LLŶR FLOATING OFFSHORE WIND PROJECT

Llŷr 1 Floating Offshore Wind Farm

Environmental Statement

Volume 2: Chapter 09 – Onshore Historic Environment and Cultural Heritage

August 2024

Prepared by: Llŷr Floating Wind Ltd

FLOVENTIS ENERGY

Document Status

Version	Authored by	Reviewed by	Approved by	Date
FINAL	AECOM	AECOM	AECOM	August 2024

Approval for Issue

Prepared by	AECOM
Prepared for	Llŷr Floating Wind Limited
Approved by	Jay Hilton-Miller

Acronyms and abbreviations

Acronym or Abbreviation	Definition	Acronym or Abbreviation	Definition
CEA	Cumulative Effects Assessment	MLWS	Mean Low Water Springs
DAT	Dyfed Archaeological Trust	NRW	Natural Resources Wales
DBA	Desk Based Assessment	PCNPA	Pembrokeshire Coast National Park Authority
DMRB	Design Manual for Roads and Bridges	PCC	Pembrokeshire County Council
ES	Environmental Statement	PRN	Primary Record Number
HDD	Horizontal Directional Drilling	RCAHMW	Royal Commission on the Ancient and Historical Monuments of Wales
HER	Historic Environment Record	RLB	Red Line Boundary
LB	Listed Building	SM	Scheduled Monument
LDP	Local Development Plan	SPG	Supplementary Planning Guidance
MHWS	Mean High Water Springs		

Glossary of project terms

Term	Definition
The Applicant	The developer of the Project, Llŷr Floating Wind Limited.
Array	All wind turbine generators, inter array cables, mooring lines, floating sub-structures and supporting subsea infrastructure within the Array Area, as defined, when considered collectively, excluding the offshore export cable(s).
Array Area	The area within which the wind turbine generators, inter array cables, mooring lines, floating sub-structures and supporting subsea infrastructure will be located.
Floventis Energy	A joint venture company between Cierco Limited and SBM Offshore Limited of which Llŷr Floating Wind Limited is wholly owned by.
Landfall	The location where the offshore export cable(s) from the Array Area, as defined, are brought onshore and connected to the onshore export cables (as defined) via the transition joint bays (TJB).
Llŷr 1	The proposed Project, for which the Applicant is applying for Section 36 and Marine Licence consents. Including all offshore and onshore infrastructure and activities, and all project phases.
Marine Licence	A licence required under the Marine and Coastal Access Act 2009 for marine works which is administered by Natural Resources Wales (NRW) Marine Licensing Team (MLT) on behalf of the Welsh Ministers.
Offshore Development Area	The footprint of the offshore infrastructure and associated temporary works, comprised of the Array Area and the Offshore Export Cable Corridor, as defined, that forms the offshore boundary for the S36 Consent and Marine Licence application.

Term	Definition
Offshore Export Cable	The cable(s) that transmit electricity produced by the WTGs to Landfall.
Offshore Export Cable Corridor (OfECC)	The area within which the offshore export cable circuit(s) will be located, from the Array Area to the Landfall.
Onshore Development Area	The footprint of the onshore infrastructure and associated temporary works, comprised of the Onshore Export Cable Corridor and the Onshore Substation, as defined, and including new access routes and visibility splays, that forms the onshore boundary for the planning application.
Onshore Export Cable(s)	The cable(s) that transmit electricity from the landfall to the onshore substation.
Onshore Export Cable Corridor (OnECC)	The area within which the onshore export cable circuit(s) will be located.
Onshore Substation	Located within the Onshore Development Area, converts high voltage generated electricity into low voltage electricity that can be used for the grid and domestic consumption.
Proposed Project	All aspects of the Llŷr 1 development (i.e. the onshore and offshore components).
Project Design Envelope (PDE)	The PDE approach sets out a series of realistic design assumptions from which worst-case parameters are drawn, and allows specific reasoned extents (normally maximum extent, but minimum is also possible) for key assessment parameters to be assessed on a 'realistic worst-case' basis.
Section 36 consent	Consent to construct and operate an offshore generating station, under Section 36 (S.36) of the Electricity Act 1989. This includes deemed planning permission for onshore works.

Contents

List of Tables

9. HISTORIC ENVIRONMENT AND CULTURAL HERITAGE

9.1 Introduction

1. Llŷr Floating Wind Limited (hereafter the Applicant) is proposing to develop the Llŷr 1 Floating Offshore Wind Farm (hereafter referred to as the proposed Project), located approximately 35 km off the coast of Pembrokeshire in the Celtic Sea.
2. The proposed Project is a test and demonstration wind farm development, comprising up to 10 wind turbine generators (WTGs). The proposed Project will make landfall at Freshwater West before connecting into the national grid network at Pembroke Dock power station.
3. The Applicant is seeking offshore (a Section 36 consent and Marine Licence) and onshore (deemed planning permission) consents for Llŷr 1, and this chapter forms part of the Environmental Statement (ES) which is submitted in support of those consent applications. This chapter describes the potential impacts and effects of the proposed Project on the historic environment and cultural heritage during the construction, operation and maintenance and decommissioning phases, and includes mitigation and good practice measures to reduce the impacts of the proposed Project on the historic environment and cultural heritage.
4. **Section 9.8.4** of this ES chapter provides a summary of the impact assessment undertaken and any residual significant effects on the historic environment and cultural heritage following consideration of any mitigation measures.
5. This chapter addresses effects upon the onshore resource, above Mean High Water Springs (MHWS). Offshore impacts below MHWS are assessed in **Chapter 24: Offshore Historic Environment and Cultural Heritage**, prepared by Coracle Archaeology.
6. Several historic receptors have been identified within the Offshore Development Area on the intertidal zone at Freshwater West between the MHWS and the Mean Low Water Springs (MLWS) (see **Chapter 24: Marine Archaeology**). As the terrestrial jurisdiction of the PCC and PCNPA extends down to the MLWS, the historic receptors in the intertidal zone have also been included in **Section 9.10, Table 9-15** Assessment Summary for ease of reference.
7. Additional information to support the assessment includes:
8. Cultural Heritage Desk-Based Assessment was carried out by the Dyfed Archaeological Trust (Poucher 2021) and is provided in **Appendix 9A: Heritage Desk Based Assessment.**
9. The assessment has been undertaken by Dr James Lyttleton. Further details of the proposed Project Team's competency are provided in **Appendix 1A: Statement of Competence**.

9.2 Legislation, Policy and Guidance

10. The following sections identify specific legislation, policy and guidance that is applicable to the assessment of potential impacts upon the Historic Environment and Cultural Heritage. Further detail on the wider legislation, policy and guidance relevant to this ES is provided in **Chapter 02: Regulatory and Planning Policy Context**.

9.2.1. Legislation

11. The legislation that is applicable to the assessment of the Historic Environment and Cultural Heritage is summarised below.

    - The Ancient Monuments and Archaeological Areas Act 1979 as amended by the HE(W)A 1979 requires the Welsh Government and Cadw to compile and maintain a Schedule of monuments considered to be of national importance. The statutory consent of Cadw is required before any works are carried out which would have the effect of demolishing, destroying, damaging, removing, repairing, altering, adding to, flooding or covering up a

Scheduled Monument. In addition, impacts of development works upon the setting of a Scheduled Monument form an important planning consent consideration.

- Planning (Listed Buildings and Conservation Areas) Act 1990 (as amended) is the principal statutory instrument which must be considered in the determination of any application affecting listed buildings and conservation areas. Under this legislation, local planning authorities must have special regard to the desirability of preserving a listed building, its setting, or any features of special architectural or historic interest that it possesses. It also places a duty on local planning authorities to publish proposals for their conservation areas and exercise their planning functions in a manner that gives regard to the desirability of preserving and enhancing the character or appearance of these areas. The effects of the proposed Project on conservation areas, listed buildings and their settings have been considered as part of the assessment of built heritage effects reported in this chapter. This too has since been amended by the Historic Environment (Wales) Act 2016.
- Historic Environment (Wales) Act 2016. This is the primary legislation for protecting heritage assets in Wales. Cadw, the Welsh Government's historic environment service, define the purpose of the Act as to:
- Give more effective protection to listed buildings and scheduled monuments;
    - Improve the sustainable management of the historic environment; and
    - Introduce greater transparency and accountability into decisions taken on the historic environment.

9.2.2. National Planning Policy

Table 9-1. A summary of national planning policy relevant to Historic Environment and Cultural Heritage

Summary of policy	How and where it is considered in the chapter
Future Wales: The National Plan to 2040 (2021). The plan is in line with the Well Being of Future Generations (Wales) Act 2015. According to Policy 18 on Renewable and Low Carbon Energy Developments of National Significance, development will be permitted if there are no unacceptable adverse impacts on statutorily protected bult heritage assets. Also, according to Policy 32 – Haven Waterway and Energy, in determining any applications for energy proposals, consideration should be given to the contribution it will make to decarbonising energy supplies, the impacts on the landscape, seascapes, natural and historic environment and the economic benefits they would bring to the region.	The overall ES chapter takes into account the requirements of Policies 18 and 32 of Future Wales: the National Plan to 2040 (2021).
Planning Policy Wales (PPW) (Edition 12, February 2024) ensures that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015 and the Well-being of Future Generations (Wales) Act	The overall ES chapter considers the requirements of Planning Policy Wales (Edition 12, February 2024).

Summary of policy	How and where it is considered in the chapter
2015. The planning system must consider the Welsh Government's objectives to protect, conserve, promote and enhance the historic environment as a resource of present and future generations.	
Technical Advice Note (TAN) 24: The Historic Environment (2017) supplements Planning Policy Wales (Edition 11, February 2021). This provides guidance on considering the historic environment in the planning system, including World Heritage Sites, scheduled monuments, archaeological remains, listed buildings, conservation areas, historic parks and gardens, historic landscapes and historic assets of special local interest. This recommends the use of the Conservation Principles for the Sustainable Management of the Historic Environment in Wales (Cadw 2011) in assessing potential impacts of development upon the historic environment. Cadw have also published additional guidance for assessing impacts upon designated assets in the form of Heritage Impact Assessment in Wales (2017) and Setting of Historic Assets in Wales (2017).	The ES chapter considers the requirements of Technical Advice Note (TAN) 24: The Historic Environment (2017).

9.2.3. Local Planning Policy

Table 9-2. A summary of local planning policy relevant to Historic Environment and Cultural Heritage

Summary of policy	How and where it is considered in the chapter
Pembrokeshire County Council LDP (2013 - currently undergoing review). The historic environment is mentioned throughout the document in numerous policies, underlining its significance to the county. The main policy reference to the Historic Environment is found in policy GN.38 Protection and Enhancement of the Historic Environment, which states that development which affects sites and landscapes of architectural and/or historical merit or archaeological importance, or their setting, will only be permitted where it can be demonstrated that it would protect or enhance their character and integrity (Pembrokeshire Council 2013, 127).	The ES chapter takes into account the requirements of policy GN.38 Protection and Enhancement of the Historic Environment in the Pembrokeshire County Council LDP (2013 – currently undergoing review).
Pembrokeshire Coast National Park LDP (2020). Policy 8 Special Qualities (Strategic Policy) includes the historic environment. The aim of this policy is to conserve, enhance and promote the historic environment of the National Park, its	The ES chapter considers the requirements of Policy 8 Special Qualities (Strategic Policy) in the Pembrokeshire Coast National Park (2020).

Summary of policy	How and where it is considered in the chapter
archaeological resource, historic buildings and landscapes, parks and gardens (Pembrokeshire Coast National Park 2020, 16, 50 & 59-60).	
Pembrokeshire Coast National Park Authority and Pembrokeshire County Council LDP Historic Environment (Archaeology) Supplementary Planning Guidance (2021) provides detailed information on how planning applications with the potential to impact upon archaeology within Pembrokeshire will be dealt with. It also provides information on the way in which Development Plan policies will be applied.	The ES chapter considers the requirements of the Supplementary Planning Guidance.

9.2.4. Guidance

Table 9-3. A summary of guidance relevant to Historic Environment and Cultural Heritage

Summary of Guidance	How and where it is considered in the chapter
Design Manual for Roads and Bridges (DMRB, LA104 for Environmental Assessment & Monitoring)	The baseline in **Section 9.5** of the ES chapter considers the requirements of guidance.
Design Manual for Roads and Bridges (DMRB, LA106 Cultural Heritage Assessment)	The ES chapter considers the requirements of guidance.
Conservation Principles (Welsh Government / Cadw 2011)	The ES chapter considers the requirements of guidance.
Heritage Impact Assessment in Wales (Welsh Government / Cadw 2017)	The ES chapter considers the requirements of guidance.
Managing Historic Character in Wales (Welsh Government / Cadw 2017)	The ES chapter considers the requirements of guidance.
Setting of Historic Assets in Wales (Welsh Government / Cadw 2017)	The ES chapter considers the requirements of guidance.
Standard and Guidance for Historic Environment Desk-Based Assessment (Chartered Institute for Archaeologists 2020)	The ES chapter considers the requirements of guidance.
Principles of Cultural Heritage Impact Assessment in the UK (Institute for Environmental Management & Assessment 2021)	The ES chapter considers the requirements of guidance.

9.3 Stakeholder Engagement and Consultation

12. Consultation with statutory and non-statutory organisations is a key element of the EIA process. Consultation with regards to the Historic Environment and Cultural Heritage has been undertaken to inform the approach to, and scope of, the assessment.

13. Stakeholders for the proposed Project include statutory consultees, landowners, local communities and other sea users. In addition to the statutory consultation process, there has

been ongoing engagement with statutory and non-statutory consultees to steer the development of the proposed Project and this is detailed in **Table 9-4.**

9.3.5. Summary of Stakeholder Consultations

Table 9-4. Summary of the key issues raised by consultees and how each issue was addressed

Consultee	Consultation type and date	Comment raised	How issue has been addressed and location of response in chapter
Scoping and Pre-application			
Cadw (Laura Cooper)	Scope of the assessment, 1 February 2024	Environment impact assessment will consider the impacts of the works on designated historic receptors within 5km.	Extent of Study Area for designated historic receptors to within 3 km agreed. See **sections 9.4.8** and **9.5.1**.
Cadw (Laura Cooper)	Scope of the assessment, 10 May 2022	Historic Environment (Wales) Act 2016 should be added to the list of relevant legislation. Given nature of development an Assessment of the Significance of the Impact of Development on Historic Landscapes (ASIDOHL2) not relevant.	**Section 9.2.1** on legislation has been updated.
Dyfed Archaeological Trust – Development Management (Mike Ings on behalf of PCC and Zoe Bevans-Rice on behalf of PCNPA)	Scope of the assessment, 29 April 2022	Noted that the DBA should assess both the visual impact of the development on the historic landscape/setting of historic assets and the potential direct impact on archaeological deposits. It is expected that a Written Scheme of Investigation for this assessment would be submitted in advance.	Visual impacts on historic landscape and setting of historic assets, and potential direct impacts on archaeological deposits assessed. Written Scheme of Investigation submitted. Scope accepted. See **section 9.5.1**.
Dyfed Archaeological Trust – Development Management (Mike Ings on behalf of PCC and Zoe Bevans-Rice on behalf of PCNPA)	Scope of the assessment, 29 April 2022	Advised consultation with Cadw to ascertain whether the ASIDOHL methodology is appropriate.	Cadw consulted. Given nature of development an Assessment of the Significance of the Impact of Development on Historic Landscapes (ASIDOHL2) not relevant.

Consultee	Consultation type and date	Comment raised	How issue has been addressed and location of response in chapter
Dyfed Archaeological Trust – Development Management (Mike Ings on behalf of PCC and Zoe Bevans-Rice on behalf of PCNPA)	Scope of the assessment, 29 April 2022	The latest version of PPW (ed. 11) dates to 2021 and the 2021 Historic Environment (Archaeology) SPG prepared by PCNPA is a joint document with PCC.	References amended accordingly. Note that PPW (ed. 11) has now been replaced by PPW (ed. 12) 2024. See **section 9.2.2**.

9.4 Approach to Assessment

14. **Chapter 05: EIA Approach and Methodology** provides a summary of the general impact assessment methodology applied in this ES. The following sections provide further detail on the specific methodology used to assess the potential impacts on the Historic Environment and Cultural Heritage.

15. The approach to the assessment of cumulative impacts, interrelated effects and transboundary impacts is provided in **Sections 9.11, 9.12** and **9.13.**

16. The significance of potential effects has been evaluated using a systematic approach together with the expert judgement of the specialist consultant. The systematic approach is based upon the identification of the importance/value of receptors and their sensitivity to the proposed Project together with the predicted magnitude of the potential impact.

17. The specific objectives of this current assessment are to:

- Identify the historic environmental baseline within and in the vicinity of the Onshore Development Area;
- Consider the Onshore Development Area in relation to its archaeological and historic environmental potential;
- Assess the potential and predicted effects of the construction and existence of the development on the baseline historic environment resource within the context of relevant legislation and planning policy guidelines; and
- Put forward measures, where appropriate to mitigate any predicted significant adverse effects.

18. The baseline data is derived from a desk-based assessment carried out by Dyfed Archaeological Trust – Archaeological Services (Poucher 2021). This is in **Appendix 9A: Heritage Desk Based Assessment**. Dyfed Archaeological Trust agreed that the desk-based assessment produced by Phil Poucher of DAT in 2021 for the Erebus Project was appropriate to inform the baseline for the cultural heritage chapter of the ES for the proposed Project. Only the information which is relevant to the proposed Project has been included within this ES.

19. All the historic receptors identified in the historic environment baseline data were assessed to determine their potential significance and the predicted impact from the proposed Project on

them. As with the Erebus Project, the assessment methodology for this ES chapter conforms to the methodology set out in DMRB LA 104 Environmental Assessment and Monitoring and DMRB LA106 Cultural Heritage Assessment. The Design Manual for Roads and Bridges (DMRB) is the established good practice guidance for assessing the impact of the effects of the proposed Project on the archaeological and heritage resource. Consideration was given to other guidance issued by Cadw in 2017 in examining designated assets and their settings, however, for reasons of consistency in terminology for the ES chapter, at this stage, the terms expressed in the DMRB were used, and assets are referred to as Historic Receptors.

9.4.6. Assessment Methodology

20. The Design Manual for Roads and Bridges (DMRB) is a series of technical documents produced by Highways England that provide standards, advice notes and other documents relating to the design, assessment and operation of trunk roads, including motorways, in the United Kingdom. The assessment methodology is outlined in the Design Manual for Roads and Bridges (DMRB), specifically referring to the LA104 Environmental assessment and monitoring, and LA106 Cultural Heritage Assessment. DMRB is widely used practice guidance for determining the value or sensitivity of historic assets, the magnitude of potential impact, and the significance of effect.

21. DMRB LA 104 Environmental assessment and monitoring sets out the requirements for environmental assessment of projects, including reporting and monitoring of significant adverse environmental effects. It establishes criteria for assignment of value (sensitivity) to receptors of impacts, categories and descriptions of magnitude of impacts, and the resultant significance of effects of impacts to receptors.

22. DMRB LA 106 Cultural heritage assessment sets out the requirements for assessing and reporting the effects on cultural heritage as part of the EIA process of construction, operation and maintenance phases of projects. It specifies that for the purposes of cultural heritage assessments, landscapes of historical, cultural or archaeological significance shall be assessed as a cultural heritage resource. It requires that the study area of an assessment be defined according to the sensitivity of the receiving environment and the potential impacts of the project, and to include the footprint of the proposed Project plus any land outside that footprint which includes any historic receptors which could be physically affected and/or their settings affected by the impact pathways scoped in for assessment during scoping. The significance criteria assigning value (sensitivity), magnitude of impact and significance of effect and reporting the significant effects of a project on cultural heritage resource and its settings are defined as those established by LA 104.

9.4.7. Significance Criteria

Magnitude of Impact

23. The scale or magnitude of potential impacts (either beneficial and adverse) is determined by a combination of three criteria: scale of change, spatial extent of change and duration of change, as outlined in LA 104.

24. The criteria for defining magnitude of impact for the purpose of the assessment on the Historic Environment and Cultural Heritage are provided in **Table 9-5.**

Table 9-5. A summary of the magnitude criteria that are associated to specific impacts

Magnitude Criteria	Definition
Major	The impact occurs over a large spatial extent resulting in widespread, long-term, or permanent changes in baseline conditions or affects a large

Magnitude Criteria	Definition
	proportion of a receptor population. The impact is very likely to occur and/or will occur at a high frequency or intensity. **Adverse:** Loss of resource and / or quality and integrity of resource; severe damage to key characteristics, features or elements **Beneficial:** Large scale or major improvement of resource = quality; extensive restoration; major improvement of attribute quality
Moderate	The impact occurs over a medium spatial extent resulting in medium-term, or partial changes in baseline conditions or partially affects a proportion of a receptor population. The impact is likely to occur and/or will occur at a medium frequency or intensity. **Adverse:** Loss of resource, but not adversely affecting the integrity; partial loss of / damage to key characteristics, features or elements **Beneficial:** benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality
Minor	The impact occurs over a small spatial extent resulting in short-term, or small changes in baseline conditions or partially affects a small proportion of a receptor population. The impact has a low likelihood of occurring and/or will occur at a low frequency or intensity. **Adverse:** Some measurable change in attributes, quality, minor loss of, or alteration to, one or more key characteristics, features or elements. **Beneficial:** Minor benefit to, or in addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk or negative impact occurring
Negligible	The impact occurs over a minor spatial extent resulting in very short-term, or minor changes in baseline conditions or partially affects a very small proportion of a receptor population. The impact has a very low likelihood of occurring and/or will occur at a very low frequency or intensity. **Adverse:** Very minor loss of detrimental alteration to one or more characteristics, features or elements. **Beneficial:** Very minor benefit to or positive addition of one or more characteristics, features or elements

Value (Sensitivity) of Receptor

25. Receptor sensitivity is defined as the degree to which a receptor would be affected by an impact. The sensitivity of the receptor is characterised by three factors: vulnerability, recoverability and importance, as outlined in **Chapter 05: EIA Approach and Methodology**, **Section 5.4.10.**

26. The criteria for defining receptor sensitivity for the purpose of the assessment on the Historic Environment and Cultural Heritage are provided in **Table 9-6.**

Table 9-6. A summary of the criteria determining a historic receptor's sensitivity

Receptor Sensitivity Criteria	Definitions
Very High	Very high importance and/or rarity, internationally important receptor with little or no ability to absorb change without fundamentally altering its character. Limited potential for substitution. Assets inscribed as being of universal international importance, such as World Heritage Sites (including nominated sites). Buildings of recognised international importance. Historic landscapes of international value, whether designated or not. Extremely well-preserved historic landscapes with exceptional coherence, time-depth or other critical factors.
High	High importance and rarity, national scale, and limited potential for substitution. Scheduled Monuments, Listed buildings Grade I, II* and II, conservation areas of demonstrable value, well preserved historic landscapes, registered parks and gardens and historic battlefields. Undesignated receptors of schedulable quality and importance. Receptors that can contribute significantly to acknowledged national research objectives.
Medium	Medium importance and rarity, regional scale, limited potential for substitution. Non-scheduled sites of regional or county importance. Reasonably preserved historic landscapes. Designated or undesignated receptors that contribute to regional research objectives. Designated landscapes/settings of special historic interest, averagely well-preserved historic landscapes, landscapes of regional value.
Low	Low or medium importance and rarity, local scale. Designated and undesignated receptors of local importance. Receptors compromised by poor preservation and/or poor survival of contextual associations. Locally listed buildings and historic (unlisted) buildings of modest quality in their fabric or historical association. Receptors of limited value, but with potential to contribute to local research objectives. Robust undesignated historic landscapes/settings with local interest, or where their value is limited by poor preservation and/or survival of contextual associations.
Negligible	Very low importance and rarity, local scale. Receptors with very little or no surviving archaeological interest. Buildings of little architectural or historic note. Landscapes/settings with little notable historical interest.

Significance of Effect

27. As set out in **Chapter 05: EIA Approach and Methodology**, an Impact Assessment Matrix (IAM) is used to determine the significance of effect which is a function of the sensitivity of the receptor and the magnitude of the impact, as shown in **Table 9-7.**

28. The matrix provides a framework for the consistent and transparent assessment of predicted effects across all receptor topics, however, it is important to note that the IAM acts as a guide and that assessments also allow for the application of expert judgement.

Table 9-7. Significance matrix

		Value / Sensitivity				
		Very High	**High**	**Medium**	**Low**	**Negligible**
Magnitude	**Major**	Very large	Very Large / Large	Large / Moderate	Moderate / Slight	Slight
	Moderate	Very Large / Large	Large / Moderate	Moderate	Slight	Slight/ Neutral
	Minor	Large / Moderate	Moderate / Slight	Slight	Slight / Neutral	Slight / Neutral
	Negligible	Slight	Slight	Slight / Neutral	Slight / Neutral	Neutral

29. The IAM provides levels of significance of effect ranging from major to negligible. Assignment of the significance of effect is carried out with consideration of embedded mitigation measures relevant to the Historic Environment and Cultural Heritage. Embedded mitigation measures and best practice measures are presented within **Section 9.7**. Details on additional mitigation measures and associated definitions can be found in **Section 9.9**. For the purposes of this assessment, Moderate and Major levels of significance are defined as significant, and where relevant additional mitigation measures may be required, whilst Negligible or Minor impacts are defined as not significant.

Table 9-8. A summary of the definitions of each significance of effect criteria

Significance Category	Definitions	Significant / Not Significant Effect
Large	A large and detrimental change to a valuable / sensitive receptor; likely or apparent exceeding of accepted (often legal) threshold. Or A large and beneficial change, resulting in improvements to the baseline result in previously poor conditions being replaced by new legal compliance or a major contribution being made to national targets. These effects may represent key factors in the decision-making process. Potentially associated with sites and features of national importance or likely to be important considerations at a regional or district scale. Large effects may relate to resources or features which are unique and which, if lost, cannot be replaced or relocated.	Significant
Moderate	A medium scale change which, although not beyond an acceptable threshold, is still considered to be generally unacceptable, unless balanced out by other significant positive benefits of a project. Likely to be in breach of planning policy rather than a legal statute. Or A positive moderate effect is a medium scale change that is significant in that the baseline conditions are improved to the extent that guideline targets (e.g. UK BAP targets) are contributed to. These effects, if adverse, are likely to be important at a local scale and on their own could have a material influence on decision making.	Significant (unless otherwise specified)

Significance Category	Definitions	Significant / Not Significant Effect
Slight	A small change that, whilst adverse, does not exceed legal or guideline standards. Unlikely to breach planning policy. Or A small positive change, but not one that is likely to be a key factor in the overall balance of issues. These effects may be raised as local issues and may be of relevance in the detailed design of a project but are unlikely to be critical in the decision-making process.	Not Significant
Neutral	A very small change that is so small and unimportant that it is considered acceptable to disregard. Effects which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error. These effects are unlikely to influence decision making irrespective of other effects.	Not Significant

9.4.8. Study Area

30. The Red Line Boundary (RLB) comprises the Onshore Development Area including all onshore infrastructure. A 500 m Study Area from the edge of the RLB has been defined for the assessment, which has been assessed to be appropriate to the sensitivity of the receiving environment and the potential impacts of the Onshore Development Area (**Volume 5: Figure 9.2)**. This Study Area was extended to 3 km from the edge of the RLB to assess the potential effect on the setting of designated historic receptors in the area (**Volume 5: Figure 9.3)**. The extent of this study was agreed following initial consultation with Cadw and the Dyfed Archaeological Trust. A full suite of desk-based data has been gathered for this area, relating to both designated and undesignated historic receptors. However, visual impact from the array was scoped out due to distance. At its closest point, the Llŷr Array Area is 38 km southwest from onshore historic receptors.

31. The Study Area is intended for data capture, encompassing historic receptors, both designated and undesignated, archaeological sites and monuments, and historic buildings. The Study Area has also been used to gather the relevant historic landscape characterisation. All captured data has been reviewed, and the significance of those receptors potentially affected by the proposed Project has been assessed.

32. This distance has been judged as appropriate to provide the context of, and potential for, surviving archaeological remains on the Project site given the nature of the proposed Project and its location. Due to the prominent nature of the Onshore Development Area, the Study Area is 3 km for designated historic receptors of high significance, comprising scheduled monuments and listed buildings.

9.4.9. Data Sources

Site Specific Surveys

33. To provide site specific information on which to base the impact assessment for the Historic Environment, site specific surveys were conducted along the route of the Onshore Export Cable Corridor (OnECC) and Onshore Substation location in August and December 2023. Weather conditions were good, with a mixture of cloudy and sunny weather. Most of the Onshore Development Area was accessible for the site visits except for small areas to the west and east (see limitations in 9.6.2) (**Volume 5: Figure 9.4**). The ground surface was subject to

visual inspection to assess archaeological potential such as earthworks, structures as well as to identify areas which may have potential to preserve environmental archaeological deposits. The site visits also assessed the setting of historic receptors i.e. Scheduled Monuments, Listed Buildings, conservation areas and historic landscapes.

Desk Study

34. A comprehensive desk-based assessment (Poucher 2021) was undertaken to inform the baseline for known archaeological and built heritage sites within the Onshore Development Area and its environs and assesses the potential for previously unknown remains to be present within the Onshore Development Area. This is in **Appendix 9A: Heritage Desk Based Assessment**.

35. All known historic receptors were identified using the data sources listed below:

- Dyfed Archaeological Trust Historic Environment Record (HER) data;
- Analysis of earlier cartographic sources;
- Available and relevant reports on any archaeological work undertaken in the area that affected the sites or their setting;
- Archival material held at the County Archive, the National Library of Wales (NLW) and the Royal Commission on the Ancient and Historic Monuments of Wales (RCAHMW);
- Aerial photography, satellite imagery and LiDAR data;
- Relevant records held by the Applicant; and,
- Data on any Scheduled Monuments, Listed Buildings, Registered Parks and Gardens, Registered Historic Landscapes, Historic Landscape Character Areas or Conservation Areas within or in the vicinity of the site area (Cadw, DAT, NRW).

36. Designated historic receptors are identified with their reference number. Undesignated historic receptors are identified with their HER reference number which uses the prefix 'PRN'. Each receptor identifier is placed within parentheses and highlighted in bold within the text.

9.5 Baseline

37. The proposed Project comprises a linear OnECC that stretches for approximately 10 km across the Castlemartin peninsula in south-western Pembrokeshire. Flanking the northern side of the peninsula is the waterway of Milford Haven, the eastern side of the peninsula overlooks the Pembroke River as it enters the haven, while the peninsula faces the Celtic Sea to the west **(Volume 5: Figure 9.1).**

38. The Landfall site comprising the Transition Joint Bay where the Offshore and Onshore Export Cables will be connected is situated at the beach at Freshwater West (SM 8803 0027).

39. The export cables at landfall will be installed by Horizontal Directional Drilling (HDD) (with no open cut trenching) at the northern end of the beach and proceed in an east-north-east direction through Broomhill Burrows, an area of grassy sand dunes, and then before turning north at a (HDD) Landfall Work Area (SM 88435 00763) where the HDD works will end and the cable is then to be installed via open cut trenching to continue as the Onshore Export Cable. It continues northward crossing the public road B4320.

40. North of the B3149, the OnECC then runs eastwards through an area of regular-sized rectilinear field enclosures, with a disused oil refinery to the immediate north.

41. To the east of the Broomhill Burrows, the OnECC runs to the south-east, crossing a local road south-east of Neath Farm, and running south of Wogaston Farm through an area of medium

to large sized pasture and tillage fields, enclosed by hedgerows, with a solar farm to the immediate north.

42. As the OnECC approaches the hamlet of Wallaston Green, it then turns north-east towards Wallaston Cross. The substation is located south of Sunnyridge Farm. The OnECC then continues east towards Lambeeth Farm. Just west of Lambeeth farm, the OnECC turns northwards towards the power station (**Volume 5: Figure 9.1**).

43. The settlement pattern in the area is dispersed though some of the farmsteads and dwellings, are relatively close to one another. These are linked by a network of local roads, with the B4320 providing the main east – west route across the peninsula. The former hamlets or villages of Rhoscrowther and Pwllcrochan which lie to the north of the Onshore Development Area are now abandoned due to the establishment of the oil refineries in their immediate vicinity. The closest nucleated settlements comprise Pembroke Dock, on the south side of the Milford Haven 2.5 km to the north-east, Milford Haven itself, on the north bank of the estuary 4 km to the north, and the town of Pembroke, on the Pembroke River 4.5 km to the east.

44. To the north of the Onshore Development Area, the skyline is dominated by the large oil refineries and Pembroke Power Station, while to the south lies the Castlemartin Artillery Range.

45. The OnECC runs across an area with a complex geology comprising a number of bedrock groups which run in a general east to west direction across the Castlemartin Peninsula. The area from Freshwater West Beach to Wallaston Green is predominantly underlain by the Milford Haven Group, while from Wallaston Green to Pembroke Power Station comprises again the Milford Haven Group with outcrops of the Ridgeway Conglomerates, Skrinkle Sandstone and the Avon Group. Superficial deposits in the Study Area are varied. Marine deposits of sand and shingle can be found at Freshwater West Beach. In the area of Broombridge Burrows and Kilpaison Burrows there is blown sand. Alluvium comprising clay, silt, sand and gravel is found underneath and to the south-east of Pembroke Power Station and around Neath Farm (see **Chapter 11: Geology and Hydrogeology and Chapter 12: Agriculture and Soils**).

46. The following sections describe the baseline environment relating to the Historic Environment and Cultural Heritage.

47. A Study Area has been adopted in the assessment to enable all historic receptors potentially affected by the proposed Project to be identified and placed within their wider settings. This comprises land required temporarily and permanently to construct and operate the proposed Project within the RLB and extends outward to a distance of 500 m beyond those limits for non-designated receptors and 3 km for designated receptors.

9.5.1. Existing Baseline

Designated cultural historic receptors

48. A 3 km search area around the Onshore Development Area was used to identify designated cultural historic receptors that may potentially be impacted upon by the development (**Volume 5: Figure 9.3**). This search area was agreed after consultation with Cadw and Dyfed Archaeological Trust. A Written Scheme of Investigation for the assessment was approved by Dyfed Archaeological Trust – Development Management, in their role as archaeological advisors to the relevant planning authorities. The designated historic receptors examined included Scheduled Monuments, Listed Buildings, registered Historic Landscapes, registered Historic Parks and Gardens and Conservation Areas.

49. There are 23 Scheduled Monuments within the 3 km search area surrounding the Onshore Development Area (**Volume 5: Figure 9.3**). One of these sites lies within the RLB of the proposed Project – the Devil's Quoit Burial Chamber (PE020). This and the other Scheduled Monuments cover a wide range of archaeological sites and periods, from Neolithic burial monuments to Second World War era military structures.

50. Of these 23 Scheduled Monuments, 16 were dismissed as remaining unaffected by the proposed Project, seven sites were identified that may potentially be affected including their setting. Given their Scheduled status, these sites are of High Value. These sites are listed in **Table 9-9.**

Table 9-9: Scheduled Monuments potentially affected by proposed Project

Scheduled Monument	Description	Value	Distance to the Red Line Boundary
Devil's Quoit Burial Chamber PE020	Neolithic chambered tomb on the northern edge of Kilpaison Burrow near Broomhill Cottage.	High	Within
Corston Beacon Round Barrow PE059	Bronze Age burial site southeast of Wallaston Green.	High	1345m
Dry Burrows Round Barrows PE060	Collection of Bronze Age burial sites northwest of Orielton.	High	1880m
Wallaston Round Barrows PE064	Collection of Bronze Age burial sites south of Wallaston Green.	High	420m
Round Barrow 400m N of West Orielton PE525	Bronze Age burial site.	High	2430m
Gravel Bay anti-aircraft battery PE494	Second World War emplacement defending RAF Angle and Milford Haven Waterway, south of Broomhill Cottage.	High	70m

51. There are 116 listed buildings within the 3 km search area surrounding the Onshore Development Area, largely as this search area includes part of Pembroke Dock with its concentration of surviving 19th-century structures, but also includes clusters of listed buildings at Angle and West Orielton. None of these sites are situated within the Onshore Development Area (**Volume 5: Figure 9.3**).

52. Of these listed buildings, the majority would remain unaffected by the proposed Project. Four buildings were identified that may potentially be affected. Given their Listed status, these sites are of High Value. These sites are listed in **Table 9-10.**

Table 9-10. Listed Buildings potentially affected by proposed Project

Listed Building	Description	Value	Distance to the Red Line Boundary
Rocket Cart House and Lookout Tower 17166 & 17167	Grade II listed late 19th century base for the -rescue team.	High	140m

Listed Building	Description	Value	Distance to the Red Line Boundary
War Memorial 17162	Grade II listed memorial to honour those lost in the First World War.	High	10m
Somerton Farmhouse 6598	Grade II listed late 18th century house built in a picturesque style.	High	920m

53. Historic Landscape Characterisations have been undertaken by Dyfed Archaeological Trust with the support of Cadw. Characterisation involves the examination of historic processes that have shaped and moulded the present-day landscape. Historic landscape components that make up the landscape such as field boundary type, field shape, buildings, settlement patterns, parks and gardens, roads and railways, industry, and archaeological sites are al taken into consideration during characterisation. By analysing all components, it is possible to divide the landscape into historic landscape character areas, Each area comprises components that are distinct from its neighbours (Cambria Archaeology 2002).

54. The western and eastern areas of the OnECC runs through the Milford Haven Waterway Landscape of Outstanding Historic Interest (HLW(D)3) (**Volume 5: Figure 9.6**. This area covers the Milford Haven Waterway and the Cleddau rivers as far as Haverfordwest to the north and Carew to the east. This Historic Landscape has been sub-divided into a number of Historic Landscape Character Areas (HLCA). These areas do not necessarily confine themselves to the illustrated limits of the registered Historic Landscape. The OnECC crosses through one HCLA area which is as follows:

- HLCA 341 Rhoscrowther is gently undulating farmland characterised by large, dispersed farms with regularly shaped fields. There are no villages. It is traversed by the 'Ridgeway', which was the focus of significant prehistoric activity, as well as important early medieval, medieval and post-medieval settlement. Many of the settlements and farms were established during the medieval period, although 19th-century buildings now predominate. Stone is the main building material, with houses usually cement rendered and outbuildings left bare, and slate the roofing material. Land-use is a mixture of improved pasture and arable. Non-agricultural landscape components are not numerous, but included small reservoirs, sites of dismantled oil storage tanks and telecommunication masts. There are numerous archaeological sites within this area, but they are not prominent landscape features and therefore do not form major components of the historic landscape. Nevertheless, they include a Neolithic burial monument, Bronze Age barrows, old farmhouses, and 20th-century military structures. Due to its variety of archaeological material, and the preservation of an essentially medieval settlement and enclosure pattern beyond the limits of the oil refineries, it is of High value.

55. There is one registered historic park and gardens within the 3 km Study Area (**Volume 5: Figure 9.3**). The grade II listed Orielton (PGW (Dy) 38(PEM) comprises parkland, a rare duck decoy lake, a gazebo, woodlands, the remains of a Japanese garden (created in about 1919) and a walled garden. The parkland lies approximately 2.7 km to the south-east of the proposed Project site. This parkland will remain unaffected by the proposed Project.

Non-designated archaeological and cultural historic receptors and general archaeological background

56. A review of the HER data supplied by Dyfed Archaeological Trust and other databases was made within a 500 m Study Area out from the proposed Project site. This identified known non-designated historic receptors that may be affected by the proposed Project as shown on **Volume 5: Figure 9.2**.

57. The HER data identifies 114 receptors within the 500 m Study Area. 19 historic receptors are recorded within or adjoining the proposed Project site. From west to east, starting at the Landfall site at Freshwater Beach, these sites are listed in **Table 9-11.**

Table 9-11. HER sites within or adjoining the proposed Project

HER Sites	Description	Value	Distance to the Red Line Boundary
Early medieval market PRN 125588	Possible beach trading	Low	Within
Gravel Pit PRN 54716	A disused gravel pit recorded on the 1875 OS map	Low	Within
Findspot PRN 3073	Fragment of Neolithic axe. Possibly part of PRN 3103	Medium	Within
Flint Working Site PRN 3103	21 Mesolithic / Neolithic flints recovered from eroded hollow in the dunes	Medium	Within
Findspot PRN 12223	Numerous Mesolithic flint artefacts recovered from Broomhill Burrows	Medium	Within
Cropmark PRN 13059	Cropmark of unknown significance	Low	Within
Findspot PRN 3075	Neolithic findspot	Medium	Within
Neolithic midden PRN 7592	Neolithic midden	Medium	Within
WWII Defence; Anti-aircraft Defence Site PRN 55454	Includes a series of concrete bases and hard standings	Medium	Within
WWII Defence PRN 55453	Concrete 'Nissen' hut floor	Medium	Within
Standing Stone PRN 7591	Recumbent standing stone recorded in 1925, possibly associated with nearby chambered tomb. No longer visible.	High	Within
Flint Scatter PRN 11383	5 Mesolithic / Neolithic flint flakes recovered from the Burrows.	Medium	Within
Round Barrow PRN 3079	Hollowed out round barrow, with standing stone near its centre. Excavated in 1925, included Bronze Age	High	Within

HER Sites	Description	Value	Distance to the Red Line Boundary
	cremation and early medieval inhumations.		
Round Barrow Reuse PRN 3080	Later cist-burial inserted into a Bronze Age round barrow	High	Within
Cross PRN 7931	Place-name evidence suggesting a possible medieval cross. More likely however to refer to adjacent crossroads.	Negligible	25m
Blacksmith's Workshop PRN 17879	19th-century smithy	Medium	Within
Cross PRN 7932	Place-name evidence suggesting a possible medieval cross. More likely however to refer to adjacent cross-roads.	Negligible	30m
Defended enclosure PRN 3244	Well-defined, but plough-denuded Iron Age defended enclosure lying adjacent to the proposed Project site.	High	50m
Round barrows PRN 48371	Pair of Bronze Age round barrows in the locality, excavated in the 1920s. No above ground remains, and location unknown.	Medium	120m

58. An archaeological and historical background is provided on a period-by-period basis in chronological order within the desk-based assessment (Poucher 2021), included as an appendix to this ES, in **Appendix 9A: Heritage Desk Based Assessment**. This background is developed from the known historic receptors of the area recorded on the HER. This background is not reproduced in full here, but it has been used to identify areas of archaeological potential within the Study Area.

59. To summarise, there are no sites of a Palaeolithic date within the Study Area. Mesolithic artefacts have been recovered largely along the coastline, highlighting the presence of flint working sites and the movement of hunter-gatherers through this area during the Mesolithic period. These artefacts may also indicate areas of activity subsequently during the Neolithic period. A stone axe head (PRN 3073) of Neolithic date was recovered in the dunes of Broomhill Burrows. 21 flints were also recovered from the same dunes (PRN 3103). Flintworking sites were identified at Broomhill Burrows (PRN 12223), Broomhill (PRN 3082), Hoplass Cottage (PRN 3250), Kilpaison Burrows (PRN 11383) and Lambeeth (PRN 3255) in 1963.

60. There is an apparent concentration of Bronze Age funerary and ritual monuments along the 'Ridgeway', a ridge of high ground which runs from west to east along the central axis of the

Castlemartin Peninsula. This is roughly followed by the present day B4320. A Bronze Age burial mound with standing stone (PRN 3079) was excavated at Kilpaison during the 1920s. A standing stone (PRN 7091) is situated close to the Devil's Quoit chambered tomb. A group of round barrows (PRN 3245; also recorded as Scheduled Monument PE064) are located 420m east-south-east of the proposed Project at Wallaston. A pair of burial mounds were also excavated close to Lambeeth Farm (PRN 48371 & PRN 11694) in 1929 but their exact location is not known. There are also sites of burnt mounds near local water sources, suggesting more widespread activity in the Bronze Age – one lies at Middlehill (PRN 3074) and another at Neath Bridge (PRN 3239). The only site dating to the Iron Age is located at the eastern end of the OnECC – a defended enclosure (PRN 3244) near Lambeeth Farm.

61. There are no sites of Roman date within the Study Area.

62. An early medieval cist burial is recorded inserted into a Bronze Age round barrow (PRN 3079) in Kilpaison Burrows (PRN3080). During the medieval period, this area was part of the manor of Castlemartin within the lordship of Pembroke. Much of the layout of the landscape is known to have medieval origins. Many of the farmsteads within the Study Area i.e. Moreston (PRN 10791) and Kilpaison (PRN 11459), are recorded in rental accounts dating to between the 13th and 15th centuries. The field layouts within the Study Area are likely to also have medieval origins. The placenames Cross Park (PRN7931) and Wallaston Cross (PRN 7932) are suggestive of wayside or memorial crosses originally located by roadsides.

63. Several sites within the Study Area date to the post-medieval era. The agricultural landscape with dispersed settlement that emerged during the medieval period continued into the post-medieval period, with further farmsteads recorded at Middlehill (PRN 54714 & PRN 120902), Broomhill (PRN 120901), Coresside (PRN 120926), Wogaston (PRN 120927), Newton (PRN 120928), Hoplass (PRN 120929) and Lambeeth (PRN 120942). There was also a small settlement at Wallaston (PRN 28006), along with Wallaston Green Farmstead (PRN 120943), a Methodist chapel (PRN 10092) and a cottage (PRN 21676). Wallaston Cross also became a focus of settlement, with a blacksmiths (PRN 17879) present in the 19th century. A mill pond (15979) still exists associated with Kilpaison corn mill (PRN 34630). Lambeeth mill (PRN 34614) was recorded on the first edition OS map. Much of the field system was well-established by this period, along with the network of roads.

64. As well as agricultural activity, there was a significant increase in industrial activity during the post-medieval era, with many quarries, mainly small-scale (PRNs 33153, 34616, 34617, 34619, 35057, 54716 & 54718), and limekilns (PRN 34615 and 34618) also recorded.

65. There are a significant number of modern sites recorded in the study area. These are sites which were established in the area during the Second World War. With naval bases established in the Milford Haven waterway, the wider area saw the establishment of many airfields, anti-aircraft batteries, radar stations and search lights, with a number of temporary camps set up to accommodate the military servicemen required to man such facilities. Angle Airfield was established in June 1941 to the west of the Study Area to protect Pembroke Dock and escort convoys at sea. The airfield was defended by anti-aircraft batteries, including one within the Study Area, on the edge of Kilpaison/Broomhill Burrows (PRN 14355), with individual features including gun pits, command posts and listening station (PRNs 55444 to 55452) and an outlying weapons pit (PRN 33440) and associated camp (PRN 55453 & 55454). The personnel serving these sites were also spread around several camps in the surrounding area. Other outlying features include a high frequency direction finding station (PRN 26247) and a minefield protecting the military base at East Blockhouse. There are a smaller number of features relating to the earlier First World War defences of the Haven, although less concerned with aerial assault, these are concentrated along the coastline. A roadside war memorial is also

located on the edge of Kilpaison/Broomhill Burrows (Listed Building 17162, PRN 54715 & 59465).

66. There is a cropmark of unknown date and significance which appears as a complicated set of crop marks. Possible settlement noted from aerial photographs (PRN 13059).

67. The archaeological baseline for the area highlights several areas of archaeological potential within the RLB of the OnECC. Although a general archaeological potential can be highlighted, the specific character of the archaeological receptor that may be present within the RLB of the OnECC is unknown, therefore no accurate value can be ascribed to these areas of potential. However, for the purposes of providing a meaningful way of assessing this resource within the parameters of this assessment, an average value of medium is assumed. In summary they comprise:

- Mesolithic activity. A low to medium potential is highlighted around Kilpaison Burrows in the west and on the approach to Lambeeth at the east end. Elsewhere potential appears low;
- Neolithic activity. A low to medium potential is highlighted on the approach to Lambeeth at the east end and around Kilpaison Burrows, rising to a medium potential around Devil's Quoit Chambered Tomb in the west. Elsewhere potential appears low;
- Bronze Age activity. A medium to high potential is highlighted in the Kilpaison Burrows area, particularly around local watercourses, and remains a medium potential to the east;
- Iron Age activity. A low potential for activity of this date within the proposed Project site;
- Early medieval activity. A low potential for activity of this date within the proposed Project site;
- Medieval activity. A medium potential is highlighted around the medieval settlement of Newton Farm. Elsewhere a low to medium potential for general agricultural activity is suggested;
- Post-medieval activity. A medium potential for settlement activity around Wallaston Cross, elsewhere a low to medium potential for general agricultural activity is suggested; and
- Modern activity. Relating specifically to wartime activity, a medium to high potential is highlighted around Broomhill Cottage / Broomhill Burrows.

New identified archaeological and cultural heritage receptors

68. The assessment included an examination of previous archaeological investigations undertaken in the area, and a review of historic cartographic sources, aerial photography, LiDAR, other document sources, and the carrying out of a walkover survey in August and December 2023. This work identified several additional historic receptors not previously recorded within the HER. These newly identified receptors were given an assessment-specific reference, prefixed with the letter 'A'. A total of 12 new historic receptors were identified as shown in **Volume 5: Figure 9.5.**

69. Analysis of historic mapping identified a potential post-medieval farmstead or dwelling between Wallaston Cross and Lambeeth Farm (A1). An area of strip fields (A2), potentially medieval in origin, lay to the north and east of Newton Farm.

70. Analysis of aerial photography also identified further enclosures (A3) and buildings (A4) around Broomhill Cottage likely related to wartime activity. The aerial photographs also suggested the presence of some outlying Bronze Age barrows (A5), since lost to oil refinery development.

71. Geophysical survey and subsequent archaeological evaluation on an adjacent project (Greenlink Connector) have identified the presence of possible prehistoric enclosures (A6) and a Bronze Age barrow (A7) between Broomhill and Neath Farms. A prehistoric ditch (A8), a Bronze Age barrow (A9) and a cooking pit (A10) were further identified to the south of Neath farm. These investigations also identified two linear features (A11 & A12) of potential archaeological interest extending into the proposed Project site between Wallaston Cross and Lambeeth Farm – one possibly representing an enclosure boundary, the other thought to be potentially geological in nature.

72. None of these historic receptors were visible on the site walkover survey and therefore represent known and potential below-ground remains. These sites are listed in **Table 9-12.**

Table 9-12. Newly identified sites within or adjoining the proposed Project area

HER Sites	Description	Value	Distance to the Red Line Boundary
A1	Post-medieval farmstead/dwelling	Low	Within
A2	Medieval strip field agriculture.	Low	Within
A3	WW2 enclosures.	Low	Within
A4	WW2 buildings.	Low	Within
A5	Bronze Age barrows.	Low	170m
A6	Prehistoric enclosures	Medium	Within
A7	Bronze Age barrow.	Medium	Within
A8	Prehistoric ditch.	Low	75m
A9	Bronze Age barrow.	Medium	130m
A10	Prehistoric cooking pit.	Medium	55m
A11	Curvilinear feature/enclosure.	Medium	Within
A12	Linear feature/geology.	Low	Within

9.5.2. Future Baseline

73. This section considers any changes to the baseline conditions described above that might occur over the lifespan of the proposed Project, but in the absence of the Project (i.e. if it is not installed).

74. There are no potential historic receptors of significance expected to change the baseline conditions. Should there be any changes to the future baseline, these are likely to relate to below ground archaeology only. Changes in future baseline are not expected to affect any historic assets identified in this assessment.

9.6 Scope of the Assessment

75. An EIA Scoping Report for the proposed Project was submitted to NRW Marine Licensing Team (MLT) in April 2022. The Scoping Report was also shared with relevant consultees, inviting comment on the proposed approach adopted by the Applicant. A Scoping Opinion was provided to the Applicant by NRW MLT in July 2022. Based on the Scoping Opinion received and further consultation undertaken, potential impacts on the Historic Environment and Cultural Heritage scoped into the assessment are listed below in **Table 9-13.**

76. As set out in **Section 9.4.6,** this assessment considers the design parameters of the proposed Project which are predicted to result in the greatest environmental impact, known as the

'realistic worst-case scenario'. The realistic worst-case scenario represents, for any given receptor and potential impact on that receptor, various options in the Project Design Envelope that would result in the greatest potential for change to the receptor in question. Given that the realistic worst-case scenario is based on the design option (or combination of options) that represents the greatest potential for change, confidence can be held that the development of any alternative options within the design parameters will give rise to effects no greater or worse than those included in this impact assessment.

77. Accordingly, the design scenarios identified in **Table 9-13** have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group within the Historic Environment and Cultural Heritage Study Area. These scenarios have been selected from the details provided in **Chapter 04: Description of the Projects**.

Table 9-13. Design scenario considered for the assessment

Potential impact	Design scenario	Justification
Construction		
Direct loss of or damage to onshore historic environment receptors from installation activities / ground-breaking works. Temporary impact on setting of onshore historic environment receptors from construction activities.	Preparation and installation of temporary access roads, working areas and Temporary Construction Compound (TCCs). Five compounds will be formed in total (consisting of one main site compound, and four satellite compounds, with temporary compounds formed as and when required). Landfall HDD drilling will require one 100 m x 75 m temporary compound. At Landfall site, subsea cables will be connected to onshore cables in an underground transitional joint bay (TJB). A 100 m x 50 m temporary works area along with a 40 m x 50 m satellite construction compound will be used at each joint for installation activity. There will be up to two onshore 66 kV export cables from the TJB.	The reasonable worst case design scenario during operation and maintenance is the installation of the onshore cable as this presents the greatest impact on heritage receptors.

Potential impact	Design scenario	Justification
	Onshore cable length is 7.1 km, likely occupying a surface area of 1,000 m². Onshore cables will be laid directly in trenches, although installation via ducts might be required in some sections. Trench target burial depth is 1.8 m to 2.5 m, a further depth of 1050 mm in certain areas to allow for field ploughing. Likewise, target trench width will be 1.2 m, however, the minimum allowable trench width will be 1.0 m. Working width of the corridor is 35 m. A five-metre width corridor will be required for heavy vehicle access along the side of the trench, and a further 5 m will be required for lay down of equipment, topsoil, and spoil from the trenching. Another 1.5 m is required from the edge of the trench on each side for safety and to prevent trench collapse under load, and a final 3 m to 5 m should be provided on the far side of the trench for access, storage or working as required.	
Direct loss of or damage to onshore historic environment receptors from installation / ground-breaking activities.	The onshore substation and control building will be located near the grid connection point at Pembroke Power Station.	The reasonable worst case design scenario during construction is the presence of the onshore substation / control building as this presents the greatest impact on visual setting of designated historic receptors.

Potential impact	Design scenario	Justification
	It is intended that the substation and control building will be housed in one building, however, up to two buildings may be required for the proposed Project. The substation will occupy a plan area of 126 m x 109 m, with a footprint of 14,000 m² (including laydown area. The switchgear and control building will be the most visible element of each substation. The height of the substation will be limited to 15 m. Construction of all onshore components will commence with the preparation and installation of temporary access roads, working areas and Temporary Construction Compound (TCCs) for a particular working area.	
Operation and maintenance		
Permanent impact on setting of onshore historic environment receptors from presence of new infrastructure.	The substation will be complemented with security infrastructure such as 2.4 m high, galvanised steel panelised fencing. Different lighting will be used throughout the substation site, including along access paths and around the security fencing. In a worst-case scenario, this lighting will be operated for 24 hours although ideally these will only be used when required.	The reasonable worst case design scenario during operation and maintenance is the presence of the onshore substation as this presents the greatest impact on visual setting of designated historic receptors.
Decommissioning		
Not applicable. Damage or loss of historic environment receptors will have already	Not applicable.	Not applicable.

Potential impact	Design scenario	Justification
occurred in same area of construction. Decommissioning will result in the same temporary effects to setting as construction activities, though will reverse visual impacts of operation.		

9.6.1. Impacts scoped out of assessment

78. No impacts from the onshore development have been scoped out of the assessment for Historic Environment and Cultural Heritage during EIA scoping. However, visual impact from the array was scoped out due to distance. At its closest point, the Llŷr Array Area is 38 km southwest off the Welsh coastline. Impacts from the operations and maintenance of the Onshore Export Cable have been scoped out.

9.6.2. Assessment Assumptions and Limitations

79. The assessment has been undertaken with reference to the baseline data, information and records pertaining to the historic environment derived from desk-based sources. These were subsequently validated and enhanced through field walkovers where land access was obtained from landowners. The Historic Environment Record and National Monuments Records of Wales datasets are records of known archaeological and historical receptors, though they are not exhaustive, and cannot preclude the existence of further receptors which are unknown at present.

80. In areas where land access was unavailable as part of the walkover survey, site-based observations were made from public rights of way and other accessible areas.

81. At the time of the walkover survey in August and December 2023, some areas of the proposed Project site remained inaccessible as land access was not available. An area of approximately 1.1 km in length could not be accessed, between Broomhill and Neath Farms midway along the route, and on the final 350 m approach to Pembroke Power Station at the eastern end of the route. However, the approach to Pembroke Power Station had been visited and examined in recent studies, and the area between Broomhill and Neath Farms was clearly visible from nearby publicly accessible areas. Other detailed information pertaining to these areas was available, and therefore this is not considered to impact upon the study.

82. Areas of archaeological potential can be identified, but the precise nature of this resource is not fully understood at this stage.

9.7 Embedded Mitigation, Management Plans and Best Practice

83. As part of the project design process, several designed-in measures have been incorporated which will reduce the potential for impacts on the Historic Environment and Cultural Heritage (see **Table 9-14**). The design of the proposed Project therefore includes embedded mitigation measures and reference to various management plans that will be produced as conditions of consent, and which will further mitigate potential impacts. This approach has been employed to demonstrate commitment to mitigation measures by including them in the design of the proposed Project and as such these measures have been considered within the assessment presented in **Section 9.8** below. Assessment of sensitivity, magnitude and therefore significance includes the implementation of these measures.

Table 9-14. Mitigation measures, management plans and best practice adopted as part of the proposed Project

Embedded Mitigation Measures, Management Plans and Best Practice	Justification
Design Embedded Measures	
Careful routeing of the proposed cable trench to avoid designated historic assets and, where possible, non-designated assets (see **Appendix 4a: Outline Construction Environmental Management Plan**).	Standard mitigation measures which have already been implemented, or will be carried out in the future, to minimise potential impacts on the Historic Environment.
Using HDD technology to avoid physical impacts on heritage assets (see **Appendix 4a: Outline Construction Environmental Management Plan**).	Standard mitigation measures which have already been implemented, or will be carried out in the future, to minimise potential impacts on the Historic Environment.
Limiting land take within the planning application boundary to only that required to construct, operate and maintain the proposed Project – to minimise disturbance to buried archaeology (see **Appendix 4a: Outline Construction Environmental Management Plan**).	Standard mitigation measures which have already been implemented, or will be carried out in the future, to minimise potential impacts on the Historic Environment.
Limiting stripping for construction compounds, haul roads, and other associated works in areas where archaeology is recorded to avoid disturbance, and instead using geotextile and stone over topsoil (see **Appendix 4a: Outline Construction Environmental Management Plan**).	Standard mitigation measures which have already been implemented, or will be carried out in the future, to minimise potential impacts on the Historic Environment.
During construction works, protective fencing and signage will be erected around known cultural heritage receptors to create buffer zones (see **Appendix 4a: Outline Construction Environmental Management Plan**).	Standard mitigation measures which have already been implemented, or will be carried out in the future, to minimise potential impacts on the Historic Environment.
Construction compounds will be located outside of culturally sensitive areas. This includes avoiding designated and undesignated receptors (see **Appendix 4a: Outline Construction Environmental Management Plan**).	Standard mitigation measures which have already been implemented, or will be carried out in the future, to minimise potential impacts on the Historic Environment.
The layout of construction compounds will aim to reduce temporary impacts on the settings of historic receptors and to minimise visibility in views (see **Appendix 4a: Outline Construction Environmental Management Plan**).	Standard mitigation measures which have already been implemented, or will be carried out in the future, to minimise potential impacts on the Historic Environment.
Raising the awareness of construction workers and operatives of any control and reporting procedures to be followed, should archaeological deposits be encountered during the works, for example through toolbox talks and regular briefings (see **Appendix 4a:**	Standard mitigation measures which have already been implemented, or will be carried out in the future, to minimise potential impacts on the Historic Environment.

Embedded Mitigation Measures, Management Plans and Best Practice	Justification
Outline Construction Environmental Management Plan).	
The control of light spillage, noise and dust within construction compounds and working areas, for example by adhering to working hours and through good site layout and working practices, to minimise impacts on the setting of heritage assets (see **Appendix 4a: Outline Construction Environmental Management Plan**).	Standard mitigation measures which have already been implemented, or will be carried out in the future, to minimise potential impacts on the Historic Environment.
A programme of outreach/public engagement to raise awareness of the cultural heritage of the scheme (see **Appendix 4a: Outline Construction Environmental Management Plan**).	Standard mitigation measures which have already been implemented, or will be carried out in the future, to minimise potential impacts on the Historic Environment.

9.8 Assessment of Environmental Effects

84. The impacts and effects (both beneficial and adverse) associated with the construction, operation and maintenance and decommissioning of the proposed Project are outlined in the sections below. The assessments consider the embedded mitigation measures described in **Section 9.7**. In those cases where a likely significant effect (i.e a moderate or major effect is identified), proposed additional mitigation measures are explained and the residual effect (considering the application of the additional mitigation) is specified.

9.8.1. Construction Effects

85. The significance of effect will be identified from appraising the magnitude of the impact and the sensitivity of the historic receptors affected during construction. Potential permanent effects of the proposed Project include physical impacts upon above ground and sub-surface historic receptors as well as impacts on the settings of historic receptors. The assessment is based on what is judged to be a realistic worst-case scenario for the proposed Project.

86. There can be significant permanent impacts upon historic receptors during construction within the proposed Project site. The onshore construction methodology is provided in **Chapter 04: Description of the Proposed Project**. It is anticipated that construction compounds, HDD compounds, a 35 m wide Onshore Export Cable construction corridor, and the Onshore Substation location, will initially be stripped of overlying deposits. Inside the drilling compounds and along the OnECC, excavations will be carried out for cable trenches, drilling pits and transition joint bays, and within the Onshore Substation location, there will be levelling works, and excavations for foundations and services. Such activities have the potential to disturb or destroy historic receptors, whether above or below ground. Other construction activities, including vehicular movements, the storage of soil and landscaping also have the potential to cause direct impacts on historic receptors. These impacts will be permanent.

87. There will be potential permanent impacts upon the setting of designated historic receptors. Aspects of the setting of these designated historic receptors could be removed or affected, while access to and visibility to and from these designated historic receptors may also be affected. Changes to aspects of setting are permanent, whilst changes to access and visibility are temporary impacts, and will last only for the duration of the construction works.

88. The assessment of temporary construction effects has considered the peak activity periods, for example when taller and/or visually prominent plant and equipment such as cranes would be visible and in use, to identify and assess the reasonable worst case in relation to potential impacts and effects on the setting of historic receptors.

89. The assessment of permanent impacts and effects has assumed that all individual finds recorded within the Study Areas were removed when found and are therefore no longer in situ; however, the location of find spots has been considered when assessing the significance of archaeological sites in their vicinity.

90. Within the area of the proposed Project site, the assessment has identified a number of potential instances where historic receptors would be directly impacted upon by the proposed project, as well as an impact upon general archaeological potential, through construction methods outlined above.

Ground-breaking works (permanent)

91. There will be construction impacts along the OnECC or Onshore Substation location. Impacts upon historic receptors may be varied, but these are outlined below.

Magnitude of impact

92. There are a small number of historic receptors that will remain unaffected by proposed works. The magnitude is therefore considered to be **negligible**.

Sensitivity of receptors

- Cross PRN 7931 – a reassessment of this potential feature indicates it refers to a local road junction and is therefore of negligible archaeological value; and
- Cross PRN 7932 – a reassessment of this potential feature indicates it refers to a local road junction and is therefore of negligible archaeological value.

93. The sensitivity of these receptors is therefore considered to be **negligible**.

Significance of the effect

94. The sensitivity of Cross PRN 7931 and Cross PRN 7932 is considered to be **negligible** and the magnitude of the impact is assessed as **negligible**. Therefore, the effect will be of **neutral** significance, which is **not significant** in EIA terms.

Magnitude of impact

95. No surface remains exists, but there is the potential for sub-surface features to exist that could be exposed, damaged or destroyed within the OnECC. The magnitude is therefore considered to be **minor adverse**.

Sensitivity of receptors

96. The following list comprises the recorded receptors, and is laid out topographically from west (Landfall site) to east (Pembroke Power Station):

- WWII Buildings A4 – no surface remains exists. It is envisaged, however, that sub-surface features are likely to be minimal, and of limited archaeological value;
- WWII Enclosures A3 – no surface remains exists. It is envisaged however that sub-surface features are likely to be of limited archaeological value;
- Boundary Ditch A8 – this feature was identified outside the RLB of the proposed Project site, but its alignment suggests that it could extend into the OnECC. It is likely however that most of this feature will remain outside the RLB;

- Strip Fields A2 – these cover a relatively extensive area. The nature of this feature however suggests any sub-surface remains are likely to be limited;
- Linear feature A11 – this sub-surface feature likely extends across the OnECC. The nature of the feature is not fully understood, however;
- Linear feature A12 – this sub-surface feature also likely extends across the Onshore Export Cable Corridor. It has been suggested however that this feature may be geological, rather than archaeological, in nature; and
- House / farmstead A1 – this site lies on the edge of the RLB of the proposed OnECC. However, the lack of any ground surface indications of the site suggest sub-surface remains may be minimal at most.

97. The sensitivity of the above historic receptors is therefore considered to be **low**.

Significance of the effect

98. The sensitivity of WWII Buildings A4, WWII Enclosures A3, Boundary Ditch A8, Strip Fields A2, Linear Feature A11, Linear Feature A12 and House / farmstead A1 is considered to be **low** and the magnitude of the impact is assessed as **minor adverse**. Therefore, the effect will be of **slight** significance, which is **not significant** in EIA terms.

Magnitude of impact

99. A **minor adverse** level of impact has initially been identified for one historic receptor. This impact is however based on there being no mitigation in place.

Sensitivity of the receptor

- Defended enclosure PRN 3244 – similar features are often considered of high value, although this feature has clearly been denuded through regular ploughing. The site lies outside the OnECC although there remains the potential for associated features of lesser importance to extend within the area of construction activity.

100. The value of this historic receptor is as such because either it is an unusual feature within the local historic environment, well-preserved remains are present, or it is of significant archaeological interest. The sensitivity of the above historic receptor is therefore considered to be **high**.

Significance of the Effect

101. The sensitivity of Defended enclosure PRN 3244 is considered to be **high** and the magnitude of the impact is assessed as **minor adverse**. Therefore, the effect will, be of **slight** significance, which is **not significant** in EIA terms.

Further mitigation and residual effects

102. By adequately highlighting Defended enclosure PRN 3244 as a protected feature on construction plans, protective fencing of the feature, with such protections laid out in the Outline CEMP, the feature will remain largely unaffected.

103. Additional mitigation measures, including the archaeological monitoring of ground-disturbing works (archaeological watching brief) would also help to ensure that potential associated features remain protected.

104. Taking the above mitigation into consideration, the magnitude has been lowered **(negligible adverse)** and the sensitivity remains the same **(high)** meaning the residual effect will be of **slight** significance, which is **not significant** in EIA terms.

Magnitude of Impact

105. A **moderate adverse** level of impact has been identified for two receptors: Modern weapons pit PRN 33440 and Gravel Pit PRN 54716. The historic receptors may be impacted upon during ground-breaking works. These will be permanent impacts.

Sensitivity of receptors

- Modern weapons pit PRN 33440 – modern weapons pit which is located within the proposed Project site in Broomhill Burrows; and
- Gravel Pit PRN 54716 – A disused gravel pit recorded on the 1875 OS map and which is located within the proposed Project site in Broomhill Burrows.

106. The sensitivity of the above historic receptors is **low**.

Significance of effect

107. The sensitivity of Modern weapons pit PRN 33440 and Gravel Pit PRN 54716 is considered to be **low** and the magnitude of effect is as assessed as **moderate adverse**. Therefore, the effect will be of **slight** significance, which is **not significant** in EIA terms.

Magnitude of impact

108. A **moderate adverse** level of impact has been identified for two receptors: Round Barrows PRN 48371 and a general potential for archaeological remains.

109. The potential impact upon potential archaeological remains will vary, however for the purpose of assessment within EIA terms a moderate adverse impact has been assessed. These monuments will be impacted during construction activity. This will be a permanent impact.

Sensitivity of receptors

- Round Barrows PRN 48371 – similar sites are often considered of high value, although these barrows have clearly been both excavated and denuded as they are no longer visible, therefore their value has been compromised. There is however the potential for sub-surface remains of these barrows to survive, which could be exposed, damaged or destroyed through construction activity. The exact location of these features is unknown, however; and
- Archaeological Potential – a general potential for archaeological remains, which varies by likelihood and period throughout the length of the Onshore Development Area. The value of potential archaeology will vary.

110. Their value is ascribed because either they are a commonplace and well understood feature of the historic environment, a poorly preserved or greatly disturbed feature, or of limited archaeological interest. The sensitivity of the above historic receptors is therefore considered to be **medium**.

Significance of effect

111. The sensitivity of the Round Barrows PRN 48371 and a general potential for archaeological remains is considered to be **medium** and the magnitude of the impact is assessed as **moderate adverse.** Therefore, the effect will be of **moderate** significance, and therefore **significant** in EIA terms.

Further mitigation and residual effects

112. Due to the predicted **moderate** (significant) effect of construction activity, additional, project specific mitigation will need to be applied.

113. For all sites potential impact could be reduced through an improved understanding of the possible location and extent of archaeological remains. Similar projects have benefitted from the well-established archaeological technique of geophysical surveying as an initial investigation of potential archaeological remains. Limited areas along the OnECC have previously been surveyed, and these need not be resurveyed, but for most of the Onshore Development Area geophysical survey should highlight features of potential archaeological interest, narrowing down broad areas of archaeological potential, and identifying potential surviving remains of archaeological sites.

114. Dependent therefore on the presence or absence of potential remains, further standard evaluation measures will then be carried out. It is possible to avoid areas of archaeological remains within the RLB of the Onshore Development Area through construction design. The results of the geophysical survey may require testing through standard intrusive archaeological trial trenching. Archaeological trial trenching will test the veracity of the geophysical survey results, allowing the nature and extent of potential archaeological features to be identified.

115. Sufficient information will be gained through standard evaluation techniques including geophysical survey and trial trenching to inform whether archaeological features of high significance require preservation within the final construction design, or preservation through record i.e. mitigation through archaeological excavation.

116. The application of these mitigation measures should reduce the level of impact to negligible, resulting in a minor adverse effect, which is not significant in EIA terms. But this cannot be confirmed until evaluation is completed and consultation is undertaken on the results with DAT.

117. Taking the above mitigation into consideration, the magnitude has been lowered **(minor)** and the sensitivity remains the same **(medium)** meaning the residual effect will be of **slight** significance, which is **not significant** in EIA terms.

Magnitude of Impact

118. A **major adverse** level of impact has been identified for one receptor: Cropmark PRN 13059. The historic receptor may be impacted upon during ground-breaking works. This will be a permanent impact.

Sensitivity of receptors

- Cropmark PRN 13059 – cropmark of unknown date and significance. Possible settlement noted from aerial photographs.

119. The sensitivity of the above historic receptor is considered to be **low**.

Significance of effect

120. The sensitivity of Cropmark PRN 13059 is considered to be **low** and the magnitude of effect is as assessed as **major adverse**. Therefore, the effect will be of **moderate** significance, which is **significant** in EIA terms.

Further mitigation and residual effects

121. Due to the predicted **moderate** (significant) effect of construction activity, additional, project specific mitigation will need to be applied.

122. For all sites potential impact could be reduced through an improved understanding of the possible location and extent of archaeological remains. Similar projects have benefitted from the well-established archaeological technique of geophysical surveying as an initial

investigation of potential archaeological remains. Limited areas along the OnECC have previously been surveyed, and these need not be resurveyed, but for most of the Onshore Development Area geophysical survey should highlight features of potential archaeological interest, narrowing down broad areas of archaeological potential, and identifying potential surviving remains of archaeological sites.

123. Dependent therefore on the presence or absence of potential remains, further standard evaluation measures will then be carried out. It is possible to avoid areas of archaeological remains within the RLB of the Onshore Development Area through construction design. The results of the geophysical survey may require testing through standard intrusive archaeological trial trenching. Archaeological trial trenching will test the veracity of the geophysical survey results, allowing the nature and extent of potential archaeological features to be identified.

124. Sufficient information will be gained through geophysical survey and trial trenching to inform whether archaeological features required preservation within the final construction design, micro-siting of the Onshore Export Cable route, or preservation through record i.e. archaeological excavation.

125. The application of these additional mitigation measures would reduce the level of impact to negligible, resulting in a minor adverse effect, which is not significant in EIA terms.

126. Taking the above mitigation into consideration, the magnitude has been lowered **(minor)** and the sensitivity remains the same **(medium)** meaning the residual effect will be of **slight** significance, which is **not significant** in EIA terms.

Magnitude of impact

127. A **major adverse** level of impact has been identified for twelve receptors: Findspot PRN 3073, Flint Working Site PRN 3103, Mesolithic Findspot PRN 12223, Neolithic findspot 3075, Neolithic midden 7592, WWII Defence / Anti-aircraft Defence Site PRN 55454, WWII Defence 55453, Flint Scatter PRN 11383, Enclosure A6, Bronze Age Barrow A7 and Blacksmith's Workshop 17879. The impacts upon these features may vary, but these are outlined below. The historic receptors may be impacted upon during ground-breaking works. These will be permanent impacts.

Sensitivity of receptors

128. The following list comprises the recorded receptors, and is laid out topographically from west (Landfall site) to east (Pembroke Power Station):

- Findspot PRN 3073 – A fragment of a Neolithic axe. Possibly part of Flint Working Site PRN 3103. The findspot will be impacted during construction activity. This will be a permanent impact.
- Flint Working Site PRN 3103 – 21 Mesolithic / Neolithic flints recovered from eroded hollow in the dunes. The site will be impacted during construction activity. This will be a permanent impact.
- Findspot PRN 12223 – numerous Mesolithic flint artefacts recovered from Broomhill Burrows. The findspot will be impacted during construction activity. This will be a permanent impact.
- Neolithic findspot PRN 3075 – collection of flints from a possible shell midden PRN 7592. The site will be impacted during construction activity. This will be a permanent impact.
- Neolithic midden PRN 7592 – The site will be impacted during construction activity. This will be a permanent impact.

- WWII Defence / Anti-aircraft Defence Site PRN 55454 – Site includes a series of concrete bases and hard standings. The site will be impacted during construction activity and the establishment of an HDD Landfall work area. This will be a permanent impact.
- WWII Defence PRN 55453 – Site comprises a concrete 'Nissen hut floor'. The site will be impacted during construction activity and the establishment of an HDD Landfall work area. This will be a permanent impact.
- Flint Scatter PRN 11383 – Five Mesolithic / Neolithic flint flakes recovered from the Burrows. The site will be impacted during construction activity and the establishment of an HDD Landfall work area. This will be a permanent impact.
- Enclosure A6 / Bronze Age Barrow A7 – sub-surface features that have been positively identified as features of likely prehistoric date. There is the potential therefore for construction activity to expose, damage or destroy any sub-surface remains.
- Blacksmith's Workshop PRN 17879 – 19th-century smithy. The site will be impacted during construction activity. This will be a permanent impact.

129. The sensitivity of the above historic receptors is of **medium** value. Their value is ascribed because either they are less commonplace within the local historic environment, positive remains have been identified, or they are of greater archaeological interest.

Significance of the effect

130. The sensitivity of Findspot PRN 3073, Flint Working Site PRN 3103, Findspot PRN 12223, Neolithic Findspot PRN 3075, Neolithic midden PRN 7592, WWII Defence; Anti-aircraft Defence Site PRN 55454, WWII Defence PRN 55453, Flint Scatter PRN 11383, Enclosure A6, Bronze Age Barrow A7 and Blacksmith's Workshop PRN 17879 is considered to be **medium** and the magnitude of the impact is assessed as **major adverse**. Therefore, the effect will be of **large** significance, which is **significant** in EIA terms.

Further mitigation and residual effects

131. Due to the predicted **large** (significant) effect of construction activity, additional, project specific mitigation will need to be applied.

132. For all sites potential impact could be reduced through a better understanding of the possible location and extent of archaeological remains. Similar projects have benefitted from the well-established technique of geophysical surveying as an initial investigation of potential archaeological remains. Limited areas along the OnECC have previously been surveyed, and these need not be resurveyed, but for most of the Onshore Development Area geophysical survey should highlight features of potential archaeological interest, narrowing down broad areas of archaeological potential, and identifying surviving remains of known archaeological sites.

133. Dependent therefore on the presence or absence of potential remains, further standard evaluation measures will then be carried out. It is possible to avoid areas of archaeological remains within the RLB of the Onshore Development Area through construction design. The results of the geophysical survey may require testing through standard intrusive archaeological trial trenching. Archaeological trial trenching will test the veracity of the geophysical survey results, allowing the nature and extent of potential archaeological features to be identified.

134. By adequately highlighting Defence Site PRN 55454 as a protected feature on construction plans, protective fencing of the feature, with such protections laid out in the CEMP, the feature will remain largely unaffected (see **Appendix 4a: Outline Construction Environmental Management Plan**).

135. Sufficient information will be gained through geophysical survey and trial trenching to inform whether archaeological features require preservation within the final construction design, micro-siting of the Onshore Export Cable route, or preservation through record (archaeological excavation).

136. The application of these additional mitigation would potentially reduce the level of impact to negligible, resulting in a **slight** effect, which is not significant in EIA terms.

137. Taking the above mitigation into consideration, the magnitude has been lowered **(minor)** and the sensitivity remains the same **(medium)** meaning the residual effect will be of **slight** significance, which is **not significant** in EIA terms.

Magnitude of impact

138. A **major adverse** level of impact has been identified for five receptors: Early market PRN 125588, Devil's Quoit Burial Chamber PE020, Standing Stone PRN 7591, Round Barrow PRN 3079 and Round Barrow Reuse PRN 3080. The impacts upon these features may vary, but these are outlined below.

Sensitivity of receptors

139. The following list comprises the recorded receptors, and is laid out topographically from west (Landfall site) to east (Pembroke Power Station):

- Early medieval market PRN 125588 – possible beach trading site on Freshwater West beach is located within the proposed Project site. The possible site will be impacted during construction activity. This will be a permanent impact.
- Devil's Quoit Burial Chamber PE020 – A Scheduled Monument is located within the Onshore Development Area in Broomhill Burrows. The monument will be impacted during construction activity and the establishment of an HDD Landfall work area. This will be a temporary impact. There is the potential for contemporary associated remains, which would form part of its original setting, also to exist within the proposed Project site. The loose sandy nature of the surrounding soil also raises the potential for vibration from heavy construction activity in the locality to disturb elements of this monument. These impacts would be permanent.
- Standing Stone PRN 7591 – A Recumbent standing stone recorded in 1925, possibly associated with nearby chambered tomb. No longer visible. The monument will be impacted during construction activity and the establishment of an HDD Landfall work area. This will be a permanent impact.
- Round Barrow PRN 3079 – Hollowed out round barrow, with standing stone near its centre. Excavated in 1925, including Bronze Age cremation and an early medieval inhumation (see PRN 3080). The monument will be impacted during construction activity and the establishment of an HDD Landfall work area. This will be a permanent impact.
- Round Barrow Reuse PRN 3080 – Later cist burial inserted into a Bronze Age round barrow. The monument will be impacted during construction activity and the establishment of an HDD Landfall work area. This will be a permanent impact.

140. The sensitivity of the above historic receptors is considered to be of **high** value. Their value is ascribed because either they are of high importance and rarity, national scale, and/or there is limited potential for substitution.

Significance of the effect

141. The sensitivity of Early Medieval Market PRN 125588, the Devil's Quoit Burial Chamber PE020, Standing Stone PRN 7591, Round Barrow PRN 3079, Round Barrow Reuse PRN 3080, and

Round Barrow Reuse PRN 3080 is considered to be **high** and the magnitude of the impact is assessed as **major adverse**. Therefore, the effect will be of **large** significance, which is **significant** in EIA terms.

Further mitigation and residual effects

142. Due to the predicted large adverse (significant) impact of construction activity, additional, project specific mitigation will need to be applied.

143. For all sites potential impact could be reduced through a better understanding of the possible location and extent of archaeological remains. Similar projects have benefitted from the well-established technique of geophysical surveying as an initial investigation of potential archaeological remains. Limited areas along the OnECC have previously been surveyed, and these need not be resurveyed, but for most of the Onshore Development Area geophysical survey should highlight features of potential archaeological interest, narrowing down broad areas of archaeological potential, and identifying surviving remains of known archaeological sites.

144. Dependent therefore on the presence or absence of potential remains, further standard evaluation measures will then be carried out. It is possible to avoid areas of archaeological remains within the RLB of the Onshore Development Area through construction design. The results of the geophysical survey may require testing through standard intrusive archaeological trial trenching. Archaeological trial trenching will test the veracity of the geophysical survey results, allowing the nature and extent of potential archaeological features to be identified.

145. Sufficient information will be gained through geophysical survey and trial trenching to inform whether archaeological features require preservation within the final construction design, micro-siting of the Onshore Export Cable route, or preservation through record (archaeological excavation).

146. The application of these additional mitigation would reduce the level of impact to negligible, resulting in a **slight** effect, which is not significant in EIA terms.

147. Taking the above mitigation into consideration, the magnitude has been lowered **(minor)** and the sensitivity remains the same **(high)** meaning the residual effect will be of **slight** significance, which is **not significant** in EIA terms.

Impacts through change to setting (temporary)

148. There will be visual impacts anticipated along the OnECC or Onshore Substation location. The receptors include Scheduled Monuments, Listed Buildings, Historic Landscape Character Areas and Conservation Area.

Magnitude of impact

149. A **minor adverse** level of impact has been identified on the setting of four designated receptors of high value. The receptors include Scheduled Monuments, Listed Buildings, Historic Landscape Character Areas and Conservation Area. The impacts upon these features may be varied, but these are discussed below:

- Gravel Bay anti-aircraft battery PE494 – views to and from the monument will be affected during construction, and the establishment of an HDD Landfall work area to the east. This will be a temporary impact. Contemporary activity associated with the site is recorded alongside the road to the east, with the possibility that associated remains also exist within the RLB of the proposed Project itself, see WW2 enclosures A3 and WW2 buildings A4, which would form part of its original setting. This would be a permanent impact.

- Rocket Cart House and Lookout Tower LB 17166 & 17167 – important views from the building south-east towards the coast will be affected during construction works. This will be a temporary impact.
- Historic Landscape Character Area 341 Rhoscrowther – the proposed Project runs through a large portion of this historic area. Construction work along the Onshore Development Area will remove small sections of field boundaries, although the field enclosure system will remain unaltered. Associated archaeological remains may be affected, although known historic receptors will be avoided. Some points of access and viewpoints may be affected, although no significant viewpoints have been identified on the proposed Project site. This will be a temporary impact.

Sensitivity of receptors

150. The following list comprises the recorded receptors, and is laid out topographically from west (Landfall site) to east (Pembroke Power Station):

- Gravel Bay anti-aircraft battery PE494 – A Scheduled Monument lying to the north and west of the proposed Project site.
- Rocket Cart House and Lookout Tower LB 17166 & 17167 – A pair of Grade II listed buildings lying to the west of the proposed Project site.
- Historic Landscape Character Area 341 Rhoscrowther – The proposed Project site encompasses a large area of this historic landscape.

151. The sensitivity of the above designated historic receptors – a scheduled monument, two Grade II listed buildings and a Historic Landscape Character Area – is therefore considered to be **high**.

Significance of the effect

152. The sensitivity of Gravel Bay anti-aircraft battery PE494, Rocket Cart House and Lookout Tower LB 17166 & 17167, and Historic Landscape Character Area 341 Rhoscrowther is considered to be **high** and the magnitude of the impact is assessed as **minor adverse**. Therefore, the effect will be **slight**, which is not significant in EIA terms.

Further mitigation and residual effects

153. None of the impacts identified above are major or moderate adverse (significant in EIA terms). Therefore, no further mitigation is required to reduce the significance to non-significant in EIA terms and the significance of residual effects remain as detailed above.

154. As it lies a short distance from the proposed Project site, particular attention should be drawn to work in the vicinity of Gravel Bay anti-aircraft battery PE494, particularly in relation to WW2 buildings A4 within the RLB, which would form part of its original setting.

155. Taking the above into consideration, the magnitude remains the same **(minor adverse)** and the sensitivity remains the same **(high)** meaning the residual effect will be of **slight** significance, which is **not significant** in EIA terms.

9.8.2. Operation and Maintenance (O&M) Effects

156. During operation of the proposed Project, there will be no additional physical impacts to below ground archaeological remains that could result in effects beyond those that have been assessed for construction impacts.

157. Potential effects of the proposed Project during the operational phase mostly consist of impacts to the setting of designated scheduled monuments and listed buildings in the surrounding area through visible structures erected during the operational life of the proposed Project, namely the Onshore Substation, together with potential for associated operational

noise, lighting and vehicular movements for staff access. No further impacts from the functioning of the proposed Project have been identified.

158. It is envisaged that the Onshore Substation will contain a building and a variety of electrical equipment, contained within a fenced compound, with appropriate lighting and security features. Precise details of the layout and appearance of the Onshore Substation are contained in **Chapter 04: Description of the Project**. The layout and appearance of the substation provides sufficient information to make a judgment on the setting.

159. Impacts through change to the setting of scheduled monuments and listed buildings will last if the Onshore substation is operational. Due to the anticipated life of the proposed Project of at least 25 years, this is a permanent impact.

160. The assessment has identified four potential instances where the proposed Project could lead to change to the setting of designated historic receptors.

Impact through change to setting (permanent)

161. There will be operation and maintenance impacts anticipated along the OnECC or Onshore Substation location. The receptors comprise two Scheduled Monuments, a listed building and a Historic Landscape Character Area. The impacts may vary, but these are outlined below.

Magnitude of impact

162. A **minor adverse** level of impact has been identified on the setting of four designated historic receptors. The impacts upon these features may vary, but these are outlined below:

- Corston Beacon Round Barrow PE059 – A prominent Bronze Age round barrow alongside the B4320 to the south of the proposed Project site including proposed Onshore Substation location. Significant views are largely associated with visible contemporary barrows remains in the vicinity, which does not at present include views towards the proposed Onshore Substation, but the potential for barrows (PRN 48371) in the Lambeeth Farm area suggests the original setting of the monument may have incorporated views in this direction. The proposed Onshore Substation will be visible from this historic receptor. The Onshore Substation will increase the sense of modern industrial development in views in this direction, although this is likely to be a minor increase on the existing views incorporating Pembroke Power Station and the Valero oil refinery. The Onshore Substation will affect some views towards the historic receptor from public footpaths around the northern edge of the proposed Project site. The historic receptor is however an indistinct feature of the landscape in these views. Neither this view or construction activity will affect the relationship with the prehistoric ridgeway, nor will it affect inter-visibility with known contemporary barrow assets in the vicinity.
- Wallaston Round Barrows PE064 – A group of Bronze Age round barrows to the south-east of Wallaston, and east and south of the proposed Project site. The impact upon these historic receptors will be identical to that of PE059.
- Somerton Farmhouse LB 6598 – A grade II listed farmhouse south of the proposed Project site. The positioning of the farmhouse suggests views north represent a significant view in its original setting. This view will incorporate the proposed Onshore Substation, increasing the sense of modern industrial development in this view, albeit at a distance. However, there are mature trees immediately to the north of the farmhouse which are likely to partially restrict or filter views towards the Onshore Substation. Other aspects of the setting – the main views of the house, its association with surrounding farmland, access from the main–road, associated outbuildings, will remain unaffected.

- Historic Landscape Character Area 341 Rhoscrowther – A character area forming part of the Milford Haven Waterway Landscape of Outstanding Historic Interest. The Onshore Substation is partially located within this HLCA. The Onshore Substation location will be removed from agricultural use, the main characteristic of this HLCA. The establishment of the Onshore Substation may also be seen as an expansion of the neighbouring HLCA of Pembroke Power Station, and a reduction in the area of this HLCA, but it will be a very small reduction of the Rhoscrowther HLCA.

Sensitivity of the receptor

163. The sensitivity of the above historic receptors, which comprise two Scheduled Monuments, a listed building and a Historic Landscape Character Area, are all considered to be **high** value.

Significance of the effect

164. The sensitivity of Corston Beacon Round Barrow PE059, Wallaston Round Barrows PE064, Somerton Farmhouse LB 6598 and Historic Landscape Character Area 341 Rhoscrowther is considered to be **high** and the magnitude of the impact is assessed as **minor adverse**. Therefore, the effect will, be of **moderate** significance, which is **significant** in EIA terms.

Further mitigation and residual risk

165. Due to the predicted moderate adverse (significant) effect of construction activity, additional, project specific mitigation will need to be applied.

166. As the potential impact is a visual one, when viewed from the south, mitigation measures will focus on the final appearance and layout of the Onshore Substation. A subsequent reduction in the visibility of the Onshore Substation will reduce the level of impact on the setting of the designated historic receptors to negligible, resulting in a minor effect, which is not significant in EIA terms.

167. Taking the above mitigation into consideration, the magnitude has been lowered **(minor)** and the sensitivity remains the same **(high)** meaning the residual effect will be of **slight** significance which is **not significant** in EIA terms.

9.8.3. Decommissioning Effects

168. The process of decommissioning is described in **Chapter 04: Description of the Project**. It is envisaged that, where buried in the ground, the cable will remain in situ. This will have no further impact upon the historic environment and cultural heritage resource.

169. Above ground elements of the Onshore Substation will be removed, and if necessary, foundations will also be removed. As foundation removal includes ground disturbance, there is potential for sub-surface archaeological remains to be disturbed, but this is unlikely to be a significant impact beyond what may have occurred during the initial construction phase. The removal of the visual elements of the Onshore Substation is likely to reverse the medium adverse impact outlined in **Section 9.8.2.**

9.8.4. Summary of Residual Environmental Effects

170. This chapter of the ES has assessed the potential environmental effects on the Historic Environment and Cultural Heritage from the construction, operation and maintenance and decommissioning phases of the proposed Project. Where significant effects have been identified, additional mitigation has been considered and incorporated into the assessment.

171. **Table 9-15** summarises the impact assessment undertaken and confirms the significance of any residual effects, following the application of additional mitigation.

9.9 Summary of Additional Mitigation Measures

172. Standard mitigation incorporated into the proposed Project is outlined in **Section 9.7.** Additional mitigation is outlined below.

9.9.1. Construction

173. Additional project specific mitigation has been developed to help mitigate impacts identified as part of the impact assessment. This includes a suite of measures which are standard requirements of Statutory Stakeholders including the local planning authorities/County Archaeologists, and which will be used as the basis of the Archaeological Mitigation Strategy.

174. Considering the form and significance of archaeological remains or other heritage assets that would be impacted by the proposed Project, the principal techniques to be used are:

- Geophysical survey along the OnECC which have not been previously surveyed;
- Full excavation in areas where significant archaeological remains have been recorded/identified;
- Archaeological Strip, Map, and Sample;
- Focused archaeological monitoring/watching brief;
- Geoarchaeological assessment; and
- Preservation of archaeological remains (i.e. fencing).

175. The basic principle of the Archaeological Mitigation Strategy is to mitigate impacts on archaeological sites identified within the proposed Project site. Rather than taking a blanket approach of strip, map and record, it is envisaged that excavations will instead be targeted upon those sites that would maximise knowledge gain to answer site-specific research questions that will be developed as part of the Archaeological Mitigation Strategy. For sites that do not fit this criteria, additional work would not be undertaken. Other sites, although within the proposed Project site, would be fenced off during construction to ensure they are preserved where the cable installation activities can be routed around the site/feature.

176. However, details of the full mitigation will be addressed in the Archaeological Mitigation Strategy, and this will also be based on the results of evaluation trenching undertaken post-submission. An appropriate mitigation strategy for the identified impacts from construction will be agreed with the statutory consultees.

177. Other measures that would be implemented during construction, and committed via the implementation of a Construction Environmental Management Plan (CEMP) that would include:

- Raising the awareness of construction workers and operatives of any control and reporting procedures to be followed, should archaeological deposits be encountered during the works, for example through toolbox talks and regular briefings;
- The protection of built heritage assets and archaeological sites during construction, for example through the demarcation of buffer zones around such interests with fencing and signage;
- The control of light spillage, noise and dust within construction compounds and working areas, for example by adhering to working hours and through good site layout and working practices, to minimise impacts on the setting of heritage assets; and
- A programme of outreach/public engagement to raise awareness of the cultural heritage of the scheme.

178. Consideration will be given to the appropriate use and appearance of construction compounds with a view to minimising identified impacts on designated historic receptors. The impact comprises the presence of both the construction compounds and the open-cut cable trench within the rural setting of designated historic receptors and in key views of these heritage assets from the south-and south-west. Through detailed design it may be possible to minimise impacts through the use of hoarding around the boundary of the construction compounds for screening, by restricting the height of elements within the compounds to, for example, a single storey of site cabins and a height limit of approximately 2.5 m being placed on materials stock piles. Whilst these additional mitigation measures will minimise the impact to heritage assets, it is not considered that they would reduce the reported magnitudes of impact as these result from the presence of the construction compounds within the assets settings, and in combination with the construction activities and open-cut trench. As such, these recommended measures do not have the capacity to lower the identified construction effects to non-significant levels and the effects remain as reported at construction. It should be noted, however, that all such effects are temporary for the duration of construction, and they will also reduce during construction as the open-cut trenches within the setting of heritage assets are completed and backfilled. The effects cease upon completion when the construction compounds are removed, and the land is returned to existing uses.

9.9.2. Operations and maintenance

179. Due to the nature of the scheme, most of the impacts are linked to the construction phase with operational impacts limited to the potential impacts on the setting of heritage assets resulting from the construction of the Onshore Substation. No significant effects have been identified in relation to the physical presence or operation of the Onshore Substation, however, it is recommended that the detailed design seeks to minimise the height, scale and massing of the Onshore Substation through physical form and materials selection as far as practicable.

9.9.3. Decommissioning

180. All significant physical impacts would have occurred during the construction phase of the Project. No further mitigation measures are proposed.

9.10 Summary of Effects and Conclusions

181. This section summarises the residual significant effects of the proposed Project on the Historic Environment and Cultural Heritage following the implementation of mitigation.

182. This assessment has identified potential impacts on up to 40 receptors, of which 14 are high value sites, 14 medium value sites, and 12 low value sites.

183. Standard mitigation has included regular consultation to avoid known sites of significance, and monitoring of geotechnical works. Further standard mitigation will include identification and protection of archaeological sites where practicable within the construction programme, to be included within the Construction Environmental Management Plan, and an archaeological watching brief during ground-breaking works.

184. During construction (ground-breaking works), a **negligible** impact resulting in a **neutral** effect has been identified for two receptors of negligible value (PRN 7931 & 7932).

185. During construction (ground-breaking works), a **minor adverse** impact resulting in a **slight** effect has been identified for seven receptors of low value (A1 to A4, A8, A11 & A12) and one receptor of high value (PRN 3244). With standard mitigation measures in place these effects are not considered significant in the context of EIA regulations.

186. During construction phase (ground-breaking works), a **moderate adverse** impact resulting in a **slight** effect, has been identified for a further three receptors of low value (PRN 33440, 54716 & 13059). With standard mitigation measures in place these effects are not considered significant in the context of EIA regulations.

187. During construction phase (ground-breaking works), a **moderate adverse** impact, but still resulting in a **moderate** effect, has been identified for two receptors of medium value (PRN 48371 & archaeological potential). With standard mitigation measures in place these effects are not considered significant in the context of EIA regulations.

188. During construction phase (ground-breaking works), a **major adverse** impact, resulting in a **large** effect, has been identified for one receptor of low value (PRN 13059) and 12 receptors of medium value (PRN 3073, 3103, 12223, 3075, 7592, 55454, 55453, 11383, 17879, A6, A7). A large adverse impact is considered significant, and additional mitigation will need to be applied. Such mitigation could take the form of geophysical surveying, and subsequent trenched archaeological evaluation, which should provide sufficient information to either allow the effects to be reduced through standard mitigation, or to inform whether any further additional mitigation would be required to reduce effects. Such additional mitigation will result in a **minor** effect.

189. During construction phase (ground-breaking works), a **major adverse** impact, resulting in a **large** effect, has been identified for five receptors of high value (PE020, PRN 125588, 7591, 3079 & 3080). A large adverse impact is considered significant, and additional mitigation will need to be applied. Such mitigation will take the form of geophysical surveying, and subsequent trenched archaeological evaluation, which will provide sufficient information to either allow the effects to be reduced through standard mitigation, or to inform whether any further additional mitigation would be required to reduce effects. Such additional mitigation will result in a **minor** effect.

190. During construction phase (temporary visual impact), a **minor adverse** impact resulting in a **slight** effect has been identified on the setting of four receptors of high value (PE494, LB 17166 & 17167, HLCA 341). With standard mitigation measures in place these effects are not considered significant in the context of EIA regulations

191. During the operational phase a **moderate adverse** impact, resulting in a **moderate** effect, has been identified on the setting of four receptors of high value (PE059, PE064, LB 6598 & HLCA 341). A medium adverse impact is considered significant, and additional mitigation will need to be applied. Such mitigation relates specifically to the proposed Onshore Substation, and will include considerations of size, materials, distribution, lighting and screening in the final design. This will result in a **minor** effect.

192. A number of historic receptors have been identified within the Offshore Development Area on the intertidal zone at Freshwater West between the Mean High Water Springs (MHWS) and the Mean Low Water Springs (MLWS) (see **Chapter 24: Marine Archaeology**, prepared by Coracle Archaeology). As the terrestrial jurisdiction of the PCC and PCNPA extends down to the MLWS, these have also been included in **Table 9-15** for ease of reference. Historic receptors identified in the intertidal zone have been given a unique Coracle Archaeology number.

Table 9-15. Assessment summary

Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
Construction						
Ground-breaking works	The Willemoes of Thuro shipwreck CA2 (foreshore)	High	Negligible	Negligible	AEZ (50m; precautionary)	Negligible
Ground-breaking works	CA8-CA12 Palaeo-environmental deposits (foreshore)	High	Negligible	Negligible	n/a	n/a
Ground-breaking works	Cross PRN 7931	Negligible	Negligible	Neutral	None required	Neutral Not significant
Ground-breaking works	Cross PRN 7932	Negligible	Negligible	Neutral	None required	Neutral Not significant
Ground-breaking works	House / farmstead A1	Low	Minor Adverse	Slight	None required	Slight Not significant
Ground-breaking works	Strip fields A2	Low	Minor Adverse	Slight	None required	Slight Not significant
Ground-breaking works	WWII Enclosures A3	Low	Minor Adverse	Slight	None required	Slight Not significant
Ground-breaking works	WWII Buildings A4	Low	Minor Adverse	Slight	None required	Slight Not significant

Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
Ground-breaking works	Boundary Ditch A8	Low	Minor Adverse	Slight	None required	Slight Not significant
Ground-breaking works	Linear feature A11	Low	Minor Adverse	Slight	None required	Slight Not significant
Ground-breaking works	Linear feature A12	Low	Minor Adverse	Slight	None required	Slight Not significant
Ground-breaking works	Defended Enclosure PRN 3244	High	Minor Adverse	Slight	Highlighting Defended enclosure PRN 3244 as a protected feature on construction plans, protective fencing of the feature, with such protections laid out in the CEMP.	Slight Not significant
Ground-breaking works	Modern weapons pit PRN 33440	Low	Moderate Adverse	Slight	None required	Slight Not significant
Ground-breaking works	Post medieval Gravel Pit PRN 54716	Low	Moderate Adverse	Slight	None required	Slight Not significant
Ground-breaking works	Round Barrows PRN 48371	Medium	Moderate Adverse	Moderate	Preliminary geophysical survey potentially followed by trenched archaeological evaluation.	Slight Not significant

Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
					Additional mitigation in the form of archaeological excavation, may be required.	
Ground-breaking works	Archaeological Potential	Medium	Moderate Adverse	Moderate	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	Slight Not significant
Ground-breaking works	Cropmark PRN 13059	Low	Major adverse	Moderate	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	Slight Not significant

Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
Ground-breaking works	Findspot PRN 3073	Medium	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	Slight Not significant
Ground-breaking works	Flint Working Site PRN 3103	Medium	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	Slight Not significant
Ground-breaking works	Mesolithic Findspot PRN 12223	Medium	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological	Slight Not significant

Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
					excavation, may be required.	
Ground-breaking works	Neolithic Findspot PRN 3075	Medium	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	Slight Not significant
Ground-breaking works	Neolithic midden PRN 7592	Medium	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	Slight Not significant
Ground-breaking works	WWII Defence; Anti-Aircraft Defence Site PRN 55454	Medium	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional	Slight Not significant

Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
					mitigation in the form of archaeological excavation, may be required.	
Ground-breaking works	WWII Defence PRN 55453	Medium	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	Slight Not significant
Ground-breaking works	Flint Scatter PRN 11383	Medium	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	Slight Not significant
Ground-breaking works	Enclosure A6	Medium	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological	Slight Not significant

Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
					evaluation. Additional mitigation in the form of archaeological excavation, may be required.	
Ground-breaking works	Bronze Age Barrow A7	Medium	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	Slight Not significant
Ground-breaking works	Blacksmith's Workshop PRN 17879	Medium	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	Slight Not significant
Ground-breaking works	Early medieval market PRN 125588	High	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched	Slight Not significant

Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
					archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	
Ground-breaking works	Devil's Quoit Chamber PE020	High	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	Slight Not significant
Ground-breaking works	Standing Stone PRN 7591	High	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	Slight Not significant
Ground-breaking works	Round barrow PRN 3079	High	Major Adverse	Large	Preliminary geophysical survey potentially followed	Slight Not significant

Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
					by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	
Ground-breaking works	Round barrow re-use 3080	High	Major Adverse	Large	Preliminary geophysical survey potentially followed by trenched archaeological evaluation. Additional mitigation in the form of archaeological excavation, may be required.	Slight Not significant
Impact through change to setting	Gravel Bay anti-aircraft battery PE494	High	Minor Adverse	Slight	None required	Slight Not significant
Impact through change to setting	Ricket Cart House LB 17166	High	Minor Adverse	Slight	None required	Slight Not significant
Impact through change to setting	Lookout tower LB 17167	High	Minor Adverse	Slight	None required	Slight Not significant
Impact through change to setting	Rhoscrowther HLCA 341	High	Minor Adverse	Slight	None required	Slight Not significant

Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
Operation and Maintenance						
Impact through change to setting	Corston Beacon round barrow PE059	High	Minor Adverse	Moderate	Considerations of size, materials, distribution, lighting and screening in the final design of the Onshore Substation.	Slight Not significant
Impact through change to setting	Wallaston round barrows PE064	High	Minor Adverse	Moderate	Considerations of size, materials, distribution, lighting and screening in the final design of the Onshore Substation.	Slight Not significant
Impact through change to setting	Somerton Farmhouse LB 6598	High	Minor Adverse	Moderate	Considerations of size, materials, distribution, lighting and screening in the final design of the Onshore Substation.	Slight Not significant
Impact through change to setting	HCLA Rhoscrowther 341	High	Minor Adverse	Moderate	Considerations of size, materials, distribution, lighting and screening in the final design of the Onshore Substation.	Slight Not significant
Decommissioning						

Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
N/A	N/A	N/A	N/A	N/A	N/A	N/A

9.11 Cumulative Effects of the Project

9.11.1. Introduction

193. Cumulative effects are those effects upon receptors arising from the proposed Project alongside all existing, and/ or reasonably foreseeable projects, plans and activities that result in cumulative effects with any element of the proposed Project. Existing Projects are generally considered as part of the baseline and as such are considered within the impact assessment presented in **Section 9.8** above.

194. This section assesses potential cumulative effects on the Historic Environment and Cultural Heritage from identified projects, plans and activities that have the potential to act cumulatively with the proposed Project.

195. PINS Advice 17: Cumulative Effects Assessment (2019) suggests that Cumulative Effects Assessment CEA follows a four-stage process. The aim of this approach is to accurately determine relevant projects and associated relationships with scoped in receptors identified in the ES, to be included within the interproject CEA.

196. The approach to the assessment of cumulative effects is detailed in Appendix 5B: Approach to Cumulative Effects Assessment and is also summarised in **Table 9-16**.

Table 9-16. PINS Advice 17 Stages of the CEA process

CEA Stage	Activity
Stage 1	Determine a zone of influence (ZoI) via desk study for each topic receptor scoped into the ES. This will establish a *long list* of projects within each ZoI that will be shortlisted in Stage 2. This list of plans and projects/activities is drawn up through a desk study of planning applications, development plan documents, relevant development frameworks and any other available sources to identify 'other development' within the ZoI. Information on each project (location, development type, status, etc.) is documented, along with the certainty or tier assigned to the 'other development' (i.e. confidence it will take place in the current form and when it will take place in relation to the project). PINS notes that the project should then consult with the relevant planning authority/ authorities and statutory consultees regarding the long list.
Stage 2	Screening of the long list identified in Stage 1, to establish a short list for the CEA. Screening is based on the criteria presented in the scoping report and subsequent comments by the regulator and statutory consultees. PINS has provided inclusions/ exclusion threshold criteria, against which the potential for 'other development to give rise to significant cumulative effects by virtue of overlaps in temporal scope, the scale and nature of the 'other developments' and /or receiving environment, or any other relevant factors is assessed. From this assessment, a shortlist of 'other developments' to be included in the CEA is produced. It is noted that documented information on each of the 'other developments' is likely to be high level at this stage, outlining the key issues to take forward.
Stage 3	Gathering of all information available on short listed projects generated in Stage 2. At this stage all available data and information about the shortlisted projects that will be included in the CEA is collected to inform the assessment. This should utilise the most current information for each project in the public domain and assess the assumptions and limitations of the information collected on each shortlisted project.
Stage 4	Each of the shortlisted projects are reviewed in turn by the different topics to assess whether cumulative effects may arise and the nature of those effects (i.e. beneficial or adverse). The significance of the effects on environmental receptors

CEA Stage	Activity
	is established within each ES technical chapters. Where significant adverse cumulative effects are identified, mitigation measures are also considered within the CEA alongside the mechanism to secure that mitigation, e.g. consent condition requirements.

9.11.2. Scope of Cumulative Effects Assessment Historic Environment and Cultural Heritage

197. The following impacts have been scoped into the CEA for Historic Environment and Cultural Heritage. Cumulative effects on historic receptors may arise from the interaction of impacts from the proposed Project during installation and operation and impacts from other planned or consented projects in the wider vicinity of the proposed Project.

198. A Cumulative Effects Assessment has been made based on existing and proposed developments in the Study Area, following the approach described in **Appendix 5B: Cumulative Effects Approach**.

199. As detailed in **Section 9.8**, the greatest risk of impact to historic receptors from the proposed Project is related to ground-breaking works and general installation activity, as well as visual impacts. Accordingly, the greatest risk for cumulative impacts would be expected to relate to these effect pathways. The maximum spatial extent of potential effects identified within this chapter comprises a 500 m Study Area from the edge of the RLB, which has been assessed to be appropriate to the sensitivity of the receiving environment and the potential impacts of the proposed Project site. This Study Area was expanded to 3 km from the boundary of the RLB to examine the potential effect on the setting of surrounding designated receptors (scheduled monuments and listed buildings) (see **Section 9.4.8**). Hence, plans or projects with potential to overlap spatially will this Zone of Influence have been subject to the cumulative assessment.

Construction

- Impact through change to setting Installation activity; and
- Ground-breaking works.

Operation and maintenance

- Impact through change to setting.

Decommissioning

- Not applicable.

200. **Table 9-17** presents the short list of projects identified and included within the CEA for Historic Environment and Cultural Heritage that have the potential to give rise to a cumulative effect on historic receptors. Cumulative effects are defined as those effects on a historic receptor that may arise when the development is considered together with other reasonably foreseeable projects. In this case there is a potential cumulative impact when the proposed Project is considered alongside similar onshore cable route to convertor stations being undertaken by several other power cable projects: the Greenlink Interconnector, Erebus and Valorous (**Volume 5: Figure 9.7**). Note: the onshore component of Valorous is still in concept / planning phase so is not included in **Volume 5: Figure 9.7.**

Table 9-17. List of projects considered for the Historic Environment and Cultural Heritage cumulative effects assessment

Project Name/Developer	Project Type	Tier and Status	Construction Timeframe	Approx. distance from the proposed Project
Erebus (Blue Gem Wind)	*Offshore wind*	*Consented*	*June-October 2026*	*Within the RLB of Onshore Substation, landfall and onshore cable*
Valorous (Blue Gem Wind)	*Offshore wind*	*Scoping Opinion Issued*	*2028*	*Within the RLB of Onshore Substation, landfall and onshore cable*
Greenlink Interconnector	*Interconnector*	*Consented*	*2022-December 2024*	*Within the RLB of Onshore Substation, Landfall and Onshore Export Cable*

9.11.3. Cumulative Effect Assessment

Construction

Installation activity & Ground-breaking impacts on Prehistoric Boundary Ditch A8

201. Prehistoric Boundary Ditch A8, of low value, lies within the Greenlink project, the impact assessed as high adverse (equivalent to Large adverse in the current assessment parameters). There is the potential for this to extend into the proposed Project site, but given the likely area affected this is assessed as a minor effect. As the main impacts would have been dealt with within the Greenlink project, there will be a neutral significance of cumulative effect.

202. The magnitude of effect is therefore considered to be **neutral**.

203. The sensitivity of this receptor is considered to be **low**.

204. The sensitivity of Boundary Ditch A8 is considered to be **low** and the magnitude of effect is assessed as **neutral**. Therefore, the cumulative effect of impact on the receptor is considered to be **neutral** and **not significant**.

Operation and Maintenance

Impact through change to the setting of Dry Burrows Round Barrows PE060, Orielton registered Park & Garden PGW (Dy) 38 (PEM) and Enclosure and Earthworks at Lewiston Hall

PE400

205. Archaeological and Cultural Heritage assessment in the Greenlink and Erebus projects has assessed their developments to have a negligible impact on Dry Burrows Round Barrows PE060, Orielton registered Park & Garden PGW (Dy) 38 (PEM) and Enclosure and Earthworks at Lewiston Hall PE400. These sites will remain unaffected by the current proposed Project, and therefore there will be no cumulative effect.

Impact through change to the character of HLCA 431 (Rhoscrowther)

206. The Greenlink and Erebus assessments identified a 'low' or minor adverse impact (equivalent to slight adverse in the current assessment parameters) for the Milford Haven Waterway Landscape of Outstanding Historic Interest HLW (D) 3 (specially HLCA 431 Rhoscrowther), and the Wallaston Round Barrows PE064. The Greenlink and Erebus assessments considered the resultant significance of effect to be minor adverse or negligible.

207. The potential impact upon HLCA 431 Rhoscrowther during the operational phase of the current proposed Project results from the change of use from an agricultural area, to an industrial one, which would reduce the size of the HLCA. However, the worst-case potential area used for the assessment of the proposed Project includes sufficient size to incorporate the development of the Greenlink and Erebus projects as well as the current proposed Project, therefore there will be no cumulative effect.

Impact through change to the setting of Wallaston Round Barrows PE064

208. The visible structural elements of all three projects would see an increased modern industrial presence within the views from Wallaston Round Barrows PE064, and the possibility that this may impact upon visibility between the Wallaston Barrows and the possible barrows near Lambeeth Farm. This does not alter the potential impacts of this project alone however, as the presence and location of barrows near Lambeeth remains unknown, and the main views and elements of the setting will remain unaffected by the proposed Project. A moderate impact is reported in relation to the proposed Project and whilst the other three schemes will also be visible within the asset's setting, the cumulative effect is not considered to raise the impact above the level of moderate adverse. Therefore, there will be no cumulative change to effect.

209. The magnitude of effect is therefore considered to be **slight**.

210. The sensitivity of this receptor is **high**.

211. The sensitivity of Wallaston Round Barrows PE064 is high and the magnitude of effect is assessed as negligible. Therefore, the cumulative effect of visual impact on the receptor is **slight** and **not significant**.

Decommissioning

212. No cumulative impact from decommissioning is anticipated.

9.12 Inter-related Effects of the proposed Project

213. The term 'Inter-related' considers the environmental interactions ('inter-relationships') with other receptors within the proposed Project. These are referred to in the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 and further described in **Chapter 31: Inter-related Effect Assessment.**

214. As set out in PINS Advice Note 17 (PINS), 2019, *inter-related -project effects*, or 'interrelationships between topics', derive from combinations of different project specific impacts which, when acting together on the same receptor, could result in a new or different

effect, or an effect of greater significance than the project effects, when considered in isolation.

215. Inter-related effects comprise the following:

216. *Project lifetime effects*: effects that have the potential to occur during more than one phase of the proposed Project (i.e. construction, operation and maintenance and decommissioning) and also to interact in a way that could potentially create a more significant effect than if it was assessed in isolation.

217. *Receptor-led effects*: effects that have the potential to interact, spatially and temporally, to create inter-related effects on a receptor.

218. **Chapter 31: Inter-related Effects Assessment** details the approach to the inter-related effects assessment.

219. Historic Environment and Cultural Heritage has been scoped out of the inter-related effects assessment. The reason for this is because the onshore archaeology and cultural heritage assessment considers the inter-relationship between cultural setting and visual impacts as assessed in **Chapter 7: Landscape and Visual**. This forms an inherent part of the assessment, and therefore a further inter-related effects assessment is not required.

9.13 Transboundary Effects

220. A transboundary effect refers to the impacts or effects of a project that extend beyond the boundaries of the United Kingdom and have the potential to affect the environment of other countries within the European Economic Area (EEA). These effects can occur either from the proposed Project on its own or when combined with the effects of other projects or activities in the wider geographical area.

221. In terms of the impacts on Historic Environment and Cultural Heritage receptors, impacts will be localised to the extent of the Historic Environment and Cultural Heritage Study Area. Given the intervening distance to neighbouring European Economic Area (EEA) states, there is no potential for transboundary impacts and resultant effects to occur.

10. REFERENCES

Cambria Archaeology, 2002. Historic Landscape Characterisation of the Milford Haven Waterway on the Register of Landscapes of Outstanding Historic Interest in Wales. Report No. 2002/02. Report prepared for Cadw: Welsh Historic Monuments.

Chartered Institute for Archaeologists, 2020. Standard and guidance for historic environment desk-based assessment. Reading: Chartered Institute for Archaeologists. [Online]. Available at: https://www.archaeologists.net/sites/default/files/CIfAS%26GDBA_4.pdf [Accessed: 19 July 2023]

Chartered Institute for Archaeologists, 2022. Code of Conduct: professional ethics in archaeology. Reading: Chartered Institute for Archaeologists. [Online]. Available at https://www.archaeologists.net/sites/default/files/Code%20of%20conduct%20revOct2022.pdf [Accessed: 19 July 2023]

Design Manual for Roads and Bridges, 2020. LA 104 Environmental assessment and monitoring. [Online]. Available at: https://standardsforhighways.co.uk/dmrb/ [Accessed: 10 May 2023]

Design Manual for Roads and Bridges, 2021. LA 106 Cultural heritage assessment. [Online]. Available at: https://standardsforhighways.co.uk/dmrb/ [Accessed: 10 May 2023]

Dyfed Archaeological Trust, 2023. Archwilio. Historic Environment Records of Wales. [Online]. Available at: https://archwilio.org.uk/wp/#intro-widgets [Accessed: 19 July 2023]

MarineSpace, 2019. Project Erebus Environmental Impact Assessment Scoping Report. [Online]. Available at: https://www.bluegemwind.com/wp-content/uploads/2020/07/SC1905-EIA-Scoping-Report-Project-Erebus-v1-3.pdf [Accessed: 19 July 2023]

MarineSpace, 2020. Project Valorous Environmental Impact Assessment Scoping Report. [Online]. Available at: https://www.bluegemwind.com/wp-content/uploads/2020/07/EIA-Scoping-Report-Project-Valorous.pdf [Accessed: 19 July 2023]

Natural Resources Wales, 2023. LandMap, Geological Landscape. [Online]. Available at https://datamap.gov.wales/layers/inspire-nrw:NRW_LANDMAP_Geological_Landscape [Accessed: 19 July 2023]

Pembrokeshire Coast National Park Local Development Plan 2 & Pembrokeshire County Council Local Development Plan 1, 2021 Historic Environment (Archaeology) Supplementary Planning Guidance. [Online]. Available at: https://www.pembrokeshirecoast.wales/planning/planning-policy/local-development-plan-2/supplementary-planning-guidance-ldp2/archaeology-supplementary-planning-guidance/ [Accessed: 19 July 2023]

Pembrokeshire County Council Local Development Plan, 2023. Planning Pembrokeshire's Future. [Online]. Available at: https://www.pembrokeshire.gov.uk/adopted-local-development-plan [Accessed: 19 July 2023]

Poucher, P, 2021. Project Erebus, Floating Offshore Wind Development: Historic Environment Desk-Based Assessment, Dyfed Archaeological Trust Report No. 2021-57.

Research Framework for the Archaeology of Wales, 2023. [Online]. Available at: https://archaeoleg.org.uk/index.html [Accessed: 19 July 2023]

Royal Commission on the Ancient and Historical Monuments of Wales, 2023. National Monuments Record of Wales (NMRW) Available ay: RCAHMW | Royal Commission on the Ancient and Historical Monuments of Wales [Accessed: 19 July 2023].

UK Government, 1979. The Ancient Monuments and Archaeological Areas Act. [Online]. Available at: https://www.legislation.gov.uk/ukpga/1979/46 [Accessed: 19 July 2023]

UK Government, 1990. Planning (Listed Buildings and Conservation Areas) Act. [Online]. Available at: https://www.legislation.gov.uk/ukpga/1990/9/contents [Accessed: 19 July 2023].

Welsh Assembly Government / Cadw / Countryside Council for Wales, 2007. Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process. Revised (2nd edition including revisions to the Assessment Process (ASIDOHL2). Cardiff: Cadw. [Online]. Available at: https://cadw.gov.wales/sites/default/files/2019-05/LandscapesRegisterGoodPractice_EN_0.pdf [Accessed 19 July 2023].

Welsh Government/Cadw, 2011. Conservation Principles for the sustainable management of the historic environment in Wales. Cardiff: Cadw. [Online]. Available at: https://cadw.gov.wales/advice-support/historic-assets/conservation-principles [Accessed: 19 July 2023]

Welsh Government, 2016. Historic Environment (Wales) Act 2016. [Online]. Available at: http://www.legislation.gov.uk/anaw/2016/4/contents [Accessed: 19 July 2023]

Welsh Government, 2017. Planning Policy Wales. Technical Advice Note (TAN) 24: The Historic Environment. [Online]. Available at: https://gov.wales/technical-advice-note-tan-24-historic-environment [Accessed: 19 July 2023]

Welsh Government/Cadw, 2017a. Heritage Impact Assessment in Wales. Cardiff: Cadw. [Online]. Available at: https://cadw.gov.wales/advice-support/placemaking/heritage-impact-assessment/heritage-impact-assessment [Accessed: 19 July 2023]

Welsh Government/Cadw, 2017b. Managing Change to Listed Buildings in Wales. Cardiff: Cadw. [Online]. Available at: https://cadw.gov.wales/advice-support/historic-assets/listed-buildings/managing-change-to-listed-buildings [Accessed: 19 July 2023]

Welsh Government/Cadw, 2017c. Managing Change to Registered Historic Parks and Gardens in Wales. Cardiff: Cadw. [Online]. Available at: https://cadw.gov.wales/advice-support/historic-assets/registered-historic-parks-gardens/managing-registered-historic-parks [Accessed: 19 July 2023]

Welsh Government/Cadw, 2017d. Managing Conservation Areas in Wales. Cardiff: Cadw. [Online]. Available at: https://cadw.gov.wales/advice-support/historic-assets/conservation-areas/managing-conservation-areas[Accessed: 19 July 2023]

Welsh Government/Cadw, 2017e. Managing Historic Character in Wales. Cardiff: Cadw. [Online]. Available at: https://cadw.gov.wales/advice-support/placemaking/historic-character/managing-historic-character [Accessed: 19 July 2023]

Welsh Government/Cadw, 2017f. Managing Listed Buildings at Risk in Wales. Cardiff: Cadw. [Online]. Available at: https://cadw.gov.wales/advice-support/historic-assets/listed-buildings/listed-buildings-risk#section-managing-listed-buildings-at-risk [Accessed: 19 July 2023]

Welsh Government/Cadw, 2017g. Managing Lists of Historic Assets of Special Local Interest in Wales. Cardiff: Cadw. [Online]. Available at: https://cadw.gov.wales/advice-support/historic-assets/other-historic-assets/historic-assets-special-local-interest [Accessed: 19 July 2023]

Welsh Government/Cadw, 2017h. Setting of Historic Assets in Wales. Cardiff: Cadw. [Online]. Available at: https://cadw.gov.wales/advice-support/placemaking/heritage-impact-assessment/setting-historic-assets [Accessed: 10 May 2023]

Welsh Government, 2021a. Future Wales: The National Plan to 2040. [Online]. Available at: https://gov.wales/future-wales-national-plan-2040 [Accessed: 10 May 2023]

Welsh Government, 2021b. Planning Policy Wales. Edition 12, February 2024. [Online]. Available at: https://gov.wales/planning-policy-wales [Accessed: 6 March 2024]