



Bowdun Offshore Wind Farm, Offshore EIA Report

Volume 2, Chapter 21: Cultural Heritage

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Glossary

Defined Term	Definition
Additional Mitigation	Also referred to as secondary mitigation which is defined by The Institute of Sustainability and Environmental Professionals (ISEP) (formerly Institute of Environmental Management and Assessment (IEMA)) as: Actions that will require further activity in order to achieve the anticipated outcome. These may be imposed as part of the planning consent, or through inclusion in the EIA Report (sic).
Array Area	The Array Area is the area in which the Offshore Generation Assets will be located.
Bowdun Offshore Wind Farm Limited (BOWFL)	A Special Purpose Vehicle (SPV) (legal entity) for the purpose of developing the Project. BOWFL are the Applicant for the Offshore Application.
Cultural Significance	Cultural Significance means aesthetic, historic, scientific or social value for past, present or future generations. Cultural Significance can be embodied in a place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.
Cumulative Effects	The effects of the Proposed Development assessed together with effects from the Onshore Infrastructure forming the Project as well as one or more different projects on the same receptor/resource.
Effect	Term used to express the consequence of an impact (i.e. the result of change or changes) on specific environmental resources or receptors. The significance of an effect is determined by correlating the magnitude of the impact with the importance, or sensitivity of the receptor or resource in accordance with defined significance criteria.
Embedded Mitigation	Measures that are adopted as part of the Proposed Development and therefore assessed within the EIA. The proposed approach for the EIA for the Proposed Development is that Embedded Mitigation includes both primary mitigation and tertiary mitigation. These are defined by the ISEP as follows: Primary: Modifications to the location or design of the development made during the pre-application phase that are an inherent part of the project, and do not require additional action to be taken. Tertiary: Actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects.
Environmental Impact Assessment (EIA)	Process for the assessment of likely significant environmental effects of a project on the physical, biological and human environment during construction, Operation and Maintenance (O&M) and decommissioning.

Defined Term	Definition
Environmental Impact Assessment Regulations (EIA Regulations)	Terminology used in this Offshore EIA Report to refer to three sets of regulations: <ul style="list-style-type: none"> • The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017; • The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017; and • The Marine Works (Environmental Impact Assessment) Regulations 2007.
Export Cable Corridor	The area seaward of Mean High Water Springs (MHWS) which connects the Array Area with the Landfall within which the Offshore Export Cables will be installed.
Impact	A change caused by an action that occurs during a project's lifetime.
Inter-Related Effects	The potential effects of multiple impacts from the construction, O&M and decommissioning of the Project, affecting one receptor.
Listed Building	A listed building is a built structure of 'special architectural or historic interest'. The term 'building' can be defined as 'anything made by people' such as houses, schools, factories, boundary walls, bridges and sculptures. Listing covers the whole of a building or structure including its exterior, interior and any ancillary structures within its curtilage (provided these were constructed before 1 July 1948). Their selection, assessment and designation is carried out by Historic Environment Scotland under the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997. Listed Buildings are managed primarily through the Listed Building Consent process by the appropriate planning authority.
Marine Directorate (MD)	The Marine Directorate of the Scottish Government, formerly known as Marine Scotland. The planning and licensing authority for Scotland's seas and custodian of Scotland's National Marine Plan (NMP). The Marine Directorate – Licensing Operations Team (MD-LOT) are specifically responsible for managing Section 36 Consent and Marine Licence Applications seaward of MHWS.
Maximum Design Scenario (MDS)	The scenario within the design envelope likely to result in the greatest impact on a particular topic receptor, and therefore the one that should be assessed for that topic receptor.
Medieval	AD 1100 - 1560
Mitigation	Measures to avoid, prevent, reduce or control effects on the environment. See also definitions for Embedded Mitigation and Additional Mitigation.
Neolithic	4,000 BC – 2,500 BC
Offshore Environmental Impact Assessment (EIA) Report (hereafter, 'Offshore EIA Report')	Document prepared to report the findings of the EIA for the Proposed Development and produced in accordance with the EIA Regulations. The Offshore EIA Report is submitted to support the Offshore Application for the Proposed Development, and to comply with EIA Regulations.
Offshore Infrastructure	All of the Offshore Infrastructure associated with the Proposed Development that is located seaward of MHWS, comprising the Offshore Generation Assets and the Offshore Transmission Assets.

Defined Term	Definition
Offshore Scoping Report	The report that presents the findings of the EIA scoping process undertaken for the Proposed Development with the purpose of obtaining a Scoping Opinion. The Offshore Scoping Report defines what is intended to be assessed and reported as part of the EIA.
Offshore Substation Platform(s) (OSPs)	OSPs comprise the support structure, topside and electrical components used for collecting and/or converting electricity generated by the Wind Turbines for transmission by the Offshore Export Cables.
Offshore Transmission Assets	The infrastructure of the Proposed Development required to transmit the generated electricity comprising the OSPs, Offshore Export Cables and associated infrastructure up to MHWS.
Onshore Substation	Part of an electrical transmission and distribution system. Substations transform voltage from high to low, or the reverse by means of electrical transformers.
Operation and Maintenance (O&M)	The phase of the Proposed Development following completion of construction. This phase of development includes routine inspections, repairs and replacement of infrastructure and equipment (including Interconnector Cables and IACs), Scour Protection replenishment or replacement, major component replacement, painting and/or other coating works, removal of marine growth, and replacement of access ladders.
Pre-Application Consultation (PAC)	Pre-Application Consultation with communities and stakeholders with regard to the consent applications for the Project that meets the requirements of Marine Licensing (Pre-application Consultation) (Scotland) Regulations 2013.
Project (the)	An overarching term for the Bowdun Offshore Wind Farm (Bowdun OWF) comprising the offshore and onshore infrastructure required to generate and transmit electricity from the Array Area to the onshore Grid Connection Point. The Project includes the Offshore Generation Assets, the Offshore Transmission Assets and the Onshore Transmission Assets.
Project Design Envelope (PDE)	A description of the range of possible elements that make up the design options for the Proposed Development under consideration when the exact engineering parameters are not yet known.
Post-Medieval	AD 1560-1745
Prehistoric	Broad period comprising Palaeolithic, Mesolithic, Neolithic, Bronze Age and Iron Age.
Proposed Development	Term used to define the Offshore Infrastructure associated with the Project seaward of MHWS for which consent is being sought. Further details of the parameters are included in Volume 1, Chapter 3: Project Description.
Scheduled Monument	Scheduled Monuments are archaeological sites or monuments of national importance that are legally protected under the Ancient Monuments and Archaeological Areas Act 1979. Their selection, assessment and designation is carried out by Historic Environment Scotland who maintains the schedule. Works to Scheduled Monuments are regulated by Historic Environment Scotland through their Scheduled Monument Consent process.

Defined Term	Definition
Scoping Opinion	A document produced by MD-LOT which is issued in response to submission and review of the Offshore Scoping Report. The Scoping Opinion is supported with feedback and advice from consultees, which details what is expected to be included in the Offshore EIA Report and what can be scoped out of the EIA process.
Scottish Ministers (the)	The decision makers with regard to Marine Licence(s) and Section 36 Consent applications in Scottish Offshore Waters and Scottish Marine Area.
Significance	Effect factor that is determined by the magnitude of impact along with the sensitivity of the receptor.
Study Area	For each environmental topic, the baseline environment will be characterised, and the potential environmental impacts will be described within a topic-specific study area. Specific study areas are defined for each topic and are based on the maximum spatial extent across which potential impacts of the Project may be experienced by the relevant receptors (i.e. Zone of Influence).
Wind Turbines	Structures comprising of a tubular tower, rotor blades, and a nacelle which houses the Wind Turbine generator.
Zone of Theoretical Visibility (ZTV)	A computer-generated tool to identify the likely (or theoretical) extent of visibility of a development. The elevation (or a set of elevations) of the development is tested against a 3D terrain model.

Acronyms

Acronym	Definition
BOWFL	Bowdun Offshore Wind Farm
CEA	Cumulative Effects Assessment
CHIA	Cultural Heritage Impact Assessment
COWRIE	Collaborative Offshore Wind Research into the Environment
DSLPL	Development Specification and Layout Plan
EIA	Environmental Impact Assessment
HES	Historic Environment Scotland
IEMA	Institute of Environmental Management and Assessment
ISEP	Institute of Sustainability and Environmental Professionals
LAT	Lowest Astronomical Tide
MD-LOT	Marine Directorate Licensing Operations Team
MDS	Maximum Design Scenario
NMP	National Marine Plan
NPF4	National Planning Framework 4
OSP	Offshore Substation Platform
OUV	Outstanding Universal Value
OWF	Offshore Wind Farm
O&M	Operation and Maintenance
PDE	Project Design Envelope
SNH	Scottish National Heritage
WHS	World Heritage Site
ZTV	Zone of Theoretical Visibility

Table of Units

Units	Definition
km	Kilometre
m	Metre
MW	MegaWatt

21 Cultural Heritage

21.1 Introduction

21.1.1 This chapter of the Offshore Environmental Impact Assessment (EIA) Report presents the assessment of the likely significant environmental effects on onshore cultural heritage assets, that may occur as a result of the Proposed Development during the construction, Operations and Maintenance (O&M) and decommissioning phases. The potential impacts upon marine archaeology are assessed in Volume 2, Chapter 19: Marine Archaeology.

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

- Volume 2, Chapter 20: Seascape, Landscape and Visual Impacts;
- Volume 3, Technical Appendix 20.2: Seascape, Landscape and Visual Impact – Accompanying Graphics;
- Volume 3, Technical Appendix 21.1: Cultural Heritage Technical Report; and
- Volume 3, Technical Appendix 21.2: Cultural Heritage – Accompanying Graphics.

21.2 Cultural Heritage Study Area

21.2.1 One study area is defined for cultural heritage which extends 60 km from the Array Area. There is no specific guidance on defining appropriate study areas for Cultural Heritage Impact Assessments (CHIAs). As the potential impacts of the Proposed Development upon onshore heritage assets stem from visual change in their setting, the Cultural Heritage Study Area is based on that developed for Volume 2, Chapter 20: Seascape, Landscape, and Visual Impacts. The Seascape, Landscape and Visual Impacts Study Area extends to a 60 km radius from the boundary of the Array Area, and it is considered that seascape, landscape and visual receptors beyond this distance are unlikely to experience significant effects.

21.2.2 Similarly, cultural heritage receptors at distances greater than 60 km from the Array Area are unlikely to experience significant effects. The Wind Turbines and Offshore Substation Platforms (OSPs) will appear very small and recessive in the wider seascape and will often be obscured from view by atmospheric conditions resulting in negligible potential for visual change in their setting to adversely affect their Cultural Significance. As such, there is negligible potential for significant effects to occur outside the Cultural Heritage Study Area. Planning Advice Note 1/2013: Environmental Impact Assessment (Scottish Government, 2013) directs that the EIA process should focus on significant environmental effects and consequently, 60 km represents an appropriate outer limit to the Cultural Heritage Study Area.

21.2.3 The Cultural Heritage Study Area, which is shown in Figure 21.1, was presented to consultees in the Offshore EIA Scoping Report (Bowdun Offshore Wind Farm Limited (BOWFL), 2024). No objections to the proposed Cultural Heritage Study Area were voiced by consultees in the Scoping Opinion (Marine Directorate –

Licensing Operations Team (MD-LOT), 2024). Scoping responses and the results of subsequent consultation are detailed in Section 21.4 of this chapter.

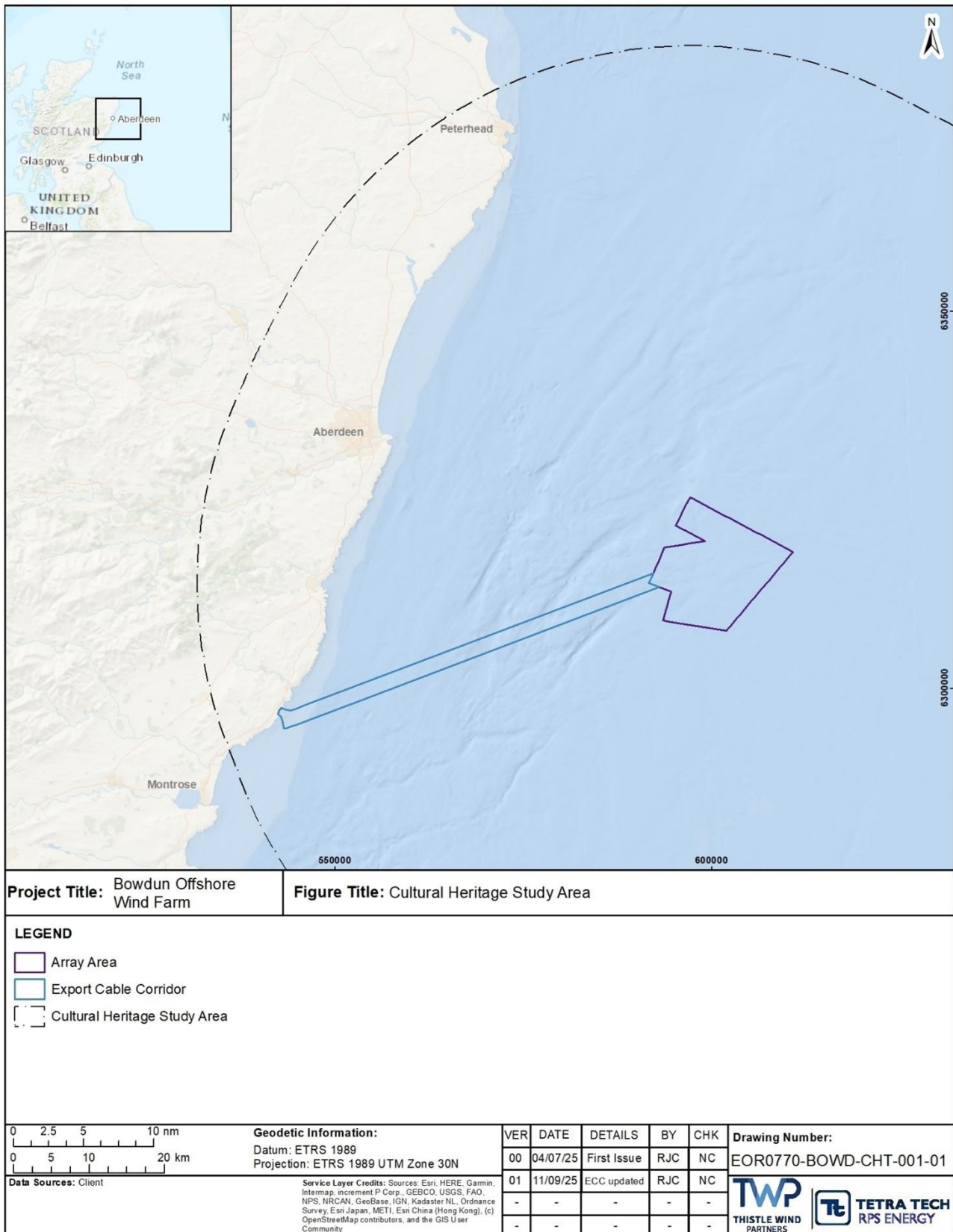


Figure 21.1: Cultural Heritage Study Area

21.3 Legislative and Policy Context

21.3.1 The overarching policy and legislation applicable to the Proposed Development is presented in Volume 1, Chapter 2: Policy and Legislation. Policy and legislation specific to cultural heritage, is contained in the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 (Scottish Government, 1997). National policy is presented in the National Marine Plan (NMP) (Scottish Government, 2015) and National Planning Framework 4 (NPF4) (Scottish Government, 2023) and local policy is in the Aberdeenshire Local Development Plan (Aberdeenshire Council, 2023) and Aberdeen City Local Development Plan (Aberdeen City Council, 2023). A summary of the legislative provisions relevant to cultural heritage are provided in Table 21.1 below, with other relevant policy provisions set out in Table 21.2.

Table 21.1: Summary of Legislation Relevant to Cultural Heritage

Summary of Relevant Legislation	How and Where Considered in the Offshore EIA Report
Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997	
The Act provides for the designation ('listing') of buildings of special architectural or historic interest. Section 59 of the Act requires that decision makers have 'special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses'.	The Proposed Development has the potential to result in change in the setting of Listed Buildings. This chapter has identified Listed Buildings and assessed the potential impact where this might conceivably not preserve the setting and result in a significant effect (Section 21.10).

Table 21.2: Summary of National Policy Relevant to Cultural Heritage

Summary of Relevant Policy	How and Where Considered in the Offshore EIA Report
Scotland's NMP: A Single Framework for Managing Our Seas	
General Policy 6 directs that 'Development and use of the marine environment should protect and, where appropriate, enhance heritage assets in a manner proportionate to their significance' and that marine planning should help ensure that marine developments respect the setting of 'important coastal heritage assets' and 'Designated assets should be protected <i>in situ</i> within an appropriate setting. Substantial loss or harm to designated assets should be exceptional and should only be permitted if this is necessary to deliver social, economic or environmental benefits that outweigh the harm or loss.'	This chapter has assessed the potential impact upon cultural heritage assets in terms of the impact upon their Cultural Significance (Section 21.10).

Summary of Relevant Policy	How and Where Considered in the Offshore EIA Report
NPF4	
<p>Policy 7 Development proposals will only be supported where they preserve the character, special architectural or historic interest of Listed Buildings, the character and appearance of Conservation Areas, and avoid direct impacts on Scheduled Monuments and significant adverse impacts upon the integrity of their setting or where exceptional circumstances have been demonstrated to justify such impacts and where these have been minimised.</p>	<p>The Proposed Development has the potential to result in change in the setting of designated heritage assets. This chapter has identified designated heritage assets and assessed the potential impact where this might conceivably not preserve the setting (Section 21.10).</p>
<p>Development proposals affecting a World Heritage Site (WHS) or its setting will only be supported where they protect and preserve its Outstanding Universal Value (OUV).</p>	<p>There are no WHSs within the Cultural Heritage Study Area.</p>
<p>Development proposals affecting nationally important Gardens and Designed Landscapes and Historic Battlefields will be supported where they protect their Cultural Significance.</p>	<p>The potential for the Proposed Development to impact upon the Inventory Gardens and Designed Landscapes within the Cultural Heritage Study Area has been considered. They have not been taken through to assessment as very limited visibility is predicted.</p> <p>There are no nationally important Historic Battlefields within the Cultural Heritage Study Area.</p>

Table 21.3: Summary of Local Development Plan Policy Relevant to Cultural Heritage

Summary of Relevant Policy	How and Where Considered in the Offshore EIA Report
Aberdeenshire Local Development Plan	
<p>Policy HE1 Protecting Listed Buildings, Scheduled Monuments and Archaeological Sites (including other historic buildings) HE1.1 We will resist development that would have an adverse impact on the character, integrity or setting of listed buildings, or scheduled monuments, or other archaeological sites. If adverse impact is unavoidable, it should be minimised and justified.</p>	<p>The potential for the Proposed Development to result in significant impacts upon cultural heritage assets has been assessed (Section 21.10).</p>
<p>Policy HE2 Protecting Historic, Cultural and Conservation Areas Conservation Areas HE2.1 We will resist development [...] which would fail to preserve or enhance the character or appearance of a conservation area. This applies both to developments within the conservation area and proposals outwith</p>	<p>The potential for the Proposed Development to result in significant impacts upon cultural heritage assets has been assessed (Section 21.10).</p>

Summary of Relevant Policy	How and Where Considered in the Offshore EIA Report
<p>that would affect its character or appearance. [...]</p> <p>Battlefields, Inventory Gardens and Designed Landscapes HE2.3 Development affecting an inventory battlefield or inventory garden and designed landscape will only be permitted if:</p> <ul style="list-style-type: none"> • the proposal would not have an adverse impact that compromises the objectives of the designation of an inventory garden or designed landscape, or the key landscape characteristics and special qualities of an inventory battlefield; or, • any significant adverse effects are outweighed by long term social or economic benefits of overriding public importance and there is no alternative site for the development. <p>These conditions may also apply to developments outwith the designated sites. In either case, measures and mitigation must be taken to conserve and enhance the essential characteristics of the site as appropriate. [...]</p>	
Aberdeen City Local Development Plan	
<p>Policy D6 – Historic Environment Development must protect, preserve and enhance Aberdeen’s historic environment, including its historic fabric. [...]</p> <p>Appropriate developments [...] must be designed to respect the character, appearance and setting of the historic environment and protect the special architectural or historic interest of listed buildings, conservation areas and historic gardens and designed landscapes. [...]</p> <p>Developments that would adversely impact upon archaeological remains, of either national or local importance, or on their setting will only be permitted in exceptional circumstances, where there is no practical alternative site and where there are imperative reasons of overriding public need. [...].</p>	<p>The potential for the Proposed Development to result in significant impacts upon cultural heritage assets has been assessed (Section 21.10).</p>

21.4 Consultation

21.4.1 The approach to consultation for the Proposed Development is set out in Volume 1, Chapter 5: Consultation and Engagement. A summary of the issues raised during consultation activities undertaken to date specific to cultural heritage is presented in Table 21.4, together with how these issues have been considered in the production of this assessment. Further detail is presented within Volume 1, Chapter 5: Consultation and Engagement, Volume 3, Technical Appendix 5.1: Consultation Log and Volume 3, Technical Appendix 5.2: Pre-Application Consultation Report.

Table 21.4: Summary of Key Consultation Issues Raised During Consultation Activities Undertaken for the Proposed Development Relevant to Cultural Heritage

Date	Consultee and Type of Consultation	Summary of Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter
17/10/2024	Historic Environment Scotland (HES) Scoping Opinion (MD-LOT, 2024)	Advised that HES was content with the list of heritage assets scoped into the assessment. Noted that there are a large number of designated heritage assets in the Cultural Heritage Study Area. Advised that they would expect the justification for scoping out some assets that are within the Zone of Theoretical Visibility (ZTV) to be included in the assessment.	There are 181 Scheduled Monuments, 148 Category A Listed Buildings, 1,634 Category B Listed Buildings and 1,402 Category C Listed Buildings, 26 Conservation Areas and 10 Inventory Gardens and Designed Landscapes within the ZTV. Site-specific justification of the scoping out of individual designated heritage assets would require the reporting on the initial assessment of a very large number of designated heritage assets. This would be an entirely disproportionate approach to the likelihood of significant effects occurring, given the distance of the Proposed Development from shore. The approach adopted is proportionate to the likelihood of significant effects occurring and the distance of the Array Area from the terrestrial heritage assets.
28/11/2024	Scoping Opinion (MD-LOT, 2024)	Content with the proposed approach to the assessment of potential impacts on the cultural heritage receptor group, including the data sources, study area, baseline characterisation and the method of assessment. It was also noted that Scottish Ministers were content with the proposed scope and mitigation measures.	Noted.

21.5 Data Sources

Desktop Study

21.5.1 Information on cultural heritage within the Cultural Heritage Study Area was collected through a detailed desktop review of existing studies and datasets which are summarised in Table 21.5.

21.5.2 The Cultural Heritage technical report (Volume 3, Technical Appendix 21.1: Cultural Heritage Technical Report) includes full details of the analysis undertaken to develop the cultural heritage baseline.

Table 21.5: Summary of Key Data Sources

Title	Source	Year	Author
HES data portal	Spatial data for designated heritage assets.	2025	HES
HES designated heritage asset descriptions	Physical descriptions and Statement of Cultural Significance.	Various	HES
National Record of the Historic Environment	Descriptions and historical background.	Various	Various

Identification of Designated Sites

21.5.3 All designated sites within the Cultural Heritage Study Area that could be affected by the construction, O&M, and decommissioning phases of the Proposed Development were identified using the two-step process described below:

- Step 1: All designated sites of international, national and local importance within the Cultural Heritage Study Area were identified using a number of sources. These are identified in Table 21.5.
- Step 2: Using the above information and expert judgement, sites were included for further consideration if:
 - their Cultural Significance drew heavily upon visual relationships with the seascape, and they were of sufficient sensitivity for there to be some potential for significant effects; or
 - consultees requested that they are included.

Site-Specific Surveys

21.5.4 Site-specific surveys were undertaken to inform this assessment. A summary of the surveys is outlined in Table 21.6.

Table 21.6: Summary of Site-Specific Survey Data

Title	Extent of Survey	Overview of Survey	Survey Contractor	Date
Visits to cultural heritage receptors	Cultural heritage receptors	The cultural heritage receptors (Table 21.8) and their surroundings were visited to establish baseline setting conditions.	RPS Consulting	29/04/2025 to 30/04/2025

21.6 Baseline Environment

Overview of Baseline Environment

21.6.1 This section provides a brief summary of the baseline environment as relevant to the CHIA. In keeping with the weight given to the preservation of setting of designated heritage assets by NPF4 (Scottish Government, 2023) and industry standard practice, the CHIA considers only designated heritage assets, with a particular focus on those that are of international and national importance:

- WHSs;
- Scheduled Monuments;
- Listed Buildings;
- Inventory Gardens and Designed Landscapes;
- Inventory Battlefields; and
- Conservation Areas.

21.6.2 The Cultural Heritage Study Area takes in most of eastern Aberdeenshire. This area has significant areas of prime agricultural land, a range of resources, including flint that was intensively mined in the Neolithic period, and multiple natural harbours. Furthermore, the coastal fringe is a major communications corridor between north and south and the area is well placed for seaborne trade. Consequently, the area has seen widespread activity throughout history, comprising a very wide range of designated heritage assets. These may be characterised broadly as comprising primarily:

- prehistoric settlements, fortifications and funerary remains surviving as upstanding features in areas of marginal ground or as buried archaeology only in intensively farmed areas;
- medieval fortifications, surviving as ruins or earthworks, and ecclesiastical sites;
- post-Medieval fortifications, houses and ecclesiastical sites;
- 18th and 19th century fortifications, houses, industrial and agricultural buildings, infrastructure, including harbours and related structures, lighthouses and bridges. There are several designed landscapes dating to this period; and
- 20th century wartime sites, primarily comprising anti-invasion defences and airfields.

21.6.3 The Scheduled Monuments are for the most part scattered. However, there are several notable concentrations:

- Tullos Hill, south of Aberdeen: where there is a group of Prehistoric burial cairns;
- North-west of Stonehaven, where there are Prehistoric settlements, funerary and agricultural remains surviving in areas of marginal land and Second World War anti-invasion defences; and

- South-east of Banchory, where there are Prehistoric settlement, funerary and agricultural remains surviving in areas of marginal land.

- 21.6.4 Of the Scheduled Monuments located on the coast, almost all are Medieval fortifications comprising either ruined castles or earthwork remains, with a small number of chapels or similar sites. The castles have been placed to take advantage of naturally defensive positions, which frequently results in the dramatic juxtaposition of ruins and coastal cliffs.
- 21.6.5 The Listed Buildings are concentrated in settlements, in particular Aberdeen, Peterhead, Stonehaven and Cruden Bay, and along the valleys of the Rivers Dee and Don. They range in date from the Medieval period onwards and include domestic premises of all kinds, industrial, agricultural, commercial and academic buildings and structures, infrastructure, churches and monuments.
- 21.6.6 The Conservation Areas primarily relate to settlements laid out in the 18th and 19th centuries. Ten of the 26 are in Aberdeen, three in Peterhead and two in Stonehaven. The remainder are smaller settlements scattered along the coast and further inland.
- 21.6.7 Owing to the history of intensive activity, the setting of designated cultural heritage assets on the coastal plain and on the higher ground in the western part of the Cultural Heritage Study Area, inevitably contains modern features, including numerous onshore wind farms and isolated Wind Turbines, pylons, forestry, agricultural sheds, modern housing and infrastructure, seen at close range or in the middle distance, with Offshore Wind Farms (OWFs) and large support vessels and other ships a feature of seaward views. Consequently, whilst numerous assets in the Cultural Heritage Study Area have visual relationships with the sea, very few are sensitive to distant change.
- 21.6.8 Designated heritage assets are enumerated in Table 21.7 and their locations are mapped on Figure 21.2 to Figure 21.4.
- 21.6.9 The following sections provide a summary of the cultural heritage baseline environment. Volume 3, Technical Appendix 21.1: Cultural Heritage Technical Report, includes full details of the analysis undertaken to develop the cultural heritage baseline.

Designated Heritage Assets

21.6.10 Designated heritage assets are summarised in Table 21.7 and presented in Figure 21.2 to Figure 21.4.

Table 21.7: Summary of Designated Heritage Assets by Distance Within the Cultural Heritage Study Area

Distance from Array Area (km)	Number of Designated Heritage Assets
0 to 10	None
10 to 20	None
20 to 30	None
30 to 40	Scheduled Monuments: 8 Category A Listed Buildings: 1 Category B Listed Buildings: 1 Category C Listed Buildings: 27 Conservation Areas: 1
40 to 50	Scheduled Monuments: 60 Category A Listed Buildings: 109 Category B Listed Buildings: 1,318 Category C Listed Buildings: 916 Inventory Gardens and Designed Landscapes: 2 Conservation Areas: 15
50 to 60	Scheduled Monuments: 113 Category A Listed Buildings: 38 Category B Listed Buildings: 315 Category C Listed Buildings: 459 Inventory Gardens and Designed Landscapes: 8 Conservation Areas: 10

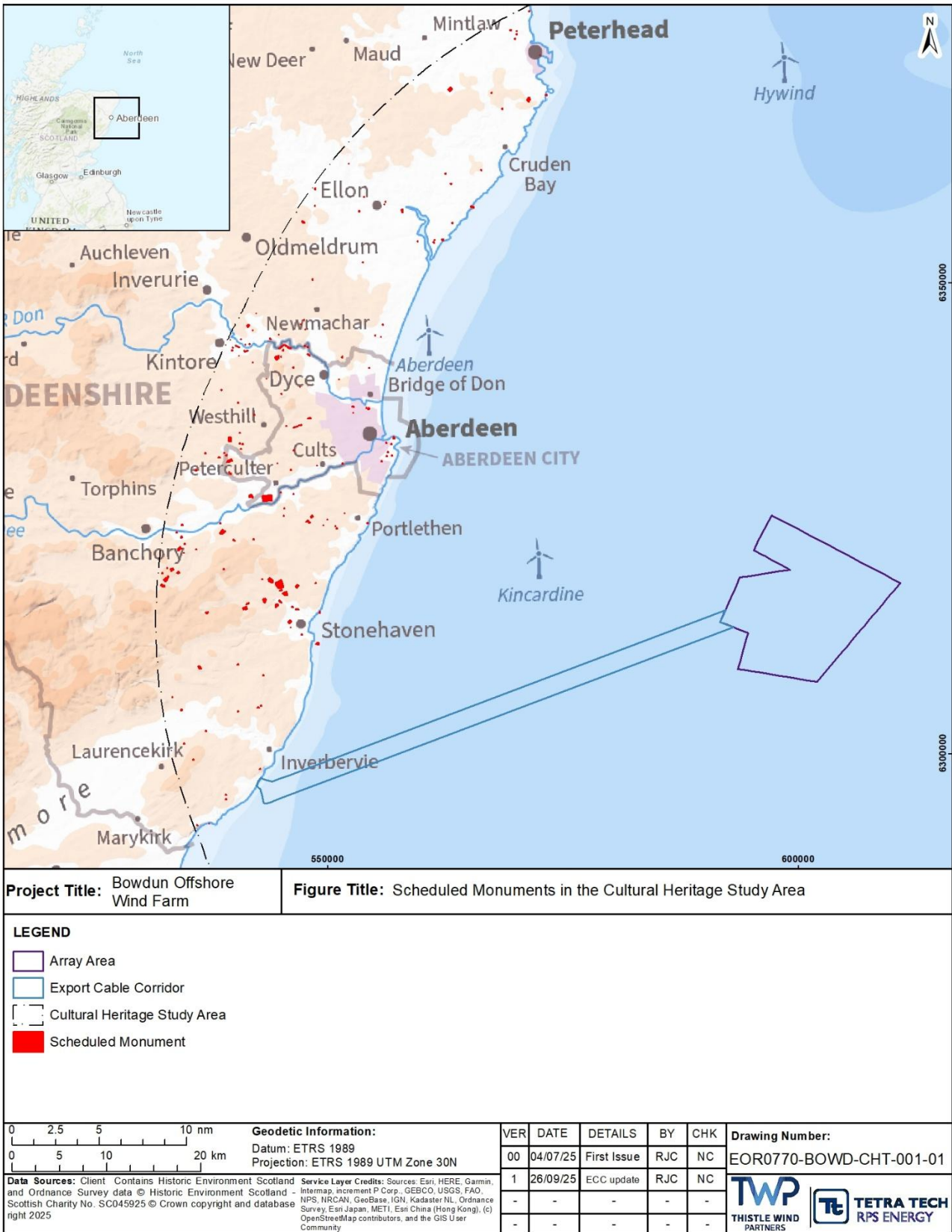


Figure 21.2: Scheduled Monuments in the Cultural Heritage Study Area

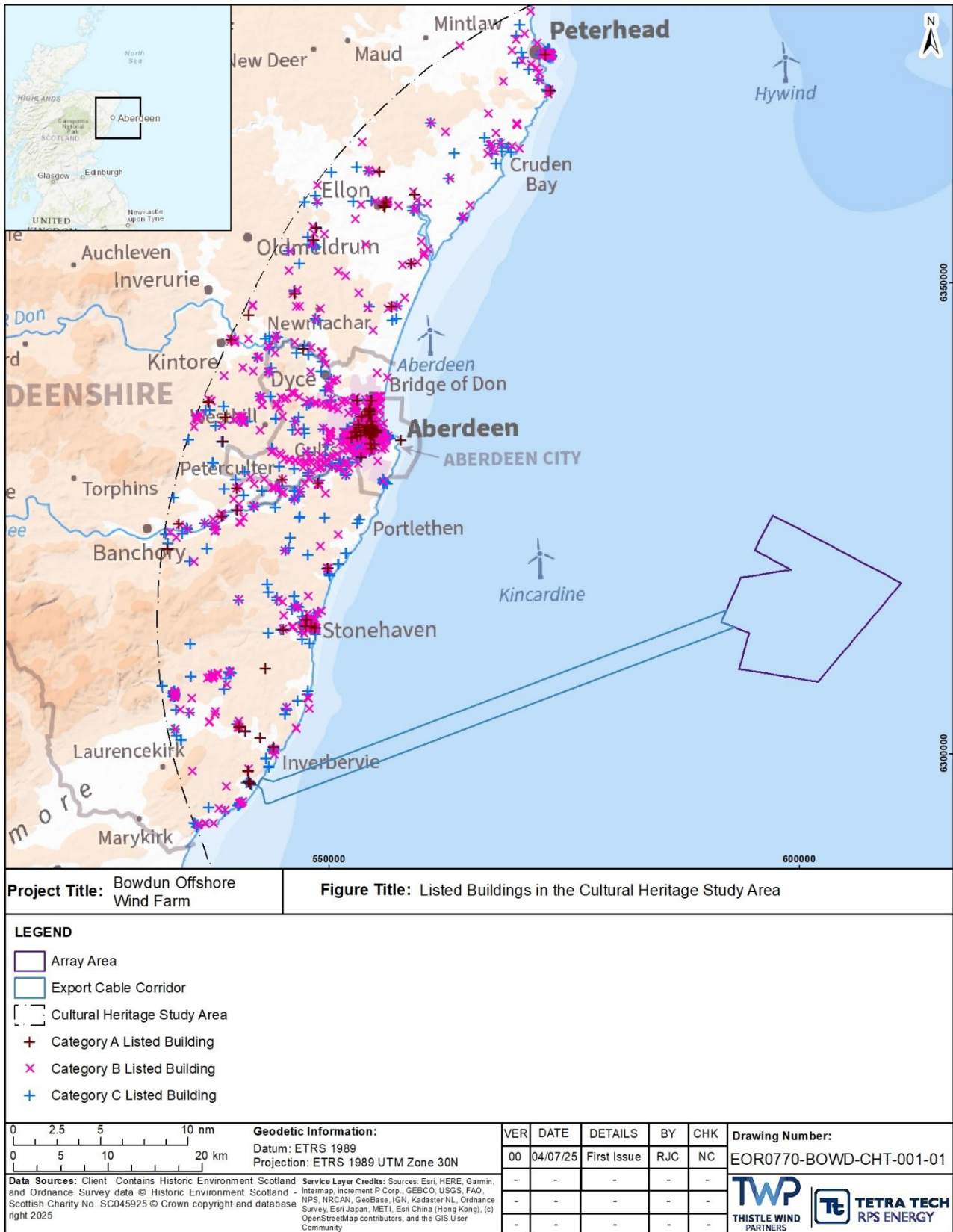


Figure 21.3: Listed Buildings in the Cultural Heritage Study Area

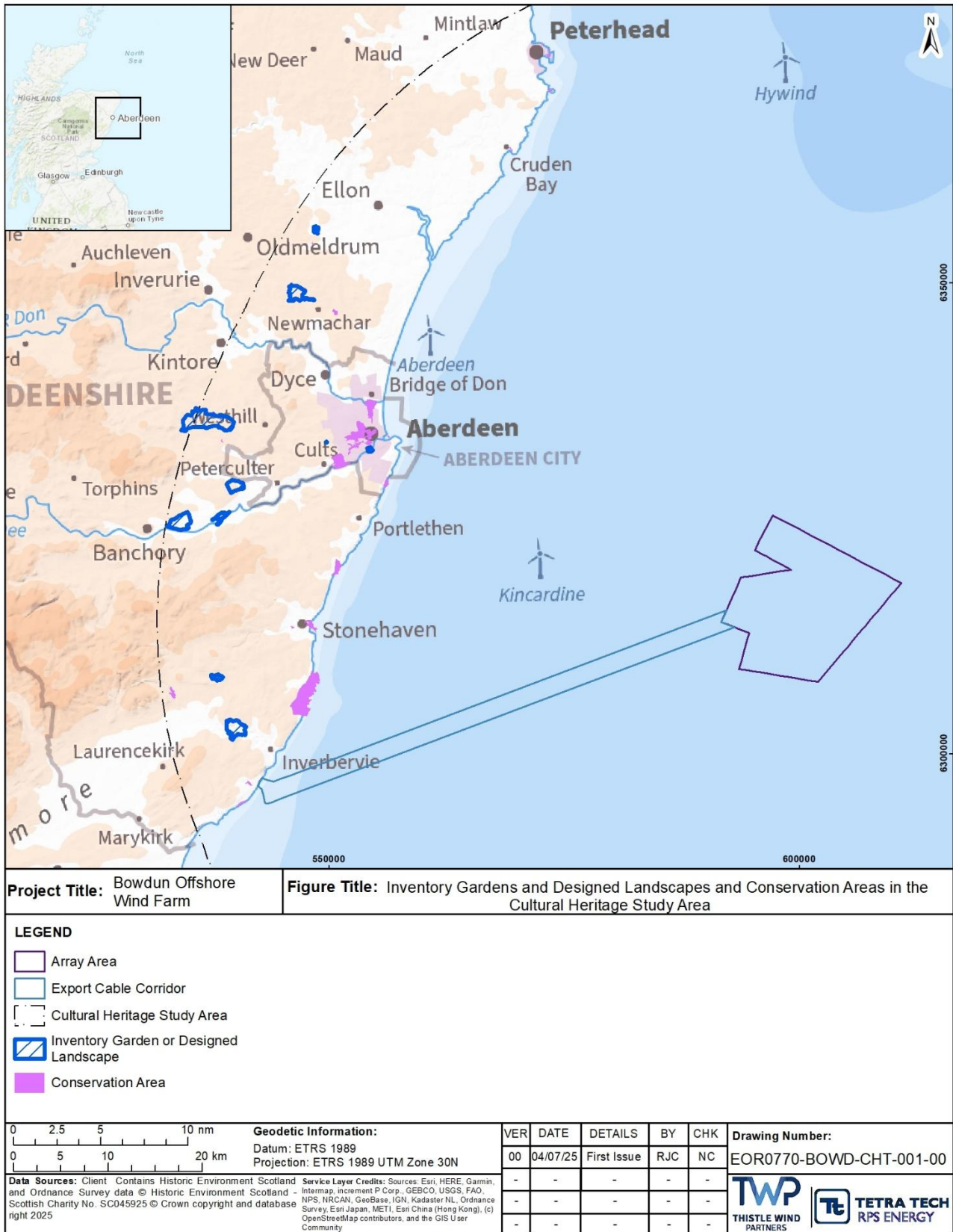


Figure 21.4: Inventory Gardens and Designed Landscapes and Conservation Areas in the Cultural Heritage Study Area

Heritage Assets Considered as Potential Receptors

21.6.11 Cultural heritage assets have been considered as receptors where there is a known visual relationship with the sea that contributes substantively to their Cultural Significance and which may be considered sensitive to distant change. These are listed in Table 21.8 and appear on Figure 21.5 to Figure 21.8.

Table 21.8: Heritage Assets Selected as Cultural Heritage Receptors

Reference	Name	Distance from Array Area (km)	Reasoning
CH1 (LB16367)	Buchanness Lighthouse Category A Listed Building	50	Lighthouse designed by Robert Stevenson and built between 1824 and 1827. Located on a promontory, the distinctive lighthouse is seen from the shore against the backdrop of the North Sea. These views contribute to its aesthetic appreciation and an understanding of its function.
CH2 (LB52471)	New Slains Castle Category B Listed Building	45	Castle/house, first built around 1597 with later additions and alterations, extensively remodelled in the 19 th century. The building has strong associations with Bram Stoker, appearing in his novels and probably providing inspiration for elements of Dracula's Castle. Sited on a promontory overlooking the sea. The dramatic ruins of the building are seen against the backdrop of the sea when approaching contributing to their aesthetic appreciation and the sense of place, which is closely tied to the building's associative characteristics.
CH3 (SM3250)	Slains Castle Scheduled Monument	45	Remains of a tower-house and associated earthworks, probably of later Medieval date. Sited on a promontory the remains are seen against the backdrop of the sea when approaching. These views contribute to the aesthetic appreciation of the monument and an understanding of its functional relationship with its surroundings.
CH4 (SM9215 and LB20078)	Torry Battery Scheduled Monument and Girdleness Lighthouse Category A Listed Building	40	Lighthouse designed by Robert Stevenson and built 1830. The nearby battery was built between 1857 and 1861 in response to fears of a French invasion. The visual relationship between the 2 assets, with the lighthouse being seen against the backdrop of the sea in views from the battery, contributes to an understanding of their function and their aesthetic appreciation.
CH5 (SM986)	Dunnottar Castle Scheduled Monument	44	Medieval castle spectacularly sited on a craggy promontory. Views out to sea from the castle and views of the castle against the backdrop of the sea contribute greatly to its aesthetic appreciation and an understanding of its function.



Project Title: Bowdun Offshore Wind Farm		Figure Title: Designated Heritage Assets and ZTV (Peterhead)				
LEGEND		ZTV (Tip)				
Array Area	Inventory Garden or Designed Landscape	Number of Turbines Theoretically Visible				
Cultural Heritage Study Area	Conservation Area	1 to 10	11 to 20	21 to 30	31 to 40	
Scheduled Monument	Cultural Heritage Receptor					
Category A Listed Building						
Category B Listed Building						
Category C Listed Building						
Geodetic Information:		VER	DATE	DETAILS	BY	CHK
Datum: ETRS 1989		00	04/07/25	First Issue	RJC	NC
Projection: ETRS 1989 UTM Zone 30N		-	-	-	-	-
Data Sources: Client Contains Historic Environment Scotland and Ordnance Survey data © Historic Environment Scotland Scottish Charity No. SC045925 © Crown copyright and database right 2025		Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community				
		Drawing Number: EOR0770-BOWD-CHT-001-00				

Figure 21.5: Designated Heritage Assets and ZTV (Peterhead)

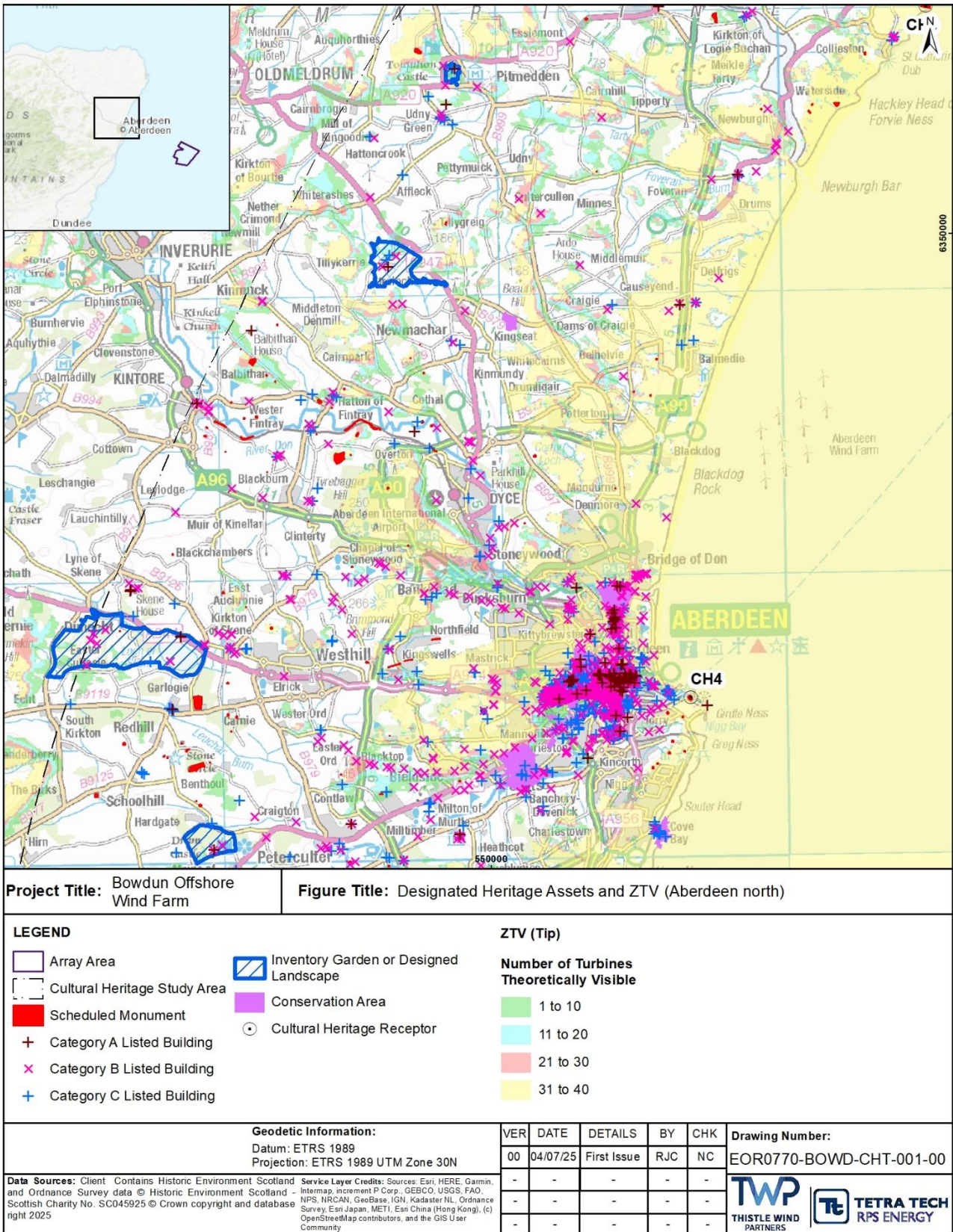


Figure 21.6: Designated Heritage Assets and ZTV (Aberdeen North)

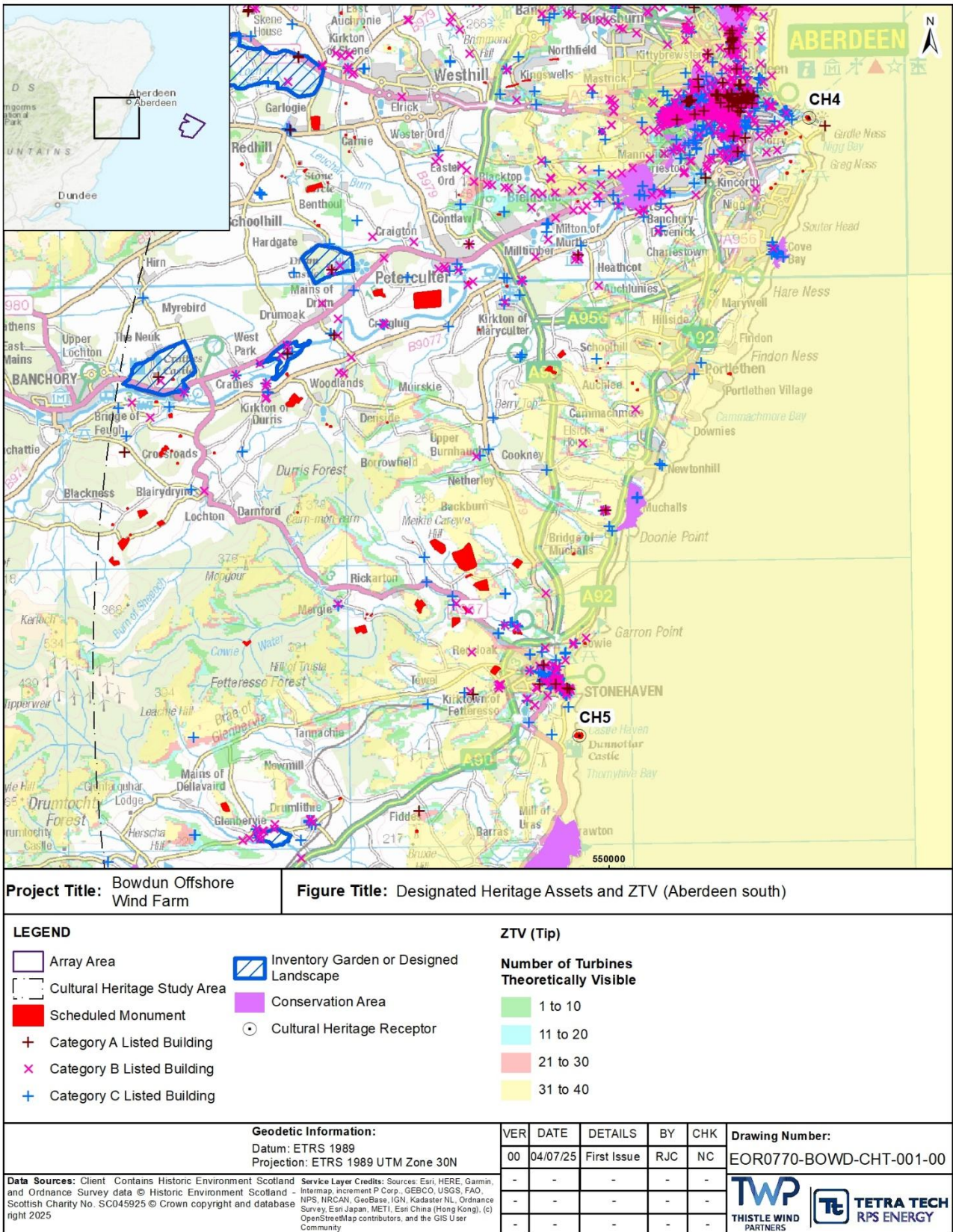


Figure 21.7: Designated Heritage Assets and ZTV (Aberdeen South)

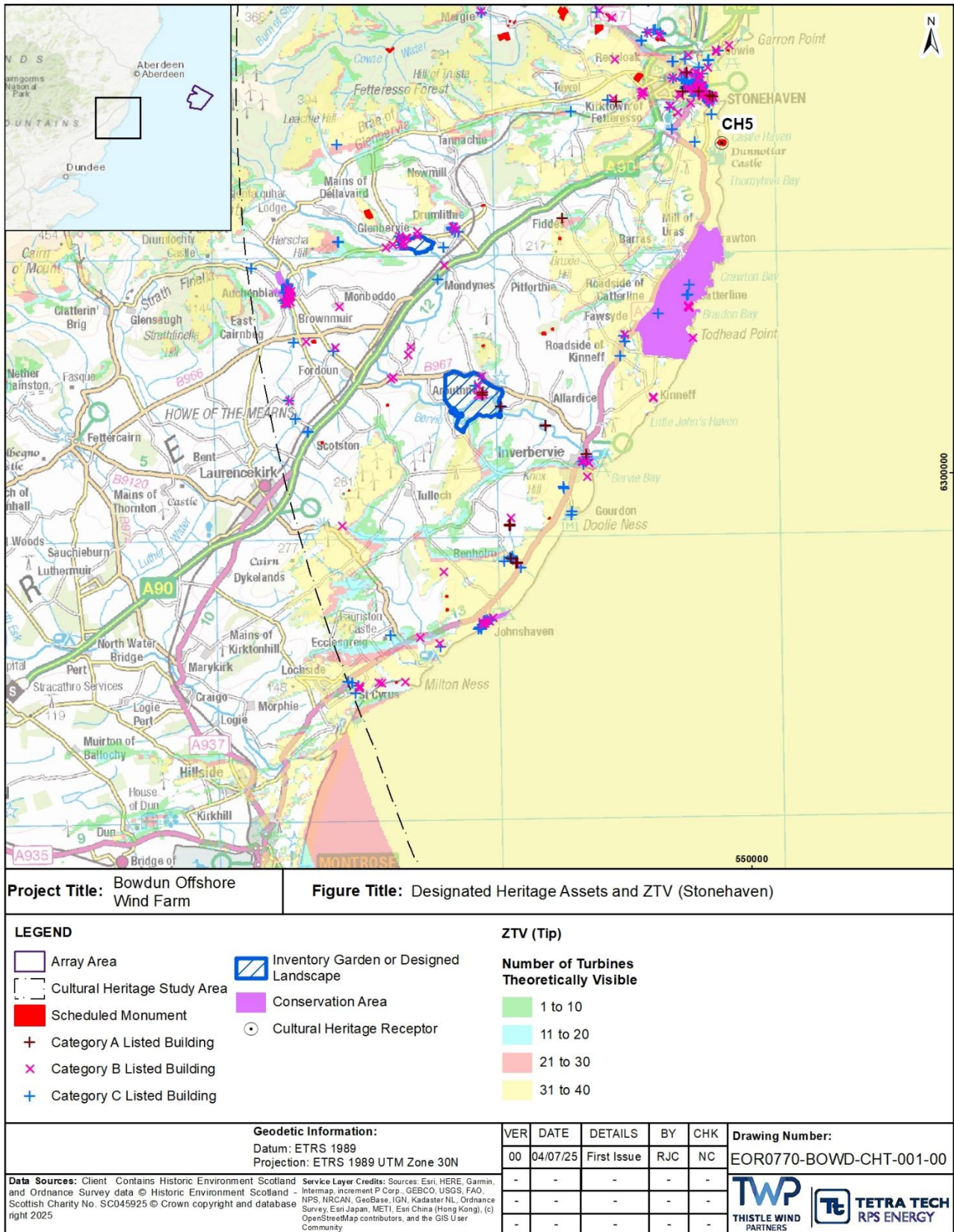


Figure 21.8: Designated Heritage Assets and ZTV (Stonehaven)

Future Baseline Scenario

- 21.6.12 The EIA Regulations 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 implementation of the project 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 this Offshore EIA Report.
- 21.6.13 If the Proposed Development does not come forward, an assessment of the ‘without development’ future baseline conditions have also been carried out and are described within this section.
- 21.6.14 The setting of the cultural heritage receptors considered by this assessment is subject to ongoing change as a result of development, land use and potentially climate change. Changes as a result of development and to a lesser degree land use will be controlled by relevant legislation and policy, such that adverse change will be minimised.
- 21.6.15 It has been assumed that the baseline condition of the cultural heritage receptors themselves will remain unchanged. However, climate change and extreme weather conditions are likely to accelerate the degradation of those receptors that are not actively maintained, with some potential for loss to occur as a result of erosion.

Data Limitations and Assumptions

- 21.6.16 All cultural heritage receptors were accessed during the baseline survey. The visits were undertaken during a period of sunny weather with good visibility. Visibility was not affected by seasonal factors such as foliage; the visits were carried out during the winter and there are no shelterbelts, woodland or other vegetation that might materially affect views contributing to their Cultural Significance at other times of year.
- 21.6.17 The assessment has been based on clear visibility and hence greatest level of visual change in setting.

21.7 Key Parameters for Assessment

Maximum Design Scenario

- 21.7.1 The Maximum Design Scenario (MDS) identified in Table 21.9 are those parameters expected to have the potential to result in the greatest effect on an identified receptor or receptor group. Any other development scenario within the Project Design Envelope (PDE), will result in the same, or less, level of environmental effect. The scenario has been selected from the details provided in Volume 1, Chapter 3: Project Description.

Table 21.9: Maximum Design Scenario Considered for Each Potential Impact as Part of the Assessment of Likely Significant Environmental Effects on Cultural Heritage

Potential Impact	Phase*			Maximum Design Scenario	Justification
	C	O	D		
Long term visual change in the setting of cultural heritage receptors (daytime)	x	✓	x	<p>O&M phase</p> <p>Wind Turbines</p> <ul style="list-style-type: none"> • Maximum number: 40 x 25 MW; • Maximum tip height: 359 m above Lowest Astronomical Tide (LAT) (based on maximum rotor diameter 326 m and maximum hub height 196 m above LAT); and • Colour: RAL7035 (light grey). <p>OSPs</p> <ul style="list-style-type: none"> • Maximum number: three; • Height of top of main structure above LAT: 60 m; and • Maximum dimensions of topside: 50 m x 40 m. 	<p>The MDS for this impact considers the daytime appearance of the Wind Turbines and OSPs during the O&M phase.</p> <p>Wind Turbines Tallest turbines (maximum height 359 m to tip) result in the most extensive ZTV and are likely to be perceived as resulting in the greatest degree of visual change in the setting of cultural heritage receptors.</p> <p>OSPs Largest number of OSPs resulting in greatest degree of visual change in the setting of cultural heritage receptors.</p>

*Proposed Development Phase refers to construction (C), O&M (O) and decommissioning (D).

Impacts Scoped Out of the Assessment

- 21.7.2 On the basis of the baseline environment and the Project Description outlined in Volume 1, Chapter 3: Project Description, a number of impacts are scoped out of the assessment for cultural heritage. These were proposed to be scoped out in the Offshore EIA Scoping Report (BOWFL, 2024) and this approach was approved by HES and Scottish Ministers within the Scoping Opinion (MD-LOT, 2024).
- 21.7.3 These impacts are outlined in Table 21.10, together with a justification for scoping them out.

Table 21.10: Impact Scoped Out of the Assessment for Cultural Heritage (Tick Confirms the Impact is Scoped Out)

Potential Impact	Phase*			Justification
	C	O	D	
Visual change in the setting of onshore cultural heritage assets	✓	×	✓	Impacts relating specifically to the construction and decommissioning phases will be transitory and short lived. There is therefore no potential for them to have a significant effect. This has been agreed with HES and Scottish Ministers through the scoping process.
Long term visual change in the setting of cultural heritage receptors (nighttime)	✓	✓	✓	Aviation warning lights and navigation lights mounted on Wind Turbines are highly unlikely to be visible/perceptible due to distance. There is therefore no potential for them to have a significant effect. This has been agreed with HES and Scottish Ministers through the scoping process.
O&M phase impacts relating to the setting of nationally important cultural heritage assets within the Cultural Heritage Study Area not identified as cultural heritage receptors	N/A	✓	N/A	Whilst the Proposed Development will result in change in the setting of such assets, it is considered that this is not likely to result in significant effects owing to their characteristics and the contribution of setting to their Cultural Significance. This has been agreed with HES and Scottish Ministers through the scoping process.
Impacts upon the setting of cultural heritage assets of less than national importance (Category B and C Listed Buildings) and Conservation Areas and non-designated heritage assets	✓	✓	✓	Given the distance of the Array Area from such assets, significant effects are only likely to occur where the receptor is of the highest sensitivity (i.e. of national or international importance). This was agreed by Scottish Ministers through the scoping process. HES did not comment as these assets lie outside HES' remit.
Impacts upon the setting of cultural heritage assets outside the Cultural Heritage Study Area	✓	✓	✓	Potential visibility falls rapidly outside the Cultural Heritage Study Area which extends 60 km from the Array Area. Cultural heritage assets are very rarely sensitive to such distant change, and it is considered that any such change has no potential to result in a significant effect. This has been agreed with HES and Scottish Ministers through the scoping process.
Impacts relating to the Offshore Export Cables	✓	✓	✓	The Offshore Export Cables have no potential to affect the setting of cultural heritage assets during the O&M phase as they will be submerged. Visual change in setting during the construction and decommissioning phases will be transitory and short lived and therefore has no potential to result in a significant effect. This has been agreed with HES and Scottish Ministers through the scoping process.

*Proposed Development Phase refers to construction (C), O&M (O) and decommissioning (D).

21.7.4 Potential impacts upon marine archaeology are considered separately in Volume 2, Chapter 19: Marine Archaeology.

21.8 Methodology for Assessment of Effects

Overview

21.8.1 The cultural heritage assessment of effects has followed the methodology set out in Volume 1, Chapter 4: Environmental Impact Assessment Methodology. Specific to the cultural heritage assessment, the following guidance documents have also been considered:

- Historic Environment Guidance for the Offshore Renewable Energy Sector (Collaborative Offshore Wind Research into the Environment (COWRIE), 2007);
- Guidance for Assessment of Cumulative Impacts on the Historic Environment from Offshore Renewable Energy (COWRIE, 2008);
- Managing Change in the Historic Environment: Setting (HES, 2020);
- EIA Handbook (HES & Scottish National Heritage (SNH) (now NatureScot)), 2018);
- Historic Environment Circular 1 (HES, 2019a);
- Historic Environment Policy for Scotland (HES, 2019b); and
- Cultural Heritage Impact Assessment (Institute of Environmental Management and Assessment ((IEMA) now The Institute of Sustainability and Environmental Professionals (ISEP)), 2021).

Criteria for Assessment

21.8.2 When determining the significance of effects, a process is used that involves defining the magnitude of the potential 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 that are described in further detail in Volume 1, Chapter 4: Environmental Impact Assessment Methodology.

21.8.3 The criteria for defining sensitivity in this chapter are outlined in Table 21.11. The principal criterion used here for determining sensitivity is the importance of the receptor.

21.8.4 The criteria for defining magnitude in this chapter are outlined in Table 21.12. Each assessment considered the spatial extent, duration, frequency and reversibility of impact when determining magnitude which are outlined within the magnitude section of each impact assessment (e.g. a duration of hours or days would be considered for most receptors to be of short-term duration, which is likely to result in a low magnitude of impact).

Table 21.11: Definition of Terms Relating to the Sensitivity of the Receptor

Sensitivity	Definition
Very High	Assets of international importance (i.e. WHS).
High	Assets of national importance: Scheduled Monuments, Category A Listed Buildings, Inventory Gardens and Designed Landscapes and Inventory Battlefields, some Conservation Areas and other assets considered by the assessor to be of similar importance.
Medium	Assets of regional importance: Category B Listed Buildings, some Conservation Areas and other assets considered by the assessor to be of similar importance.
Low	Assets of local importance (e.g. Category C Listed Buildings, most Conservation Areas and other assets considered by the assessor to be of similar importance).

Table 21.12: Definition of Terms relating to Magnitude of Impact

Magnitude of Impact	Definition
High	Changes to the fabric or setting of a heritage asset resulting in the complete or near complete loss of its Cultural Significance (Adverse).
	Preservation of the asset <i>in situ</i> where it would be completely or almost completely lost in the do-nothing scenario or removal of elements of the setting that prevent the appreciation of the asset's Cultural Significance (Beneficial).
Medium	Changes to the elements of the fabric or setting of the heritage asset that contribute to its Cultural Significance such that this is substantially altered (Adverse).
	Changes to key elements of the asset's fabric or setting that result in its Cultural Significance being restored, where such elements have been lost, or preserved, where these elements would otherwise be lost (Beneficial).
Low	Changes to elements of the fabric or setting of the heritage asset that contribute to its Cultural Significance such that this is slightly diminished or appreciable change in the setting that would affect overall experience of visiting the asset without adversely affecting its Cultural Significance or the appreciation and understanding of the asset (Adverse).
	Changes that result in elements of the asset's fabric or setting that detract from its Cultural Significance being removed (Beneficial).
Negligible	Very minor loss or detrimental alteration to one or more characteristics of the asset or its setting that contribute to its Cultural Significance (Adverse).
	Very minor benefit to, or beneficial addition of one or more characteristics, features or elements of the asset or its setting that contribute to its Cultural Significance (Beneficial).
No Change	Changes to the fabric or setting of a heritage asset that leave its Cultural Significance unchanged.

21.8.5 The magnitude of the impact and the sensitivity of the receptor are combined when determining the significance of the effect upon a cultural heritage receptor. The particular method employed for this assessment is presented in Table 21.13 and Table 21.14.

21.8.6 Where a range is suggested for the significance of effect, for example, minor to moderate, it is possible that this may span the significance threshold. The technical specialist’s professional judgement will be applied to determine which outcome defines the most likely effect, which takes in to account the sensitivity of the receptor and the magnitude of impact. Where professional judgement is applied to quantify final significance from a range, the assessment will set out the factors that result in the final assessment of significance. These factors may include the likelihood that an effect will occur, data certainty and relevant information about the wider environmental context.

21.8.7 The EIA Regulations require the identification and reporting of significant environmental effects. For the purposes of this assessment:

- a level of moderate or more will be considered a ‘significant’ effect in terms of the EIA Regulations; and
- a level of minor or less will be considered ‘not significant’ in terms of the EIA Regulations.

Table 21.13: Matrix Used for the Assessment of the Significance of the Effect

Sensitivity of Receptor	Magnitude of Impact			
	Negligible	Low	Medium	High
Negligible	Negligible	Negligible or Minor	Negligible or Minor	Minor
Low	Negligible or Minor	Negligible or Minor	Minor	Minor or Moderate
Medium	Negligible or Minor	Minor	Moderate	Moderate or Major
High	Minor	Minor or Moderate	Moderate or Major	Major
Very High	Minor	Moderate or Major	Major	Major

Table 21.14: Definition of Significance

Impact	Justification
Negligible	No effects or those that are beneath levels of perception, within normal bounds of variation, or within the margin of forecasting error.
Minor	These beneficial or adverse effects are generally, but not exclusively, raised as local factors. They are unlikely to be critical in the decision-making process but are important in enhancing the subsequent design of the Proposed Development.
Moderate	These beneficial or adverse effects have the potential to be important and may influence the decision-making process. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse or beneficial effect on a particular resource or receptor.
Major	These beneficial or adverse effects are very important and are likely to be material in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national, or

Impact	Justification
	regional importance. However, a major change in a site or feature of local importance may also enter this category.

21.9 Embedded Mitigation

21.9.1 As part of the Proposed Development design process, a number of Embedded Mitigation measures have been proposed to reduce the potential for impacts on cultural heritage (see Table 21.15). They are considered at every stage of the Proposed Development through design and best practice and, as there is a commitment to implementing these measures, these have been considered in the assessment presented in Section 21.10 (i.e. the determination of magnitude and therefore significance assumes implementation of these measures). These Embedded Mitigations are considered standard industry practice for this type of development.

Table 21.15: Embedded Mitigations Adopted as Part of the Proposed Development

ID*	Embedded Mitigation Adopted as Part of the Proposed Development	Justification
24	Development of, and adherence to, a Development Specification and Layout Plan (DSLPL). The development of the DSLPL includes consultation with the relevant authorities for approval, including the MCA and NLB.	To provide visual uniformity and visual coherence in views including those from cultural heritage assets.
34	Drafting and implementation of a decommissioning programme, prepared in accordance with requirements of the Energy Act 2004, which will set out the extent of infrastructure to be removed as well as the methods and processes which will be used.	To ensure that operational phase impacts cease upon decommissioning.
35	Colouration of the Wind Turbines and blades to industry standard (light grey).	To reduce visibility and prominence of the Wind Turbines in the setting of cultural heritage assets.
46	Wind Turbines will be of consistent form and rotor diameter.	To provide visual uniformity and visual coherence in views including those from heritage assets.

*See Volume 3, Technical Appendix 4.6: Schedule of Mitigation and Commitments

21.10 Assessment of Significance

21.10.1 Table 21.16 summarises the potential impacts arising from the construction, O&M and decommissioning phases of the Proposed Development, as well as the MDS against which each impact has been assessed. An assessment of the likely significance of the effects of the Proposed Development on the cultural heritage receptors caused by each identified impact is given below.

21.10.2 It should be noted that assessment has been undertaken using an indicative layout based on the number of Wind Turbines giving rise to the MDS, presented in Table 21.9. The final layout and locations of Wind Turbines will be developed post-consent and will be within the PDE.

IMPACT 1 - LONG TERM VISUAL CHANGE IN THE SETTING OF CULTURAL HERITAGE RECEPTORS (DAYTIME)

Buchanness Lighthouse (CH1)

Magnitude of Impact

- 21.10.3 The predicted view of the Proposed Development from Buchanness Lighthouse (CH1) is shown in the photomontage Volume 3, Technical Appendix 21.2: Cultural Heritage – Accompanying Graphics (Figure 21.11c). This is representative of the Proposed Development’s appearance from the coastal area in which the lighthouse is sited and experienced. However, in views of the lighthouse from the wider landscape it is generally seen in combination with modern development along the coastal strip.
- 21.10.4 The proposed Wind Turbines will be located between approximately 51 km and 68 km to the south-south-east of the lighthouse. The photomontage demonstrates that all 40 Wind Turbines will theoretically be visible. These will appear beyond the horizon; the hubs of approximately 16 will be visible just above the horizon with only the blades of the remainder appearing above the horizon. Given the distance, the Wind Turbines will only be visible in very clear conditions.
- 21.10.5 In views from the sea front in Boddam the proposed Wind Turbines may be seen in the distance beyond the lighthouse. Given their distance from the viewer, it is very unlikely that they will be experienced as distracting or competing with the lighthouse in these views. The proposed Wind Turbines will not be seen in combination with the lighthouse in views from Peterhead.
- 21.10.6 The Wind Turbines will represent a very distant change in the lighthouse’s setting that will not challenge the lighthouse’s prominence in the townscape, landscape or seascape or affect the appreciation of its designed relationship with the sea.
- 21.10.7 It is concluded that the Proposed Development will leave the Cultural Significance of the lighthouse unchanged and will not affect the appreciation and experience of the listed building. The impact will be of negligible magnitude. The impact will be long term and reversible, ceasing upon decommissioning.

Sensitivity of the Receptor

- 21.10.8 Buchanness Lighthouse is a Category A Listed Building. It is of national importance and therefore considered to be of high sensitivity.

Significance of the Effect

- 21.10.9 Overall, the magnitude of the impact is deemed to be negligible, and the sensitivity of the receptor is considered to be high. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 21.10.10 No Additional Mitigation is considered necessary because the likely effect in the absence of mitigation is not significant in EIA terms.

New Slains Castle (CH2)

Magnitude of Impact

- 21.10.11 The predicted view of the Proposed Development from New Slains Castle (CH2) is shown in the photomontage in Volume 3, Technical Appendix 21.2: Cultural Heritage – Accompanying Graphics – Accompanying Graphics (Figure 21.12c). This is representative of the Proposed Development’s appearance from the area in which the castle is sited and experienced. From within the castle itself, the proposed Wind Turbines will be visible only from the south-eastern windows on the ground floor. These command clear views out to sea. The visualisation provided is therefore also representative of these views of the Proposed Development. However, the Proposed Development will for the most part be screened from view as one moves around the labyrinthine interior of the castle.
- 21.10.12 The proposed Wind Turbines will be located between approximately 47 km and 65 km to the south-east of the castle. The photomontage demonstrates that all 40 Wind Turbines will theoretically be visible. The towers will largely be hidden beyond the horizon.
- 21.10.13 In views when approaching the castle from the north the proposed Wind Turbines will generally be obscured by the landform or the castle itself, whilst when approaching from the west they will be seen in succession with the castle. They will not be seen in combination with it from the path or in views from the shore.
- 21.10.14 The castle is dramatically sited on clifftops overlooking the North Sea. This contributes to an understanding of its original function as a defensive structure, but, perhaps more importantly, to the castle’s Romantic sense of place. The silhouetted ruins are striking when seen from the surrounding landscape and the open views out to sea are key to the aesthetic appreciation of the castle. The dramatic qualities of the location were commented on by Samuel Johnson and tie into the castle’s association with Bram Stoker, the castle being said to have provided the inspiration for Dracula’s Castle.
- 21.10.15 The proposed Wind Turbines will not affect the appreciation of the castle’s defensive position or the appreciation of its considerable architectural interest. Nor will they affect views of the castle and hence its value as a dramatic landmark. However, their appearance on the horizon, may be perceived as intrusive and detracting from the dramatic open character of seaward views, which is closely related to the castle’s literary associations. The degree to which this will occur will be significantly limited by the proposed Wind Turbines’ distance from the viewer. In most conditions the Wind Turbines will be recessive in these views owing to their colour or obscured from view owing to atmospheric conditions, particularly during stormy conditions. It is considered therefore that this would represent an adverse impact of low magnitude. The impact will be long term and reversible, ceasing upon decommissioning.

Sensitivity of the Receptor

- 21.10.16 New Slains Castle is a Category B Listed Building. It is of regional importance and therefore considered to be of medium sensitivity.

Significance of the Effect

- 21.10.17 Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be medium. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 21.10.18 No Additional Mitigation is possible in respect the predicted long term effect arising from the Proposed Development.

Slains Castle (CH3)

Magnitude of Impact

- 21.10.19 The predicted view of the Proposed Development from Slains Castle (CH3) is shown in the photomontage in Volume 3, Technical Appendix 21.2: Cultural Heritage – Accompanying Graphics (Figure 21.13c). This is representative of the Proposed Development’s appearance from the headland where the castle is sited and experienced.
- 21.10.20 The proposed Wind Turbines will be located between approximately 46 km and 62 km to the south-east of the castle. The photomontage demonstrates that all 40 Wind Turbines will theoretically be visible. The towers will largely be hidden beyond the horizon.
- 21.10.21 The proposed Wind Turbines will not be seen in the initial view of the castle when approaching from the track to its west. As one approaches, they will become visibly offset from the castle, which is seen silhouetted against the sea and sky.
- 21.10.22 The proposed Wind Turbines will not affect the appreciation of the castle’s defensive location. Given their distance from the viewer, they are unlikely to be experienced as distracting from the castle or detracting from its aesthetic appreciation.
- 21.10.23 It is concluded that the Proposed Development will leave the Cultural Significance of the castle unchanged and will not affect the appreciation and experience of the listed building. The impact will be of negligible magnitude. The impact will be long term and reversible, ceasing upon decommissioning.

Sensitivity of the Receptor

- 21.10.24 Slains Castle is a Scheduled Monument. It is of national importance and therefore considered to be of high sensitivity.

Significance of the Effect

- 21.10.25 Overall, the magnitude of the impact is deemed to be negligible, and the sensitivity of the receptor is considered to be high. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 21.10.26 No Additional Mitigation is considered necessary because the likely effect in the absence of mitigation is not significant in EIA terms.

Torry Battery (CH4)

Magnitude of Impact

- 21.10.27 The predicted view of the Proposed Development from Torry Battery (CH4) is shown in the photomontage in Volume 3, Technical Appendix 21.2: Cultural Heritage – Accompanying Graphics – Accompanying Graphics (Figure 21.14c). This is representative of the Proposed Development’s appearance from the battery.
- 21.10.28 The proposed Wind Turbines will be located between approximately 40 km and 56 km to the south-east of the battery. The photomontage demonstrates that all 40 Wind Turbines will theoretically be visible, depending on weather conditions. The towers will be partially below the horizon. The proposed Wind Turbines will appear behind the prominent form of Girdleness Lighthouse. They will be seen in succession with the operational Aberdeen and Kincardine OWFs, which are respectively 6 km and 16 km from the battery (Volume 3, Technical Appendix 21.2: Cultural Heritage – Accompanying Graphics: Figure 21.14d).
- 21.10.29 The proposed Wind Turbines will not affect the key views from the battery over Aberdeen Bay, which it was sited to command. They will, however, appear as a distant change in views out to sea, which the battery was also sited with reference to. As they will lie beyond the horizon there is no potential for them to interfere with the appreciation of the functional visual relationship between the battery and views out to sea.
- 21.10.30 It is considered therefore that this would represent an adverse impact of negligible magnitude. The impact will be long term and reversible, ceasing upon decommissioning.

Sensitivity of the Receptor

- 21.10.31 Torry Battery is a Scheduled Monument. It is of national importance and therefore considered to be of high sensitivity.

Significance of the Effect

- 21.10.32 Overall, the magnitude of the impact is deemed to be negligible, and the sensitivity of the receptor is considered to be high. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 21.10.33 No Additional Mitigation is considered necessary because the likely effect in the absence of mitigation is not significant in EIA terms.

Girdleness Lighthouse (CH4)

Magnitude of Impact

- 21.10.34 The predicted view of the Proposed Development from Girdleness Lighthouse is shown in the photomontage in Volume 3, Technical Appendix 20.2: Seascape, Landscape and Visual Impact – Accompanying Graphics (Figure 20.32c). The predicted appearance of the Proposed Development in combination with Girdleness Lighthouse in views from Aberdeen Esplanade is shown in Volume 3, Technical Appendix 20.2: Seascape, Landscape and Visual Impact – Accompanying Graphics (Figure 20.30 & Figure 20.31) and from Torry Battery in

Volume 3, Technical Appendix 21.2: Cultural Heritage – Accompanying Graphics (Figure 21.14c).

- 21.10.35 The proposed Wind Turbines will be located between approximately 40 km and 56 km to the south-east of the lighthouse. The photomontage demonstrates that all 40 Wind Turbines will theoretically be visible arrayed along the horizon, depending on weather conditions. The towers will be partially below the horizon. They will be seen in succession with the operational Aberdeen and Kincardine OWFs, which are respectively 6 km and 16 km from the lighthouse.
- 21.10.36 The proposed Wind Turbines' appearance beyond the horizon in views from the lighthouse will not affect the appreciation of the lighthouse's intended functional relationship with the sea.
- 21.10.37 In views of the lighthouse from Torry Battery, the proposed Wind Turbines will appear in the background, beyond the lighthouse. In such views, the lighthouse will remain the dominant feature, with the Wind Turbines likely to be perceived as recessive features owing to their greater distance from the viewer and colour. The presence of the Wind Turbines will not detract from the appreciation of the lighthouse's intended prominence in the seascape.
- 21.10.38 It is considered therefore that this would represent an adverse impact of negligible magnitude. The impact will be long term and reversible, ceasing upon decommissioning.

Sensitivity of the Receptor

- 21.10.39 Girdleness Lighthouse is a Category A Listed Building. It is of national importance and therefore considered to be of high sensitivity.

Significance of the Effect

- 21.10.40 Overall, the magnitude of the impact is deemed to be negligible, and the sensitivity of the receptor is considered to be high. The effect will therefore be of **Minor** adverse significance, which is not significant in EIA terms.

Additional Mitigation and Residual Effect

- 21.10.41 No Additional Mitigation is considered necessary because the likely effect in the absence of mitigation is not significant in EIA terms.

Dunnottar Castle (CH5)

Magnitude of Impact

- 21.10.42 The predicted view of the Proposed Development from Dunnottar Castle (CH5) is shown in the photomontage in Volume 3, Technical Appendix 21.2: Cultural Heritage – Accompanying Graphics (Figure 21.15c). This is representative of the Proposed Development's appearance from the coastal strip in which the castle is sited and experienced. However, visibility from within the castle will be localised owing to the screening effect of the buildings of which the castle is composed. It should be noted that the visualisation is 'worst case' and is based on excellent visibility. The much closer Kincardine OWF are barely perceptible in the photomontage.
- 21.10.43 The proposed Wind Turbines will be located between approximately 43 km and 62 km to the north-east of the castle. All 40 Wind Turbines will theoretically be

visible. The lower parts of the towers will be hidden below the horizon to varying degrees. The proposed Wind Turbines will be seen in combination with the operational Kincardine OWF, which comprises six Wind Turbines the closest of which is approximately 18 km from the castle (Volume 3, Technical Appendix 21.2: Cultural Heritage – Accompanying Graphics, Figure 21.15a). The northernmost of the proposed Wind Turbines will appear behind Kincardine OWF with the rest of the array extending to the right. The proposed Wind Turbines will appear of very similar height to those of the Kincardine OWF, but will be much less prominent given their greater distance from the viewer.

- 21.10.44 The proposed Wind Turbines will appear in succession with the operational Seagreen 1 OWF (Volume 3, Technical Appendix 21.2: Cultural Heritage – Accompanying Graphics, Figure 21.15d). This comprises 114 Wind Turbines, the closest of which are approximately 35 km to the south-east of the castle. The proposed Wind Turbines will appear of a similar scale to those of the Seagreen 1 OWF.
- 21.10.45 The availability of such views will vary greatly with location. The proposed Wind Turbines will theoretically be seen during the approach along the footpath leading to the castle from the car park and from the headland to the castle's south-west and may theoretically distract from the castle. However, the likelihood of this occurring is greatly limited by the proposed Wind Turbines' distance from the viewer, which will frequently result in their being difficult to see due to atmospheric conditions and the Wind Turbines' colour, combined with the imposing form of the castle. This will result in the castle remaining the dominant focus of views from these areas.
- 21.10.46 The proposed Wind Turbines will theoretically be visible from some areas within the castle, in particular the area of the cemetery, the top of the keep and the east range. From many other areas the castle itself curtails views in the direction of the Array Area. Where visible, the proposed Wind Turbines will appear a distant change in general views and will frequently be difficult to see owing to atmospheric conditions and the colour of the Wind Turbines.
- 21.10.47 It is considered that, when visible, the proposed Wind Turbines will result in change in the castle's setting that will slightly detract from the aesthetic experience of the castle, depending on the preferences of the viewer, and hence its Cultural Significance. This would represent an adverse impact of low magnitude. The impact will be intermittent, owing to weather conditions, long term and reversible, ceasing upon decommissioning.

Sensitivity of the Receptor

- 21.10.48 Dunnottar Castle is a Scheduled Monument. It is of national importance and therefore considered to be of high sensitivity.

Significance of the Effect

- 21.10.49 Overall, the magnitude of the impact is deemed to be low, and the sensitivity of the receptor is considered to be high. It is considered that the effect will be of **Minor** adverse significance as the impact is at the lower end of what may be considered adverse. The effect will occur infrequently. This is not significant in EIA terms.

Additional Mitigation and Residual Effect

21.10.50 No Additional Mitigation is considered necessary because the likely effect in the absence of mitigation is not significant in EIA terms.

21.11 Proposed Monitoring

21.11.1 No significant effects are predicted in respect of cultural heritage. No monitoring is proposed.

21.12 Inter-Related Effects

21.12.1 A description of the likely inter-related effects arising from the Proposed Development on Cultural Heritage is provided in Volume 2, Chapter 23: Inter-Related Effects.

21.12.2 Inter-relationships are considered to be the impacts and associated effects of different aspects of Bowdun OWF on the same receptor. Inter-related effects are considered to be either:

- Lifetime effects: Assessment of the scope for effects that occur throughout more than one phase of Bowdun OWF (construction, O&M and decommissioning), to interact to potentially create a more significant effect on a receptor than if just assessed in isolation in these three project stages (e.g. underwater sound effects from piling, operational Wind Turbines, vessels and decommissioning);
- Receptor-led effects: Assessment of the scope for all effects to interact, spatially and temporally, to create inter-related effects on a receptor. As an example, all effects on Infrastructure and Other Users, such as displacement of recreational activities and impacts to cables or pipelines or restrictions on access to these assets, may interact to produce a different, or greater effect on this receptor than when the effects are considered in isolation. Receptor-led effects may be short-term, temporary or transient effects, or incorporate longer-term effects.

21.12.3 Across the Proposed Development's lifetime, the effects on cultural heritage receptors are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phase or when considered in conjunction with other topics addressed in this Offshore EIA Report.

21.13 Cumulative Effects Assessment

Methodology

21.13.1 The Cumulative Effects Assessment (CEA) assesses the impact associated with the Proposed Development together with other relevant projects and activities. Cumulative effects are defined as the effect of the Proposed Development in combination with the effects from a number of different projects, on the same receptor or resource. Further details on CEA methodology are provided in Volume 1, Chapter 4: Environmental Impact Assessment Methodology.

21.13.2 The projects selected as relevant to the CEA presented within this chapter are based upon the results of a screening exercise (see Volume 3, Technical Appendix 4.4: Cumulative Effects Assessment – Screening). Volume 3, Technical

Appendix 4.4: Cumulative Effects Assessment – Screening provides further information in relation to other projects and how this information is obtained and applied to the assessment. 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.

21.13.3 In undertaking the CEA for the Proposed Development, it is important to bear in mind that other projects under consideration will have differing potential for proceeding to an operational stage and hence a differing potential to ultimately contribute to a cumulative impact alongside the Proposed Development. Therefore, a tiered approach has been adopted. This provides a framework for placing relative weight upon the potential for each project to be included in the CEA to ultimately be realised, based upon the project's current stage of maturity and certainty in the projects' parameters. The tiered approach which will be utilised within the Proposed Development CEA employs the following tiers:

- Tier 1 – The onshore elements of the Project;
- Tier 2 – Projects that have an application submitted, are consented, under construction or operational to the extent not already captured with the baseline;
- Tier 3 – Projects which have submitted a scoping report and/or have received a scoping opinion; and
- Tier 4 – Reasonably foreseeable projects including those with Crown Estate Scotland option or lease agreements.

21.13.4 Following an initial screening exercise that has considered projects within the Cultural Heritage Study Area (Figure 21.9), no projects have been scoped into the CEA:

- Tier 1 projects, the cable will be buried and above ground structures associated with it (e.g. small wooden-fenced enclosures and markers) have no potential to affect the setting of any of the cultural heritage receptors. Similarly, the Onshore Substation has no potential to affect any of the cultural heritage receptors owing to its inland location and lack of intervisibility.
- Operational Tier 2 projects, comprising Aberdeen, Kincardine, Hywind Scotland and Seagreen Phase 1. These form a part of the baseline setting of cultural heritage receptors.
- Seagreen 1A (Tier 2: Consented), will be subsumed within Seagreen 1 in views from and of the cultural heritage receptors. There is therefore no potential for greater or additional effects in respect of heritage receptors to arise.
- Salamander (Tier 2: Consented), the CHIA submitted in support of the application predicted no adverse effects in respect of the cultural heritage receptors considered here. Salamander OWF is located approximately 59 km from the Array Area, and it is considered that there is no potential for any cumulative effects to arise.

- Inch Cape (Tier 2: Under Construction), is approximately 42 km from the nearest cultural heritage receptor (CH5: Dunnottar Castle) and the ZTV submitted with the application indicates minimal intervisibility from the castle. It is considered that there is no potential for significant cumulative effects to arise.
- Berwick Bank (Tier 2: Consented), Muir Mohr (Tier 2: In Planning), Ossian (Tier 2: In Planning) and Morven North and South (Tier 3: Pre-Application). Although within the Cultural Heritage Study Area, these are over 60 km from the cultural heritage receptors. They are therefore too distant to affect the setting of the receptors and there is no potential for cumulative effects to arise.
- Flora (Tier 4: Pre-Planning), lies approximately 46 km to the north of the Array Area. Where visible from the cultural heritage receptors considered here, it would be seen beyond the Hywind Scotland and is unlikely to result in any material change in their setting.

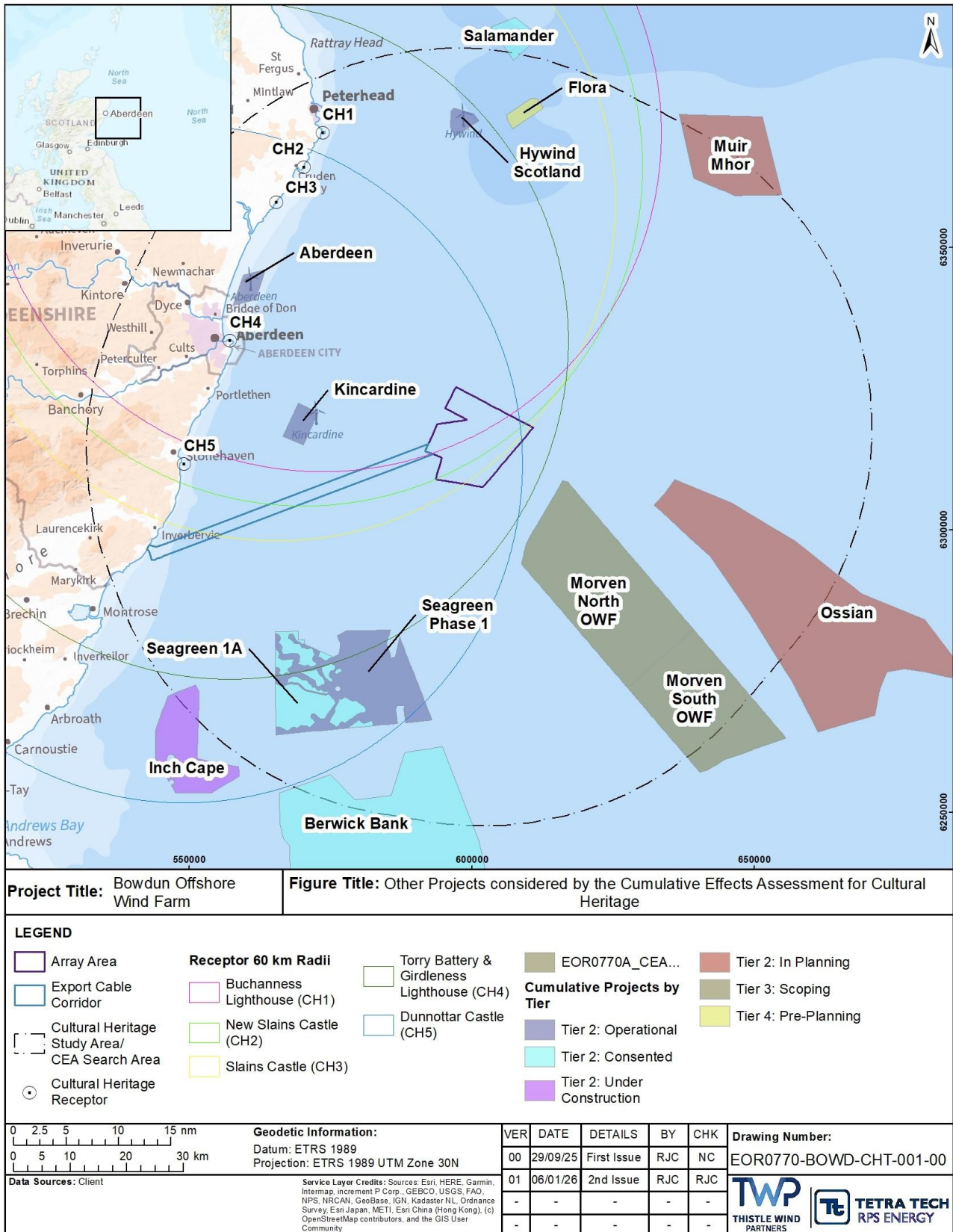


Figure 21.9: Other Projects considered by the CEA for Cultural Heritage

21.14 Proposed Monitoring

21.14.1 No significant effects are predicted in respect of cultural heritage. No monitoring is proposed.

21.15 Transboundary Effects

21.15.1 A screening of transboundary effects has been carried out (see Volume 3, Technical Appendix 4.5: Transboundary Effects Screening) and has identified that there were no likely significant transboundary effects with regard to cultural heritage from the Proposed Development upon the interests of European Economic Area States.

21.16 Summary of Impacts, Mitigation, Likely Significant Environmental Effects and Monitoring

21.16.1 Information on cultural heritage within the Cultural Heritage Study Area was collected through desktop review and site visits. This information is summarised in Table 21.5 and Table 21.6.

21.16.2 Table 21.16 presents a summary of the potential impacts, Embedded Mitigation and the conclusion of likely significant environmental effects in EIA terms in respect of cultural heritage.

21.16.3 Overall, it is concluded that there will be no likely significant environmental effects arising from the Proposed Development during the construction, O&M or decommissioning phases.

21.16.4 Overall, it is concluded that there will be no likely significant cumulative effects from the Proposed Development alongside other projects/plans.

21.16.5 No likely significant transboundary effects have been identified in regard to effects of the Proposed Development.

Table 21.16: Summary of Impact Assessment and Significance of Residual Effects

Potential Impact	Phase*			Embedded Mitigation	Receptor	Sensitivity of Receptor	Magnitude of Impact	Significance of Effect	Additional Mitigation	Significance Residual Effect	Proposed Monitoring
	C	O	D								
Long term visual change in the setting of cultural heritage receptors (daytime)	x	✓	x	24. Development of, and adherence to, a DSLP.	Buchanness Lighthouse	High	Negligible	Minor	None required.	Minor	None
				34. Drafting and implementation of a decommissioning programme, prepared in accordance with requirements of the Energy Act 2004, which will set out the extent of infrastructure to be removed as well as the methods and processes which will be used.	New Slains Castle	Medium	Low	Minor	None required.	Minor	None
					Slains Castle	High	Negligible	Minor	None required.	Minor	None
					Torry Battery	High	Negligible	Minor	None required.	Minor	None
					Girdleness Lighthouse	High	Negligible	Minor	None required.	Minor	None
					Dunnottar Castle	High	Low	Minor	None required.	Minor	None
			35. Colouration of the Wind Turbines and blades to industry standard (light grey)								
			46. Wind Turbines will be of identical form and rotor diameter.								

*Proposed Development Phase refers to construction (C), O&M (O) and decommissioning (D)

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