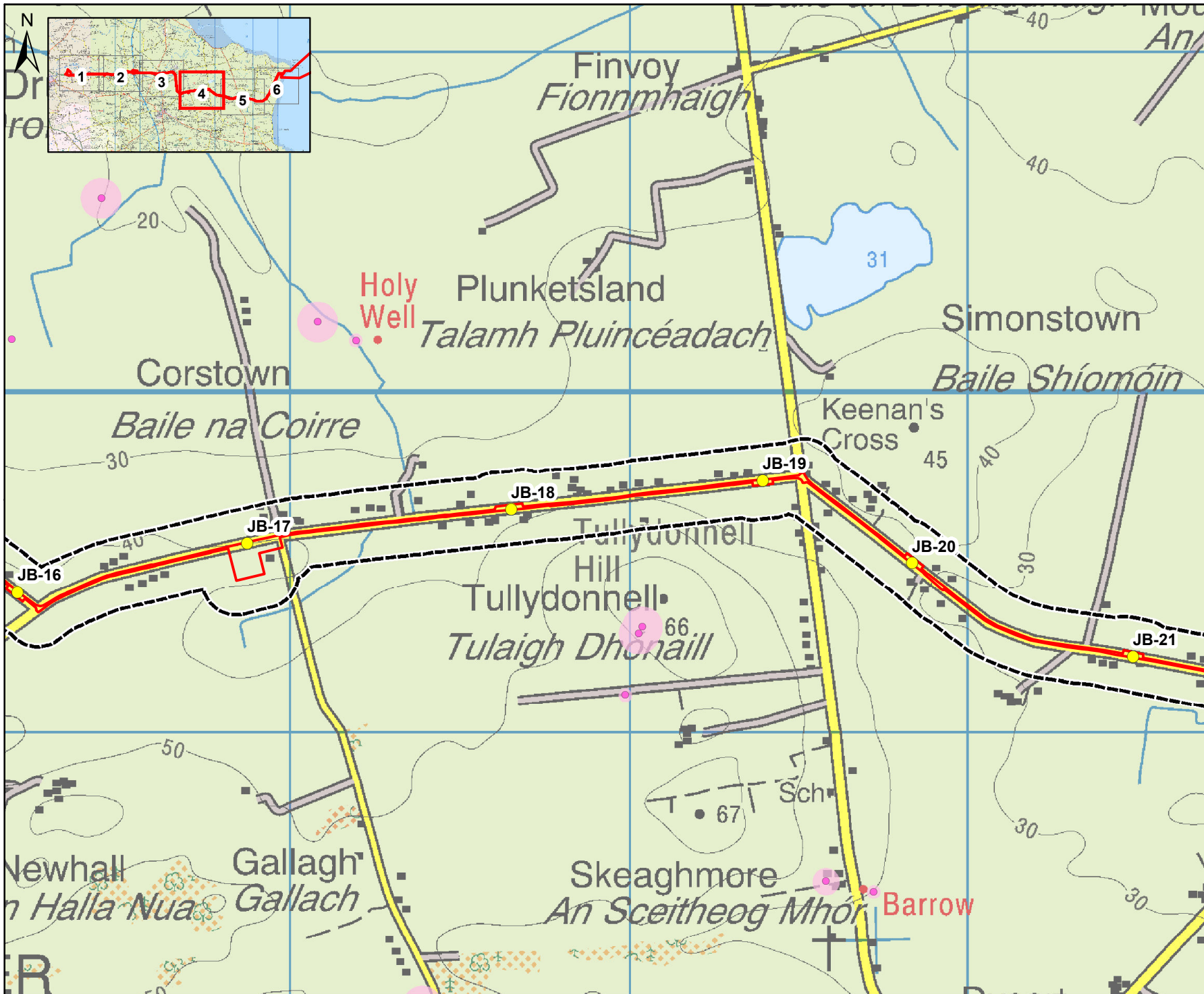
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Title
**Figure 26-8:
 Areas of Archaeological Potential
 along the Onshore Cable Route
 Map 3 of 6**

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Date: 31/01/2024	

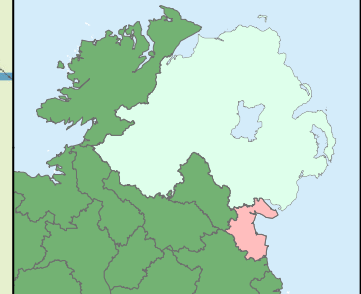
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Legend

- Planning Application Boundary
- ▭ 100m buffer from the Planning Application Boundary
- Joint Bays
- AAP
- RMP and SMR sites
- RMP Zone of Notification

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 SMR = Sites and Monuments Record
 AAP = Areas of Archaeological Potential
 Data Sources: OWL, Tailte Éireann, National Monuments Service



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**Figure 26-8:
Areas of Archaeological Potential
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Map 4 of 6**

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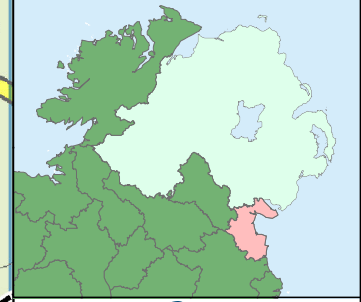
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Checked By: CD	File Ref:
Approved By: CC	MDR1520bArc3080F01
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- Legend**
- Planning Application Boundary
 - 100m buffer from the Planning Application Boundary
 - Joint Bays
 - AAP
 - RMP and SMR sites
 - RMP Zone of Notification

RMP = Record of Monuments and Places
 SMP = Sites and Monuments Record
 AAP = Areas of Archaeological Potential
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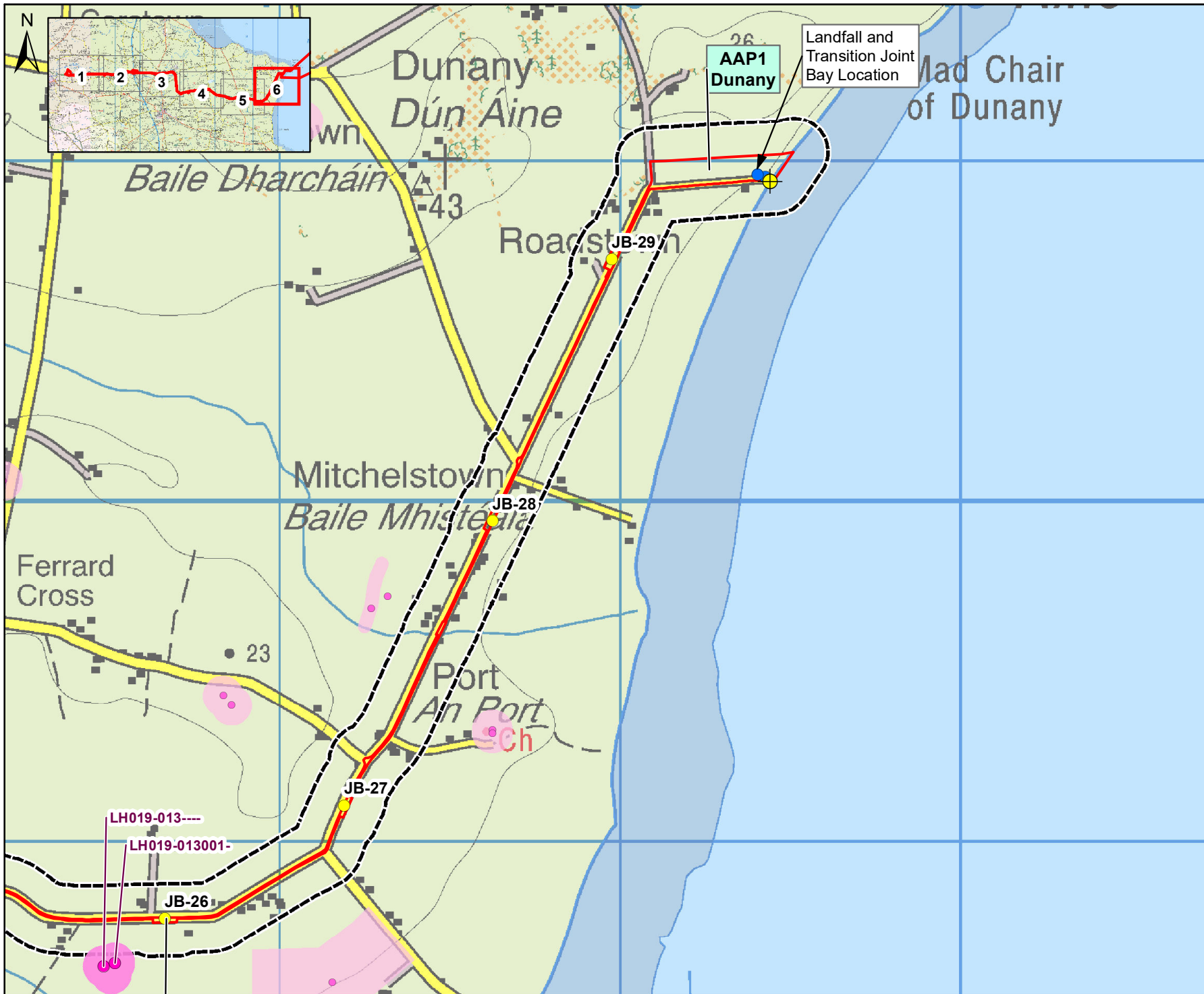
Title
**Figure 26-8:
 Areas of Archaeological Potential
 along the Onshore Cable Route
 Map 5 of 6**

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Scale: 1:15,000 @A4	Projection:
Date: 31/01/2024	ITM (IRENET95) Geographic Co-ordinates: ETRS89

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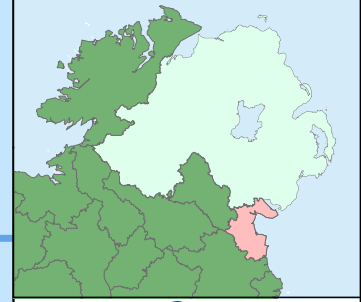
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Legend

- Planning Application Boundary
- 100m buffer from the Planning Application Boundary
- Joint Bays
- Proposed Transition Joint Bays
- ⊕ Landfall Location
- AAP
- RMP and SMR sites
- RMP Zone of Notification

RMP = Record of Monuments and Places
 SMP = Sites and Monuments Record
 AAP = Areas of Archaeological Potential
 Data Sources: OWL, Tailte Éireann, National Monuments Service.



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**Figure 26-8:
Areas of Archaeological Potential
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Map 6 of 6**

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Oriel Wind Farm Project – Cultural Heritage

Archaeological investigations (geophysical survey and test excavation)

As a result of the desk-based research and field inspection, licenced archaeological geophysical survey and/or archaeological test excavation was carried out in three areas of the scheme, in the area of the onshore cable at Clonmore (AAP3, RMP Ref: LH018-005, LH018-019001) and Drumcar (AAP4, RMP Ref: LH018-005), and the substation site at Stickillin (AAP6). Geophysical survey was carried out by J.M. Leigh Surveys at Stickillin and Drumcar in January 2021 (Licence Reference: 21R0012), this was followed by archaeological test excavation (Licence Reference: 21E0036) which took place over five days from 19 April 2021 in all three areas of potential.

The investigations in the area of the cable route in the vicinity of the site in Drumcar (AAP4) identified several archaeological features. West of the River Dee a ring ditch approximately 10 m in diameter (Bronze Age / Iron Age) and a possible field system medieval in date was identified. East of the River Dee further ditches, pits and spreads also which also of medieval in date were identified. The presence of medieval pottery in some of the features indicate habitation at or nearby the site. The medieval features are likely to be associated with the recorded ecclesiastical site which is likely to be located further north.

Test excavation was also carried out along the roadside verge in the vicinity of Clonmore Church (AAP3). Due to in-situ electrical services in the area of the test trenches, the archaeological testing was unable to fully assess the archaeological potential of the onshore cable route at this location. Whilst there is no indication that the sites extend any further south than the existing road, there is a potential that features associated with the site may extend beyond the present boundaries of the site beneath the existing road surface.

Whilst the field work did not identify any features or sites within the field, research has shown that the construction of the N33 in this area has revealed previously unknown archaeology in Stickillin. Geophysical survey of the footprint of the onshore substation site was carried out as a risk assessment exercise. In Stickillin (AAP6) the investigations identified burnt mound remains and a possible ditched enclosure.

The testing and geophysical survey results are summarised and provided along with the full testing and geophysical survey report in appendix 26-1: Cultural Heritage Report.

Undesignated cultural heritage (CH) features

Seven roadside cultural heritage features were noted during the fieldwork (CH1 – CH7) (see appendix 26-1: Cultural Heritage Report, Table 1-7). Of these, six cultural heritage features are located adjacent to the road in private property and have been scoped out from further assessment, as they will not be subject to impact by the Project (i.e. in these areas the cable will primarily run along the public road (Figure 26-7).

Joint bay 13 and the onshore cable proposed in Drumcar will have an impact on a stretch of rubble stone wall (CH6) on the western side of Drumcar Bridge (RPS LHS018-052) and Drumcar Corn Mill (RPS LHS018-055) (see Table 26-8).

Table 26-8: Cultural heritage sites.

CH reference	Site type	Townland	Location
CH6	Stone walls	Drumcar	Rubble stone walls and culvert on the westerly approach to Drumcar Bridge and Mill on both sides of the road.

26.7.5 Cultural heritage setting

Not all cultural heritage sites are sensitive to change in the coastal environment; the offshore elements of the Project will potentially be visible from several designated cultural heritage sites, but in most instances, there is no potential for this to have a significant impact on the setting, as distant seascape views are only incidental to the site. The offshore wind farm and offshore substation have the potential to generate effects on the setting of heritage assets where views of the coastal environment/seascape form a substantive contribution to the significance, understanding and experience of the assets. For such potential, the asset's significance must relate closely to its visual, functional or aesthetic relationship with the sea.

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A representative sample of 12 sites (and complexes) indicative of the four seascape category types, was visited in the field and their setting assessed in detail (Figure 26-9, SET 1 – SET 12, see appendix 26-1: Cultural Heritage Report, Table 2-3). This assessment demonstrates the general setting impacts that might be experienced by similar sites in the receiving environment. Of the sites assessed, three of the sites (SET1, SET2 and SET6) were found to have a setting that would potentially be impacted by the offshore wind farm.

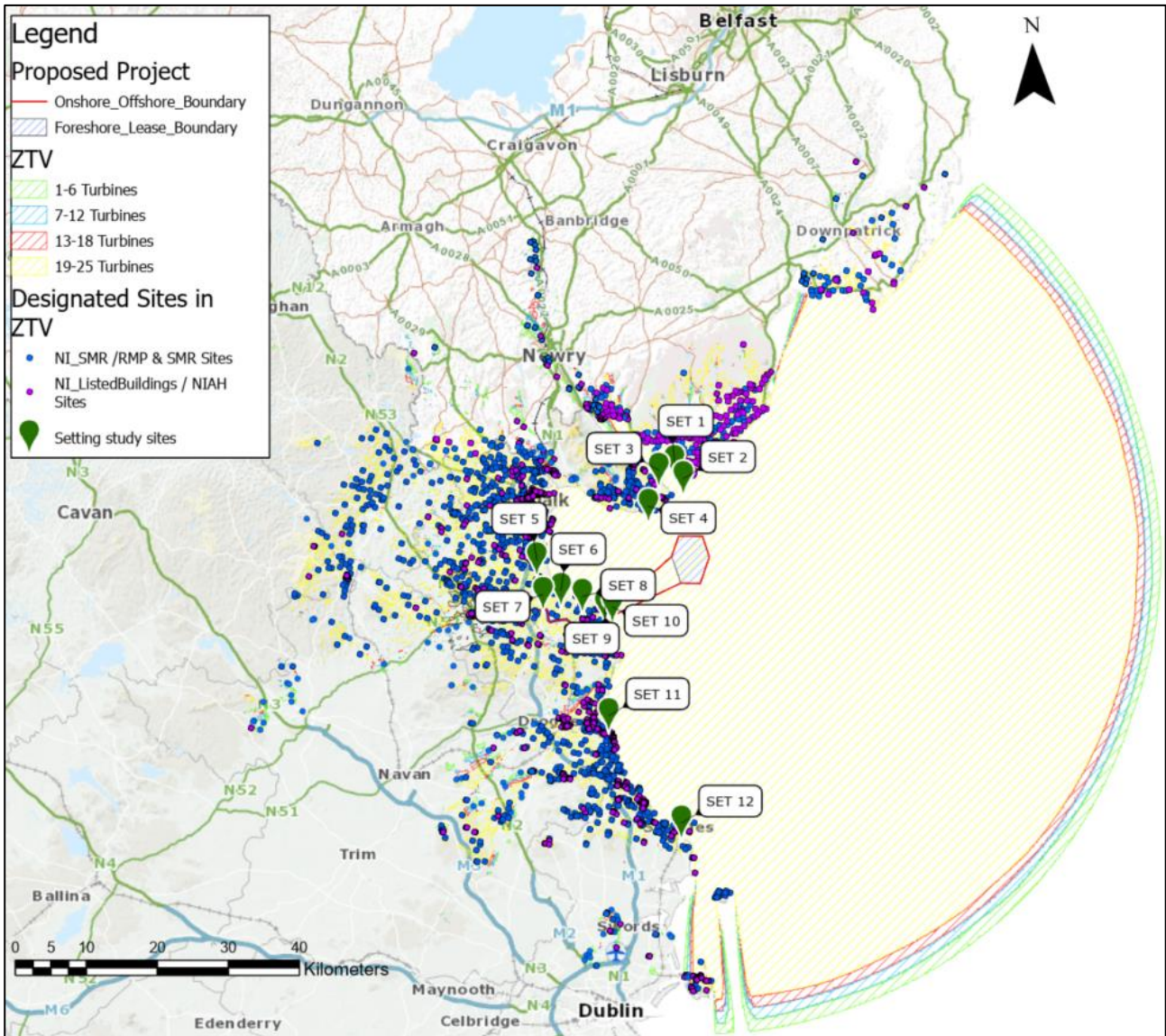


Figure 26-9: Designated sites within the ZTV and sites assessed.

The baseline description of the three sites (SET1, SET2 and SET6) is summarised as follows (see also appendix 26-1: Cultural Heritage Report).

SET 1: Greencastle Castle (NISMR Ref: DOW057-003, National Monument in State Care)

The offshore wind farm is approximately 10 km south/southeast of the Greencastle Castle (NISMR Ref: DOW057-003, National Monument in State Care) in Greencastle (Northern Ireland). The castle is on a natural knoll in a prominent position in the landscape commanding expansive views in all directions. Its

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strategic placement guarded the narrow entry channel to Carlingford Lough, the important Anglo-Norman sites at Carlingford and ferry crossings at Greenore; links that are critical aspects of the site's significance. Modern agricultural buildings and residential development however interrupt the former visual or physical connections between these sites. From the wall walk in the castle's upper levels, there are extensive open views of the surrounding landscape, upstream and downstream of Carlingford Lough, and beyond that, out to the bay to the open sea.

The view out into the open sea, beyond Ballagen Point, will be altered by the offshore elements of the Project, and the development will represent a new modern element to the distant seascape. The understanding and dominance of the castle in its location inside Carlingford Lough and its visual and associative links to Greenore and Carlingford will not be impacted by the wind farm. The presence of the turbines in the open sea beyond the mouth of the Lough will not impact the ability to appreciate and understand the castle's setting.

SET 2: Haulbowline lighthouse (NI HB16/04/009)

The proposed wind farm is approximately 8 km south of Haulbowline lighthouse (SET2, NI HB16/04/009). The lighthouse is located on Haulbowline rock on the northern side of the entrance to Carlingford Lough. At 38 m high above high water level, it is a visually dominant feature in the seascape in the views outward from the mouth of Carlingford Lough and along both its shores. The structure's visual dominance is enhanced by the fact that it is surrounded by water and is an isolated feature that breaks the horizon. There are also two 19th century lattice metal structures located upstream from the lighthouse close to Greencastle, which are viewed in relation to the lighthouse from Greencastle; they are much smaller in scale. The lighthouse and beacons are of social and maritime industrial significance, its presence at the mouth of Carlingford Lough reflects the importance of Greenore and Newry as busy trading ports since the 19th century. Besides its social/ industrial heritage value, it has an aesthetic quality as a landmark feature associated with Carlingford Lough.

Photomontage viewpoint 3 (VP3) from Cranfield (see appendix 27-1: Seascape, Landscape and Visual – Accompanying Graphics) on the northern shore of Carlingford Lough shows that the full extent of the wind farm will be visible across the open sea view. In this view, the wind farm is separate and distinct from the lighthouse, and they appear almost comparable in height to the lighthouse.

The development will add a discernible modern element to the seascape; the number and the movement of the turbines will detract from the dominance of the isolated lighthouse. The wind farms' presence will change the lighthouse aesthetic experience for visitors to the coastline or users of the lough; however, it will not change the understanding or appreciation of its maritime function and relationship with Carlingford Lough.

SET 6: Lisnaran Fort (RMP LH015-015001 –003, National Monument in State Ownership No. 579)

The proposed wind farm is approximately 16 km northeast/east of Lisnaran Fort (RMP LH015-015001 –003, National Monument in State Ownership No. 579) in the village of Annagassan. Located on a cliff edge at the southern end of a high natural ridge above the river Glyde. The roughly D-shaped earthen enclosure is accessed on the western bank of the river via a stile with a steep climb to the top along a worn informal track. The fort has a dominant presence over Annagassan port and village; however, the site itself as an earthwork is not readily legible to the visitor, however there is interpretive signage posted around the village which assists in its understanding.

The site's interior comprises a level field of pasture with low-lying banks. The external fosse (or bank), and the edge of the cliff over the river, are overgrown. The vegetation prevents any clear outward views into the surrounding landscape to the east; however, when viewed from the outer edge of the site, the commanding far-reaching views from the monument towards the north, northeast and east is appreciated. From this precarious vantage point, there are views over the mouth of the Dee/Glyde estuary and extensive views of Dundalk Bay with the distant Mourne Mountains as a backdrop. Views of the seascape horizon to the east are today obscured by the village's 19th-century industrial and modern development along the coastline; this viewpoint towards the sea would have been an essential part of the site's characteristic as a cliff-edge fort for the seafaring Vikings that were thought to have settled at the site. there is a tall water tower on the western side of the site, a new dwelling to the west and a 19th-century dwelling built into the foot of cliff northwest of the site at the junction of Harbour Road and Lynns Road.

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The offshore wind farm, theoretically, would be visible in views to the east from the monument, together with but as a background to, Annagassan village. However, there is no clear open view from within the fort site towards the east/southeast, nor along the cliff edge outside of it; the mature vegetation inhibits views from on top of the site's fosse. The wooded shelterbelt on the cliff edge running along the riverbanks to the south also prevents open views in this direction. The presence of the wind farm in the eastern view approximately 16 km to the east of the site within the Irish Sea will not affect the public understanding of the monument and the ability to understand its relationship to the sea and the river estuary.

26.7.6 Future baseline scenario

The European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (hereafter the EIA Regulations 2018) require that “a description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge” is included within the EIAR.

In the event that the Project is not constructed, an assessment of the future baseline conditions has been carried out and is described within this section.

The existing landscape is the result of processes of change over the millennia, understanding how these are represented in today's landscape is critical in providing a time-depth analysis on the cultural landscape and identifying areas of unique character, sensitivity vulnerability and its capacity for change (as demonstrated in the field assessment appendix 26-1: Cultural Heritage Report).

The landscape within which the Project will be constructed is generally low-lying agricultural land. It is an important repository of historical and archaeological information spanning some six-thousand years of human settlement and activity, the earliest of evidence being located on the coast, with evidence for settlement extending from the prehistoric period to the early medieval and medieval period.

Dairy farming in the early medieval period brought with it dispersed settlement in fertile land and settlement around church sites, this was followed by the Anglo Normans who had a big impact on the landscape bringing with them new intensive farming techniques and the reorganisation of landholdings.

The milling industry was also a catalyst for development in the area with flour and cornmills harnessing waterpower, bringing with them middle sized houses often adjacent to the mills and a further intensification in agriculture. The expansion and development of transport networks in the form of nineteenth century rail links to modern motorways and link roads led to the increase in dispersed settlement patterns in the landscape that may have otherwise not been accessible. The modernisation of farming practice also brought large field systems and the replacement of old vernacular farmhouses and buildings with large houses and farm buildings often adjacent to the earlier farms. One off housing, not associated with farming, was developed in the mid-19th century; and in more recent times the roadside plots in between these are being developed.

These changes demonstrate a dynamic landscape that is changing over time responding to wider changes in the way people live and work. This appraisal has revealed continuity and change in land use with the physical environment adapting and moulding to reflect changes in both settlement and resources. This pattern of change will continue even if the Project does not come forward.

26.7.7 Data validity and limitations

The most up to date datasets and sources of information as outlined in section 26.6.1 have been used to inform this assessment. The survey information as outlined in section 26.6.2 has been completed in recent years and is considered valid to inform this assessment.

There have been no data limitations in relation to cultural heritage that would have implications for the conclusions of the assessment.

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26.8 Key parameters for assessment

26.8.1 Project design parameters

The project description is provided in volume 2A, chapter 5: Project Description. Table 26-9 outlines the project design parameters that have been used to inform the assessment of potential impacts of the construction, operation and maintenance and decommissioning phases of the Project on cultural heritage.

Table 26-9: Project design parameters considered for the assessment of potential impacts on cultural heritage.

Potential impact	Phase ¹			Project design parameters	Justification
	C	O	D		
Construction activities with potential to impact Areas of Archaeological Potential.	✓	✗	✗	All works within the planning application boundary including: <ul style="list-style-type: none"> Transition joint bay (options 1 and 2); Onshore cable route – 20.1 km in length, approximately 1.4 m deep and 0.7 m wide including fibre optic connection to one existing 110 kV double pole set (approximately 3 km in length); and 29 roadside / verge joint bays approximately 20 m²; and Temporary construction compounds and access roads and 16 temporary passing bays. 	The maximum areas required for construction that may impact on Areas of Archaeological potential: AAP1-Dunany; AAP2-Port Boycetown in the vicinity of a townland boundary and RMP LH019-013 enclosure sites; AAP3-Clonmore; AAP4- Drumcar Archaeological features identified in Drumcar; AAP5 Greenfield areas either side of the M1/Railway in Charleville and Dromgoolestown
Construction activities for onshore substation site may impact on features identified in the geophysical survey and test excavation.	✓	✗	✗	Substation area – approximately 3 hectares is required for temporary construction works and permanent infrastructure.	This is the maximum area required for construction activities that may impact on Area of Archaeological potential (AAP6) impact on archaeological features comprising burnt mound remains and a possible ditched enclosure.
Construction activities for passing bays, joint bays, fibre optic cable connections and river crossings impact on as yet unrecorded subsurface features and may impact on cultural heritage features or in previously undisturbed greenfield areas.	✓	✗	✗	All construction activities within the application planning boundary.	This is the maximum area required for construction activities that may impact cultural heritage features and AAP: CH6-rubble stone walls in Drumcar; AAP3-RMP LH018-019001 Church and graveyard at Clonmore, General greenfield archaeological potential AAP7- Areas of general archaeological potential.
Effects of the operation of the offshore wind farm and onshore substation on the setting of cultural heritage sites.	✗	✓	✗	Presence of 25 offshore wind turbines (270 m in height) and offshore substation within open sea views; and Onshore substation at Stickillin.	Permanent offshore infrastructure and onshore infrastructure that has potential to impact on setting.

1. C= Construction, O = Operation, D = Decommissioning.

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26.8.2 Measures included in the Project

As part of the project design process, a number of measures have been proposed to reduce the potential for impacts on Cultural Heritage (see Table 26-10). These measures include designed-in and management measures (controls). As there is a commitment to implementing these measures, they are considered inherently part of the design of the Project and have therefore been considered in the assessment presented in section 26.10 below (i.e. the determination of magnitude assumes implementation of these measures). These measures are considered standard industry practice for this type of development.

Table 26-10: Measures included in the Project.

Measures included in the Project	Justification
The construction team will be made aware of the locations of those upstanding structures that are designated RPS / NIAH sites and the cultural heritage sites situated in the immediate vicinity of the onshore cable route (appendix 26-1: Cultural Heritage Report, Tables 1-2, 1-3 and 1-5). This will be incorporated into the Construction Environmental Management Plan (see volume 2A, appendix 5-1: CEMP).	To avoid any physical impact on each cultural heritage feature or accidental impact during construction. All precautions will be taken to ensure that there is no accidental impact on any of the boundary treatments associated with these sites / structures during the construction phase.
(CH6) A photographic and written record of the impacted section of the rubble stone wall at Drumcar will be made. The impacted section of the wall will be rebuilt using traditional methods and the same materials subject to agreement and any other requirements as may be agreed with the planning authority prior to the commencement of construction.	To provide a record of the past and to preserve the historic character of the area.
A section of woodland shelterbelt associated with the former Drumcar Demesne (GS ID: GS2) will be impacted. Replanting to restore any breach in the wooded shelterbelt with similar trees will be undertaken where feasible.	Restore any breach in the wooded shelterbelt with similar trees.
The location of the boulder known as the 'Mad Chair of Dunany' on Dunany beach (located outside the redline boundary approximately ITM 715647, 791296) will be made known to the construction team.	To avoid any inadvertent damage to the cultural heritage feature.
An exclusion zone (i.e. where no construction or earthmoving works will take place) of >5 m from the southern walled/hedgerow boundary of Dunany Demesne will be maintained during construction.	To avoid any inadvertent damage to the southern boundary of the demesne.
No works will be carried out that will damage the boundary wall of Dunany Demesne. The proposed permanent access track to TJB (Option 2) will be installed 5 m away from the Dunany Demesne wall to ensure no impact on this feature.	To avoid any inadvertent damage to the boundary of Dunany Demesne which defines the laneway to the north.

Note: The measures will be incorporated into the Construction Environmental Management Plan (see volume 2A, appendix 5-1: CEMP).

26.8.3 Impacts scoped out of the assessment

On the basis of the baseline environment and the project description outlined in volume 2A, chapter 5: Project Description, a number of impacts are proposed to be scoped out of the assessment for cultural heritage. These impacts are outlined, together with a justification for scoping them out, in Table 26-11.

Table 26-11: Impacts scoped out of the assessment for cultural heritage.

Potential impact	Justification
The onshore cable route along the length of the N33. Whilst there are nine recorded RMP sites along this section of the onshore cable route, all nine RMP sites were discovered and fully excavated as part of the construction of the N33. (see Table 1-2 in appendix 26-1: Cultural Heritage Report, RMP Ref: LH017-104, LH018-	The construction of the N33 has resulted in it being fully archaeologically resolved, and any subsurface archaeological sites that were revealed during construction have been excavated in full and as such there will be no impact on archaeological remains.

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Potential impact	Justification
066, LH018-067, LH018-068, LH017-111, LH017-107, LH017-105, LH017-110 and LH017-017).	
With the exception of walls facing the Mill at Drumcar CH6 (RPS LHS015-027), cable laying construction works, passing bays and joint bays will not impact on the properties or boundaries of the RPS/NIAH sites, listed in Table 1-5 in appendix 26-1: Cultural Heritage Report.	These roadside features will not be impacted by the construction works, as only cable laying will be carried out in the locations adjacent to the property boundaries. The location of these properties will be made known to the contractor.
Cable laying within the public road fronting cultural heritage sites listed in Table 1-7 in appendix 26-1: Cultural Heritage Report (i.e. CH1-CH5 and CH7).	Construction works including passing bays and joint bays will be within the road, grass verge or agricultural fields in front of the properties, the properties and their boundaries will not be subject to impact. The location of these features will be made known to the contractor.
Cable laying within the NIAH Garden sites at Dunany Demesne (GS ID: GS1), and the passing bay associated with joint bay 10 (GS ID: GS3) in farmland associated with the former Charleville Demesne.	The onshore cable route will be located in the peripheral areas of these demesnes, through what is now farmland. Dunany is an intact demesne, whereas Charleville has been broken up over the years. In both cases there is no visual link from the main core area of the demesne where the principal structures and sensitive landscape features lie, in each case these core areas are surrounded by dense shelterbelts which provide screening.
Onshore operational and maintenance impacts	There are no excavation activities occurring during the operational and maintenance phase of the Project. All construction impacts will be mitigated during the construction phase of the Project and therefore there will be no additional impacts. The onshore cable elements of the Project are below ground and as such there will be no visual impact on the setting of recorded monuments in proximity to the Project. There are no upstanding or below ground recorded monuments in the vicinity of the substation that will be subject to setting impacts during the operational phase.
Onshore decommissioning impacts	In general, it is anticipated that direct impacts during the decommissioning phase would be limited and would only occur if new ground works are required beyond the areas disturbed during the original construction works. Once the decommissioning phase occurs within the same construction land take corridor, decommissioning phase impacts are not anticipated. The archaeological sites encountered during the construction phase will already have been subject to a full archaeological excavation.
Onshore operational setting impacts from the onshore substation.	The desk-based assessment and windshield survey (see appendix 26-1) found that the 35 cultural heritage sites within 2 km of the onshore substation not to be sensitive to setting changes (i.e. the area of the onshore substation site did not form part of the surroundings in which the heritage asset is experienced, or that the view in the direction of the onshore substation site was obscured or did not contribute to the significance of a heritage asset). This impact was therefore scoped out for further assessment.
Offshore construction and decommissioning setting impacts	Setting effects are principally associated with the operational and maintenance phase of the Project, as the changes related to the construction and decommissioning phase are relatively short and not included in the assessment. All indirect operational effects upon the settings of designated assets would be reversed with the removal of the turbines following decommissioning.

26.9 Impact assessment methodology

26.9.1 Overview

The assessment on cultural heritage has followed the methodology set out in volume 2A, chapter 3: Environmental Impact Assessment Methodology. Specific to the cultural heritage impact assessment, a number of guidance documents have also been considered.

In Ireland, there is several policy and guidance documents issued by the government, local authorities, and semi-state bodies to assist in the identification, protection and avoidance of heritage assets. These guidelines also assist in standardising the approach taken during the planning and design stages of development. The guidelines, legislative framework and international charters, consulted for the purposes of the Project and excerpts from the relevant legislation are provided in appendix 26-1: Cultural Heritage Report.

The impact assessment follows the methodologies contained in the 'Cultural Heritage Guidelines for Electricity Transmission Projects' (EirGrid, 2015) and 'The Code of Practice between the Minister of Environment, Heritage Local Government (now DHLGH) and EirGrid in relation to Archaeological Heritage' (EirGrid and DEHLG, 2009).

The Code of Practice outlines the principles and measures to be applied to ensure the protection of Ireland's archaeological heritage whilst developing and upgrading the existing transmission system. It is generally guided by the following principles which are also reflected in this study:

- Every effort will be made to avoid direct impacts on archaeology;
- Mitigatory planning will take place at the earliest opportunity as it minimises the impact on the archaeological heritage;
- Appropriate archaeological investigation is carried out during the period from route identification to the commencement of construction; and
- If avoidance cannot be achieved, the Applicant will finance a balanced and cost-effective approach to archaeological investigation, excavation and mitigation as an integral element of the transmission system development programme.

26.9.2 Impact assessment criteria

Potential effects on the receiving archaeological and cultural heritage environment can be described as direct physical effects, indirect physical effects, and effects on setting.

Direct physical impacts are those development activities that directly cause damage to the fabric of a heritage asset. Typically, these activities are related to construction works.

Indirect physical impacts are those processes, triggered by development activity, that lead to the degradation of heritage assets.

Impacts on the setting of heritage assets describe how the presence of a development changes the surroundings of a heritage asset (archaeological, or cultural heritage sites) in such a way that it affects (positively or negatively) the heritage significance of that asset. Visual impacts are most commonly encountered but other environmental factors such as noise, light or air quality can be relevant in some cases. Such impacts may be encountered at all stages in the life cycle of a development from construction to decommissioning but they are only likely to be considered significant during the prolonged operational life of a development.

The archaeology and cultural heritage assessment has followed the methodology set out in the EPA Guidelines (EPA, 2022) and the National Roads Authority (NRA) Guidelines for the Assessment of Archaeological Heritage Impact of National Road Schemes (hereafter referred to as the NRA Guidelines)

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(NRA, 2005). The assessment was also informed by relevant legislation and guidelines, details of which are listed in appendix 26-1: Cultural Heritage Report.

Determining the significance of effects is a process that involves defining the magnitude of the impacts and the sensitivity of the receptors. This section describes the criteria applied in this chapter to assign values to the magnitude of potential impacts and the sensitivity of the receptors. The terms used to define magnitude and sensitivity are based on those which are described in further detail in volume 2A, chapter 3: Environmental Assessment Methodology.

The criteria for defining impact magnitude in this chapter are outlined in Table 26-12 below. These criteria are treated as an aid to professional judgement and cannot offer exact descriptions of what will occur in all cases.

Table 26-12: Definition of terms relating to the magnitude of an impact.

Magnitude of impact	Definition
High	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements (Adverse). Applies where mitigation would be unlikely to remove adverse effects. Reserved for adverse, negative effects only. These effects arise where a cultural heritage asset is completely and irreversibly destroyed by the Project.
	Large scale or major improvement or resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial) (e.g. providing access to a monument).
Medium	Loss of resource, but not adversely affecting integrity of resource; partial loss of/damage to key characteristics, features or elements (Adverse). An impact which, by its magnitude, duration or intensity alters an important aspect of the environment. An impact like this would be where part of a cultural heritage asset would be permanently impacted upon leading to a loss of character, integrity and data about the archaeological / cultural heritage feature/site.
	Or an impact which by its magnitude results in the partial loss of a historic structure (including fabric loss or alteration) or grounds including the part removal of buildings or features or part removal of demesne land (e.g. severance, visual intrusion or degradation of setting and amenity).
	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial).
Low	Some measurable change in attributes, quality or vulnerability, minor loss or, or alteration to, one (maybe more) key characteristics, features or elements (Adverse). A low direct impact arises where a change to the site is proposed which though noticeable is not such that the archaeological/cultural heritage integrity of the site is compromised, and which is reversible. This arises where an archaeological/cultural heritage feature can be incorporated into a modern-day development without damage and that all procedures used to facilitate this are reversible.
	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial).
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse). An impact capable of measurement but without noticeable consequences.
	Very minor benefit to, or positive addition of one or more characteristics, features or elements (Beneficial).

An evaluation of the value/significance of sites and features is based on the extent to which assets contribute to the archaeological or built heritage character, though their individual or group qualities, either directly or potentially and guided by legislation, national policies, acknowledged standards, designations and criteria. The table below presents the scale of values/sensitivity together with criteria. It has been compiled based on standard authorities and guidelines.

The criteria for defining receptor sensitivity in this chapter are outlined in Table 26-13 below.

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Table 26-13: Definition of terms relating to the sensitivity of the receptor.

Sensitivity	Definition
Very High	Sites of international significance: World Heritage Sites, National Monuments, Protected Structures or NIAH sites of international and national importance. Designed landscapes and gardens of national importance. Assets of acknowledged international importance or that can contribute significantly to international and national research objectives.
High	RMP/SMR sites. Designated assets that contribute to regional research objectives. Protected Structures or NIAH sites of regional importance.
Medium	Recently/newly identified archaeological sites (not yet included on the SMR/RMP; the importance of the resource has yet to be fully ascertained). Newly identified archaeological sites or confirmed through archaeological investigation, to be added to the SMR. Undesignated assets that contribute to regional research objectives. NIAH Building Survey and Garden Survey Sites.
Low	Undisturbed greenfield areas and riverine environs, which have an inherent archaeological potential. Undesignated Sites of local importance (e.g. townland/field boundaries). Assets compromised by poor preservation and/or poor survival of contextual associations. Assets of limited value but with the potential to contribute to local research objectives (e.g. potential buried foundations associated with features/structures shown the 1 st edition OS six-inch mapping). Historic townscapes or built-up areas of limited historic integrity in their building or their settings.
Negligible	Assets with very little or no surviving archaeological interest. Buildings of no architectural or historic note.
Unknown	The nature of the resource has yet to be fully ascertained (e.g. sites or areas of specific archaeological potential, greenfield areas or riverine/stream/coastal environs with inherent archaeological potential). Structures with potential historic significance (possibly hidden or inaccessible).

The significance of the effect upon cultural heritage is determined by correlating the magnitude of the impact and the sensitivity of the receptor. The method employed for this assessment is presented in Table 26-14. Where a range of significance of effect is presented in Table 26-14, the final assessment for each effect is based upon expert judgement.

For the purposes of this assessment, any effects with a significance level of slight or less have been concluded to be not significant in terms of the EIA Regulations.

Table 26-14: Matrix used for the assessment of the significance of the effect.

		Magnitude of impact				
		Negligible	Low	Medium	High	Very High
Sensitivity of receptor	Negligible	Imperceptible	Imperceptible	Imperceptible	Imperceptible	Imperceptible – slight
	Low	Imperceptible	Not significant – slight	Slight	Slight – moderate	Moderate – significant
	Medium	Imperceptible – not significant	Slight	Moderate	Moderate – significant	Very significant
	High	Not significant	Slight	Moderate – significant	Very significant	Profound

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Magnitude of impact					
Very High	Not significant – slight	Slight -moderate	Moderate – significant	Very significant – profound	Profound

The significance of the effect has been adapted from the EPA (2022) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Figure 3.5 Chart showing typical classification).

The significance of effect levels is adapted from these guidelines and described as follows:

- **Profound:** An effect which obliterates sensitive characteristics. These effects arise where an archaeological site is completely and irreversibly destroyed by a proposed development;
- **Very Significant:** An impact which, by its character, magnitude, duration or intensity, significantly alters the majority of a sensitive aspect of the environment, for example, in this case, a monument
- **Significant:** An effect which, by its character, magnitude, duration or intensity, significantly alters most of a sensitive aspect of the environment. An impact like this would be where an archaeological/cultural heritage asset would be impacted upon leading to a significant loss of character, integrity and data about the site. Or an impact which by its magnitude results in the partial loss of a historic structure (including fabric loss or alteration) or grounds, including the part removal of buildings or features or part removal of demesne land (e.g. severance, visual intrusion or degradation of setting and amenity);
- **Moderate:** An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.; where a change to the site is proposed which though noticeable, is not such that the archaeological/cultural heritage character/integrity of the site is significantly compromised, and where there is no significant loss of data about the site; this arises where an archaeological/cultural heritage feature can be incorporated into a modern-day development without damage and that all procedures used to facilitate this are reversible.
- **Slight:** An effect which causes noticeable changes in the character of the environment without affecting its sensitivities; and does not directly impact an archaeological/cultural heritage asset or affect the appreciation or significance of the asset. There would be very minor changes to the character and integrity of the asset and no loss of data about the site;
- **Not Significant:** An impact which causes noticeable changes in the character of the environment but without significant consequences; and
- **Imperceptible:** An effect capable of measurement but without significant consequences.

26.10 Assessment of significance

The potential impacts arising from the construction, operational and maintenance and decommissioning phases of the Project are listed in Table 26-9 along with the project design parameters against which each impact has been assessed.

A description of the potential effect on cultural heritage caused by each identified impact is given below.

26.10.1 Construction activities with potential to impact on Areas of Archaeological Potential

There is a potential that construction activities within the onshore cable route and associated with the transition joint bay at the landfall location, cable trenching and passing and joint bays may have an impact on Areas of Archaeological Potential. There is potential that such cultural heritage features will be identified during the earthmoving works at and within the vicinity of:

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- Dunany Demesne and beach (AAP1) – potential for stray finds and sites or isolated remains/features dating to the prehistoric period or later;
- Port/Boycetown (AAP2) – potential that isolated remains/features will be identified in the vicinity of joint bay 26 in Port/ Boycetown given its proximity to the recorded monument and a townland boundary;
- Clonmore (AAP3) – potential that subsurface archaeological features, soils or finds (including the potential to reveal burials), related to the settlement at Clonmore, might be revealed during the earthmoving works associated with the construction of the onshore cable route through the existing road;
- Drumcar (AAP4) – potential that the onshore cable route which runs through the greenfields on either side of the river crossing and works associated with the reception pits (drill entry and exit pits) for the directional drilling will result in the removal of the archaeological features that have been identified on both sides of the river. The construction will also remove some of the shelter belt of mature broadleaf trees as it crosses into the Drumcar Demesne (GS3); and
- Greenfield (AAP5) – potential that subsurface isolated remains/features will be identified during the earthmoving works for the cable and the substation in these fields.

Construction phase

AAP1 – Dunany Demesne and Beach

A significant quantity of prehistoric stray finds has been identified in the ploughzone in the fields of Dunany Head. This suggests prehistoric activity in the general area and may be an indicator of prehistoric sites in the area. Given this potential the construction activity through this area, which comprises the onshore cable route, joint bays, construction of a temporary construction compound, and a permanent access road, there is a potential to uncover previously unidentified subsurface archaeological sites or features or additional stray finds.

Magnitude of impact

Should in-situ archaeological features or sites be identified at Dunany during the construction phase within the planning application boundary from the high-water mark (landfall) to the greenfield areas within Dunany Demesne, there would be a direct and permanent impact on these feature/sites. The magnitude of impact is considered to be medium, where there will be a negative permanent impact on the newly discovered archaeological feature/site leading to a loss of character, integrity and data about the feature/site.

Sensitivity of the receptor

There is an inherent greenfield archaeological potential in Dunany and the landfall location given the numerous stray finds (predominantly prehistoric flint debitage and tools) found in the townland. Should in-situ archaeological features be identified during earthmoving works, they would be of low sensitivity (undisturbed areas which have an inherent archaeological potential).

Significance of the effect

Overall, the magnitude of the impact is medium, and the sensitivity of the archaeology is low. The overall significance of the effect on potential archaeological sites/features will, therefore, be of **slight significance**, which is not significant in EIA terms.

AAP2 – Port/Boycetown

There will be earthmoving works associated with joint bay 26 (JB26) in the vicinity of the Port/Boycetown townland boundary, and also 97 m from RMP LH019-013 enclosure sites further south in the same field.

Magnitude of impact

Should in-situ archaeological features or sites be identified at joint bay 26 during earthmoving works, there would be a direct and permanent impact on these feature/sites. The magnitude of impact on the feature/site

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would be is considered to be medium, where there will be a negative permanent impact on the newly discovered archaeological feature/site leading to a loss of character, integrity and data about the feature/site.

Sensitivity of the receptor

Should in-situ archaeological features be identified during earthmoving works at joint bay 26, they would be of low sensitivity as outlined in Table 26-13 above (undisturbed areas which have an inherent archaeological potential).

Significance of the effect

Overall, the magnitude of the impact is medium, and the sensitivity of the archaeology if identified, is low. The effect will, therefore, be of **slight significance**, which is not significant in EIA terms.

AAP3 – Clonmore

The onshore cable route travels the length of the public road to the south of the church and graveyard (RMP LH018-023) and a castle (LH018-019001 and -002) in Clonmore. Archaeological testing in the RMP zone of notification of the church and graveyard, in the verge of the road was attempted. Due to in-situ electrical services in the area of the test trenches, the archaeological testing was unable to fully assess the archaeological potential of the onshore cable route at this location. Whilst there is no indication that the sites extend any further south than the existing road, there is a potential that features associated with the site may extend beyond the present boundaries of the site beneath the existing road surface.

Magnitude of impact

Should features be identified beneath the existing road surface at this location, the impact on the archaeological features identified is predicted to be direct and permanent. The impact however will be localised in spatial extent and will have no impact on the upstanding castle, church and graveyard (RMP LH018-023 and LH018-019001 and -002). The magnitude is therefore, considered to be medium (as outlined in Table 26-12 above).

Sensitivity of the receptor

The RMP site itself is of high sensitivity, the principal features associated with Clonmore Church are within the walled area of the graveyard or in adjacent lands that will not be impacted by the Project. Whilst the area in its vicinity is of archaeological potential, the nature of this potential has yet to be fully ascertained, should archaeological features be identified, newly recorded sites/features associated with an RMP site its zone of notification would be of medium sensitivity.

Significance of the effect

Overall, the magnitude of the impact is medium, and the sensitivity of the archaeology, if identified, is, medium. Where features are identified, the effect will, therefore, be of **moderate significance**, which is considered significant in EIA terms.

AAP4 – Drumcar

The cultural heritage baseline assessment highlighted an area of archaeological potential (AAP4) on both sides of the River Dee in Drumcar townland. At this location, the onshore cable route travels in the greenfield to the south of the potential 'site of' an ecclesiastical site (a friary) (RMP LH018-005). Geophysical survey and archaeological testing confirmed that the cable and its construction will impact on in-situ subsurface archaeological remains. West of the River Dee a ring ditch (Bronze Age/Iron Age) and a possible medieval field system were identified. East of the River Dee further ditches, pits and spreads, also medieval in date, were identified.

Magnitude of impact

The impact on the newly identified subsurface archaeological features in AAP4 Drumcar is predicted to be direct and permanent. The impact however will be localised in spatial extent, resulting in the partial loss of a newly identified archaeological features, the magnitude is therefore, considered to be medium.

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Sensitivity of the receptor

As described in Table 26-13, newly identified archaeological sites yet to be recorded in the RMP/SMR are considered to be of medium sensitivity.

Significance of the effect

Overall, the magnitude of the impact is medium, and the sensitivity of the archaeology is medium. The effect will, therefore, be of **moderate significance**, which is considered significant in EIA terms.

AAP5 – Greenfield

The cultural heritage baseline assessment has highlighted two specific areas of archaeological potential, in the greenfields either side of the M1 (AAP5) in the townlands of Charleville and Drumgoolestown. Construction of the N33 identified several small scale and isolated archaeological features dating from the prehistoric period. Similar sites might be identified during the construction of the onshore cable route and the onshore substation.

Magnitude of impact

In the event that features are identified beneath the existing ground surface at these locations, then the magnitude of impact is therefore, considered to be medium (i.e. where the area of the site to be impacted will be permanently impacted upon leading to a loss of character, integrity and data about the archaeological feature/site).

Sensitivity of the receptor

Should in-situ archaeological features or sites be identified during earthmoving works, they would be of low sensitivity as outlined in Table 26-13 above (undisturbed areas which have an inherent archaeological potential).

Significance of the effect

Overall, the magnitude of the impact is medium, and the sensitivity of the archaeology, if identified, is, low. Where features are identified, the effect will, therefore, be of **slight significance**, which is not significant in EIA terms.

26.10.2 Construction activities at the onshore substation site with potential to impact on identified features

There is potential that earthmoving works associated with the construction phase of the onshore substation (in the greenfields) will result in the removal of the archaeological features identified within the footprint of the onshore substation site. Such construction activities may impact on the Area of Archaeological Potential associated with Stickillin Substation (AAP6).

Construction phase

AAP6- Stickillin Substation

Burnt mound remains and a possible ditched enclosure are located within the greenfield proposed for the onshore substation site (Stickillin AAP6).

Magnitude of impact

The potential impact on the archaeological features identified is predicted to be direct and permanent. The magnitude of impact is therefore considered to be medium (i.e. where the area of the site to be impacted will be permanently impacted upon leading to a loss of character, integrity and data about the archaeological feature/site).

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Sensitivity of the receptor

As described in Table 26-13, newly identified archaeological sites that have been confirmed through archaeological assessment are considered to be of medium sensitivity.

Significance of the effect

Overall, the magnitude of the impact is medium, and the sensitivity of the archaeology is medium. The effect will, therefore, be of **moderate significance**, which is considered significant in EIA terms.

26.10.3 Construction activities with potential to impact on undisturbed greenfield areas

During the construction phase, there is a general archaeological potential that isolated remains/features will be identified during the earthmoving works in previously undisturbed greenfield areas associated with the construction of passing and joint bays, river crossings (HDD works), fibre optic cable connections, and temporary construction compounds. Such construction activities may impact on general greenfield archaeological potential (AAP7). The greenfield potential has been demonstrated by the discovery of a number of sites during the development of the N33 in greenfield areas where no previous sites were known.

Construction phase

AAP7- General Greenfield Archaeological Potential

There is a general greenfield archaeological potential associated with AAP7 – Areas of general archaeological potential, as listed in Table 26-8 above.

Magnitude of impact

If features are identified at these locations, then the potential impact on the archaeological features identified is predicted to be direct and permanent. The magnitude of impact is therefore considered to be medium should such features be identified; as the area of the site to be impacted will be permanently impacted upon leading to a loss of character, integrity and data about the archaeological feature/site.

Sensitivity of the receptor

The areas identified as AAP7, have an inherent undisturbed greenfield or riverine archaeological potential (as outlined above) and are of low sensitivity.

Significance of the effect

Overall, the magnitude of the impact is medium, and the sensitivity of the area is low. The effect will, therefore, be of **slight significance**, which is not significant in EIA terms.

26.10.4 Effects of the offshore wind farm on setting

Setting effects are principally associated with the operational and maintenance phase of the Project, as the changes related to the construction and decommissioning phases, are relatively short. An impact on the setting of cultural heritage sites will persist for the duration of the operational and maintenance phase of the Project and will be entirely reversed on decommissioning. The seascape categories that were found to have a setting that would potentially be impacted by the offshore wind farm and offshore substation, include SET 1, SET2 and SET6.

Operational and maintenance phase

SET1: DOW057-003, DOW057-002; Greencastle Castle, Church, and well, fortification, and battlefield site

The offshore wind farm is located approximately 10 km south/southeast of this set; it lies in the open sea beyond the mouth of Carlingford Lough and Ballagen Point. The view out into the open sea, beyond

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Ballagen Point, will be altered, and the Project will represent a new modern element to the distant seascape. The essential visual links associated with the site's setting, towards the entrance of the lough, Greenore and Carlingford, will not be impacted. The understanding and dominance of the castle in its location inside Carlingford Lough and its visual and associative links to Greenore and Carlingford will not be impacted by the Project.

Magnitude of impact

The magnitude of the effect on Greencastle castle is considered low, (i.e., where there is a change that, though noticeable, is not such that the cultural heritage character and integrity of the site is significantly compromised and where there is no significant loss of understanding about the site).

Sensitivity of the receptor

The site is of very high sensitivity as it is a designated national monument.

Significance of the effect

Overall, the magnitude of the impact is low, and the sensitivity of the area is very high. However, the presence of the offshore wind farm in the open sea beyond the mouth of Carlingford Lough will not impact the ability to appreciate and understand the castle's setting. There will be an effect of slight significance on the setting of Greencastle castle and complex of sites. The effect will, therefore, be of **slight significance**, which is not significant in EIA terms.

SET2: HB16/04/009; Haulbowline Lighthouse/Navigation Marker and associated lattice metal beacons, Greencastle

The offshore wind farm and offshore substation are located approximately 8 km south of Haulbowline Lighthouse. Photomontage viewpoint 3 (VP3) (see appendix 27-1: Seascape, Landscape and Visual Amenity – Accompanying Graphics) from Cranfield on the northern shore of Carlingford Lough shows that the full extent of the offshore wind farm will be visible across the open sea view. In this view, the offshore wind farm is separate and distinct from the wind turbines, and they appear almost comparable in height to the lighthouse. The development will add a discernible modern element to the seascape; the number and the movement of the turbines will detract from the dominance of the isolated lighthouse in certain views.

Magnitude of impact

The magnitude of impact on the lighthouse will be medium as its isolated and dominant character will be altered.

Sensitivity of the receptor

The lighthouse is of medium sensitivity as it is a designated historic building.

Significance of the effect

Overall, the magnitude of the impact is medium, and the sensitivity of the area is medium. The effect will, therefore, be of **moderate significance**, which is considered significant in EIA terms. The presence of the offshore wind farm and offshore substation will change the lighthouse's aesthetic experience for visitors to the coastline or users of Carlingford Lough; however it will not change the understanding or appreciation of its maritime function and relationship with the Carlingford Lough.

SET6: RMP LH015-015001, -015002,-015003; National Monument in State Ownership No. 579, Lisnaran Fort.

The offshore wind farm, theoretically, would be visible in views to the east from the monument, together with but as a background to, Annagassan village. However, there is no clear open view from within the fort site towards the east/southeast, nor along the cliff edge outside of it; the mature vegetation inhibits views from on top of the site's fosse. The wooded shelterbelt on the cliff edge running along the riverbanks to the south also prevents open views in this direction.

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Magnitude of impact

The presence of the offshore wind farm and offshore substation in the eastern view approximately 16 km to the east of the site within the Irish Sea will not affect the public understanding of the monument and the ability to understand its relationship to the sea and the river estuary (Glyde Estuary). The offshore wind farm and offshore substation will have a negligible impact on the promontory fort.

Sensitivity of the receptor

As a national monument this site is of very high sensitivity.

Significance of the effect

Overall, the magnitude of the impact is negligible, and the sensitivity of the area is very high. The effect will, therefore, be of **slight significance**, which is not significant in EIA terms (i.e. a change which though noticeable, is not such that the archaeological character or integrity of the site is compromised and where there is no significant loss of understanding about the place).

Conclusions

According to the assessment's findings, the effects of the offshore wind farm on coastal heritage assets with settings that are sensitive to visual change in the coastal/seascape environment may vary. Some assets may be affected more than others. Depending on proximity and heritage asset type, the impact ranges from no impact to a slight impact, as a new modern element in the distant seascape can be absorbed by the sea's vast expanse and view of the distant horizon. Generally, the experience of the coastal asset is not diminished, and the visitor can still understand the heritage asset's relationship with the sea as the changes do not strongly conflict with the character of the sites. The effect on the setting of most coastal heritage assets is, therefore, not significant in EIA terms.

The evaluation revealed that there would be a greater impact on 'in-sea' based heritage assets close to the wind farm, where the wind farm is experienced alongside the heritage asset, as is the case at Haulbowline Lighthouse, upon which there will be a moderate impact.

26.10.5 Mitigation and residual effects

Measures included as part of the Project are outlined in section 26.8.2. No mitigation of setting effects is considered necessary or possible given the offshore nature of the Project and therefore the impact on the setting of the site will remain for the duration of the Project

The following mitigation measures will be implemented.

Construction activities with potential to impact on Areas of Archaeological Potential

AAP1 – Dunany Demesne and Beach; AAP2 - Port/Boycetown

The following mitigation measures are required for the protection of unidentified subsurface archaeological sites or features or additional stray finds at and within the vicinity of AAP1 and AAP2:

- A programme of archaeological monitoring will take place at the pre-construction and early phases of construction, during the stripping of topsoil, site preparation and earthmoving works, and where any preparatory ground reduction works are required;
- The archaeological monitoring will be carried out by a suitably qualified archaeologist under Licence to the Department of Housing, Local Government and Heritage (DHLGH). This will ensure the full recognition of, and the proper excavation and recording of all archaeological soils, features, finds and deposits which may be disturbed below the ground surface;
- In the event of the discovery of archaeological finds or remains, the National Monuments Service (NMS) and the National Museum of Ireland (NMI) will be notified immediately. If features are revealed, the immediate area will need to be investigated, allowing no further development to take place until the site is fully identified, recorded and excavated or alternatively avoided (by rerouting the onshore cable) to

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the satisfaction of the statutory authorities. This possibility will be accounted for in the Project programme and budget, and will be undertaken at the earliest phases of the Project to allow the archaeologists sufficient time to record/excavate as required;

- Provision will be made to allow for, and fund any, archaeological work that may be needed if any remains are noted. In accordance with legislative requirements the funding provision will include the production of written reports on the findings, with post-excavation analyses and publications of the results of the works, where appropriate;
- A report detailing the results of the monitoring will be submitted to the DHLGH upon completion of the works in accordance with the terms and conditions of the archaeological licence; and
- A 5 m buffer zone from the southern boundary of Dunany Demesne will be maintained to ensure no accidental damage to the demesne boundary wall during construction works.

AAP3 – Clonmore

The following mitigation measures are required for the protection of subsurface archaeological features, soils or finds (including the potential to reveal burials), related to the settlement at Clonmore and within the vicinity of AAP3:

- All earthmoving works associated with the cable installation in the area adjacent to the recorded archaeological sites in Clonmore (AAP3), including any temporary/enabling works associated with the Project will require archaeological monitoring under license issued by the DHLGH. The purpose of monitoring is to identify any archaeological material or features that are uncovered during ground disturbance works;
- In the event of the discovery of archaeological finds or remains, the National Monuments Service (NMS) and the National Museum of Ireland (NMI) will be notified immediately. If features are revealed, the immediate area will be investigated, allowing no further development to take place until the site is fully identified, recorded and excavated or alternatively avoided (by rerouting the cable) to the satisfaction of the statutory authorities. This possibility will be accounted for in the Project programme and budget, and will be undertaken at the earliest phases of the Project to allow the archaeologists sufficient time to record/excavate as required; and
- Provision will be made to allow for, and fund any, archaeological work that may be needed if any remains are noted. In accordance with legislative requirements the funding provision will include the production of written reports on the findings, with post-excavation analyses and publications of the results of the works, where appropriate.

AAP4 - Drumcar

The following mitigation measures are required for the protection of known archaeological features either side of the River Dee crossing at and within the vicinity of AAP4:

- It is recommended that the onshore cable route and associated wayleave be subject to full licenced excavation of the archaeological features identified on either side of the River Dee (ring ditch, field system and habitation activity) within the construction area well in advance of construction. This will allow time for any archaeological remains within the wayleave to be archaeologically excavated and preserved by record under licence to the NMS; and
- Provision will be made to allow for, and fund any, archaeological work that may be needed if any remains are noted. In accordance with legislative requirements the funding provision will include the production of written reports on the findings, with post-excavation analyses and publications of the results of the works, where appropriate.

The following mitigation measures are required to ensure the wooded shelterbelt within the former demesne of Drumcar House (NIAH Garden LH0026), in the southernmost part of the demesne, is returned to its former function:

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- The disturbed area will be replanted where possible noting restrictions over onshore cable route (see chapter 5: Project Description).

AAP5 - Greenfield

The following mitigation measures are required for the protection of subsurface isolated remains/features at and within the vicinity of AAP5.

It is unlikely that geophysical survey and testing in this area will capture isolated features similar to those identified on the N33 within the onshore cable route, such sites are usually found during the topsoil stripping phase of the Project. Given the proven potential for the discovery of previously unknown and isolated sites in the vicinity of the Project:

- Archaeological monitoring of the earthmoving works will be carried out under license from DHLGH. The purpose of monitoring is to determine if any archaeological material or features are uncovered during ground disturbance works;
- In the event of the discovery of archaeological finds or remains, the NMS and the National Museum of Ireland (NMI) will be notified. Provision will be made to allow for, and fund any, archaeological work that may be needed if any remains are noted;
- If features are revealed, the immediate area will be investigated, allowing no further development to take place until the site is fully identified, recorded and excavated or alternatively avoided to the satisfaction of the statutory authorities. This possibility will be accounted for in the Project programme and budget; and
- In accordance with legislative requirements the funding provision will include the production of written reports on the findings, with post-excavation analyses and publications of the results of the works, where appropriate.

Construction activities at the onshore substation site

AAP6 - Stickillin Substation

The following mitigation measures are required for the protection of archaeological features identified within the footprint of the onshore substation site at and within the vicinity of AAP6:

- It is recommended that two areas each measuring 20 m x 20 m be opened for full excavation and preservation by record in the areas of the burnt mound remains. This is to be carried out under licence to the NMS; and
- The area south of the Stickillin field will be stripped of topsoil under archaeological supervision well ahead of commencement of construction on the site to establish if the features identified and indicated on geophysical survey is archaeological, and if so to make provision for its excavation or preservation in situ as appropriate.

Construction activities with potential to impact on undisturbed sites

The following mitigation measures are required for the protection of greenfield archaeological potential within the vicinity of AAP7:

- Licensed archaeological monitoring of earthmoving works in greenfield areas will be carried out. The purpose of monitoring is to identify any archaeological material or features are uncovered during ground disturbance works;
- In the event of the discovery of archaeological finds or remains, the NMS and the National Museum of Ireland (NMI) will be notified immediately. If features are revealed, the immediate area will be investigated, allowing no further development to take place until the site is fully identified, recorded and excavated or alternatively avoided (by rerouting the cable) to the satisfaction of the statutory authorities. This possibility will be accounted for in the Project programme and budget, and will be undertaken at the

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earliest phases of the development to allow the archaeologists sufficient time to record/excavate as required; and

- As above provision will be made to allow for, and fund any, archaeological work that may be needed if any remains are noted.

Residual effects

Once the mitigation measures are implemented in full, identified and previously unknown subsurface archaeological features that are identified will be resolved and recorded in full. The residual effects would be reduced to imperceptible, and this would result in a significance of effect of negligible which is not significant in EIA terms. There is a slight beneficial impact whereby retrieved archaeological information will inform a new understanding of the archaeological landscape (AAP1, AAP2, AAP5, AAP6, AAP7), Clonmore Church and environs (AAP3) and in the vicinity of the ecclesiastical site of Drumcar (AAP4).

No direct mitigation is possible for indirect (setting) effects of the Project and therefore residual effects on the setting of heritage assets will be the same as predicted without mitigation.

26.10.6 Future monitoring

No future monitoring of cultural heritage to test the predictions made within the impact assessment is considered necessary.

26.11 Cumulative Impact Assessment

The Cumulative Impact Assessment (CIA) takes into account the impact associated with the Project together with other projects. The projects selected as relevant to the CIA presented within this chapter are based upon the results of a screening exercise (see volume 2A, appendix 3-1: CIA Screening Annex). Each project has been considered on a case-by-case basis for screening in or out of this chapter's assessment based upon data confidence, effect-receptor pathways and the spatial/temporal scales involved.

The approach to CIA examines the effects of the Project alongside the following projects if they fall within the Zone of Influence (Zol) for cultural heritage:

- Other projects with consent but not yet constructed/construction not completed;
- Other projects in a consent application process but not yet determined (including planning applications, foreshore lease/licence applications, Dumping at Sea Permit applications);
- Other projects currently operational that were not operational when baseline data were collected, and/or those that are operational but have an ongoing impact; and
- Projects, which satisfy the definition of 'relevant maritime usage' under the Maritime Area Planning Act (2021) (i.e. wind farm projects designated as 'Relevant Projects' or 'Phase 1 Projects') including Arklow Bank II, Bray Bank and Kish Bank; North Irish Sea Array, Codling Wind Park (I and II).

No projects were screened in for the CIA for cultural heritage.

26.12 Transboundary effects

The potential effects of the Project on cultural heritage during construction are considered to be of local extent. The potential effects of the Project on cultural heritage setting were also examined within the ZTV for the offshore infrastructure. The ZTV extends into Northern Ireland and therefore the assessment considered the potential to impact on cultural heritage features in Co. Down. The potential effects during the operational and maintenance phase on cultural heritage setting are moderate for Haulbowline Lighthouse, Co. Down however it will not change the understanding or appreciation of its maritime function and relationship with the Carlingford Lough. Therefore, there is no potential for significant transboundary effects with regard to cultural heritage from the Project upon the interests of the UK or other EEA States.

26.13 Interactions

A description of the likely inter-related effects arising from the Project on cultural heritage is provided in volume 2C, chapter 32: Interactions.

26.14 Summary of impacts, mitigation measures and residual effects

This assessment, encompassing archaeological heritage, architectural heritage and cultural heritage was based on a desk-study comprising a detailed documentary and cartographical review, and a field inspection and windshield survey. The historical background indicates that the Cultural Heritage Study Area is in a landscape that is layered with a rich history of occupation since prehistoric times right up to the present day.

Table 26-15 presents a summary of the potential impacts, mitigation measures and residual effects in respect to cultural heritage.

There are no protected structures (RPS sites) or NIAH sites within 100 m of the onshore substation site or the landfall location. The onshore cable route will for the most part run along the existing public road and therefore will not impact on private boundaries or properties associated with protected structures (RPS sites), NIAH sites or undesignated roadside cultural heritage features identified during the course of the present assessment. There are no potential setting impacts on cultural heritage sites within 2 km of the onshore substation site and associated infrastructure. This is due to the nature of the sites and to the natural topography, structural and vegetation screening.

Construction activities within the onshore cable route were deemed to be of slight significance (AAP1, AAP2, AAP5), and moderate significance (AAP3 and AAP4). Construction activities within the onshore substation site were deemed to be of moderate significance (AAP6). Construction activities associated with previously undisturbed greenfield areas were deemed to be of slight significance (AAP7). Operational and maintenance phase setting impacts associated with the offshore wind farm and offshore substation were deemed to be slight significance (SET1 and SET6) and moderate significance (SET2).

With the incorporation of the measures included in the Project, and mitigation measures for: the protection of unidentified subsurface archaeological sites (AAP1); the protection of subsurface archaeological features, soils or finds (AAP3); the protection of known archaeological features (AAP4); the protection of subsurface isolated remains/features (AAP5); the protection of archaeological features identified within the footprint of the onshore substation site (AAP6) and the protection of greenfield archaeological potential (AAP7), residual effects would be reduced to imperceptible, resulting in a significance of effect of negligible, which is not significant in EIA terms. No mitigation is proposed during the operational phase for setting impacts.

No cumulative impacts were identified, and no potential transboundary impacts have been identified in regard to effects of the Project.

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Table 26-15: Summary of potential environment effects, mitigation and monitoring.

Potential impact	Phase			Measures included in the Project	Magnitude of impact	Sensitivity of receptor	Significance of effect	Additional measures	Residual effect	Proposed monitoring
	C	O	D							
Onshore cable route: AAP1 – Dunany Demesne and Beach	✓	×	×	None	Medium	Low	Slight	Archaeological monitoring of the earthmoving works under license to the DHLGH to ensure any potential archaeological features are identified and appropriately resolved through either preservation by record (excavation) or preservation in situ.	Imperceptible and slight beneficial.	None
Onshore cable route: AAP2 – Port/Boycetown	✓	×	×	None	Medium	Low	Slight	Archaeological monitoring of the earthmoving works under license to the DHLGH to ensure any potential archaeological features are identified and appropriately resolved through either preservation by record (excavation) or preservation in situ.	Imperceptible and slight beneficial	None
Onshore cable route: AAP3 – Clonmore	✓	×	×	None	Medium	Medium	Moderate	All earthmoving works associated with the cable installation in the area adjacent to the recorded archaeological sites in Clonmore (AAP3), including any temporary/enabling works associated with the development will require archaeological monitoring under license to the DHLGH. The purpose of monitoring is to identify any archaeological material or features are uncovered during ground disturbance works.	Imperceptible and slight beneficial	None
Onshore cable route: AAP4 – Drumcar	✓	×	×	None	Medium	Medium	Moderate	It is recommended that the wayleave for the proposed cable route be stripped of topsoil to the surface of archaeological deposits under archaeological direction as an archaeological exercise in	Imperceptible and slight beneficial	None

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Potential impact	Phase			Measures included in the Project	Magnitude of impact	Sensitivity of receptor	Significance of effect	Additional measures	Residual effect	Proposed monitoring
	C	O	D							
								advance of the cable trenching. This will allow time for any archaeological remains within the wayleave to be archaeologically excavated and preserved by record under licence to the NMS.		
Onshore cable route: AAP5 – Greenfield (Charleville Drumgoolestown)	✓	×	×	None	Medium	Low	Slight	Archaeological monitoring in advance of construction, archaeology will be identified and resolved.	Imperceptible and slight beneficial	None
AAP6 – Onshore substation site: Stickillin	✓	×	×	None	Medium	Medium	Moderate	It is recommended that two areas each measuring 20 m x 20 m be opened for full excavation and preservation by record in the areas of the burnt mound remains. This is to be carried out under licence to the National Monuments Service (NMS). It is also recommended that the area south of the Stickillin field be stripped of topsoil under archaeological supervision well ahead of construction to establish if the feature identified and indicated on geophysical survey is archaeological, and if so to make provision for its excavation or preservation in situ as appropriate.	Imperceptible and slight beneficial	None
Undisturbed greenfield areas: AAP7 – General Greenfield Archaeological Potential	✓	×	×	None	Medium	Low	Slight	Archaeological monitoring of the earthmoving works under license to the DHLGH to ensure any potential archaeological features are identified and appropriately resolved through either preservation by record (excavation) or preservation in situ.	Imperceptible and slight beneficial	None

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Potential impact	Phase			Measures included in the Project	Magnitude of impact	Sensitivity of receptor	Significance of effect	Additional measures	Residual effect	Proposed monitoring
	C	O	D							
Offshore wind farm and substation setting impacts: SET1: DOW057-003 (including DOW057-002); Greencastle Castle, Church, and well, fortification, and battlefield site, Greencastle	x	✓	x	None	Low	Very high	Slight	There are no mitigation measures for setting impacts, the impact on the setting of the site will remain for the duration of the Project.	Unchanged	None
Offshore wind farm and substation setting impacts: SET2: HB16/04/009; Haulbowline Lighthouse/Navigation Marker and associated lattice metal beacons, Greencastle	x	✓	x	None	Medium	Medium	Moderate	There are no mitigation measures for setting impacts, the impact on the setting of the site will remain for the duration of the Project.	Unchanged	None
Offshore wind farm and substation setting impacts: SET6: RMP LH015-015001-003; National Monument in State Ownership No. 579, Lisnaran Fort	x	✓	x	None	Negligible	Very high	Slight	There are no mitigation measures for setting impacts, the impact on the setting of the site will remain for the duration of the Project.	Unchanged	None

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